AGRICULTURAL CREDIT IN UGANDA

by

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A Thesis Submitted for the
Degree of Doctorate of Philosophy
in the University of East Africa.

1967

CONTENTS.

ACKNOWLEDGEMENTS.

The people who have helped me in the course of this study are too numerous for it to be possible to mention all by name. However, I should particularly like to extend my thanks to the farmers who gave up their time to be interviewed, and to the field staff of the Ministry of Agriculture, Cooperative Development and Forestry and the Ministry of Animal Husbandry, Game and Fisheries who gave up their time to help me in the field. I should also like to thank those members of the staff of these Ministries and of the Uganda Commercial Bank who gave up their time to discuss the Uganda Government's credit schemes with me, and who contributed many valuable ideas.

I am very grateful to Walter Newlyn, Malcolm Hall and Ian Livingstone for acting as my supervisors and for providing much useful encouragement, criticism and advice. I should also like to thank Deryck Belshaw for his encouragement and assistance, particularly at the beginning of the project, and Robert Posner for his invaluable help while I was writing up. Lastly I should like to thank Mrs. Anne Brannan for her patience in typing both a preliminary and final draft.

The final year of the project was financed by a grant from the Houblon-Norman Fund and a supporting grant from the Department of Cooperative Development, for both of which I am very grateful.

Responsibility for the study as it now stands, and for the conclusions contained it it, is however entirely mine.

Summary

This study is concerned with the provision and use of agricultural credit in Uganda. At the national level it aims to provide an account of the main sources and recipients of credit, and of the terms on which credit is available. The major part of this account is contained in Chapter 2, although some of the points raised there are amplified in other chapters. The main sources of credit considered are government loans schemes operated through the Uganda Commercial Bank and primary cooperative societies. The commercial banks are also discussed in order to (i) identify the reasons for their unwillingness to lend to individual farmers and (ii) to describe their crop financing activities. Various non-institutional sources of credit including other members of the farming community and farm labourers, are discussed in Chapter 6.

The study also contains an examination of the operation of two government credit schemes (the Progressive Farmers' Loans Scheme and the Cooperative Credit Scheme) in two districts of Uganda. This section (Chapters 3 - 5) includes an examination of the use made of these schemes by a sample of peasant farmers. The case-studies give rise to a number of criticisms of the administration of both schemes. It is shown that frequently no costings were available to demonstrate the profitability of the inputs, techniques and enterprises financed with credit when these were applied or operated on peasant farms. In addition, qualified personnel for the supervision of medium-term loans

were often lacking. It appears that many farmers did not experience a rise in income as a result of using credit. The provision of credit for the production of cotton and coffee (Uganda's main cash crops) is unlikely to lead to high profits and may lead to a net loss for the borrowing farmers. Use of credit for the purchase of fuel-powered equipment and most ox-drawn equipment is shown to be unprofitable given (i) the present state of research into alternative techniques of production, (ii) average farm size, (iii) the low level of mechanical experience amongst both the farming community and the extension personnel, (iv) the existence of time-consuming operations that still have to be performed by hand.

Chapter 7 discusses the provision of credit for the production of tea and tobacco, for ranching and for the Group Farming scheme. Tea and tobacco are both shown to yield high returns to the use of credit to finance capital investment.

Chapter 8 contains a critique of the Uganda Government plans for expanding agricultural credit as they existed in 1966. An analysis of the cost to the Government of introducing an expanded and supervised short-term credit scheme, and of the additional revenue which is likely to accrue to the Government shows that the proposed scheme would require a subsidy. To justify the provision of a subsidy credit must be directed to those enterprises and techniques where the returns obtained by the borrowing farmers will be highest, and where these returns will undoubtedly be positive. It is suggested that where the Government provides credit to encourage the introduction of new inputs or techniques, it should carry part of the additional risk.

The conclusions drawn from the study are summarised in the final Chapter.

Chapter I

Introduction.

1. General Background.

Uganda, the location of this study, is situated in East Africa. The country has a population of 7.6 million people , 99% of whom are African.[(1)] From 1900 to 1962 the country was a British Protectorate: since October, 1962, it has been an independant state.

The dominant sector in the Ugandan economy is agriculture which "accounts for more than half of gross domestic product and for 80% - 90% of overseas export earnings."[(2)] Of the total population 90% depend on this sector for their income. Table 1, which shows the composition of Gross Domestic Product in 1964, demonstrates the predominance of agriculture. It also reveals that within the agricultural sector, non-monetary subsistence production is of considerable importance.

Within the monetary agricultural sector, cotton and coffee are the main cash crops, contributing between them approximately 48% of the total output of cash-crops in 1965/66.[(3)] In 1965 total exports were valued at £62.7 million, of which coffee contributed £30.4 million (48%) and cotton £16.8 million (26%).[(4)] Most of the coffee that is produced

(1) Source: Uganda Government Statistical Abstract, 1965, table UB 2.

(2) "Work for Progress - Uganda's Second Five Year Plan 1966-71", Government Printer, Entebbe, 1966, p. 55

(3) "Work for Progress", p. 57

(4) Ibid., p. 1

Table I. 1

Composition of Uganda's Gross Domestic Product
at Factor Cost by Industry, Current Value.

Industry	1964 £'000	3 yr. average 1962 - 64 £'000
MONETARY ECONOMY		
Agriculture	57,455	51,912
Cotton ginning, Coffee Curing, sugar manufacture	6,760	5,881
Forestry, hunting, fishing	2,371	2,348
Mining and Quarrying	3,217	2,962
Manufacture of food products	1,323	1,166
Misc: Manufacturing	4,664	4,620
Electricity	2,339	2,273
Construction	3,148	3,373
Commerce	18,829	17,217
Transport and Communication	6,714	6,325
Government (Administration and miscellaneous expenditure and Military)	4,461	4,158
African Local Government	2,087	1,944
Miscellaneous services	11,738	11,079
Rents	3,547	3,457
TOTAL	128,653	118,715
NON-MONETARY ECONOMY		
Agriculture	40,068	38,985
Forestry and fishing	5,475	5,339
TOTAL	45,543	44,324
GRAND TOTAL	174,196	163,039

Source: Uganda Government, Statistical Abstract, 1966, p. 82

is poor quality robusta grown predominantly in Buganda Region and Busoga District. High quality arabica is grown in Bugisu on the slopes of Mount Elgon. Cotton is grown mainly in the drier areas to the north. (See maps 1 and 2 , pages 147 and 148.)

The agricultural sector is comprised almost entirely of peasant farmers who, on average, cultivate two acres of their main cash crop.(1) In 1963 (2) estate agriculture produced no cotton and 5.5% of the total coffee crop.(3) Estate agriculture is confined almost entirely to the production of tea and sugar. In these circumstances it is not surprising that disposable per capita incomes are low, being estimated at £26.42 in 1963.(4)

The increasing output of cotton and coffee has been a factor of major importance in Uganda's development, cotton being the more important cash crop until 1955. In the past these crops have consistantly been responsible for 70% or more of total export earnings. The output of cotton rose from 2,000 bales in 1907 to 418,000 in 1938; (the latter figure was not surpassed until 1964). The main rise in coffee production

(1) Report on Uganda Census of Agriculture, Vol. III, 1966, pp. 58 and 67.

(2) The latest year for which figures are available.

(3) Department of Agriculture, Annual Report, 1963, p. 9.

(4) C. Frank, 'The Sugar Industry in East Africa', East African Institute of Social Research, 1966, page 36.

took place during the '50s and early '60s, output rising from 42,104 tons[1] in 1950/51 to 169,000 tons in 1963/64.

During the period of expanding cotton production no institutional credit was available to farmers. (Cotton was, and still is, cultivated predominantly with family and casual labour, the latter frequently being paid in kind). Similarly, during the '50s when robusta coffee acreages expanded from 185,000 in 1951 to 499,000 in 1960,[3] relatively little institutional credit was available.

In the past it appears that the main factors affecting the volume of agricultural output have been (i) governmental extension activity and propaganda, (ii) natural population growth, (iii) an increasing demand for cash among the agricultural community, (iv) price variations (v) variations in the weather, (vi) crop disease and insect attack. While the first three factors might be expected to contribute fairly consistently to a rise in output, the last three are liable to have a negative impact on production.

C. Ehrlich in a detailed discussion of the factors leading to the rapid development of cotton production over the years 1905 - 1915 lists the following contributory factors:[4]

(1) Department of Agriculture, Annual Report, 1961, p. 7

(2) Uganda Government "Background to the Budget 1966/67", p. 5.

(3) Uganda Government Statistical Abstract, 1957, p. 45 and 1966, p. 39.

(4) C. Ehrlich, "The Ugandan Economy 1903-1945", in "History of East Africa", Vol. II, Edited by Harlow Chilver and Smith, Oxford 1965, pp. 399-420.

(i) the desire of the Protectorate Government to encourage cash-cropping as a means of raising its own revenue. This lead to experimentation with a wide variety of crops.

(ii) the free distribution of cotton seed by the Government.

(iii) the suitability of this crop to the ecology of large areas of Uganda.

(iv) the dissemination by the Government (through local chiefs) of instructions on how to grow cotton.

(v) the enforcement by the Government of an early decision that farmers should produce only one high quality variety of cotton which would be competitive on the world market.

(vi) the efforts made by the local chiefs to persuade farmers to grow cotton.

(vii) the growth of trading centres and an increasing demand for consumer goods, particularly in Buganda.

The 1953-55 East Africa Royal Commission attributed the development of cash-cropping to the creation of markets and a desire to enter the exchange economy.[1] The 1962 World Bank report on the economic development of Uganda stated that

> "Among the factors responsible for the spread of cash crops in Uganda has been guidance from the government through the local chiefs, the need for money income to pay taxes and the growing desire for the commodities that could be bought with money." (2)

(1) East Africa Royal Commission 1953-1955 Report, H.M.S.O. London, 1955 p. 46.

(2) International Bank for Reconstruction and Development, "The Economic Development of Uganda," John Hopkins Press 1962, pp. 16, 17.

Table 2 illustrates with two examples the effect that climatic factors can have on agricultural output. Commenting on the low level of cotton output in the 1954/55 season, the Department's Annual Report in 1956 stated:

> "Unseasonal rain during the marketing season in many zones hindered picking and movement of the crop." (1)

In 1961/62 the cotton-growing areas of Uganda experienced abnormally severe rainfall, which led to severe attacks of boll-rot and boll-worm.

Table I. 2

Cotton Production, Cotton Acreages, and the Average Price to the Grower.

1 Year	2 Estimated Acreage Planted to Cotton	3 Bales of Lint (400lb.)	4 Average Yields of Seed Cotton per acre - lbs.	5 Average Price to Growers for 100lbs Seed Cotton Sh.	 Ct.
1953/54	1,611,223	397,594	325	49.	40
1954/55	1,738,821	299,831	227	58.	51
1955/56	1,585,500	363,449	305	52	11
1960/61	1,516,155	371,022	318	52	23
1961/62	2,072,121	181,137	113	52	06
1962/63	1,803,459	358,288	257	53	56

Source: Uganda Government Department of Agriculture, Annual Report 1963, p. 5.

(1) Department of Agriculture, Annual Report, 1955, p. 5.

The influence of relative coffee and cotton prices on the output of these two crops in Buganda has been discussed by B. Van Arkadie, who shows that the expansion of coffee acreages at the expense of cotton in the 1950s can be related to the greater profitability of coffee.(1) A regional analysis of cotton prices and yields per acre with total output in the succeeding year made by D. Belshaw for the years 1958/59 to 1962/63 also demonstrated that in 19 cases out of 20 changes in output moved in the same direction as one or both of the other factors.(2)

While it is very possible that non-institutional credit in the form of small loans made within the farming community assisted the expansion of output over this period, no writer has suggested that this was the case.(3)

(1) B. Van Arkadie, "Trends in the Output of Cotton and Coffee", East African Institute of Social Research, Economic Development Research Project, paper no. 70, March, 1965.

(2) D.G.R. Belshaw "The Level of Incentives: A Factor Limiting Agricultural Production in Uganda", Paper read to the Annual Conference of the Uganda Agricultural Association, September, 1963, p. 56.

(3) See, for example, C. Ehrlich in Harlow, Chilver and Smith op.cit. pp. 395-475, I.B.R.D., op.cit. pp. 16, 17 and C. Wrigley "Crops and Wealth in Uganda", East African Institute of Social Research 1959, passim. This point is discussed further in Chapter II, sect. 1. 3.

2. The Program for Agricultural Development.

There is a general assumption in Uganda that the initiative for agriculture development must still come partly from the public sector. Only the Government has sufficient resources for large scale experimentation with new techniques and new varieties of crops. The Government commands access to a volume of capital and to technical and managerial know-how which is out of all relation to that enjoyed by any single farmer in the private sector. This assumption is made explicit in the agricultural program outlined in the 1966-70 Five Year Plan. The Plan lays considerable emphasis on the further development of the sector. It enumerates the following reasons for this:

1. "Agricultural stagnation ... would exclude the majority of the population from contributing to or participating in the benefits of development. It is a major principle of Ugandan development policy that progress should be spread throughout the country."
2. Food supplies must grow faster than the expansion of the population, in order to improve dietary standards.
3. Increases in agricultural exports will increase foreign exchange earnings.
4. Growth of rural incomes will provide an expanding market for the products of the urban areas.
5. "Farm communities can use the surplus generated by their efforts in agriculture to build facilities to enrich rural life, creating

an environment more in keeping with modern life." (1)

The aims of the Development Plan with respect to the agricultural sector are:

1. to achieve a growth of gross monetary product of agriculture of 5.1% per annum during the Plan period, and of subsistence product of 3.2%; i.e. an overall increase of 4.3% per annum.

2. to diversify the sector so that the economy is less dependant on robusta coffee and,to a lesser extent, on cotton.

Table 3 taken from the Plan presents a breakdown of predicted development for different products.

Diagram 1, also taken from "Work for Progress" illustrates the size of the planned expansion of the agricultural sector over the years 1966-81 as it relates to the planned development of the economy as a whole. As industrial capacity and output rise it is planned to reduce the dominance of the agriculture sector with its largely uncontrollable fluctuations in income (2) arising both from climatic factors and movements in world prices for Uganda's main exports. (Table 4 lists the prices paid to farmers for cotton and coffee over the period 1950-65). Despite the existance of Marketing Boards for these crops it has been impossible to maintain a constant price to the grower.

(1) "Work for Progress", pp. 14 and 15.

(2) both national income and personal incomes.

Table I. 3

Breakdown of Gross Output from the Rural Sector indluding Subsistence (Current Prices),(1) 1966 and 1971

Product	Unit of Output	1966 Quantity	1966 Value(2) £ million	1971 Quantity	1971 Value(2) £ million
Robusta	Th. tons	190	19.9	240	18.9
Arabica	" "	10	2.9	20	4.9
Cotton Lint	" "	77	16.8	103	19.8
Seeds	" "	170	2.5	230	3.4
Sugar	" "	115	4.7	230	9.3
G/nuts	" "	154	6.4	224	9.6
Tea	" "	10	3.4	19	6.3
Tobacco	" "	4	0.6	11	1.4
Soft.Fibres	" "	-	-	10	0.6
Cocoa	" "	negligible		3	0.5
Sisal	" "			2	0.2
Rubber	" "	-	-	-	-
Other crops	" "	-	58.0	-	67.8
Wood	Cu. ft.	5.1	0.6	5.4	0.7
Sub-total, Agriculture and Forestry			115.8		143.4
Meat	Mil.lb.	255	12.0	315	14.6
Milk	Mil.gal.	79	16.8	105	21.0
H. & S.	Th.tons	3.9	1.0	4.3	1.3
Animal b.p.	" "	-	-	3.1	0.1
Eggs	Mil.doz.	16.5	1.7	21	2.2
Fish	Th. tons	76	3.1	104	4.2
Honey	Mil.lb.	negligible		11	
Wax	Th. tons			0.3	0.4
Sub-total, Animal Industry			34.6		43.8
	Grand Total		150.4		187.2

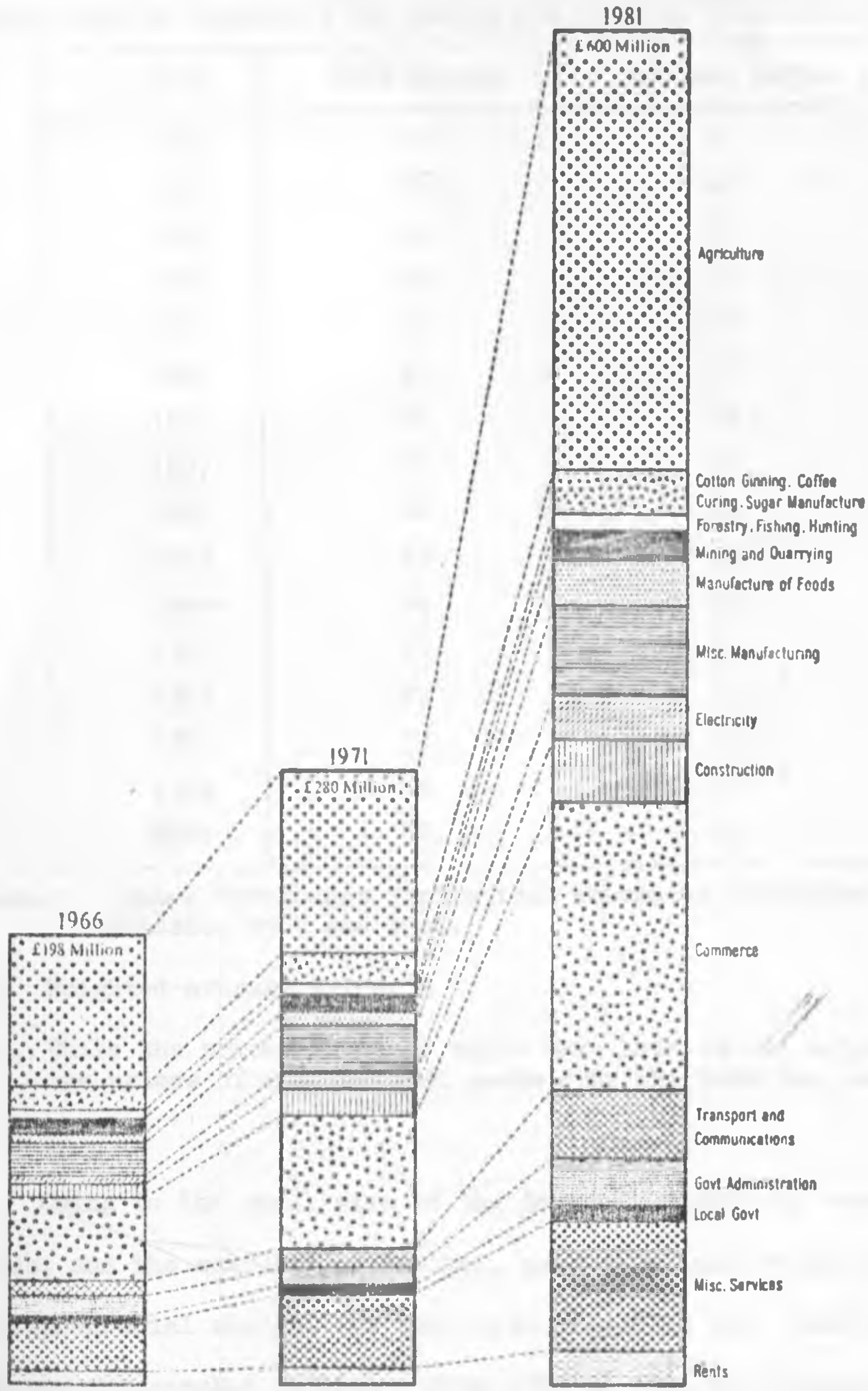
(1) 1966 Forecast of value based on 1965 prices; 1971 targets based on forecast 1971 prices.

(2) Valued at locally processed stage, i.e. cured coffee, ginned cotton white sugar, etc.

Source: "Work for Progress, Uganda's 2nd Five Year Plan", Government Printer, 1966, p. 76.

Diagram I. 1

Planned Changes in the Structure of the Uganda Economy.



Source: "Work for Progress", page 19.

Table I. 4

Prices Paid to Producers for Cotton and Coffee, 1950-1965. Cents per lb.

Year	Seed Cotton	Robusta Coffee (Unhulled)
1950	33	25
1951	45	40
1952	50	50
1953	50	70
1954	51	100
1955	61	125
1956	55	75
1957	56	80
1958	58	80
1959	47	68 (1)
1960	48	56 (1)
1961	55	50
1962	57	55 (1)
1963	57	48 (1)
1964	51	57 (1)
1965	56	43

Source: Uganda Government Statistical Abstracts, Government Printer, Entebbe, 1957 and 1966.

(1) Weighted average price.

Note: While the prices of these crops have both fallen below the 1955 peak, the prices of manufactured goods over the last ten years have risen.

Owing to the small size of the internal market for manufactured goods, and the scarcity of capital, machinery, and technical and entrepreneurial skills, the agricultural sector will remain the largest for the foreseeable future. From 1959 to 1964 the increase in the value of output of the manufacturing, mining and quarrying, construction and electricity sectors combined was only 7.8% higher than the growth of total Gross Domestic Product.

Table 5 gives a breakdown of estimated expenditure on agricultural development over the five year period. While credit does not figure as a particularly large item in this schedule, the figures do not tie up with those given in the section on agricultural credit itself. According to this section £4.25 million should be outstanding in short- and medium-term agricultural loans in 1971. This figure is the more accurate representation of plans for the expansion of credit as they stood in 1966.(1) If it is accepted then it can be seen that the provision of credit is one of the most important items in the Government's agricultural development plan.

The concern of the rest of this study is with the provision of credit. Five forms of agricultural credit are identifiable in Uganda; these are listed in Table 6. The Uganda Government has in the past been and will be in the future concerned predominantly with types 2 and 3. These also form the main subject matter of this thesis.

(1) See "Work for Progress", p. 61, and also Chapter VIII of this thesis.

Table I. 5

Proposed Central Government Development Expenditure on Agriculture and Animal Industry, 1966/67 - 1970/71.

	£ million
Cotton	1.70
Coffee	2.20
Tea (1)	0.91
Sugar (2)	4.00
Groundnuts	0.70
Tobacco	0.46
Cocoa	0.30
Sisal	0.20
Citrus	0.15
Forestry	0.28
Group Farms	4.29
Tractor Hire	1.50
Agricultural Education	1.32
Credit	1.20
Extension	0.17
Seed Multiplication	0.01
Miscellaneous	1.25
Sub-total, Agriculture	19.64
Dairy	2.30
Meat	1.70
Miscellaneous	1.25
Fisheries	0.15
Sub-total, Animal Industry	5.08
Grand Total	24.72

Source: "Work for Progress, Uganda's 2nd Five Year Development Plan", Government Printer, 1966, p. 75

(1) Total project value 4.3 million.

(2) Part of this sum may be met from para-statal or private sources.

Table I. 6

Types of Agricultural Credit

Type of Credit	Repayment period	General Purpose
1. Consumption credit	1 year or less	To ease seasonal cash shortages, especially in the pre-harvest period. Used directly for off-farm expenditure (food, school-fees, medical, etc.) it may release cash for farming which would otherwise have been ear-marked for these items.
2. Production credit	"	To ease seasonal shortages of cash required for recurrent farm inputs (labour, insecticide, fertilizers, tractor hire, etc.)
3. Medium-term credit	2 - 5 years	To facilitate investment leading to the extension or improvement of an existing enterprise, or the establishment of a new enterprise.
4. Long-term credit	6 years or more	Ditto. (Most long-term agricultural credit in Uganda is currently obtained by estates operated by Agricultural Enterprises Limited, a para-statal body.)
5. Crop finance	1 - 4 months	To finance the purchase of crops from farmers and their subsequent movement to the place of primary processing, and, in the case of cotton and coffee, repurchase by the Marketing Boards from the primary processors.

Chapter II

Developments in the Provision of Agricultural Credit, 1950 - 1966.

In 1950 virtually no institutional credit was available to African farmers in Uganda. Crop finance - for the purchase of existing crops - was, as it still is, obtainable from the commercial banks. This Chapter begins with a brief summary of the positions in 1950 of those institutions that are currently of importance with regard to the provision of credit to the agricultural sector.

1. The position in 1950

1. 1 The Commercial Banks.

In 1950, three expatriate commercial banks had branches in Uganda: Barclay's Bank D.C. and O. (5 branches), the National Bank of India (8), the Standard Bank of South Africa Ltd.(5).(1) Between them they averaged one branch per 288,000 people.(2) The banks were closely connected to London, their head offices and boards of directors being situated there, and each being partially integrated with important British Banks. Their loans and advances business in Uganda was devoted to financing expatriate and Government enterprise.

Seasonal credit provided for the purchase of crops from farmers,

(1) See Newlyn and Rowan, "Money and Banking in British Colonial Africa," Oxford University Press, 1954, pp. 76 et seq.

(2) A much lower ratio than in Southern Rhodesia (1:43,000), or Northern Rhodesia (1:82,000), where a greater degree of expatriate enterprise had led to the establishment of more branches. In Kenya, the ratio was 1:177,000, and in Tanganyika 1:288,000. Source: Newlyn and Rowan, op.cit., p. 77.

their movement to the places where primary processing takes place, and to meet the recurrent costs of processing incurred during the first weeks of the season constituted the main business of the commercial banks related to the agricultural sector. The provision of crop finance was (and still is) a lucrative (because quantitatively very large) and comparatively safe form of lending which has the additional advantage of being annually recurrent. The loans are in the form of heavily fluctuating overdrafts, are outstanding for a few months only, and are renewable at the banks' discretion. The banks' statistics for loans and advances were at this time only published at quarterly intervals, and it is therefore impossible to identify seasonal fluctuations in loans outstanding due to crop finance requirements. The combined value of the cotton and coffee crops to the African growers in 1951 was £14.0 million and £16.3 million in 1952.(1) While it is unlikely that the banks would have to finance the purchase of the full value of the crop before the processors began selling, additional credit would be required to finance the processors' running costs at the beginning of the season.

The substantial crop finance business was financed mainly by a rapid contraction in the amount due from banks in East Africa and banks abroad. If necessary, the banks could borrow supplementary funds from these sources. Newlyn and Rowan reported that, "in Kampala, it is quite normal for Branches to hold 100% of their deposits in cash immediately

(1) Source: Uganda Government, Statistical Abstract, 1957, p. 46.

prior to the buying season." At December 31st 1951, total deposits held by the commercial banks in Uganda amounted to £14.6 million. Of these, demand deposits were worth £10.6 million, time deposits were worth £3.7 million and savings deposits £ 0.3 million. At 31st December, 1952, the breakdown was: demand deposits, £18.2 million, time deposits: £0.9 million, and savings deposits £0.3 million. The total value of demand deposits fluctuated throughout the '50s between £10-19 million.(1) In March, 1952, the interest rates paid on customers' deposits by the East African commercial banks were: demand deposits - nil; time deposits - 1½% (6 - 9 months), 1¾% (9 - 12 months), 2% (over 12 months); and 2½% on savings accounts. The minimum advances rate rose to 6% in April that year. Thus the provision of seasonal short-term loans, possibly in excess of £10 million p.a. was a highly profitable business.

1.2 The Absence of a Land Bank.

Land Banks are specialised institutions whose main function is the provision of long-term credit (up to thirty years) for agricultural development, normally on the security of first mortgages on land. The loans are normally for the purchase of land and buildings, the erection of buildings, and in some cases for the purchase of equipment. They are larger and carry a greater degree of risk than the short-term loans preferred by the commercial banks.(2) The land banks therefore require

(1) Source: J. Loxley, "The Development of the Monetary and Financial System of the East African Currency Area, 1950 to 1964", Unpublished Ph.D. thesis, p. 108, 1966.

(2) The average value of the long-term loans paid out by the Land Banks of Tanganyika in 1960 was £4,020. Source: J. Loxley, op.cit, p. 272.

a well-qualified staff of assessors and inspectors. While they may sometimes provide short-term finance for agricultural production on the security of crops, this is a supplementary activity (it requires a different securities portfolio) and not the banks' raison d'etre. Thus the Tanganyika Land Bank tried to discourage short-term borrowers in 1959 by deliberately creating a 2% interest differential between short- and long-term loans.(1)

In 1950 Uganda, unlike Kenya and Tanzania, had no land bank. This was primarily due to the much smaller number of freehold agricultural estates owned by expatriate farmers that existed in Uganda, as compared to the other two countries. It is relevant here to describe the present pattern of land tenure in Uganda, which has not changed since 1950. Table II. 1 shows the 1960 classification of land-use in Uganda.

The general pattern of land tenure in Uganda was described by the I.B.R.D. mission in 1961 as follows:

> "Over the greater part of Uganda, traditional relationships to land persist ... In general the rights in land which the cultivator enjoys depend largely on his continuing position as a member of his society and are secure so long as he is in occupation of the land allocated to him. His individual claim, as such, is to the land actually cultivated. Open range land or fallow is free to all and the concern of no one in regard to its maintenance or improvement." (2)

There are variations on this system in different areas. Among the Badama in Bukedi District, for example, there is strict clan control over the allocation of empty land, whereas in less densely populated

(1) Ibid.

(2) I.B.R.D. op. cit., p. 206.

areas (e.g. parts of Lango and Acholi Districts) the right of entry is not so strictly controlled. In no case, with the exception of mailo land in Buganda and a few freehold titles in Kigesi District, do individuals hold transferable legal title to land.

Table II. 1
Land Classification in Uganda

	Square Miles	Acres (thousands)	Percentages of Total Area
Government forest reserves	6,197	3,966	6.80
National parks and game reserves	5,970	3,821	6.55
Sleeping sickness areas	5,810	3,718	6.38
Townships	201	129	.22
Alienated to non-Africans	530	339	.58
Allotted to individual Africans	9,746	6,238	10.69
All other land	46,294	29,628	50.80
Total land area	74,748	47,839	82.02
Open water and swamp	16,386	10,487	17.98
Total for Uganda	91,134	58,326	100.00

Source: The International Bank for Reconstruction and Development, "The Economic Development of Uganda", John Hopkins Press 1962, p. 125.

Land in Uganda is either held privately or vested in the Uganda Government. The total of privately held land in Uganda only constitutes 12% of the total land area. Of this, approximately 1.5% is freehold land held in fee simple (of which roughly 44% is held by non-Africans); the remaining 10.5% is made up of roughly 8,000 square miles of mailo land in Buganda Region.[1] This land is a form of freehold land, but cannot be alienated to non-Africans. In 1960, at least 35% of mailo titles were estimated to be unregistered. This accumulated backlog derives from the rapid fragmentation of mailo titles that has occurred since this system of tenure was instituted under the Buganda Agreement of 1900. At this time 4,000 mailo land titles were created. By 1960 there were over 50,000 titles belonging partly to large landowners, and partly to landed peasants. As a group, the larger mailo landowners have so far conspicuously failed to develop a nucleus of efficiently run agricultural estates, many of them owning large tracts of unexploited land.

In 1950 the Protectorate Government declared that Crown Land outside Buganda was to be held in trust for the use and benefit of the African population, thus effectively discouraging the further development of expatriate estate agriculture. This land is now controlled by the Uganda Government which has continued to discourage similar development.

Mention must be made, however, of the one attempt made in Uganda to provide credit facilities comparable to those of a land bank. The Uganda Credit and Savings Bank[2] was established in 1950 to "facilitate loans to Africans in furtherance of Agricultural, Commercial, Building and Cooperative Society purposes in the Protectorate."[3] Loans were to

(1) Source: "The Economic Development of Uganda", IBRD Report 1962, page 184 (Between 1950 and 1961 there was little change in the pattern of land ownership.)

(2) Discussed further in sections 1.5 and 2.3 of this Chapter.

(3) Uganda Ordinance No. 20 of 1950.

be granted on the security of a first mortgage on land, equitable mortgages, life insurance policies, and instruments of charge on property. The Bank's loan facilities have been classified as "similar to those of the land banks except that they extend to industry and trade."(1) The Bank's activities are discussed later in this chapter.

1.3 Rural Debt.

"Hitherto there has been no widespread indebtedness (in Uganda) and the peasant population has been able to tide over from one crop season to the next without resort to credit. There is no regular class of moneylenders and when the peasant does borrow, it is usually from a friend for a short-term and without interest."(2) Although there are very few money lenders in Uganda, legislation to restrict their activities exists here as in the other former British territories of tropical Africa.(3) In 1951 the Uganda Protectorate Government passed an ordinance (no. 31 of 1951) controlling the activities of money lenders. This stated that (i) agreements should be in writing, (ii) all money lenders should be licensed, and (iii) rates of interest in excess of 24% per annum should be regarded by the courts as excessive.

(1) Newlyn and Rowan op. cit., p. 126: "In addition to providing loan facilities (which are similar to those of the land banks except that they extend to industry and trade) the bank acts as a savings bank receiving savings deposits from Africans on which it pays interest."

(2) Department of Cooperative Development, Annual Report 1948, p. 5

(3) See Newlyn and Rowan op. cit, p. 136.

No special protection was afforded to African borrowers. The Ordinance has affected the activities of only a very small number of people - in 1964 two applications were made for licenses.(1) (A similar ordinance had been passed in Kenya in 1933. In Kenya rates in excess of 48% are regarded as excessive. In addition all suits by non-Africans against Africans are barred where the African has received more than £10, unless the credit has been granted under a written contract approved by an attesting officer. In Tanganyika, Africans receive special protection similar to that granted in Kenya.)(2)

There is no recorded information concerning the type or degree of rural debt existing in Uganda in 1950. The basis for the following statements derives from conversations which the writer has had, mainly with farmers and civil servants, in Masaka Division (Buganda Region), Lango District (Northern Region), and Kigesi District (Western Region). While it was true that a "burden of rural debt" comparable to that in India or even in Ghana(3) did not exist in Uganda rural indebtedness did. The amounts involved, however, were generally small, loans were more often made in kind than in cash (e.g. seed, or cattle for the payment of bride-price), and credit was given most frequently to friends and relatives, i.e. to people of comparable economic status, or provided by farm labourers to their employers for periods of one to twelve months.(4)

(1) Loxley op.cit., p. 184. Loxley also states, "money lending (in East Africa) is practised on a very small scale and seems to be restricted almost entirely to the Asian community in the larger towns of Kenya."

(2) East Africa Royal Commission 1953-55 Report, H.M.S.O. London 1955, p. 96

(3) See J.C. Degraft-Johnson "African Experiment", Watts, London 1958 pp. 117-126.

(4) See Chapter VI. Sections 6 and 7.

With the possible exception of isolated money lenders in Buganda there seems to have been no exploitation of borrowers by lenders. Loans were normally interest free or else interest took the part of a gift made to the lender when the principal was repaid. Security was not usually asked and repayment periods not rigidly fixed. Lenders took comfort in the fact that even if the loan itself was not repaid they might at a later date obtain reciprocal assistance from the borrower. (Although poor relatives might constitute a more persistent drain on the resources of wealthier kin.)

Given the complete lack of quantitative data, one cannot now estimate the contribution of this type of lending to agricultural development. Even in India, despite the predominance of money lenders, this form of lending satisfies 14.2% of the credit needs of the rural population, while the Government commercial banks and cooperatives combined only satisfy 7.3% of credit requirements.(1) In Uganda, where money lenders do not exist and farmers could not obtain institutional credit prior to the 1950s, relatives and friends were the most important source of credit. The loans could not be expected to finance substantial expenditure on medium-term farm development. They were probably as often intra-seasonal as for longer periods. However, by helping farmers to overcome a bad season, by enabling them to obtain labour at crucial periods and by assisting peasants in establishing their own farms as young men this type of credit may have been of very great importance to

(1) S.V. Ayyar and A. Ramaswami, "Reorganisation of Rural Credit in India", Indian Journal of Agricultural Economics, Vol. XI, April-June 1956, p.22.

individual farmers. Informal loans of this nature were probably better suited to the needs of the agricultural community than institutional credit since the terms were more flexible.

It was possible for agricultural development to take place in Uganda without the emergance of conspicious rural indebtedness owing to

(i) the absence of land pressure in most areas. Evidence obtained in India indicates that this factor is more important than the absence of title to land. In India tenant farmers are important borrowers.(1) Where there is strong demand for credit rural money lenders can raise interest rates to cover the risk of making unsecured loans.(2)

(ii) the absence of title to land. However, the absence of title to land would deter any potential money lenders interested as much in increasing their landholding through seized security as in making cash profits. Where demand for credit was low and also price elastic the absence of security would deter all potential lenders who could not charge high enough rates to cover the risk of lending. (It has been calculated that where the normal rate of interest is 10% per annum, a risk of 10% bad debts would force a lender to raise his interest to 22.2% per annum.)(3)

(1) See "All-India Rural Credit Follow-up Survey 1956-7, General Review Report," Reserve Bank of India, 1960, p. 641.

(2) See A. Bottomley, "The Structure of Interest Rates in Underdeveloped Rural Areas", Journal of Farm Economics, May 1964, p. 318.

(3) See U Tun Wai, "Interest Rates Outside the Organised Money Markets of Underdeveloped Countries", International Monetary Fund Staff Papers, November 1957, p. 110.

(iii) the importance of subsistence production (which accounted for just over 50% of African agricultural production in 1950)(1), and the self-sufficiency of the agricultural population in its most basic need - food,

(iv) the fact that cash-crops were cultivated largely by family labour,

(v) the fact that labourers were frequently paid in kind (with food produced on the employers' shamba),

(vi) the low value of capital equipment.

(vii) coffee seedlings were often obtained without cash payment, being reared by the farmer or stolen from Government nurseries.(2)

Statements have been made which suggest that there was nonetheless a demand for credit among African farmers. The East Africa Royal Commission reported that,

> "A further sense of grievance on the part of the African arises from the fact that loans made by established banks are made almost entirely to non-Africans." (3)

The Commission produced no evidence to support this statement.

The most convincing evidence that lack of capital prevented the development of large-scale farming is the emergence of large coffee farms and a few African-owned estates in Buganda in the early '50s. Rising prices presented an incentive to increase plantings. On the larger farms rapid development was generally associated with the availability

(1) Source: Uganda Government Statistical Abstract 1957, p. 79.

(2) In Masaka Division in the early '50s up to 50% of the seedlings reared by the Government were stolen. Source: Annual Reports of Masaka Divisional Agricultural Office, 1951-53. The price of seedlings was at -/02 each in any case low.

(3) East Africa Royal Commission 1953-1955 Report, H.M.S.O., London 1955, p. 98.

of other sources of income.[1] The investment was speculative, and with the fall in coffee prices many large farmers are moving out of coffee. Nonetheless, the emergence of these farms illustrated that the availability of additional capital facilitated the exploitation of an important opportunity for economic gain. (This self-financed expansion of coffee may be compared with the present provision of institutional credit for the development of tea, which is also speculative.)[2]

The situation in Uganda though typical of a number of African countries, including Kenya and Tanganyika,[3] presents a strong contrast to the situation that has generally been assumed to exist in developing countries. H. Belshaw, for example, stated in 1959:

> "The bulk of credit comes from private money lenders, merchants and landlords under extremely onerous conditions." (4)

Belshaw presupposes that to reduce the cost of credit and thus make it available to more farmers, it is necessary, "to promote credit institutions in substitution for or in competition with private lenders."[5]

(1) This phenomenon has been examined in the Buganda Large Farm Survey, conducted by a team from Cambridge University in 1966. Their report is not yet published. See also Chapter 6, below.

(2) See Chapter 7, section 1.

(3) Cf. Loxley op.cit, p. 83. In Kenya and Tanganyika also there were virtually no money lenders operating in the agricultural sector.

(4) H. Belshaw, "Agricultural Credit in Economically Underdeveloped Countries", F.A.O., Rome, 1959, p. 234.

(5) Ibid., p. 236.

The basis for the assumption that existing facilities in under-developed countries were frequently exploitive can be found (i) in the following table which shows the level of interest rates charged by money lenders in various countries, and (ii) in statistics showing the importance of money lenders in Asia. In India, for example, it has been shown that money lenders provide 70% of all the credit needs of the rural population.[1]

Table II. 2

Money lenders' Rates of Interest[2]
(in per cent per annum)

	Lower Exceptional	Usual	Occasional	Higher Exceptional
AFRICA				
Nigeria(1)				500
(2)		45		150
ASIA				
Burma (1)	12 - 15	24 - 36	50 - 100	400 - 1,800
(2)	12 - 18	24 - 36	50 - 60	100 - 250
Cambodia		36 - 84	120	
Ceylon (1)	13.5	18 - 24	67	100
(2)	6	6 - 18	18 and above	
(3)	10 - 15	17 - 20	27 - 36	50
(4)				600

(1) Source: Report of the Committee of Direction, All-India Rural Credit Survey Vol.II, quoted in S.V. Ayyar and A. Ramaswami "Reorganisation of Rural Credit in India", Indian Journal of Agricultural Economics, Vol. XI, April-June 1956, p. 22.

(2) For Note see foot of Table II. 2, page 33

Table II. 2 (Cont'd.)

		Lower Exceptional	Usual	Occasional	Higher Exceptional
China	(1)		20 - 30	40 and above	
	(2)		24 - 48	72 - 96	100-200 and above
India	(1)		12 - 50		300 - 400
	(2)		25 - 50		
Indonesia			50	200	500 - 600
Japan		10	10 - 15	15 - 20	20 and above
Malaya				100	
Pakistan	(1)		30		300
	(2)		25 - 30		150
Philippines	(1)		60 -200		300
	(2)		25 - 30	100 -200	400
	(3)		20		300
Thailand	(1)		36	60	
	(2)	18 and below	25 - 30	40 - 60	92
Viet-Nam	(1)	20	36 -100		
	(2)		50 -100	240 -300	3,650
LATIN AMERICA					
Colombia			18 - 24	48	
Cuba	(1)	12	24 - 30		
	(2)	8 - 18	24 - 40		
Guatemala		8 - 12		100	
Haiti			100		over 100
Honduras			24 - 36		200-600
Mexico			60		300-1,200
MIDDLE EAST					
Egypt		15	25 - 40		200
Iran				200	775
Iraq	(1)		20 - 50	100	
	(2)		100	200 -400	700

Table II. 2 (Cont'd.)

		Lower Exceptional	Usual	Occasional	Higher Exceptional
Israel	(1)		140		
	(2)		30		
	(3)		18 - 24		
	(4)		30		80 - 90
Jordan	(1)		60		
	(2)		20 - 40	exorbitant	
Lebanon	(1)			50 - 100	
	(2)		22 - 24	33	
Sudan, northern				100	
Syria	(1)	9 - 20	40 - 45	150	
	(2)	18	40		

Note : For individual countries data are given in chronological order where more than one source of information is available. For most countries, the final set of data are post-1945. The rates shown for Japan and Egypt however are pre-war.

Source: U Tun Wai "Interest Rates Outside the Organised Money Markets of Underdeveloped Countries", Staff Papers of the International Monetary Fund, Vol. VI, November 1967, p. 140.

In the absence of any serious degree of rural indebtedness, it may be asked why the Ugandan Government has felt compelled over the past seventeen years to devise means of enabling farmers to incur relatively substantial and rigid debt obligations, establishing special funds and Credit Schemes for this purpose. The answer is as follows. Assuming that adequate outlets for expanded agricultural production exist, then land, labour, capital and entrepreneurial ability are the four potentially limiting factors to development in the agricultural sector. In Uganda, neither land nor labour has been considered to be in short supply in most areas and an agricultural extension service has operated throughout the country, designed to teach farmers the skills that they lacked. Per capita cash incomes, however, were - in the eyes of an expatriate civil service - conspicuously low (see Table 3). The absence of any institutional means of raising loans was obvious. While it was possible that agricultural development would take place without the provision of credit (as did in fact occur)[1] it was felt that the provision of credit would induce investment in new techniques and equipment at a greater speed than would otherwise be feasible, thus accelerating the increase in agricultural production.

Table II. 3

Disposable Annual Per Capita Incomes at Current Prices[2]

	£	Index(1954 = 100)
1954	20.82	100.00
1955	22.01	105.71
1956	21.69	104.17
1957	21.97	105.52
1958	21.19	101.77
1959	20.97	100.72
1960	20.84	100.09
1961	21.03	101.00
1962	20.23	97.16
1963	21.99	105.61

Source: C. Frank, "The Sugar Industry in East Africa", East African Studies No. 20, 1966, p. 34.

(1) This point is discussed further in Chapter 9.

(2) The estimates include salaries, profits and dividends paid to Ugandans and expatriates working mainly in the urban areas. Estimates for rural Uganda alone are not available, but would be somewhat below these averages.

1.4 The Establishment of the Uganda Credit and Savings Bank.

Until 1950 there were no institutional sources from which African farmers in Uganda could obtain credit. In July of that year the Uganda Credit and Savings Bank was established. The aims of the Bank, and the security against which it was able to make loans have been described in Section 1.2 of this Chapter.

The sources of the Bank's funds were listed in the establishing Ordinance as follows:-

"(a) such sums as may, from time to time, be placed at the disposal of the Bank by resolution of the Legislative Council;

(b) such sums as may be raised specifically for the purpose of the Bank by loan, either within or without the Protectorate, either by the Government or by the Bank with the approval of the Legislative Council;

(c) such sums as the Board may, with the consent of the Governor in Council, raise either by means of a bank overdraft or by such other means as may be prescribed: and

(d) such sums as may accrue to the Bank by virtue of its operations in accordance with the provisions of this Ordinance."(1)

The Bank was financed by an initial grant of £631,749 voted by the Legislative Council from Government funds. This capital was in the form of gilt-edged securities which were transferred to the Bank at the going market value.

Since the first of the Bank's aims was to promote agricultural development, it is worth considering what the policy of the Department of Agriculture was at this stage, with regard to the development of African

(1) Ordinance 20, 1950, section 11.

farming. Unfortunately, no detailed statement of policy is available, the Department's Annual Report for 1950 stating briefly that current policy was "directed towards obtaining an improvement in the traditional farming systems and also, where possible, towards introducing more modern methods." The aims of the Department were firstly to ensure adequate food production and secondly to increase the output of cash crops by increasing yields per acre. The work of the extension service was concerned with the introduction of improved varieties of food-crops, the encouragement of early planting and adequate weeding of annual crops, the introduction of ox-drawn ploughs and cultivators, the construction of paspallum bunds and use of wash-stops, the pruning and mulching of coffee and the use of livestock manure on crops. At this stage farmers were not being encouraged to purchase exotic cattle, to establish deep litters of exotic poultry, or to plant tea (any of which might have required medium-term credit), but surprisingly, a few were being encouraged to purchase machinery. Although a little mechanised cultivation of food-crops had taken place in Uganda during the war, serious equipment trials did not start until 1947. By 1950, the Department was in a position to recommend different ploughs for difficult soil conditions, but still had only very limited costings for these, and could make virtually no recommendations on suitable equipment for mechanised planting, weeding, spraying or harvesting. In these circumstances it is surprising to find that the only reference in the Department's Annual Report for 1950 to the use made by farmers of the Bank is as follows:

"Introduction of mechanisation and nearly all other improvements envisaged in agricultural development schemes require investment of large amounts of capital, and ... additional finance is often required by those farmers who are participating in contract cultivation schemes. To this end the opening of the Uganda Credit and Savings Bank ... provides facilities for certain types of farmers to obtain cheap capital and, by the end of the year, a number of Baganda had made arrangements to make use of this Bank to purchase or hire machinery."

The Bank began operations without an inspectorate staff (although advice on loans plans was received from various Government Departments, including the Department of Agriculture). Of 830 application forms issued between October 2nd(1) and December 31st, 1950, 298 were submitted to the Bank requesting loans worth Shs. 4,533,900/-. Of these 166 worth Shs. 829,300/- were approved, of which 74 worth Shs. 214,300/- were for agriculture.(2) The subsequent operations of the Bank are discussed below in Section 2.3.

1.5 The Establishment of the Cooperative Movement.

The status of cooperative societies is considered here because these have since become an important medium for the provision of agricultural credit in Uganda. The first societies were registered in Uganda in 1947. Since the beginning the emphasis of the movement has been on the development of producers' primary marketing societies, and processing unions of which these societies are members. By 1950 there were already 255 registered primary marketing societies, with a membership of 22,746.(3) From the start, the bye-laws of these societies

(1) When the Bank began operations.

(2) Source: Uganda Credit and Savings Bank, Annual Report, 1950, p. 2

(3) Source: Department of Cooperative Development, Annual Report, 1950, p. 3. (The adult African population was 2.5 million. Source, Uganda Government Statistical Abstract, 1957, p. 10)

contained provision for the acceptance of deposits from, and the provision of loans to, individual members. At first nothing was done to encourage primary societies to provide loans. The Department's Annual Report for 1948 stated:

> "A growing need for the provision of short-term credit to cultivators is, however, apparent and it seems desirable for this need to be met by the formation of separate cooperative credit societies rather than by introducing this complication into producers' societies at the present stage." (1)

The following year the Department set forth its views in more detail:

> "In general it can be said that the purposes which the provision of credit facilities serve fall under two heads:
>
> (a) the relief of indebtedness; and
>
> (b) increasing productive resources.
>
> In the initial stages there was no pressing need to promote a cooperative credit movement in the Protectorate, but the subject has been kept under review. The relief of indebtedness presents no great problem in Uganda, but it is now clear that the introduction of the cooperative credit movement would be of value for increasing productive resources, particularly in rural communities. There is a need for short-term credit to enable agriculturalists to employ labour, to pay wages, purchase seed, etc., and for medium term purposes such as the purchase of agricultural implements, erection of storage accomodation, etc. The land tenure system does not readily lend itself, however, to the provision of long-term credit.
>
> "It is clear that the present system of land cultivation must eventually be superseded by mechanical aids if a large-scale increase in production is to be obtained . ... Mechanisation in turn will create a demand for credit in addition to that which exists for the purposes indicated above." (2)

It is against this early conviction that credit was essential to progress in the agricultural sector that subsequent developments must be considered.

At this stage, no cooperative societies received crop buying finance from the commercial banks; in Bugisu District, however, the Bugisu

(1) Source: Department of Cooperative Development, Annual Report, 1948 p. 5

(2) Annual Report, Department of Cooperative Development, 1949, p. 4

Coffee Scheme (incorporated under the Bugisu Coffee Scheme Ordinance, 1940)(1) acted as a central financing institution in that it made advances to registered coffee societies in the area for an amount equal to the value of a lorry-load of arabica coffee. This enabled societies to pay cash to members delivering their coffee at the beginning of the season. In other areas, however, it was the attitude of the Cooperative Department that members should be sufficiently loyal to be willing to forego cash payments until their societies had built up their own funds. It was the financial success of the Bugisu Coffee Scheme that enabled it to make annual advances to societies in the District.

2. Developments after 1950

2.1 The Commercial Banks' Attitudes Towards Lending to Agricultural Producers.

The statistics published by the East African Statistical Department provide the only record of commercial bank activities in Uganda from 1950 to 1964. This source is therefore used for Tables 4 and 5 to show the rise in the absolute level of loans and advances and the development of their distribution between sectors. The rise of loans to agriculture has been much slower than in other sectors. Despite an increase from three to ten in the number of commercial banks having branches in Uganda, a 400% increase in the number of branches (from 18 to 71), and a reduction in the ratio of branches to population to 1:106,000 by 1964, loans to the agricultrual sector only once exceeded the level reached in 1954 prior to 1962. Loans to other

(1) The Scheme had a buying monopoly of all arabica coffee sold in the District. It was responsible for collecting, weighing, grading, storing and rebulking the coffee for mailing to Nairobi.

Table II. 4

Distribution of Commercial Banks' Loans and Advances, 1951-1964.
(Figures in £'000)

Year as at 31 December	Loans to Industry	Index (1954 =100)	Loans to Agric.	Index (1954 =100)	Loans to other Sectors	Index (1954 =100)	Total Loans	Index (1954 =100)
1951	1,863	49.41	1,666	83,00	2,238	71.41	5,767	64.70
1952	2,159	57.26	1,173	58.44	2,151	68.63	5,483	61.51
1953	2,664	70.66	1,852	92.27	2,292	73.13	6,808	76.38
1954	3,770	100.00	2,007	100.00	3,134	100.00	8,911	100.00
1955	4,606	122.17	2,172	108.21	5,284	168.53	12,062	135.33
1956	5,839	154.87	1,992	99.25	3,602	114.93	11,433	128.27
1957	5,334	141.48	1,990	99.15	4,162	132.80	11,486	128,87
1958	4,685	124.26	1,341	66.81	5,310	169.43	11,336	127.18
1959	6,477	171.80	1,727	86.04	4,397	140.29	12,601	141.38
1960	5,964	158.19	2,179	108.56	5,255	167.67	13,398	150.32
1961	5,828	154.58	2,002	99.74	6,405	204.37	14,235	159.71
1962	7,029	186.44	3,617	180.21	6,345	202.45	16,991	190.63
1963	7,161	189.94	3,275	163.17	12,090	385.76	22,526	252.7
1964	7,969	211.37	3,794	189.03	19,401	619.04	31,164	349.66

Source: Uganda Government Statistical Abstracts, 1957 - 1965.

Table II. 5

Relationship of Commercial Bank Credit to Sectoral Output: the Agricultural Sector compared to the Rest of the Economy. (£'000)

Year	1 Loans to Monetary Agricultural Sector	2 Agricultural G.D.P.*	3 1 ag % 2	4 Loans to other Sectors	5 G.D.P. other Sectors	6 4 ag % 5	7 Total Loans	8 Total Monetary G.D.P.	9 7 ag % 8
1951	1,666	n.a.		4,101	n.a.		5,767	n.a.	
1952	1,173	n.a.		4,310	n.a.		5,483	n.a.	
1953	1,852	n.a.		4,956	n.a.		6,808	n.a.	
1954	2,007	52,758	3,8	6,904	40,264	17.1	8,911	93,022	9.6
1955	2,172	55,132	3.9	9,890	46,858	21,0	12,062	101,990	11.8
1956	1,992	51,766	3.7	9,441	51,002	18.6	11,433	102,778	11.1
1957	1,990	56,524	3.6	9,496	52,851	18.0	11,486	109,375	10.5
1958	1,341	52,952	2.6	9,995	53,395	18.6	11,336	106,347	10.4
1959	1,727	50,757	3.4	10,874	57,117	19.0	12,601	107,874	11.8
1960	2,179	51,842	4.2	11,219	58,973	18.9	13,398	110,815	12.0
1961	2,002	50,718	4.0	12,233	59,629	20.5	14,235	110,447	12.9
1962	3,617	46,906	7.7	13,374	59,919	22.4	16,991	106,825	16.0
1963	3,275	56,046	5.8	19,251	64,680	29.4	22,526	120,726	18.7
1964+	3,794	60,016	6.4	27,370	67,743	40,4	31,164	127,759	24.4

* Excluding subsistence sector

\+ Provisional

Source: Uganda Government Statistical Abstracts, 1957-1965.

sectors, however, rose substantially above the 1954 level. It is interesting to compare the Uganda figures with the position in Great Britain, where the proportion of total bank advances going to "agriculture"[1] during the latter half of the 1950s averaged 11%, while agriculture's contribution to G.D.P. was about 4%.[2] Unfortunately the British figures include a wider range of loans and therefore cannot be used for direct comparison, with Uganda, but they nonetheless reveal a complete reversal of the proportional distribution of loans as related to sector product. This naturally provokes the question why did the commercial banks find it so difficult to find new opportunities for lending in this the largest sector of the economy?

Two partial answers to the question lie in the type of small-scale peasant farming, much of it subsistence production, that prevails throughout Uganda, and in the absence of a market in land. Even in Buganda Region, where there are land titles, the Uganda Credit and Savings Bank experienced considerable difficulty in realising a satisfactory price for seized security put up for sale during the early '50s.[3]

(1) "These figures include loans to occupiers of agricultural land for current purposes, long-term loans to landlords and owner occupiers for purchase or improvement of farms, farmers' personal borrowings and loans to agricultural merchants and livestock dealers (who are themselves large providers of credit to farmers)." "Report of the Committee on the Working of the Monetary System" (Radcliffe Report) Command 827 H.M.S.O., London, 1959, page 314.

(2) Ibid, page 314. While the proportion of commercial bank loans going to agriculture has since fallen slightly, in 1965 it was still nearly 10%. See S. Hoopee, "The Financing of British Agriculture", Journal of the Institute of Bankers, October, 1965, page 341.

(3) See Section 2. 3 below.

British farmers operate on a larger scale than their counterparts in Uganda, and enjoy Government guaranteed prices for their produce. Furthermore, in Britain industrial and commercial enterprises are able to raise public loans and are much less dependant on the banks. Whereas in Uganda the banks are fully lent, in Britain they are underlent:

> "The present ratio of advances to deposits is so far below the figures to which the banks were accustomed just before 1939, that the banks consider that their advances could be greatly expanded .... This has obvious relevance to questions of the finance of agricultural and small industry." (1)

In 1955, the East African Royal Commission explained the failure of African peasant farmers to obtain loans from commercial sources in these terms:

> "Borrowing depends upon the existence of a negotiable security and upon the availability of an income out of which the service of the loan can be met. In the traditional subsistence economies these conditions do not exist." (2)

Six years later the World Bank Mission to Uganda supported this argument, stating:

> "The best way of widening the African clientele of commercial banks, however is by action outside the banks' own field: specifically, through the creation of adequate collateral for bank credit by carrying out land surveys and land title registration in Buganda, and by the spread of freehold land tenure and title registration in the rest of the country."

Although the commercial banks in Uganda are held to have been influenced

(1) "Report of the Committee on the Working of the Monetary System", H.M.S.O., London, 1959, pp. 48-49.

(2) Report of the East African Royal Commission 1953-1955, Command 9457, H.M.S.O., p. 97.

by British banking practices, the Radcliffe Report demonstrated that British banks are willing to make unsecured short-term loans to agriculture, estimating that "one-third or more of the total of bank advances for agriculture is unsecured."(1) In Uganda, then, what deterred the commercial Banks, with strong British connections, from adopting a similar policy? Firstly, the fact that Branch Managers considered all forms of lending to the peasant farming community as risky propositions and had no detailed data on the basis of which they could assess individual applications; secondly, the very low value of the loans required; thirdly, the complete lack of contact between Branch Managers and their potential clientele in the farming community; fourthly, the unwillingness of the commercial Banks to carry the cost of an agricultural inspectorate staff which, while primarily concerned with medium-term lending, might also have inspected the farms of borrowers of short-term funds; fifthly, the lack amongst most farmers of security in the form of either land, capital stock or liquid cash reserves. While many farmers own cattle, these are not branded. It is, therefore, easy to deceive an outsider as to the total number owned. The banks had no means of selecting those larger farmers who were likely to be good borrowers from the general run of the farming community. On this point, the I.B.R.D. Report stated in its section on agricultural credit,

"The Mission was struck by the way in which the various

(1) "Report of the Committee on the Working of the Monetary System," H.M.S.O., London, 1959, p. 314.

> communities in Uganda tend to keep to themselves in their social life. Such a lack of social interrelationships is particularly hampering to a banker's ability to learn to know and to judge the character of potential African borrowers." (1)

The degree of insistence with which the commercial banks now demand security for short-term loans is indicative of the amount of risk which bank managers consider attach to the loans. Lending to agriculture is in any case affected by the fact that a substantial part of a farmer's assets (crops in the ground and in store) are perishable. In highly mechanised and capitalised farming areas the degree of risk is reduced owing to the timeliness with which operations such as planting, harvesting or spraying aginst crop disease can be performed, and to the much higher quality of crop storage facilities. Ugandan farmers enjoy none of these advantages. The small size of farms (few farmers grow as much as fifteen acres of one crop) and the average cash-crop acreage per farm is under three acres, the dependence on export crops confronted with heavily fluctuating world prices, and the riskiness of farming where the farmer owns little time-saving machinery, frequently does not spray the crops, and owns poor storage facilities,deter both bank lending to agriculture and the introduction of any form of crop insurance or scheme for guaranteed minimum returns which might encourage such lending.

So far as medium-term loans are concerned, it is not normal commercial banking practice to grant unsecured loans to agriculture. To do so in a developing country would demand a break with tradition, and it is unlikely that in the short-run the banks in Uganda could make this break profitably:

(1) op.cit., p. 74

a well-qualified inspectorate would have to be employed in order to ensure an adequate rate of return on the loans, and where a relatively small number of loans are provided, of low average value, the revenue accruing to the banks in the form of interest charges cannot cover the cost of the staff required. Two further courses of action which might attract the commercial banks to medium-term lending in the present agricultural sector are the registration of land-titles and the promotion of the emergence of groups of efficient, capitalised farmers who could provide good security in the form of equitable mortgages; neither is a short-run solution.

Moreover, in a situation where the banks are already fully lent, as is the case at present, the prospect of attracting the banks to new, risky business is remote. The degree to which the banks have been fully lent over the past seven years is shown in the following Table, which gives the ratio of commercial bank advances to deposits for the period 1959-1965. If the rate of increase in deposits remains lower than the rate of increase in advances there is likely to be at least a levelling-off in total lending. Since the banks are currently meeting their short-fall in local funds by overseas borrowing there may in the future be a contraction in total loans outstanding if (i) the banks are nationalised, or (ii) it is made more difficult or costly for them to transfer funds from abroad. Thus in the short-run there is no strictly financial pressure on the commercial banks to go out of their way to look for new business in risky areas.

Table II. 6

Year	Month	Total Deposits £ m	Total Advances £ m	Ratio Advances/Deposits %
1959	June	18.1	9.4	52.0
	December	16.8	13.1	77.9
1960	June	15.1	13.0	85.9
	December	13.3	14.1	106.1
1961	June	15.8	14.3	90.2
	December	15.7	15.1	96.3
1962	June	17.6	16.4	93.3
	December	17.9	17.6	98.7
1963	June	20.2	20.6	102.1
	December	19.7	23.1	117.3
1964	June	23.2	25.1	104.0
	December	27.8	31.9	112.4
1965	June	34.9	37.1	106.3
	December	35.0	37.2	106.3

Source: Uganda Government, Background to the Budget, 1963/64 and 1966/67.

2.2 The Commercial Banks' Crop Financing Activities.

The bulk of the cotton crop and a large part of the coffee crop in Uganda is sold by the producers to primary cooperative marketing societies. These in turn bulk the crops and sell the bulked produce to cooperative unions who undertake primary processing. In 1966 the Unions processed 67.5% of total cotton production and 40% of total coffee production.(1) The remainder is purchased and processed privately

(1) Department of Cooperative Development. The value of the unions' total turnover in 1966 was £19.4 million.

the majority of private processing plants being owned and/or managed by Asians.

The processed cotton and dry-hulled robusta coffee are in turn purchased and then exported by the Lint and Coffee Marketing Boards. Wet-pulped robustas and Bugisu arabica coffee are marketed direct by the processors. (In 1965, out of 168,000 tons of Ugandan coffee exported, 120,000 tons were dry processed robusta, and the remainder was divided equally between wet-processed robusta and Bugisu arabica.[1])

The cooperative movement still plays a relatively small part in the marketing of minor crops. These are for the most part either sold leja-leja by the grower in local markets, or else sold to up-country traders who either store the produce for subsequent sale locally when the price has risen or bulk it and resell it to one of the larger private buyers.

In the field of crop financing three developments of importance occurred between 1950 and 1964. Firstly, while the provision of crop finance remained predominantly, if not entirely, in the hands of the three main expatriate commercial banks, the volume of business rose. Owing to the lack of published statistics, the only possible indication of the degree of increase is a time series giving the rise in the total amount paid to the growers for Uganda's two main cash crops. This is given in Table 7 where it can be seen that although the rate of increase in total value to the growers was not constant, the value (at current prices) nonetheless doubled between 1951 and 1966. Through the period an increasing amount of crop finance went

(1) Source: Uganda Coffee Marketing Board.

to the Cooperative Unions, as indicated in Table 8. The loans were invariably fluctuating overdrafts secured by the hypothecation of stocks of produce and, in most cases, by a second mortgage on the factory installation (cotton ginnery or coffee hullery). The usual overdraft

Table II. 7

Combined Value of the Cotton and Robusta Coffee Crops to the Growers, 1950 - 1963 (£'000)

Year	Robusta Coffee	Index (1954 =100)	Cotton	Index (1954 =100)	Total Value	Index (1954 =100)
1950	1,820	26.50	7,334	56.73	9,154	46.25
1951	3,120	45.44	10,372	80.24	13,492	68.16
1952	3,925	57.16	11,929	92.28	15,854	80.10
1953	5,055	73.62	10,374	80.25	15,429	77.95
1954	6,866	100.00	12.926	100.00	19,792	100.00
1955	13,922	202.76	11,584	89.61	25,506	128.86
1956	7,970	116.07	12.576	97.29	20,546	103.80
1957	9,139	133.10	13,081	101.19	22,220	112.26
1958	10,605	154.45	12,792	98.96	23,397	118.21
1959	12,950	188.61	11,720	90.66	24,670	124.64
1960	12,458	181.44	10,517	81.36	22,975	116.08
1961	8,770	127.73	12,575	97.28	21,345	107.84
1962	11,796*	171.80	6,106	47.23	17,902	90.44
1963	14,251	207.55	12,432	96.17	26,683	134.81
1964	16,698	243.19	10,106	78.18	26,804	135.42

* includes all coffee

Source: Uganda Government, Statistical Abstracts, 1957, 1964, 1965.

interest rates were charged. In 1964 the Unions' turnover, excluding arabica coffee, was worth £12,906,448 and they purchased, through the primary societies, 27% of the robusta coffee crops, and 55% of the cotton crop. The turnover on these two crops was worth £5,145,381 and £7,761,067 respectively. It can be seen from the 1966 figures given above that their activities are still expanding.

Table II. 8

Cooperative Unions' Authorised Maximum Liability for Crop Finance, 1952 - 1964

Year	No. of Unions	Shs'000 Total Authorised Maximum Liability
1952	3	5,300
1953	n,a.	n.a.
1954	n.a.	n.a.
1955	5	30,220
1956	5	34,094
1957	9	41,263
1958	10	39,657
1959	13	56,811
1960	13	47,669
1961	14	46,463
1962	n.a.	n.a.
1963	17	65,003
1964	21	98,893

Source: Annual Reports of the Department of Cooperative Development.

During the peak buying months the Unions generally obtain advances worth up to 80% of their maximum authorised liability.

The pattern of drawings in the private sector for crop finance purposes appears in normal years to attain a marked peak in February. This can be explained by the seasonal nature of the credit supplemented by variations between districts in the start of the cotton buying season, which in 1966/67 began at the end of November in five areas, in December in five areas, in January in two areas and in February in one. Crop buying, and therefore drawings of credit, rises to a peak as more areas start purchasing the crop.

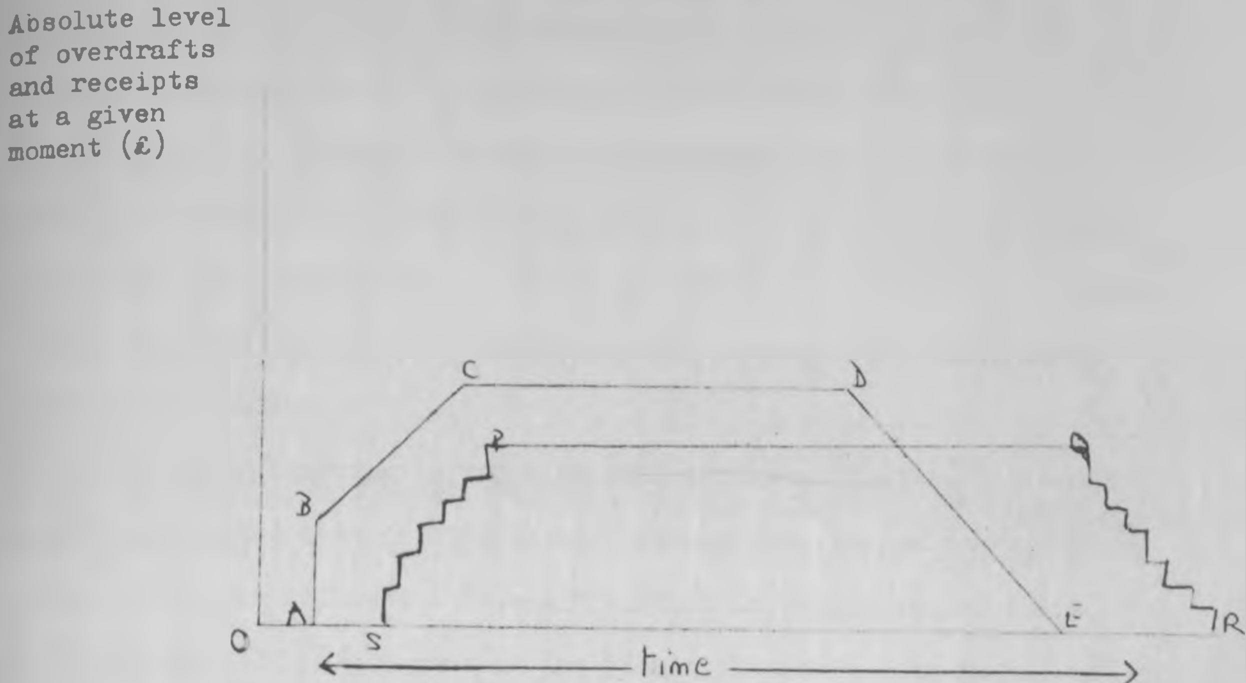
Table II. 9
Dates of 1966/67 Cotton Buying Season

Zone	Date Started	Date Ended
Mbale	21.11.66	14/15. 4.67
Teso	21.11.66	14/15. 4.67
S. Teso	21.11.66	14/15. 4.67
Usuku (Teso)	21.11.66	14/15. 4.67
Lango	28.11.66	14/15. 4.67
E. Acholi	5.12.66	14/15. 4.67
W. Nile	5.12.66	14/15. 4.67
Mengo/Entebbe	12.12.66	14/15. 4.67
Bunyoro	12.12.66	14/15. 4.67
Busoga	12.12.66	14/15. 4.67
Singo/Mubende	2. 1.67	14/15. 4.67
Masaka	30. 1.67	5. 5.67
Kazinga Channel	6. 2.67	28. 5.67

Source: Department of Cooperative Development

Overdrafts of cooperative unions (and presumably of private processors as well) rise sharply in the first month of the buying season, after which they remain at the same level until buying is completed. Stocks are then run down, and payments received from the Lint Marketing Board can be used to pay off the overdraft. Thus for individual zones the level of overdrafts remains on a plateau throughout the main part of the season. By the time the overdraft plateau is reached the ginnery stores are full with stocks of seed cotton and lint, and they remain full till the end of the season. As ginned cotton (i.e. lint) is collected by the Lint Marketing Board, more seed cotton is immediately moved in. The Board should pay for ginned cotton within seven days of receipt of a "note of ginning" from the ginner, irrespective of whether the cotton has been physically removed from the ginnery. If the Board for any reason delays payments, then the overdraft plateau may be extended beyond the end of the buying season.

The pattern of drawings and receipts can be illustrated diagramatically for all zones starting buying in a given month as follows:



ABCDE represents the level of overdrafts

SPQR represents the level of receipts from the Lint or Coffee Marketing Board.

The length and slope of BC for an individual ginnery will depend on the extent of its storage facilities, and the number of lorries available for transporting seed cotton to the ginnery. [8] It is, of course, within the power of the commercial banks to set a practical limit to the level of credit below the level warranted by storage capacity if a particular borrower has a poor credit or management record.

The pattern of drawings described presupposes that at the point when buying starts seed cotton is already available in bulk. Formerly the opening date of the season was artificially held back in order to achieve this situation, it being thought this would reduce the total overdraft requirements of the unions. It has been found, however, that the need to start operating the ginneries at full-scale, and with full stores, soon after the season starts, frequently exacerbates managerial and operational inefficiency. Recently, delays in starting the buying season have been due to administrative delays rather than continuance of the former policy.

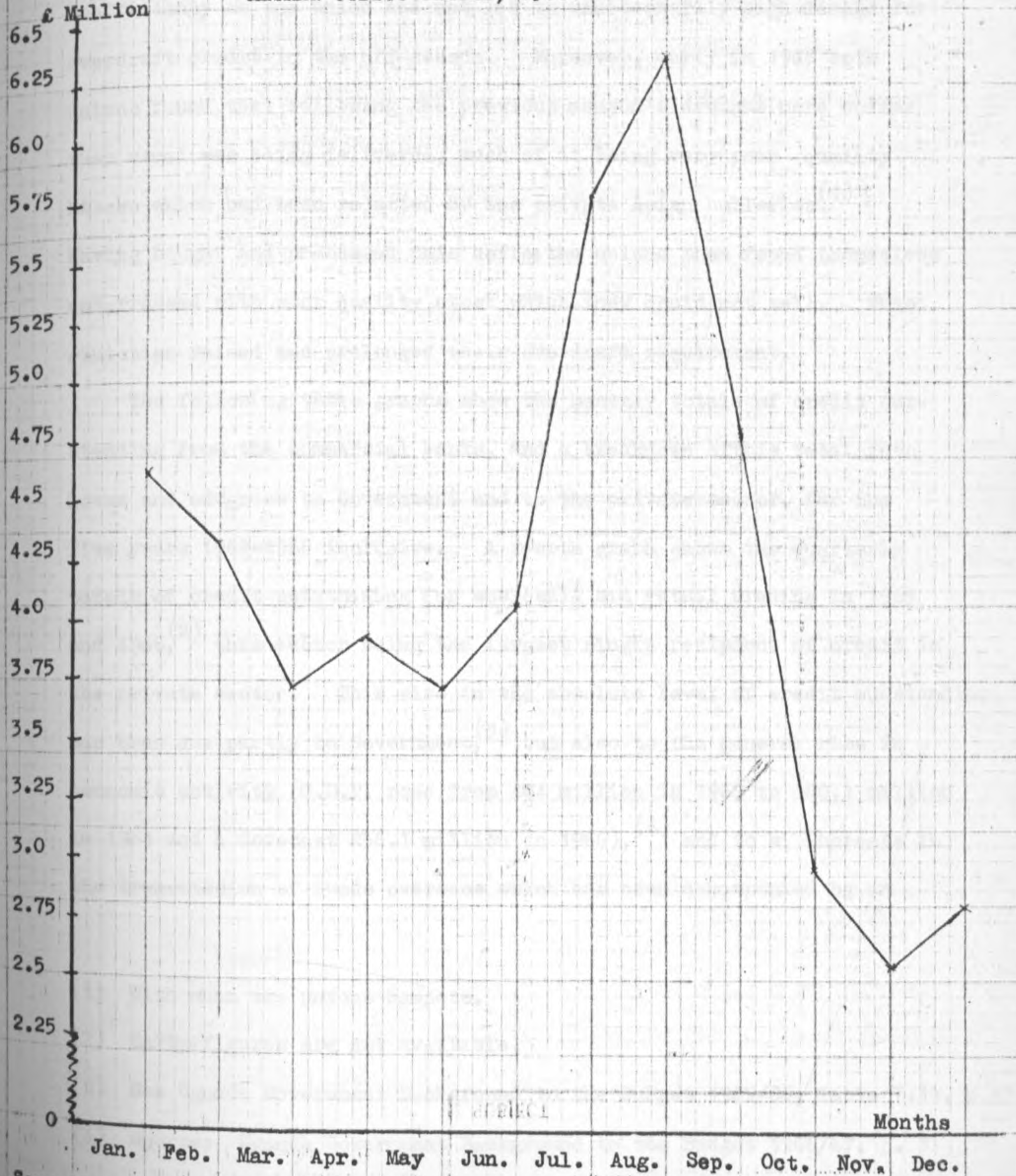
With buying starting in three or four different months, it is not surprising to find that in 1962/63 and 1964/65 (the two seasons in which cotton buying has followed a "normal" pattern in recent years) there was an increase of 50% or more in the volume of credit outstanding to the private sector between the end of November and the end of February.(1)

The minor rise in credit outstanding in July in these years (1963 and 1965) can be ascribed to peak coffee buying activity in the robusta coffee producing areas of Masaka and Ankole. In Mengo, where the main coffee harvest occurs in December-January, the overdrafts of the Uganda Growers Cooperative Union Limited remain at the same level throughout the year. This is due to a combination of two factors: the physical incapacity of the Union's hulleries to handle the peak input, and inept management. In so far as private processors of robusta coffee in Mengo have peak seasonal overdrafts, these would occur in December-January, coinciding with the cotton harvest. In Masaka District, the 1966 overdraft figures obtained from the two coffee Unions reveal clear seasonal fluctuations, as the following graph (Graph 1) shows.

(1) See Graph 2, p. 57.

Graph II 1

Commercial Bank Crop Finance to
Masaka Coffee Unions, 1966.



Source: Masaka District Growers' Cooperative Union and Bwavumpologoma

The peak in Masaka would be more pronounced if managerial inefficiency in one union had not led to unnecessarily high demand for overdraft credit in the off-season. Moreover, early in 1966 both unions found that following the previous season's drought more coffee than usual was being delivered, much of it being very poor quality kiboko which had been rejected by the private Asian hulleries.[1] Having bought and processed this coffee the unions then found themselves embarrassed with poor quality stock which they could not sell. This siutation raised and prolonged their overdraft requirement.

The following three graphs show the monthly totals of credit outstanding from the commercial banks, and a breakdown ofthis total into loans and advances to Government and to the private sector, for the five years 1962-1966 inclusive. A fourth graph shows the quarterly totals of credit outstanding for wholesale and retail trading in 1965 and 1966,[2] this sector being the largest single recipient of credit in the private sector. This rise in the absolute level of credit outstanding has been due partly to Government,[3] but also to the general rise in economic activity (G.D.P. rose from £44 million in 1962 to £60.1 million in 1964 and a forecast £56.1 million in 1966),[4] and to an increase in the transmission of funds overseas which has been accompanied by an

(1) With whom the unions compete.

(2) Earlier figures are not available.

(3) See Uganda Government Background to the Budget 1965/66, Table 7.1a, p.37

(4) Source: Uganda Government Background to the Budget 1966/67, p. 3

increasing use of advances within Uganda.

In an earlier paragraph it was suggested that the years 1962/63 and 1964/65 represent the "normal" pattern of crop financing in the private sector. This argument is based on the following list of factors that distorted the pattern of lending in the other three years. (The value to the grower of the cotton and coffee crops over the five years is given in Table II. 10).

Table II. 10

Value to the Grower of the Cotton and Coffee Crops, 1961/62 - 1965/66.

	Cotton		Robusta and Arabica Coffee (clean)		
Year	no. of bales	value to growers	tons	value to growers	total value
		£ million		£ million	£ million
1961/62	181,000	6.1	117	11.7	17.8
1962/63	358,000	12.4	156	17.1	29.5
1963/64	379,000	10.1	169	21.6	31.7
1964/65	438,000	14.8	150	15.1	29.9
1965/66*	411,000	15.2	145	14.8	30.0

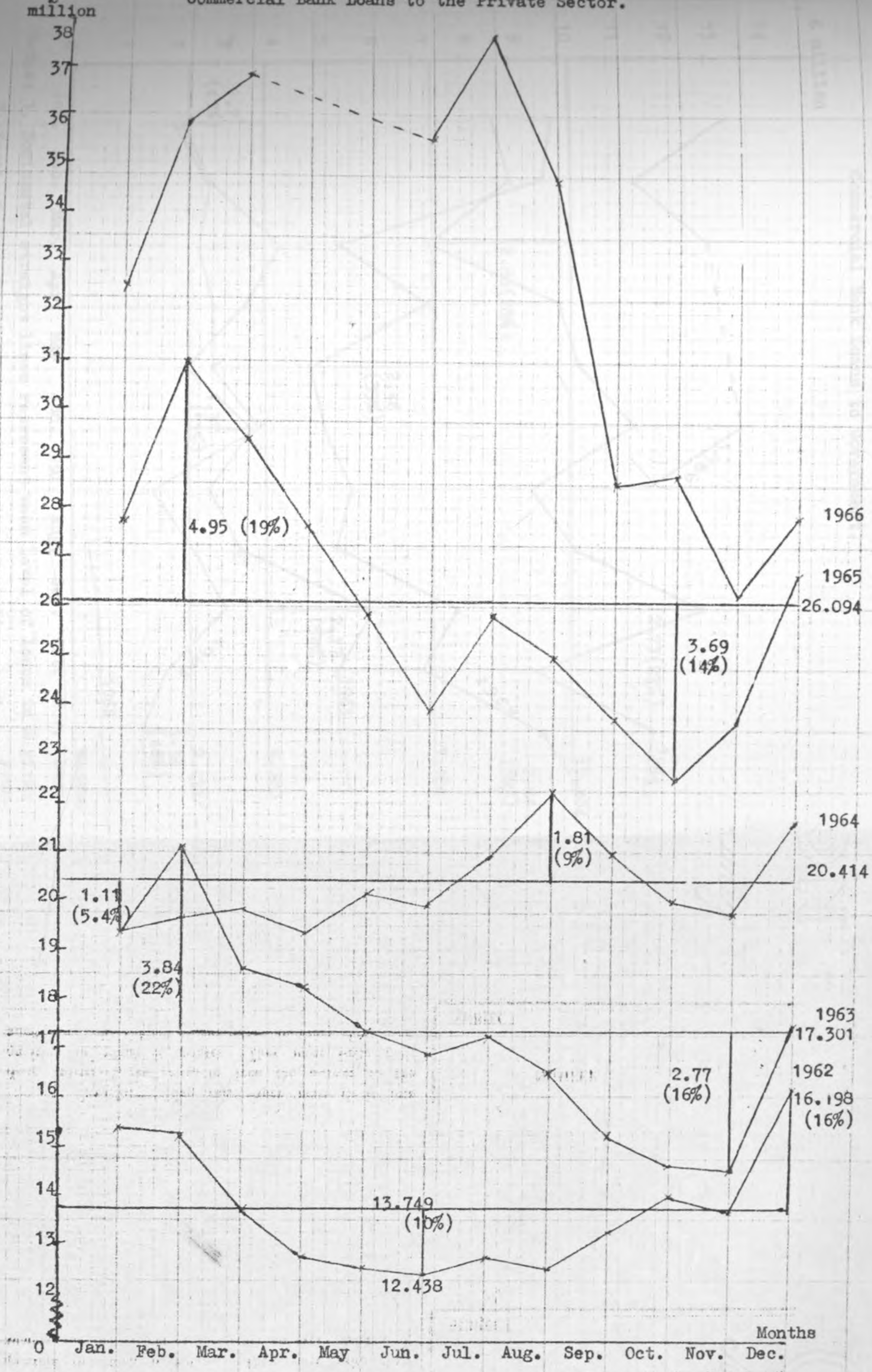
* provisional

Source: Uganda Government, Background to the Budget, 1965/66 and 1966/67.

In 1962 the cotton harvest was damaged by heavy flooding which cut back production by more than 50% on the preceding year. Hence the demand for crop finance was substantially reduced. In 1964, a delay in payments

Graph II . 2

Commercial Bank Loans to the Private Sector.

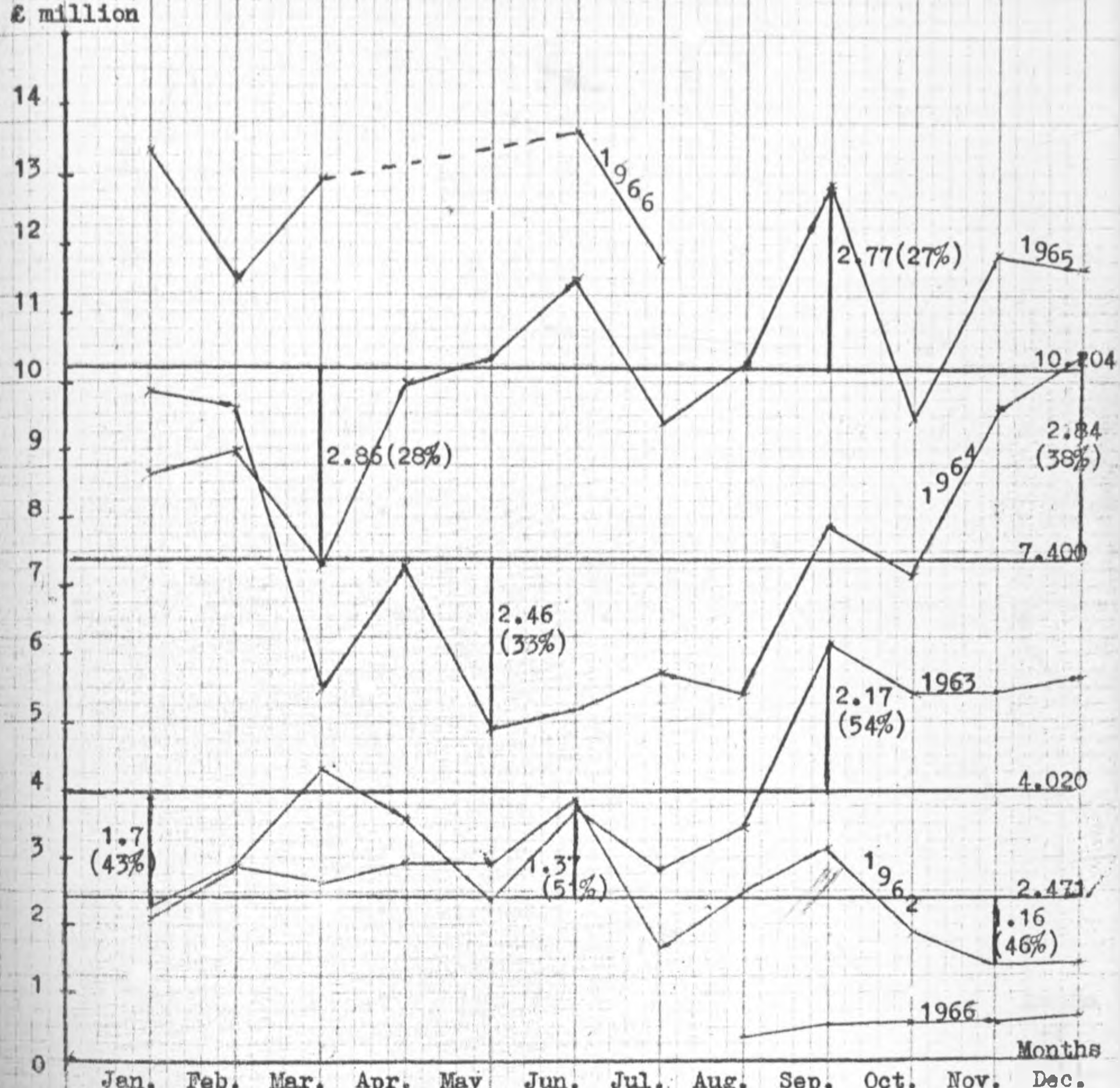


Notes: See Notes 1 - 3 on Graph II . 3

Source: East African Economic and Statistical Review 1962-66.

Graph II 3

Commercial Bank Loans to Government.



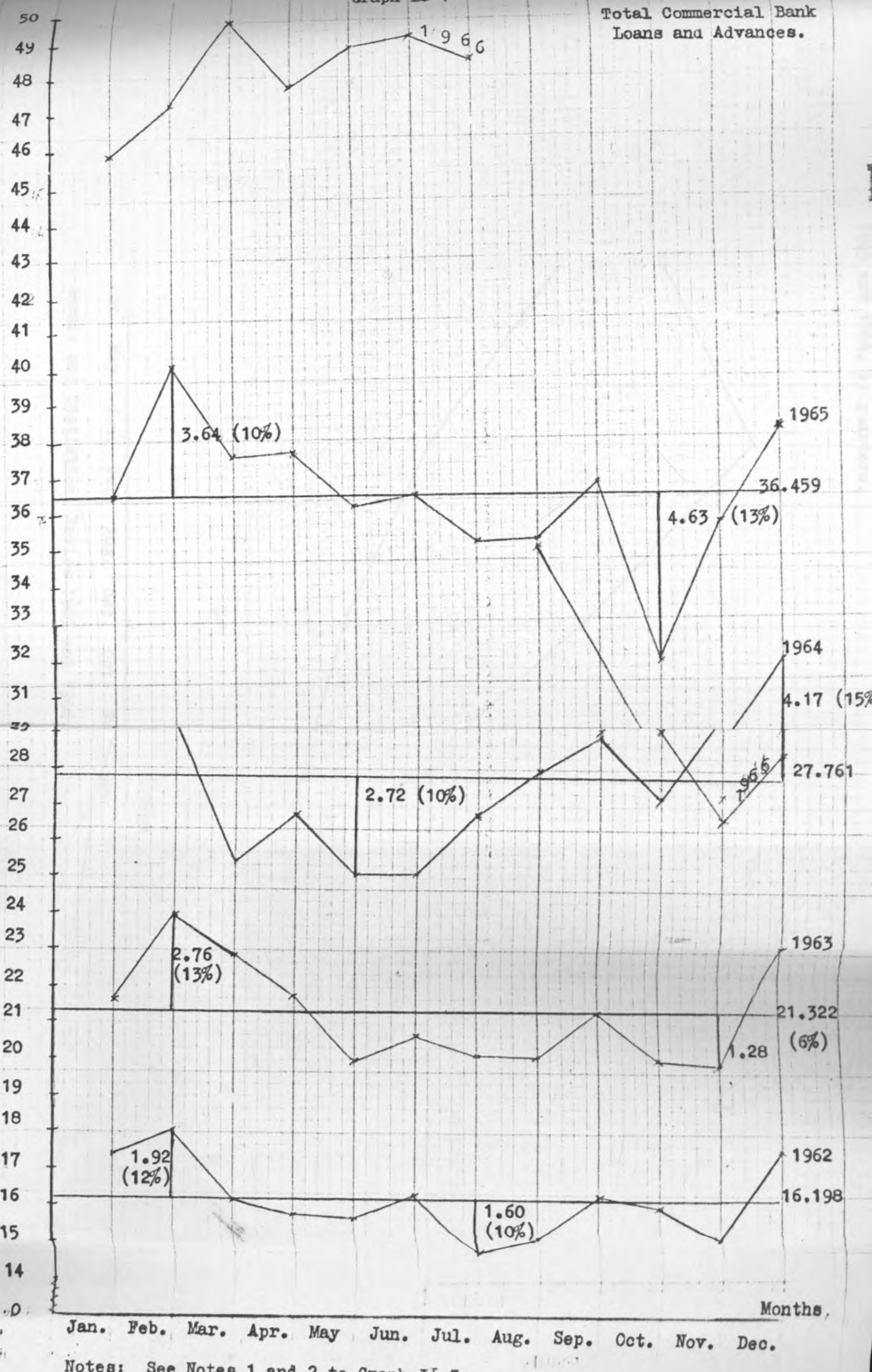
Notes: 1. Horizontal straight lines represent mean level of loans in a given year.

2. Vertical straight lines represent maximum deviation above and below the mean.

3. In August 1966 the Uganda Government switched its accounts to the Central Bank of Uganda.

4. Figures for April and May 1966 not available.

Source: East African Economic and Statistical Review, 1962-1966.

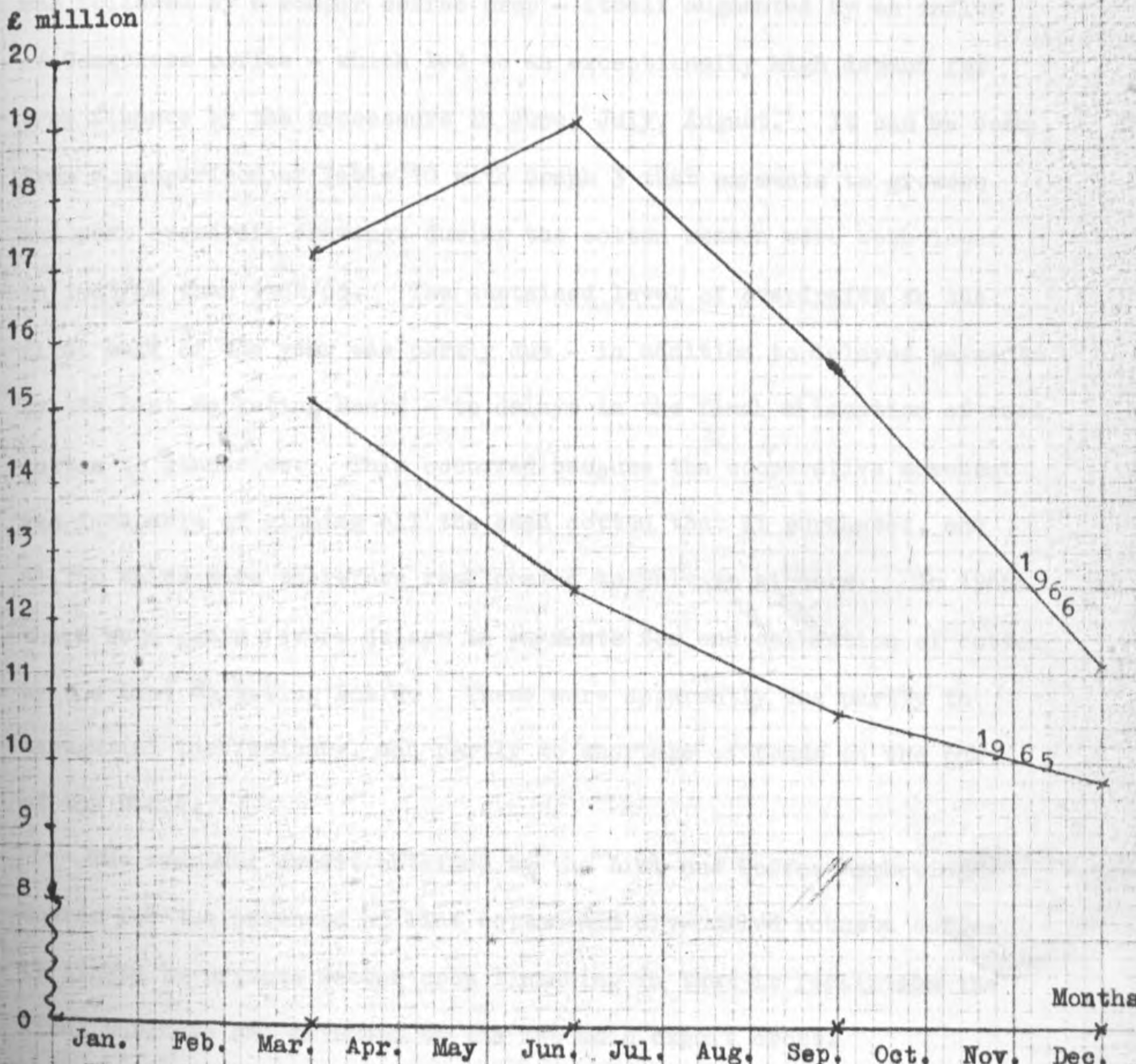


Notes: See Notes 1 and 2 to Graph II 3.

Graph II 5

Commercial Bank Loans for Wholesale and Retail Trade,

1965 and 1966, by quarters.



Source: East African Economic and Statistical Review 1965 and 1966.

for cotton by the Lint Marketing Board (following a switch in its marketing policy to increased direct marketing by the Board),[1] was followed by a bumper coffee crop - itself augmented by an influx of Congolese coffee - which led to an exceptionally high demand for crop finance by the processors in June, July, August. It can be seen from a comparison of Table 10 with Graph 3 that payments to growers and peak overdraft drawings during the cotton season were both lower in 1963/64 than 1962/63. The sustained level of overdrafts in the first half of the year was partly due - in addition to delayed payments by the Lint Marketing Board - to delays in the final allocation of seed cotton to ginneries. This occurred because the cooperative movement was incapable of ginning all the seed cotton that it purchased, and 61,750 bales were therefore reallocated to private ginners. In 1966 there were again severe delays in payments for and collection of cotton by the Lint Marketing Board. These were apparently due partly to managerial inefficiency, and partly to shortage of funds on the part of the Board.

The seasonal credit obtained by the Lint and Coffee Marketing Boards for the purchase of lint cotton and dry-hulled robusta coffee is linked to private sector crop financing in that it facilitates the final purchase and movement of the two main export crops.

All the cotton crop in Uganda is purchased from the ginners by the Lint Marketing Board. The Board obtains finance for this purpose from the Uganda Government and the expatriate commercial banks. From

(1) See Annual Report of the Lint Marketing Board, 1963/64, p. 4

1961 to 1965 the Board's Balance Sheet as at 31st October showed the following short-term liabilities to the Government and the Commercial Banks:

Table II. 11

Lint Marketing Board Short-term Liabilities. £

Year	Uganda Government Short-term Loan	Bank Overdraft
1961	580,000	66
1962	570,000	7,793
1963	478,000	-
1964	1,302,000	95,414
1965	-	219,478

Source: Annual Reports of the Lint Marketing Board, 1961 - 1965.

These accounts, however, are compiled at a time of the year when the Board is relatively inactive, most buying taking place between February and June. The Statement of the Public Accounts of Uganda, 1965, reveals that for the purchase of the 1964/65 crop the Uganda Government guaranteed a £5 million loan to the Board from a consortium of the three main expatriate commercial banks. The loan was at an interest rate of 7% per annum. At 30th June 1965, £3,822,995 of this loan was outstanding. At the same date the Board had a further loan worth £1,198,800 outstanding from the Cotton Price Assistance Fund.(1) Until 1963/64 Government used

(1) Source: Public Accounts of the Government of Uganda, for the year ended 30.6.65, p. 39. (The Cotton and Coffee Price Assistance Funds were built up in the late '40s and '50s from the substantial profits earned by the two Marketing Boards.)

to borrow on behalf of the Lint Marketing Board funds required for the crop seasons and the amounts borrowed used to go through the Consolidated Fund accounts of Government. In the 1964/65 season this procedure was changed, and while the Government continues to guarantee advances made by the commercial banks, the amounts borrowed are directly deposited in the accounts of the Board. The same change in policy also applies to the Coffee Marketing Board. (1)

All dry. hulled coffee in Uganda, with the exception of Bugisu arabica coffee, is marketed through the Coffee Marketing Board. The Board does not, however, deal in wet pulped coffee. (2) The Coffee Marketing Board obtains credit for the purchase of the processed coffee from Uganda Government funds, including the Coffee Price Assistance Fund. This credit is obtained under the authority of the 1963 Coffee Act:-

> "If at any time the Board applies to the Government for a loan in order to enable it to purchase coffee and the Treasury is satisfied that the Board's funds and resources are insufficient for it to carry out all or any of its functions, the Government shall ... lend to the Board out of the Fund (the Coffee Price Assistance Fund) or out of such other funds as are available to the Government ....
> The Treasury may on behalf of the Government (a) borrow sums of moeny to be re-lent to the Board by the Government ... (b) pledge or deposit as security for any sum so borrowed any money in the Fund and any investment or security in which such moneys have been invested." (3)

From 1960 when the Uganda Government first made advances to the Board under the 1959 Coffee Act, the balance due from the Board to the Government at the end of the financial year (October 31) was as follows:

(1) See Uganda Government, Background to the Budget 1965/66, p. 38

(2) Wet pulped robustas in 1965, constituted17% of the total robusta coffee exported from Uganda.

(3) See Sections 39(2) and (3) of the 1963 Coffee Act.

1960	£4.5 million
1961	£2.4 million
1962	£0.8 million
1963	£6.5 million
1964	£4.3 million (1)

The years 1961, 1962 and 1963 were affected by (i) unfavourable weather, (ii) the political situation, and (iii) the influx of coffee from the Congo, respectively. In 1964, the Board also began borrowing substantially from the commercial banks. The Board's overdraft position for the last five years (as of October 31) has been:-

1960	-
1961	£36,038
1962	-
1964	-
1964	£1,863,368

The Bugisu Cooperative Union Limited itself markets all arabica coffee produced in the District. It finances purchases of the crop from its own substantial reserves.

To date, a national marketing board has not existed for the purchase and sale of other crops. Private buyers and processors find their own outlets for a variety of produce, including maize, tea, tobacco and sugar. The Busoga Growers Cooperative Union Ltd., which handles most of the groundnuts sold through the Cooperative movement, markets them direct, obtaining crop finance for their initial purchase from one of the commercial banks.

(1) Source: Coffee Marketing Board, Annual Reports 1960-1964.

Examination of Graph 4 (loans and advances outstanding to Government) reveals little in the way of a consistent seasonal pattern of borrowing apart from a rise in credit during the latter half of the year. Overdrafts obtained by the two Marketing Boards are included, and the absence of a more pronounced pattern may be partly due to the fact that these are outstanding for longer periodsthan those obtained for crop purchase in the private sector. Clearance of these overdrafts depends largely on the speed with which export sales are negotiated. With rising stockpiles it may be that the Coffee Marketing Board is at present persistently overdrawn. There is no obvious reason for the Boards to increase their drawings during the last quarter, and from the little evidence available it does not appear that they do so.(1) On the other hand, other Government activities not connected with crop purchases may give rise to an increase in overdrafts at this time.

An examination of Graph 5 reveals that in 1965 and 1966 the pattern of lending to the wholesale and retail trade sector broadly conformed with the overall pattern of private sector lending, tending to accentuate the first quarter peak, rather than to reduce it.

The expatriate banks are engaged mainly in financing cotton and coffee buying, but they also provide credit for the purchase of other produce, including groundnuts, tobacco, milk and vegetables. For these four items part of the credit is channelled through Cooperative Unions. Other crops that are bought by the primary societies (e.g. maize, finger millet and beans) are not yet handled in large enough quantities to be

(1) See the Balance Sheets of the two Boards given in their Annual Reports.

purchased by the Unions without the latter running the risk of reselling at a loss. These crops are generally marketed locally by the primary societies. A small amount of crop finance is provided to two Unions by the Uganda Commercial Bank.(1)

Outside the Cooperative Movement crop finance is also provided by produce buyers in the main trading centres, who, acting either as a source of credit, or as a channel for commercial bank credit, lend to their up-country agents. This was noted by Anne Martin in 1961:

> "The intermediary buyers ... may receive crop finance for buying (produce) from yet larger buyers, sometimes at quite a distance, like the buyers in Ankole who receive credit from large buyers in Kampala, often their kinsmen, for whom they act virtually as the up-country agent. It should be noted that this particular web of kinship amongst Asian traders forms an extremely cheap and efficient method of channelling the necessary credit into produce-buying." (2)

Since the cooperatives still take up only small quantities of minor crops, there is no reason to suppose that this chain of credit has declined in importance since 1961. However, with the establishment of the Agricultural Produce Marketing Board, which isintended to start operations in 1967, the pattern of marketing may change, with increasing quantities of minor crops being sold through the cooperatives.

The second major development in the field of crop financing was that in November 1960 the East African Currency Board obtained the power to offer crop finance facilities to the commercial banks up to a maximum of

(1) Previously the Uganda Credit and Savings Bank. The business of the latter was entirely taken over by the Uganda Commercial Bank when it opened its doors for business on 9th October, 1965.

(2) Anne Martin, "The Marketing of Minor Crops in Uganda", Dept. of Technical Cooperation, Overseas Research Publication No. 1, p.16.

£5 million (in 1963 this was raised to £10 million). The Board was prepared to offer these facilities in the form of advances or rediscounts on crop bills. Although it stated its preference for the latter form of lending (wishing to encourage the emergence of a more active market in bills) and in 1965 considered imposing an interest differential on the two formsof assistance, the Board stated in 1966 that:

> "During 1965/66 advances remained the chief vehicle of obtaining credit from the Board, the scope for rediscounts being limited not only by the dearth of commercial bills but also by the lack of interest of the commercial banks in that method of raising funds." (1)

The rediscount and advances rate for crop finance was progressively lowered from 7% in 1961 to 5% in November 1964, when it stood at 2% below the banks' official minimum overdraft rate. Considering the reasons for this interest differential the Board stated:

> "It can be argued - and the Board has practical experience to confirm this - that no rate can contain the appropriate element of penalty unless it is above the banks' minimum overdraft rate. But there would be several objections to such a level: in so far as the Banks are financing the movement of vital export crops, it is not desired to impede the process by discouraging the banks from participating to the full extent required: secondly a rate of 7½ or 8 per cent might create a wrong impression of crisis; and thirdly it might provoke the banking system into raising its own charges." (2)

During 1964/65and 1965/66 the banks made much greater use of the Board's facilities than previously. Partly this was due to the introduction in November 1964 of a penal rate for borrowing from overseas, which led

(1) Annual Report of the East African Currency Board, 1965/66, p. 36

(2) Annual Report of the East African Currency Board, 1963/64, p. 25.

the banks to turn in greater degree to possibilities of local finance. The developing use of the Board's facilities is shown in Table 12.

Table II. 12

£EA '000s

End of	1961/62	1962/63	1963/64	1964/65	1965/66
July	-	-	-	1,000	1,900
August	-	500	450	750	1,405
September ...	-	-	23	425	2,040
October	-	-	23	235	2,350
November	-	50	200	600	2,095
December	160	750	200	3,200	2,979
January	588	1,200	566	2,853	3,150
February	150	1,000	300	2,028	2,225
March	-	-	1,000	1,568	1,500
April	-	-	200	900	2,240
May	-	-	-	850	2,020
June	-	-	750	1,010	1,140

Source: Annual Report of the East African Currency Board, 1965/66, p. 36.

There is no breakdown of the use of these facilities by country but greatest use of the Board's facilities was made by the banks in Uganda, and it is probable that they were almost entirely responsible for the peaks reached in December-January 1964/65 and 1965/66.

Finally, on August 15th 1966 the Central Bank of Uganda was established. In the future, the commercial banks will have to turn to the latter for the crop financing assistance that has recently been provided by the Currency Board.

2.3 The Commercial Bank Development Corporations.

In addition to their normal commercial banking activities, the three main expatriate commercial banks in Uganda all claim to operate development corporations. Barclays Bank Development Corporation was established in 1945 and the Standard Bank Finance and Development Corporation in 1946. No information is available concerning the third (National and Grindlays) corporation.[1] With regard to the first two, the precise extent to which they have provided assistance for private sector agricultural projects in Uganda is not known, but given the very small number of privately owned estates it seems fair to assume that they have found little or no business in this area. In the public sector however, Barclays Bank Development Corporation has (as of August 31, 1966) provided long-term loans to three subsidiary companies of Agricultural Enterprises Limited, (a parastatal body for which the holding company is the Uganda Development Corporation). Barclays Bank Development Corporation is prepared to provide up to two-thirds of the finance required for acceptable projects. Two of the three loans referred to are repayable in sterling, and the third in East African currency. The provisions of the loans are given below in note form:

(i) Kiko Tea Co. Limited
£55,000
Drawings 1964/65
Interest 7½%
Repayment in 16 half-yearly instalments commencing 1.1.68.

(1) See J. Loxley, op. cit,, pp. 192 and 193. Loxley assumes that this Development Corporation isinactive in East Africa.

(ii) Kigezi Plantation Co. Limited,
£60,000
Drawings 1964/65
Interest $7\frac{1}{2}$%
Repayment in 16 half-yearly instalments commencing 1.1.68

(iii) Ankole Tea Co. Limited,
£90,000
Drawings 1961/62
Interest $7\frac{1}{2}$%
Repayment 1964-70

All three loans are secured by a charge on the relative company's assets.

2.4 Other Credit Used by the Subsidiary Companies of Agricultural Enterprises Limited (A.E.L.)

Agricultural Enterprises Limited is acquiring an increasing number of subsidiaries. The number has risen from one - Salama Estates Limited - in 1955 to nine in 1965.(1) Most credit has been and still is obtained by the subsidiary companies in the form of advances on current account lent interest free by A.E.L., which in turn borrows on the same basis from the Uganda Development Corporation (U.D.C.). In the case of developing companies the practice is for the holding company (A.E.L.) to convert the balance on their current account to equity capital at the end of each year. However, because the U.D.C. is currently short of

(1) These include: The Ankole Tea Co., Ltd., Bugambe Plantation Co. Ltd., Kiko Tea Co. Ltd., Kigezi Plantation Co. Ltd., the Muzizi Tea Plantation Co. Ltd., Mwenge Tea Co.Ltd., Salama Estates Ltd., Solutea Ltd., and the Bunyoro Ranching Co. Ltd.

funds, several subsidiaries of A.E.L. have raised direct loans and this pattern of borrowing is likely to continue. The three loans from Barclays Bank Development Corporation outlined above fall into this category. In addition to these, the position at August, 1966, was that the Commonwealth Development Corporation has directly provided credit in sterling, and repayable in sterling, to two other subsidiaries of A.E.L. The provisions are given below in note form:

(i) Mwenge Tea Co. Ltd.,
Maximum £360,000
Drawing, 1964-66
Interest 7½%
Up to 31.12.66, interest capitalised.
Interest paid from 1.1.67 - 31.12.71.
Repayment of principal and capitalised interest commences in 1972 by means of 7 equal annuities of principal and interest.

(ii) Buganda Plantation Co. Ltd.
£100,000
Drawing in one instalment 31.12.64
Interest 7½%
Interest payable up to 31.12.70
Repayment by 4 equal annual instalments of principal and interest commences 31.12.71.

These loans are both secured by a charge on the companies' assets. A.E.L. itself has advanced £250,000 to the Ankole Tea Co. Ltd. on a secured loan account (the security is a second charge on the Company's assets):

Drawing s up to 31.12.65
Interest 7½%
Repayments to begin in 1971 (1)

(1) Source: Agricultural Enterprises Limited.

2.5 The Uganda Credit and Savings Bank.

The development of the activities of the Uganda Credit and Savings Bank in the field of agricultural lending can be divided into two periods: (i) 1950 - 1956, (ii) 1956 and after. The first period is characterised by the Bank's attempt to make secured loans to African farmers and to other small-scale African enterprises from its own funds. Table 13 summarises the number and value of loans approved for different purposes from 1950 to 1956/57. From this it can be seen that by number roughly 50% of all loans approved each year were for agriculture. By value, the proportion was less, indicating that loans to agriculture were generally smaller than the average value of all loans granted.

Soon after the Bank was established, the comment was made that the Bank's facilities were similar to those of a land bank.(1) At no stage during the Bank's life, however, has it possessed the specialised staff of assessors and inspectors which a land bank, by its very nature, requires. In 1950 and 1951, there was no agricultural inspector. In late 1951 an Assistant Agricultural Officer (African) was seconded by the Agricultural Department (Special Development Section) to the Bank's Service, and he took up his duties in 1952. In 1953 it will be noted that 167 agricultural loans were approved, and that approximately 650 loans which had been approved previously required insepction. The Bank's Annual Report for this year does not state how many borrowers were visited. In 1955 the Bank recruited two more inspectors, but these

(1) See footnote (1) p. 25.

Table II. 13

Uganda Credit and Savings Bank: Loan Applications Approved, 1950 - 1957

Purposes.	1950 No.	1950 Amount	1951 No.	1951 Amount	1952 No.	1952 Amount	1953 No.	1953 Amount	1954 No.	1954 Amount	1955 1st January to 30th June No.	1955 1st January to 30th June Amount	1955/56 No.	1955/56 Amount	1956/57 No.	1956/57 Amount
		Shs.		Shs.		Shs.		Shs.		Shs.		Shs.		Shs.		Shs
Fishing		-	-	-	10	14,050	4	5,100	-	-	-	-	1	2,000	2	3,500
Industries (mainly tile and brick-making)	11	58,200	13	149,300	7	101,200	7	205,000	1	1,200	-	-	-	-	-	-
Development of land and Cultivation	74	214,300	309	892,790	280	723,250	167	446,100	59	116,350	17	30,450	72	122,190	128	244900
Purchase of Lorries, buses, etc.	-	-	-	-	26	525,500	16	314,500	5	72,000	3	88,000	1	20,000	-	-
Erection and Repair of Buildings	32	163,000	112	1,447,030	70	1,223,050	35	548,060	12	130,400	2	20,500	15	298,900	19	319200
Discharge of Prior Encumbrances	21	287,600	35	151,503	23	506,001	5	56,000	-	-	1	4,000	1	90,000	3	30000
Purchase of Land	-	-	9	37,200	4	11,300	2	1,900	1	23,000	1	700	2	13,000	5	9500
Trade and Business, mainly shop-keeping	28	106,200	156	1,076,270	147	461,491	120	460,705	27	65,700	6	9,300	23	105,800	32	138850

Table II. 13 (Cont'd)

Uganda Credit and Savings Bank: Loan Applications Approved, 1950 - 1957

Purposes	1950 No.	1950 Amount Shs.	1951 No.	1951 Amount Shs.	1952 No.	1952 Amount Shs.	1953 No.	1953 Amount Shs.	1954 No.	1954 Amount Shs.	1955 1st January to 30th June No.	1955 1st January to 30th June Amount Shs.	1955/56 No.	1955/56 Amount Shs.	1956/57 No.	1956/57 Amount Shsl
Printing	-	-	-	-	2	8,500	1	10,000	-	-	1	20,000	-	-	-	-
Life Ins. Societies	-	-	3	14,100	-	-	-	-	-	-	-	-	-	-	-	-
Ntinde African Housing estate	-	-	-	-	-	-	-	-	4	32,453	1	8,250	6	56,436	-	-
Cattle Trading	-	-	-	-	-	-	-	-	2	5,500	2	13,500	1	5,000	2	7,000
Purchase of Plan-type machine	-	-	-	-	-	-	-	-	1	400	-	-	-	-	-	-
Total	166	829,300	637	3,768,193	569	3,594,342	357	2,047,365	112	447,003	34	194,700	122	713,326	191	752,950

Source: Uganda Credit and Savings Bank, Annual Reports, 1956, 1957.

were concerned almost entirely with loans granted from the African Loans Fund,[1] and not the Bank's own funds. The Bank claimed that it experienced considerable difficulty in recruiting inspectors with suitable qualifications and of a suitable calibre, but this was presumably within the limits of qualifications and salary range set by the Bank itself. It may be questioned whether it would not have been ofgreater long-run benefit to the Bank in the establishment of an agricultural loans department to have recruited more, and more highly qualified, agricultural inspectors. However, the Bank was hampered by the fact that it was expected to make a profit, although it only achieved this twice during the first fourteen years of its existence.

The consequence of the lack of inspection and follow-up advice and of skilled planning of at least some loans was a rapid rise in the default rate on the Bank's loans. ('Default' in this thesis is taken to refer to overdue loans not yet written off. "Bad debts" refer to loans which have been written off.) These figures are not available for agricultural loans alone; they are given in Table 14 for all loans made by the Bank. As a result, the Bank found it necessary in 1953 to create a Reserve for Bad and Doubtful Debts equal to approximately 40% of the value of all outstanding loans granted prior to 31 December, 1952. The setting aside in 1953 of Shs. 423,000/- for this purpose contributed substantially to the loss of Shs. 2,168,000/- carried forward at the end of the year. (The rest of the accumulated loss can be ascribed to

(1) Referred to below, Section 2. 6.

Table II. 14

Uganda Credit and Savings Bank: Default Rates
1952 - 1955/56 - Shillings.

	1952		1953		1954		1955		1955/56	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
1. Loans Outstanding	1,099	4,953,193	1,285	6,126,246	1,151	5,049,725	991	4,311,295	787	3,371,11
2. Loans in Default	267	234,970	457	681,021	433	965,235	331	948,465	318	1,034,65
2. as % of 1.	24.2	4.8	35.6	11.0	37.7	19.1	33.3	22.0	40.0	30.7

Figures as of December 31st, 1952 - 54 and June 30th thereafter.

Source: Uganda Credit and Savings Bank, Annual Reports 1952-56 earlier provisions for Bad and Doubtful Debts and to the statutory requirement that the Bank should annually pay into a Reserve Fund all interest payable on the funds loaned by the Protectorate Government to the Bank in 1950).

The Bank's Reports provide no information on the purposes for which agricultural loans were granted, although it is clear that because the Bank preferred to take land as security, this being the main asset of most farmers, the majority of loans were granted within Buganda. From the few references made to the Bank in the Agricultural Department's Reports it appears that most loans were granted for general improvements, and some for the purchase or hire of machinery. Thus, in 1951 the Department stated:

> "Nearly all loans were made to farmers in Buganda against the security of mailo land. Extension and improvements of coffee and banana gardens were the most frequent purposes of loans, but about ten loans were made for the purchase of agricultural tractors and machinery, and a much larger number for purchase of motor transport, erection of coffee drying floors, produce stores and other capital improvements. A number of loans were made to assist farmers to hire machinery." (1)

Although it was not apparently acknowledged at the time, some of these loans carried a high level of risk for the borrowers. Thus, while farmers were encouraged to buy tractors in 1950 and 1951, by 1953 the Department of Agriculture was "consolidating" rather than expanding its own mechanisation programme, and in 1955 the Department reported that:

(1) Department of Agriculture, Annual Report 1951, p. 15

"In Buganda ... the difficulties of perennial crops, small scattered units and heavier soils raise the cost per acre (of mechanical cultivation) to a level which is unlikely to be economic with the annual crops grown." (1)

It is not possible to make detailed comments on these loans because so little information is available. It is unlikely that for any of these loans there were costings available from which predictions could be made of the likely rate of return to capital invested. The rising rate of default has already been referred to.

"The decision to foreclose on some of the securities held showed that their realisable value was both low and uncertain. In some cases, less than one-quarter of what the Bank required was offered for land and buildings held as security, despite the fact that in no case did the original loan amount to more than 50% of the Bank's valuation of the security." (2)

In 1956, fifteen out of forty-seven properties put up for sale by the Bank had to be withdrawn because a satisfactory price was not offered.

One consequence of the increasing default rates and the difficulty of selling seized security experienced in the early '50s wasthat the Bank became more conservative in its selection of loans business, moving away from small loans with doubtful security to larger and better secured lending. The ease with which this change took place wasdue to the simultaneous expansion of small, unsecured loans made, from the African Loans Fund.(3) Already in 1955/56 the number of applications for loans coming from the three Provinces outside Buganda, where there are no individual titles to land, had dropped to a minimum. From 1956/57, the decrease in the number of loans granted and the increase

(1) Department of Agriculture, Annual Report 1955, p. 11

(2) Report of the East African Royal Commission 1953-1955, op. cit., P. 102.

(3) Discussed in detail in the following section.

in their average size is obvious. By value, most loans went to Cooperative Unions for the construction of processing factories, and to private individuals, particularly civil servants, for the construction and purchase of residential buildings. In 1959/60 the distribution of loans approved by value was as follows:-

Purpose	Amount (Shillings)
Fishing	21,350
Agriculture	266,900
Ginneries	600,000
Coffee factories	360,000
Residential Buildings	1,100,000
Industrial Purposes	223,000
Shopkeeping	101,800 (1)

A breakdown of loan approvals by sector for the years 1950 to 1960/61 is given in Table 15a. Whereas by value 25% of loans approved in 1950 were for agricultural purposes, in 1960/61 the proportion was 7%. In 1962/63 the Board of the Bank summarised the position as follows:-

> "There has been a considerable change in the pattern of lending, particularly marked in loans for agricultural purposes. The type of credit provided by the Bank tends more and more to be of large amounts repayable over much longer periods ... Originally the Bank was the only source of credit for farmers but, with the establishment of the African Loans Fund and the receipt of grants from International Cooperation Administration funds (American Aid) it has become unnecessary to devote the Bank's resources to the provision of small agricultural loans. Although credit is still occasionally provided by the Bank when adequate security is available, most of the individual farming loans are made from these other funds through the Progressive Farmers' Loans Scheme, operated in conjunction with the Ministry of Agriculture." (2)

(1) Uganda Credit and Savings Bank Annual Report 1959/60.

(2) Uganda Credit and Savings Bank Annual Report 1962/63, p. 2.

Table II. 15a

Uganda Credit and Savings Bank: Loan Approvals by Sector, 1950 - 1960/61

Year	1 Agriculture	2 Cattle Trading	3 Trade	4 Industry and other purposes	5 Total	6 Agriculture as a % of Total
	£	£	£	£	£	
1950	10,715	-	5,310	25,440	41,465	26
1951	44,640	-	53,813	89,957	188,410	24
1952	36,162	-	23,075	120,480	179,717	20
1953	22,305	-	23,035	57,028	102,368	22
1954	5,817	275	3,285	12,973	22,350	26
1955 (Jan.-June)	1,522	675	465	7,072	9,734	16
1955/56	6,100	250	5,290	24,017	35,657	17
1956/57	12,245	350	6,943	18,110	37,648	33
1957/58	6,818	350	12,275	182,050	201,493	3
1958/59	14,113	950	2,200	37,500	54,763	26
1959/60	14,413	-	5,075	117,174	136,662	11
1960/61	28,576	295	18,429	396,341	443,641	6

Source: Uganda Government Statistical Abstracts. (Later figures are not available.)

The Board commented further, "this is a highly desirable development as it reduces administrative costs which are disproportionately heavy on small accounts." The Bank's only substantial commitment of its own funds to agricultural lending subsequent to 1962/63 was an indirect one, when in 1964/65 it made £75,000 available to the African Loans Fund for the operation of the Cooperative Credit Scheme.

Table II. 15b

Indices of Value of Loan Approvals (1954 = 100)

1950 - 1960/61

Year	1 Agriculture	2 Cattle Trading	3 Trade	4 Industry and other Purposes	5 Total
1950	184.20	-	161.64	196.09	185.52
1951	767.40	-	1638.14	693.41	842.98
1952	621.65	-	702.43	928.69	804.09
1953	383.44	-	701.21	439.58	458.02
1954	100.00	100.00	100.00	100.00	100.00
1955(Jan.-June)	26.16	245.45	14.15	54.51	43.55
1955/56	104.86	90.90	161.03	185.13	159.54
1956/57	210.50	127.27	211.35	139.59	168.44
1957/58	106.27	127.27	373.66	1403.29	901.52
1958/59	242.61	345.45	66.97	289.06	245.02
1959/60	247.77	-	154.49	903.21	611.45
1960/61	491.24	107.27	561.00	3055.11	1984.94

In July, 1965, the Uganda Credit and Savings Bank was reconstituted The Uganda Commercial Bank.(1) As such, the Bank will obviously not change its policy of caution towards agricultural lending. At 24th December, 1966, Shs. 22,482,913/- were outstanding in loans from the Bank's own funds. Of the total outstanding, only Shs. 233,375/- represented loans toagriculture. At this stage, the Bank was operating nine branches, but all agricultural loans were outstanding from the Kampala Branch - an indication of the continued preference for title to land as security for loans.

(1) Throughout the rest of this thesis the Bank will be referred to by whichever name it held at the date of reference.

2.6 Special Loans Funds: African Loans Fund, I.C.A. 1st Grant, I.C.A. 2nd Grant.

The African Loans Fund was established under Ordinance 22, 1954, of the Uganda Protectorate Government, to assist applicants for loans who could not satisfy the security requirements of the Uganda Credit and Savings Bank. The establishment was of particular importance to potential borrowers living outside Buganda Region who, by this time, owing to the absence of registered land titles, were virtually deprived of the Bank's loans facilities. It was equally important, however, to those potential borrowers - the majority - within Buganda who also did not own titles to land. The initial capital of the Fund was a grant of £150,000 voted and put at the disposal of the African Loans Fund Central Committee[1] by the Legislative Council. This was further augmented by a grant of £68,000 in 1958 and £90,000 in 1959. The Bank was appointed Government Agent for the administration of the Fund. Prior to the submission of applications to the Control Committee, all applications were subjected to initial scrutiny by the Area Committee of the Fund. These Committees consisted of local Government officials, Protectorate Government Technical Officers, and others who by virtue of their position in the districts could be expected to advise on the suitability of the applicants. The Branch Manager of the local branch of the Uganda Credit and Savings Bank was secretary to each Committee. After the first three years of operation of the Fund it was at the Area Committee stage that the majority of applications were rejected.

(1) The Control Committee was to consist of: (a) two persons employed in the public service of the Protectorate, one of whom shall be nominated as Chairman, who shall be appointed by the Governor in Council, (b) the Secretary to the Board of the Bank, (c) four Africans, one representing each Province, who shall be appointed by the Governor in Council.

Table II. 16

African Loans Fund,

Applications Submitted and Approved, 1955/56 - 1959/60.

	Loans Approved		Applications Submitted to Control Committee		Applications Submitted to Area Committees	
	No.	Amount Shs.	No.	Amount Shs.	No.	Amount Shs.
1955/56 T.	268	705,540	1357	6,163,615	2178	10,882,695
A.	78	213,240				
1956/57 T.	358	1,017,200	883	4,340,470	1408	6,669,270
A.	161	432,800				
1957/58 T.	1,112	2,693,420	3783	23,520,239	n.a.	n.a.
A.	"majority"					
1958/59	895	3,221,600	1011	n.a.	2108	14,000,000
1959/60	673	2,099,637	n.a.	n.a.*	1239	n.a.

T = Total

A = Agriculture only (figures available only for 1955/56 and 1956/57)

* 95% of applications submitted were approved.

Source: Annual Reports of the African Loans Fund. (After 1959/60 there is no complete breakdown of applications submitted to the African Loans Fund and the two I.C.A. Funds.)

Because borrowers were not normally expected to present substantial tangible assets as security, the African Local Governments were expected to guarantee 50% of all loans granted from the Fund in their respective districts. This was the only real security available to the Fund; so far as individual borrowers were concerned the loans were predominantly "character" loans, although the loans were usually nominally secured by an instrument of charge over personal chattels, livestock and crops. Like the Uganda Credit and Savings Bank itself, the Fund was intended "to facilitate loans to Africans in furtherance of agricultural, industrial commercial and building purposes." A consistent record of the extent to which loans went to agriculture is not available, but from the figures which are available for the years 1958/59 to 1961/62 it would appear that the proportion was roughly 50%:

Table II. 17

African Loans Fund, Loans Outstanding, 1958/59 to 1961/62.

Year	1 Total No. of Loans Outstanding	2 Total Value Shs.	3 Total No. loans O/S to Agric.	4 Total Value of Loans to Agric.-Shs.	5 Column 4 as a % of Column 2. %
1958/59	2062	4,469,688	n.a.	2,062,880	46
1959/60	2257	4,139,374	n.a.	2,135,000	52
1960/61	2241	4,696,305	n.a.	2,402,226	51
1961/62	2046	4,771,401	1,286	2,338,860	49

Figures are as of 30th June at the end of each financial year.

Source: African Loans Fund Annual Reports.

Prior to 1962, little information is available as to the purposes for which the agricultural loans were used. The Bank's Annual Report for 1957/58 mentions the following purposes:

(i) To enable farmers to develop their farms in accordance with the Department of Agriculture's policy of Farm Planning. (For these loans the normal quarterly repayment period was extended, a one year moratorium being granted.)

(ii) a loan made to an African Local Government for relending in small amounts to individual farmers enabled approximately 800 farmers to purchase insecticide on credit.

(iii) other purposes included tobacco growing, and the purchase and hire of tractors.

It can be seen from Table 17 that the average size of the loans was not large - approximately Shs. 1900/-. It is unlikely that the list given above presents a complete picture of loan use. Assuming that the Progressive Farmers Loan Scheme (referred to in Section 2.7 below) continued rather than radically altered the previous pattern of lending from the Fund, it is likely that most loans were for general farm improvements: coffee mulching, purchasing water tanks and minor items of equipment, building produce stores, purchasing fencing materials and livestock, and opening additional acreages for annual crops. This is borne out by the detailed description of three loans granted in Busoga District in 1959 as given by Evans and Phillips in the East African Agricultural and Forestry Journal.(1)

There is no doubt that the Fund fulfilled its intended function of providing credit to borrowers outside Buganda. The following Table gives a breakdown of numbers of applications submitted and approved by districts for the year 1956/57. The reasons for the rejection of applications are not available; it can only be inferred that applicants

(1) Evans and Phillips, "An Outline of an Agricultural Credit Scheme Operated in the Busoga District of Uganda," East African Agricultural and Forestry Journal, p. 255, April 1962.

Table II. 18

African Loans Fund:

Applications Submitted by Districts, 1956/57

District	1 No. Submitted	2 Amount (Shs.)	3 No. Approved	4 Amount Approved (Shs.)	5 Column 3 as a % of Column 1 %	6 Column 4 as % of Column 2 %
Acholi	81	268,320	50	143,500	61	53
Ankole	91	567,850	40	147,500	42	26
Bukedi	46	198,000	21	56,200	46	28
Bunyoro	74	317,500	24	72,400	32	23
Bugisu	85	367,500	30	80,500	35	22
Busoga	64	384,750	15	59,000	23	15
Karamoja	1	2,000	1	2,000	100	100
Kigezi	18	116,200	12	32,000	67	28
Lango	54	164,000	19	36,000	35	22
Madi	4	36,000	1	3,000	25	8
Mbale	5	21,000	2	3,500	40	17
Teso	8	29,000	6	21,000	75	72
Toro	42	167,500	10	38,500	24	23
W. Nile	38	128,000	10	17,000	26	13
W. Mengo (Districts in Buganda Region)	153	743,850	59	144,500	39	19
E. Mengo (Districts in Buganda Region)	24	169,500	15	37,500	63	22
Kyagwe (Districts in Buganda Region)	21	197,000	9	31,000	43	16
Masaka (Districts in Buganda Region)	34	159,900	18	48,600	53	30
Mubende (Districts in Buganda Region)	40	302,600	16	43,500	40	14
TOTAL	883	4,340,470	358	1,017,200	41	23

Source: African Loans Fund, Annual Report 1956/57.

(i) submitted unrealistic applications, (ii) were thought incapable of implementing the loan plan efficiently, (iii) were not considered credit-worthy.

Although the Fund started with a satisfactorily low default rate, this gradually rose, partly owing to adverse weather conditions in the three successive years 1959/50 to 1961/62. Figures for agricultural loans only are not available. At the 30th June, 1959, the total number of borrowers in default with repayments was 234 (11% of loans outstanding) whilst the sum involved was only Shs. 97,459/- (roughly 2% of the amount outstanding). Two years later 10% of the amount outstanding was in default. Two officials concerned with loans made from the Fund in Busoga District - the Branch Manager of the Bank and the Distric Agricultural Officer - suggest that the rise in the default rate was partly due to the system used for inspecting borrowers:

> "When the fund commenced its operations, the system was for the loan applicant to complete a form setting out particulars of the farm ... and details of his livestock, personal effects which he offered as security and income. The form was then submitted to the Uganda Credit and Savings Bank, which arranged for the farm to be inspected by one of its Agricultural Inspectors. The Application together with the Inspector's report would be submitted to an Area Committee.
>
> Owing to the difficulty of recruiting the right type of inspector, the small inspectorate staff have inevitably to cover several districts often outside their own tribal areas. The Inspector's knowledge of the district is therefore limited and, since the applicant is visited on one day only , the Inspector has little opportunity to delve into the man's background or even to ensure that the security offered is the applicant's own property.
>
> Inadequate inspections and the difficulty in following up loans granted resulted in a considerable amount of default and

often in the actual misuse of loans."(1)

The Area Committees were responsible for the assessment of an applicant's integrity. It is unlikely, however, that where a large number of loans were granted per district, the Committees were always able to check adequately the information obtained on applicants. The annual reports of the Fund acknowledge the increasing difficulty of inspecting all applicants, and also the difficulty of following up defaulters in areas where the Bank had no branch office.

Interest was normally charged on loans from the African Loans Fund at 6½% per annum up to 1960/61. The rate was then raised to 7%, and a penal rate of an additional 2% was charged on amounts in default. The same rates applied to the two I.C.A. Funds.

The first capital grant of £100,299 was made to the International Cooperation Administration Revolving Loan Fund by the United States International Cooperation Administration (then the Foreign Operations Administration) to the Uganda Government in 1954. A second grant of £30,000 was made in 1959 and used to establish a second fund known as the International Cooperation Administration Revolving Loan Fund, 2nd Grant. In practise, the two funds were administered as one. They were supplemented by two further grants of £50,000 in 1961 and £40,000 in 1963.(2) The Uganda Credit and Savings Bank was again appointed agent for the administration of the Funds. Until April 1959, however, the conditions governing the uses to which loans were to be put were so

(1) Evans and Phillips, op. cit., p. 255.

(2) For accounting purposes these were both added to the grant of £30,000 received in 1959,

stringent that none were paid out. Once these conditions were relaxed it was possible to use the I.C.A. Grants to supplement the African Loans Fund. As with the latter, approximately 50% of the loans made were for agricultural purposes. From 1958 to 1965, loans worth a total of Shs. 8,087,879/- (£404,394) were approved from the I.C.A. Grants. Of this, Shs. 4,424,660/- (£221,233) was for agricultural purposes. The agricultural loans were small (average value approximately Shs. 1500/-). They were granted in the same manner, and used for similar purposes, as the loans made from the African Loans Fund.

From 1961, the loans made for agricultural purposes from the three funds were mainly devoted to special schemes: the Progressive Farmers' Loans Scheme, the Cooperative Credit Scheme, the Tea Outgrowers Scheme, and the Master Tobacco Growers Scheme. These are all discussed in the two following sections. Reference is made here to the cost of operating the Funds, to the causes of the rise in default during the period 1960-66, and to the reasons for the decision to stop most forms of lending from the funds as from February, 1964.

The three funds operated at a loss which by December 31, 1965, amounted to Shs. 1,130,968/- (£56,584), or approximately 10% of the combined capital of the three funds at that date (Shs. 11, 875,973). This is perhaps not excessively large given the risky, largely experimental type of lending in which the funds were engaged. During the following nine months, however, the funds operated at a further loss of Shs. 119,508/-. During this period, Bad Debts (for which provision had been made) were written off to the extent of Shs. 455,000/-.[1]

(1) From 1 January, 1966, the three funds were amalgamated into one

Analysis of the expenses incurred by the funds reveal that much the largest single item is the annual payment of expenses to the agent. The Bank received an agency fee from the funds which over the four years mid-1961 to mid-1965 averaged Shs.86,750/- per annum. In addition, it charged over the same period an average of Shs. 572,500/- per annum for expenses. When the Uganda Credit and Savings Bank agreed to act as agent for the African Loans Fund it was accepted that the latter should contribute to the cost of opening and running new branch offices, without which it would have been virtually impossible to operate the Fund on any scale outside Buganda. It was also accepted that similar contributions should be made from the I.C.A. Funds. It is not possible to tell whether the Bank's assessments of expenses represent true costs, since th se would be mainly attributable to indivisable factors, e.g. fixed overheads and staff working partly on administration of the Funds and partly on the Bank's own business. It is notable, however, that a number of items were not included in the payment to the Bank, amongst which were committee expenses, staff travelling expenses and general office items (printing and stationery, furniture and fittings, etc.).

By 1961, the Bank was completely dependant on Government Departments for evaluation of applications and inspection of loan use with regard to the three Funds for which it was agent. This assistance provided a concealed subsidy to the Funds, since no charge was made by the Departments concerned.

These two factors - the absence of a breakdown of expenses payable to the Bank, and the concealed subsidy provided by Government Departments - make it impossible to assess the actual cost of operating the Funds. If one accepts, however, that the operation of a loans fund designed to provide small loans to widely scattered and inexperienced borrowers will normally require a subsidy or guaranteed source of supplementary revenue, then the loss incurred does not appear exorbitantly high.(1) Table 19 shows the expenses incurred by the African Loans Fund in relation to loans outstanding and income over the period 1st July, 1955, to 31st December, 1965. The main justification for subsidising a loans fund of this nature should, however, lie in the increase in output and income resulting from the use of the loans. This is a point on which little information has been available in Uganda. It is referred to in detail in the reports of case-studies in Chapters 4, 5 and 7.

From 1960 the three funds experienced rising default rates. At first this was attributed to adverse weather conditions and poor harvests. Little action was taken against defaulters and virtually no effort was made to adjust cropping patterns in order to facilitate repayments by the production of a supplementary cash-crop. "At the request of Government, borrowers whose accounts were in default at 31 December, 1961, were granted until 1 May, 1964, to put their accounts in order before the Bank would take actionto recover the debts by the sale of securities.

(1) In Tunisia and Morocco the Societes de Prevoyance which, as they operated in 1960, specialised in lending to small farmers, had as revenue the tax on maize. See E. Jucker-Fleetwood, "Money and Finance in Africa", George Allen and Unwin Ltd., 1964, p. 158.

African Loans Fund: Expenses, incurred in relation to Value of Loans Outstanding and Income (Shillings)

Table II. 19

	1 Expenses Paid to U.C.S.B.	2 Total Recurrent Expenses (3)	3 Bad Debts Written off	4 Provision for Bad & Doubtful Debts(1)	5 Loans Out-standing	6 Interest on Loans	7 Other Income (5)	8 Net Loss for the Year	9 Accumu-lated loss Brought Forward	10 Col.2 as a % of Col.4	11 Col.5 as a % of Col.4
1955/56	130,000	161,143	-	-	532,462	11,697	10,223	89,666 (4)	205,407 (4)	30.2	2.1
1956/57	n.a.	n.a.	-	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1957/58	330,000	429,132	-	-	2,945,570	166,159	137,855	131,160	388,124	14.5	5.6
1958/59	330,000	401,061	'very few'	20,000	4,575,410	223,337	81,015	96,709	504,833	8.7	4.8
1959/60	270,000	346,034	9,431	10,000	4,215,359	289,813	72,611	-	508,096	8.2	6.8
1960/61	290,000	380,713	15,066	50,000	4,792,401	358,798,	79,018	-	516,964	7.9	7.4
1961/62	315,000	364,163	53,363	-	4,771,401	369,021	69,831	-	495,638	7.6	7.7
1962/63	315,000	373,900	31,544	-	4,978,220	373,434	32,272	-	496,322	7.5	7.5
1963/64	280,000	326,798	4,311	-	5,508,145	413,228	25,328	-	388,875	5.9	7.5
1964/65	280,000	317,677	127,637	20,000	6,318,360	371,155	7,987	90,301	479,176	5.0	5.8
Jul-Dec. 1965	140,000	156,960	10,636	35,000	5,915,883	192,357	330	26,811	505,987	2.6	3.2

n.a. = not available

All figures as of 30th June at end of financial year.

Source: African Loans Fund, Annual Report

Explanatory Notes to Table 19.

1. During the period Bad Debts worth Shs.251,988/- were written off without running down the Provision for Bad and Doubtful Debts. This loss absorbed the profits made from 1959/60 to 1962/63 and contributed to the subsequent increase in the accumulated loss in 1964/65, when Shs.127,637/- was written off.

2. Following the amalgamation of the three funds into the Development Loans Fund, a further Shs. 455,000/- was written off. It is not known to what extent these Bad Debts are attributable to the African Loans Fund.

3. Total Expenses includes (i) printing, stationery, postages, telegrams and telephone; (ii) travelling expenses; (iii) credit fee and expenses; (iv) administration expenses payable to Uganda Credit and Savings Bank; (v) agency fee.

4. The loss of Shs.115,731/- carried forward into 1955/56 represents the loss incurred in the first six months of the Fund's operation, for which full accounts are not available.

5. Other Income represents charges to borrowers and interest on investments and deposits.

Similarly, borrowers whose accounts fell into default between 1 January, 1962 and 31 December, 1963, were to be allowed until 1 November 1964 to pay their debts before their securities would be seized and sold. As a result the public became generally aware that it was unlikely that action would be taken if a borrower defaulted in his obligations, there was little effort to meet instalments and the income from repayments of loans was severely reduced.

> " Very nearly 50% of the loan accounts were in arrears on the 30th June, 1964, and the amount outstanding in respect of overdue instalments and interest was almost Shs.1,100,000/- i.e. approximately one-fifth of the total amount of loans." (1)

The following year, at 30th June, 1965, Shs. 1,042,805/- was still in default to the Fund, following a Government directive that further extensions should be granted to defaulting borrowers. Unfortunately, no figures are available concerning the length of time for which accounts had been overdue. In total, Shs. 2,134,407/- was outstanding in overdue instalments and interest from the three Funds at 30th June, 1965, which again represents approximately 20% of total loans outstanding.

Although the statutory provisions under which it was established did not state that the African Loans Fund was to be operated as a revolving fund, it ultimately came to be regarded as such. During its first years of operation, however, the rate at which loans were paid out did not allow the Fund to revolve on its original capital, which had to be supplemented in 1958 and 1959. Furthermore in 1964/65 the Fund had to avail itself

(1) African Loans Fund, Annual Report 1963/64, p. 9.

of an arrangement under which the Uganda Credit and Savings Bank agreed to lend up to £75,000 to the Fund. The I.C.A. Funds were regarded as revolving funds from the date of their establishment, but were also replenished by supplementary grants up to 1963 (see above). Table 20 relates the amount outstanding each year to the amount available for lending. This table is presented because the failure of the funds to revolve after February 1964 has been attributed to the high default rates.(1) At this date the funds were fully loaned up, 80% of loans outstanding not being in default. It would have been unrealistic to expect a very low default rate, given the trend of the preceding years. It was, however, three years since the Funds had received their last injection of capital, while there was a sustained demand for loans.

In summary, prior to the introduction of the Progressive Farmers Loans Scheme in mid-1961 the distribution of agricultural loans made from the A.L.F. and I.C.A. Funds was as follows:

Table II. 21

Distribution of Agricultural Loans from A.L.F. and I.C.A. Funds, first half 1961.

Region	1 No. of Loans	2 Total Value (Shillings)	3 No. in Default	4 Col.3 as a % of Col. 1
Buganda	1368	2,671,981	769	56
Eastern	253	606,480	105	42
Northern	545	700,113	81	15
Western*	96	721,120	33	34
Total	2262	4,699,694	988	44
Average Value	-	2,078	-	-

* Excluding Bunyoro for which no information is available

Source: Department of Agriculture.

(1) See the Annual Reports of the African Loans Fund and I.C.A. Funds 1963/64 and 1964/65.

Table II. 20

African Loans Fund and I.C.A. Funds:

Loans Outstanding in Relation to Available Capital. Shillings

Year	1	2	3	4	5	6	7	8	9	10	11	12
	African Loans Fund			I.C.A. 1st Grant			I.C.A. 2nd Grant					
	Total Capital	Loans O/S	2 as a % of 1	Total Capital	Loans O/S	5 as a % of 4	Total Capital	Loans O/S	8 as a % of 7	Total Capital (Cols.1+4+7)	Total Loans Outstanding (Cols.2+5+8)	*
1955/56	4,360,000	532,462	12.3	2,015,973	-	-	-	-	-	6,375,973	522,462	8
1956/57	4,360,000	924,939	21.3	2,015,973	-	-	-	-	-	6,375,973	924,939	15
1957/58	4,360,000	2,945,570	67.7	2,015,973	-	-	-	-	-	6,375,973	2,945,570	46
1958/59	6,160,000	4,575,410	74.3	2,354,644	194,765	8.3	-	-	-	8,514,644	4,770,175	56
1959/60	6,160,000	4,215,359	68.4	2,254,910	2,194,397	97.3	600,000	199,737	33.0	9,014,910	6,609,493	73
1960/61	6,160,000	4,792,401	77.8	3,213,802	2,816,736	87.5	1,600,000	847,206	53.0	10,973,802	8,456,343	77
1961/62	6,160,000	4,771,401	77.4	3,179,622	2,527,863	79.5	1,900,000	1,341,285	70.3	11,239,622	8,640,549	77
1962/63	6,160,000	4,978,220	80.8	3,113,713	2,203,657	70.7	2,700,000	1,800,338	66.7	11,973,713	8,982,215	75
1963/64	6,160,000	5,508,145	89.4	3,148,643	3,142,206	99.8	2,700,000	2,574,355	95.4	12,008,643	11,224,706	93
1964/65	6,160,000	6,318,360	102.5	3,015,973	2,366,491	78.5	2,700,000	1,833,443	64.2	11,875,973	10,518,294	89
July - Dec.'65	6,160,000	5,915,883	96.0	3,015,973	2,106,835	69.8	2,700,000	1,152,258	42.7	11,875,973	9,174,976	77

O/S = Outstanding   * = Total loans outstanding as percentage of total capital

Figures as of 30th June (end of financial year), and at 31Dec. in final row.

Source: Annual Reports of African Loans Fund and I.C.A. Funds.

2.7 Medium-term Loans Schemes: Progressive Farmers' Loans Scheme, Tea Outgrowers' Scheme, Nyakashaka Settlement Scheme, Master Tobacco Growers' Scheme, Loans for Dairy Farming and Ranching.

2.7. 1 The Progressive Farmers' Loans Scheme.

In 1960 the Uganda Government invited an American specialist in agricultural credit to visit Uganda and advise the Department of Agriculture on the development of agricultural lending. Mr. Tyson, whose report is summarised in Appendix 1 to this Chapter, advocated that the system of 'supervised' credit currently operative in the United States should be introduced in Uganda.

An initial Scheme was introduced in June 1961, but was then stopped because (i) the approval mechanism was slow, (ii) the division of responsibility between Bank and agricultural staff was unclear, and (iii) new equipment was not always adequately demonstrated. An amended Scheme was therefore introduced in 1962. The new regulations defined the Scheme's objectives as "to make credit available .... to Progressive Farmers for the purchase of tools and equipment, to improve their agriculture and to make capital improvements to their farms." (1) A Progressive Farmer was defined as one "who actively follows the advice and puts into practice the instruction given to him by the Department of Agriculture or the Department of Veterinary Services and Animal Industry, for the

(1) Department of Agriculture, circular AA1.C.788, 1:6:1962. This circular is reproduced in full in Appendix 2 to this Chapter.

proper management of his farm."[1] [2]

The amended Scheme was operative from July 1, 1962, to February 6, 1964. During this period all agricultural loans made from the African Loans Fund and I.C.A. Funds were made under the Scheme. Approximately 2,800 farmers obtained loans, 50% of these being either for the production of tea or flue-cured tobacco.[3] The remaining loans were granted mainly for general farm improvements, with emphasis on the production of cotton and coffee. Despite the fact that these, Uganda's major export crops, have encountered falling world prices for the last ten years, little effort was made to use the loans to encourage diversification of production outside the tobacco and tea schemes.[4] In the coffee-growing areas of Mengo, Masaka, Busoga, Bugisu, Bunyoro, Ankole and Toro, the majority of loans were granted for mulching coffee and lusuku, building produce stores, and the acquisition of certain items of equipment. In the cotton-growing areas, loans were granted predominantly for the purchase of ox-drawn implements, oxen, seeders, spray-pumps, fencing materials, materialsfor the construction of produce stores, and, in a

(1) Department of Agriculture, circular AA1.C.788, 1:6:1962. This circular is reproduced in full in Appendix 2 to this Chapter.

(2) The introduction of the Scheme followed the decision that as a result of the shortage of trained agricultural personnel to man the extension services, extension effort was to be concentrated on 'progressive and emergent' farmers.

(3) These are considered in the following section.

(4) With the exception of the few loans for the establishment of dairy farms.

few cases, full-size tractors.

Loans were made from the A.L.F. and I.C.A. Funds to farmers approved by the local staff of the Department of Agriculture and the branch manager of the Uganda Credit and Savings Bank. Applications for loans in excess of Shs. 5,000/- had to be approved by the Central Committee of the African Loans Fund in Kampala.

Following the attempt to streamline the processing of applications when the Scheme was amended in 1962, Kingdom Governments and District Administrations were no longer required to guarantee 50% of the loans made under the Scheme. Although nominal security was offered by borrowers, the loans were very predominantly character loans. In Buganda, a borrower who owned his land was required to include the title-deed in his security. Otherwise, the security offered for loans consisted of a borrower's goods and chattels. These might include his house, bicycle, radio (if he owned one), furniture, cattle and agricultural implements.

The rate of interest charged on loans was 7% per annum, plus a $2\frac{1}{2}$% penalty rate on amounts in default. Throughout most of the period of the operation of the Scheme the 7% charge was equal to the minimum East African advances rate. This rate represented a 2% - $2\frac{1}{2}$% reduction on the interest charge which a farmer would have been required to pay at one of the commercial banks, had the latter been willing to lend to him.

Initial applications were drawn up with the assistance of the agricultural extension staff. At first there was, as is shown in Table 22 , considerable delay in taking up loans. Several reasons for

Table II. 22

Progressive Farmers Loans Scheme: Ratio of Issue to Approvals

Year/Month		Total Loans Approved Since June 1962 Number	Value (Shillings)	Total Value loans Issued since June 1962 (Shillings)	Ratio Issues / Approvals %
1963	March	730	1,701,080	550,180	32
	April	794	1,865,260	708,380	38
	May	1010	2,155,820	876,080	41
	June	1186	2,577,660	1,390,200	54
	July	1367	2,930,560	1,709,420	58
	August	1470	3,107,460	2,040,860	66
	September	1487	3,160,080	2,271,420	72
	October	1522	3,183,300	2,621,640	82
	November	1584,	3,234,860	2,730,220	84
	December	1598	n.a.	n.a.	n.a.
1964*	January	1994	4,135,680	2,914,200	70
	February	2067	4,475,940	3,181,880	71
	March	2068	4,484,940	3,344,860	75
	April	2372	4,994,900	3,708,560	74
	May	2373	5,002,900	3,803,980	76
	June	2408	5,047,520	4,073,580	81
	July	2503	5,037,140	4,197,320	83
	August	2503	5,037,140	4,298,900	85
	September	2588	5,124,940	4,335,700	85

* Almost all loans approved in 1964 relate to the production of tea or flue-cured tobacco.

Source: Department of Agriculture.

this were suggested by District Agricultural Officers responsible for the Scheme. These were:

(i) there were delays in receiving the letter of approval from the Bank.

(ii) the necessary equipment was not always available.

(iii) in the North it was difficult to persuade the sellers of oxen to come in to the District Centre in order to collect payment from the D.A.O.(objection from Lango District).

(iv) it was difficult to operate loans granted partly for labour where farmers didn't keep muster rolls (This objection also came from Lango District where a serious attempt was made to pay out loans in kind).

(v) farmers were reluctant to accept loans in kind.

(vi) farmers failed to take up, or withdrew, their applications after approval.(1)

An intensive effort by the extension staff to see that loans were taken up, partly by reducing the rate of approval, and partly by "chasing-up" tardy borrowers, led to considerable improvement in the position.

Repayments were required twice-yearly, normally with no moratorium. While one of the two half-yearly instalments usually coincided with the harvest of the borrower's main cash-crop, there was a tendency to expect repayments at rigid six-monthly intervals without ensuring that adequate

(1) The same hesitancy in accepting debt obligations was encountered among borrowers under the Cooperative Credit Scheme who reduced the size of their applications.

cash revenue would be available at the second date. In the course of field-work the writer encountered no instance of a cropping pattern replanned to enable a defaulting borrower to meet his repayment schedule.

The regulations of the Scheme required that "a farmer should submit his application to the nearest Assistant Agricultural Officer". However, owing to the low ratio of A.A.O.s to the number of borrowers, the majority of applications were drawn up under the supervision of Agricultural Assistants. Excluding the loans for tea and tobacco an average of 93 loans were granted per district; in Teso District, 509 loans were made; in Masaka 207. In no district would it be reasonable to expect to find more than four A.A.Os. The preparation of applications and subsequent supervision therefore came to depend heavily on the work of Agricultural Assistants: staff who had a Junior Secondary Leaving Certificate and, in most cases, one year's subsequent general agricultural training. They themselves would usually have had no prior experience in planning the expenditure of Shs. 2 - 5,000/- on farm development. Loan plans consequently became oversimplified and stereotyped.

The prevention of default was also the responsibility of the extension staff. Three sanctions were available to them, but the first was of little use owing to successive Government directives that all defaulting borrowers should be granted extensions of time for repayments before securities could be seized and sold. The sanctions were:

(i) secured property would be seized

(ii) a $2\frac{1}{2}\%$ per annum penalty rate of interest would be charged on all amounts in default

(iii) the defaulter would receive no more departmental advice.

The last sanction constituted a negation of one of the main objects of the Scheme.

When the Scheme ceased to operate (with the exception of loans made for tea and tobacco) at the same time as the suspension of virtually all lending from the three funds, it was generally assumed that the rate of default on loans made under the Scheme was very high. In fact, this would have been unlikely to have been the case, given the fact that most loans, while they were granted for a period of two - five years, had only been paid out over the preceding eighteen months. Excluding tea and tobacco loans, on which the rate of default was negligible,(1) there were 1368 agricultural loans worth £171,614 outstanding from the three Funds when the Scheme was suspended. Of these, 279 were in default for a total of £13,900 or approximately 8% of the total value of loans outstanding. What does appear to have happened, in some areas at least, is that the default rate has risen since 1964. Certainly this is true for Masaka Division, where at 31 May, 1966, of 156 loans worth Shs.278,994/- outstanding, 109 worth Shs. 101,291/- were in default.

It proved extremely difficult to obtain a reliable breakdown by area of loans made and the default position, since the Uganda Commercial Bank no longer keeps separate records for the Progressive Farmers' Loans Scheme. The following Table, however, is based on returns made by the Bank to the Department of Agriculture in late 1964. It must be remembered

(1) See following section.

Table II. 21

Progressive Farmers' Loans Scheme: (i) Loans Approved and Issued July 1962-September 1964
(ii) Default position September 1964.

1	2	3	4	5	6	7	8	9	10	11	12	13	14
											% in Default of		
Branch	Region	No. of Loans Approved	Total Value of Approvals	Average Value of Approvals	Total Issued	% of Issues to Approvals (i.e.% of 5 to 2)	No. of Loans O/S	No. of Loans in Default	Total Value of Default	Average Value of Default amongst Defaulters	No. of Loans Approved	No. of Loans O/S	Value of Loans Issued
			Shs.	Shs.	Shs.				Shs.	Shs.			
Mbale	Eastern	183	412,000	2,260	588,620	94	183	70	53,900	780	39	39	9
Soroti	Eastern	509	535,020	1,040	535,020	100	186	60	15,620	240	12	32	3
Jinja	Eastern	73	213,840	4,140	213,840	100	65	35	27,580	780	48	54	13
Kampala	Buganda	233	912,420	3,920	829,640	91	208	50	47,680	940	22	24	6
Masaka	Buganda	207	757,280	3,660	738,480	97	194	33	22,880	700	16	17	3
Fort Portal	Western	478	671,440	1,400	92,620	14	33	16	46,760	2,920	3	48	50
Mbarara	Western	20	56,140	2,800	56,140	100	19	0	0	0	0	0	0
Gulu-Acholi	Northern	47	247,860	5,280	235,340	95	51	37	47,600	1,280	56	73	13
Gulu-Lango	Northern	19	137,140	7,220	130,720	95							
Arua-(Tobacco)	Northern	806	1,197,600	1,480	131,960	94	n.a.	13	13,280	1,020	2	n.a.	0.7
Arua (Other)	Northern	24	65,800	2,740	63,940	97							
Total		2,589	5,206,540	2,000	4,417,340	85	958	314	275,300	960	12	n.a.	6

O/S= outstanding. n.a. = not available.

In Fort Portal the majority of tea loans were only recently approved.
Source: Uganda Credit and Savings Bank.

that the Scheme was suspended in February (apart from the provision of loans for tea and tobacco). It is to be presumed that by the end of the year loans not taken up had been cancelled; this would explain the very high ratio of issues to approvals.

2.7. 2. The Tea Outgrowers' Scheme, and Nyakashaka Settlement Scheme.

The major part of tea production in Uganda has taken place in Toro District, in the Western Region. A loans scheme to assist established African tea growers in Toro District was initiated in February, 1961, at the request of the Department of Agriculture. The loans were to be made from the African Loans Fund and I.C.A. Funds. They were intended to assist farmers growing tea on a substantial scale.

> "Although the number of growers concerned was small, the individual amounts required were large and in view of the time required for tea to mature, long moratoria on loan repayments were necessary. To facilitate the issue of loans to them, arrangements have been made for their applications to be scrutinized by the Agricultural Officer (Tea), who gives them technical advice, and whose support is required before a loan is approved." (1)

Agricultural Enterprises Limited also made credit available in kind for the purchase of stumps from A.E.L. estates.

In 1963 the Scheme to assist large growers was modified in order to make loans available to progressive farmers who had not necessarily been growing tea previously.

The Central Committee of the African Loans Fund allocated Shs.100,000/-

(1) African Loans Fund Annual Report, 1961, p. 11.

for lending to farmers for the purchase of tea stumps during 1963. In 1964/65 the Ministry of Agriculture and Cooperatives put an additional Shs. 900,000/- at the disposal of the Uganda Credit and Savings Bank to finance the Tea Outgrowers programme until funds from outside sources could be obtained. So far, additional funds have not been obtained.

To date, at least 952 loans, worth Shs. 1,323,637/- have been approved to outgrowers mostly in Toro and Ankole Districts. Loans have also been granted in four other Districts in Buganda and the Western Region: Masaka, Mengo, Kigesi and Bunyoro. The loans have been granted for a ten year period, with a four year moratorium, it being assumed that plucking would start at the end of the fourth year. The loans were granted on the basis of an estimate that the planting of one acre of tea costs Shs. 840/-.

Following the suspension of the Progressive Farmers' Loans Scheme it was considered possible to continue to provide loans to tea outgrowers for the following reasons: firstly, it was considered desirable to promote the production of tea by African farmers since this crop undoubtedly yields a much higher return per acre than cotton or robusta coffee. The Commonwealth Development Corporation Uganda Tea Survey, 1964, estimated that outgrowers in Western Uganda should be able to produce 1000 lb. of made tea per acre and in Buganda, 800 lb. At payments to the grower of 23 cents per lb. green leaf while paying off stump loans, and at 33 cents per lb. thereafter, this would give a net return per acre of Shs. 1045/- to Shs. 1500/-. Average cotton yeilds per acre of 400 to 500 lbs. give a gross return of approximately Shs. 200/- to Shs. 250/- per acre. With robusta coffee, average yields of 4-5 cwt. clean coffee per acre give a return of Shs. 500/- to Shs. 600/-.(1)

Secondly, it appeared that the scheme was likely to be more successful than the provision of general farm improvement loans because: (i) loans were to be paid out in kind; (ii) loan repayments were to be made direct by the processors to the Bank; (iii) supervisory staff with special training in tea production were to be made available.

Tea stumps for sale to outgrowers are produced by Agricultural Enterprises Limited under an arrangement with the Department of Agriculture. Prior to 1963, A.E.L. had also provided credit to growers for the purchase of stumps. This arrangement ceased on 1.9.63. All new outgrowers have obtained credit from the Uganda Credit and Savings Bank. To do so they have been required to complete a Green Leaf Agreement. This document is an agreement between the outgrower and the factory which undertakes to purchase his tea, and it provides the security for the loan. The manufacturer undertakes to buy all tea from the outgrower which attains a specified quality, and he also undertakes to deduct 8 cents per lb. green leaf from the grower's deliveries for payment to the Uganda Credit and Savings Bank so long as the grower has any stump loan (which carries an interest of 7.5%) outstanding to the Bank. The manufacturer also deducts from the grower's sales the value of the short-

(1) Estimates taken from 1964 Commonwealth Development Corporation, Report on Tea Production in Uganda, pp. 30 and 31.

term credits provided for fertilisers. The grower on his part undertakes to deliver all his tea to the factory concerned.

Most of the tea outgrowers loans have been paid out since April, 1964: it is therefore too soon to forecast what the repayment performance will be. Two factors may effect this: (i) if standards of production are poor the grower might not produce sufficient tea to meet loan repayments; (ii) if there are several factories within a limited area, as in parts of Toro, the grower may be able to sell through an alternative outlet.

In 1963 another scheme for the provision of loans to unemployed junior secondary school leavers for tea production was initiated by the Church Missionary Society at the Nyakashaka Resettlement Scheme in Ankole District. This Scheme is designed to assist unemployed Junior Secondary leavers in establishing farm enterprises with a relatively high income potential. The main cash crop is tea. The credit system of the scheme has been described as follows: of £32,500 available for the settlement of 100 farmers, £25,000 is in the form ofloans to settlers to be repaid over a ten year period.

> "Each farmer can draw on a loan of up to Shs. 5,000/- which he must repay in the form of a standard deduction per pound from all the tea he sells, after his initial three years on the scheme. Of this loan up to Shs. 400/- is available for building his house, and the remainder is for purchase of 10,000 tea stumps, pocket money before crops start yielding, and hire of labour. The period for which pocket money would be necessary was originally estimated at three years, this period has now been cut down, partly because of the method of tea growing employed which results in early plucking, and partly because the money originally intended for pocket money has instead been used to make short term loans to the farmers for subsidiary cash crops, which bring them in income

> after only six months of dependance. These short-term loans are made at the discretion of the manager for: exotic poultry Shs. 2,000/-, strawberry plants Shs. 300/-, and for English seed potatoes and other vegetable seeds, varying smaller amounts. These loans are repaid in instalments as soon as the crops in question begin to yield." (1)

Estimates of the income to be derived from tea grown on the Scheme are of Shs. 375/- per month per three acres of tea once the bushes are in full production. (This is almost exactly the same as the income estimates made by the C.D.C. quoted above.)

Two members of the scheme are not growing tea, but are concentrating on exotic cattle. "These cattle were introduced as an experiment, partly to see if cattle would do well ... and they possibly demonstrate a further source of income ... and partly to provide a supply of good quality milk which could be available for the settlers' families in the future."(2)

In 1965/66 the Scheme was being run by two expatriates; one a graduate in agriculture with previous experience of agricultural settlement in Africa, and one a graduate in agronomy, having no previous settlement experience, who was receiving training to enable him to take over the Scheme.

By 1966 there were 52 ordinary tea outgrowers attached to the Scheme. These farmers are enabled to start tea growing with loans of 250/- from the Uganda Commercial Bank for the purchase of 1,000 tea stumps. The stumps, which come from Myakashaka nursery, are not delivered until their plots have been correctly terraced and contoured.

(1) Source: C. Hutton, Associate of the East African Institute of Social Research, "Nyakashaka Resettlement Scheme - a Preliminary Account." Unpublished paper, 1966.

(2) [illegible]

They are supervised by the local Agricultural Department Tea Officer.

While more information is needed, it appears that Nyakashaka provides one of the few examples in Uganda of the benefits that can be derived from a scheme that is given intensive high-level supervision. One example of this is the speed with which outlets for supplementary cash-crops were explored. It is intended that after five or six years the farmers will assume all responsibility for production and marketing. Any further assistance that they need will then be provided through the Agricultural and Veterinary Department extension services.

2.7. 3. The Master Tabacco Growers' Scheme(1)

Tobacco produced in Uganda is of two varieties: fire-cured and flue-cured. Flue-cured tobacco is the better quality product and fetches a price from two to four times as high as fire-cured tobacco, depending on the grade. It is with this variety that the Master Tobacco Growers' Scheme is concerned. The Scheme was introduced in West Nile District (Northern Region) in 1960 by the British American Tobacco Company who have a buyer's monopoly of all flue-cured tobacco produced in the District. Up to this date, the Company had distributed seedlings annually to the growers from the Company's nurseries and bought back from them green leaf for curing in its own barns. The Company then decided to try handing over to selected growers full responsibility for

(1) The information in this section has been obtained from the British American Tobacco Company and an unpublished paper "Report on a Brief Survey of the B.A.T.(Uganda) Ltd. Master Growers' Scheme" by Miss C. Hutton of the East African Institute of Social Research., 1966

the production of flue-cured tobacco produced in the District. Up to this date, the Company had distributed seedlings annually to the growers from the Company's nurseries and bought back from them green leaf for curing in its own barns. The Company then decided to try handing over to selected growers full responsibility for the production of flue- cured tobacco to the point where the cured leaf is sold to the Company. From 1961 to 1965 loans were provided to registered master tobacco growers for the construction of their own curing barns.

The master growers, selected from farmers who were previously growing tobacco for the Company, are grouped in fours. Each group has received a joint loan from the African Loans Fund or I.C.A. Funds, of from Shs. 1200/- to Shs. 1800/- to cover the cost of the erection of a curing barn and the purchase of one year's fertilisers.(1) Credit for recurrent inputs (fertilizers) in subsequent years is obtained from the Company, who deduct the value of the advance from the proceeds of sale of the crop. Each group has two accounts at the Bank (a current account and a loan account) held in the name of the voluntarily selected head of the group. The accounts are shared in order to save administrative costs. After the tobacco harvest, B.A.T. buys the flue-cured tobacco, which has been graded by the cooperative societies, and pays the net proceeds into each group's current account. If any member is in default on the loan account, the Bank can refuse to release an equivalent amount from the group's savings account. With this degree of control over repayments, the Scheme's default record is excellent.(2) By 1966, 1236

(1) The value has risen from Shs.1,200/- in 1961 to Shs.1,800/- in 1966.

loans worth Shs. 1,885,600/- have been approved to master growers. Supervision is intensive with an average junior staff ratio of one to 160 growers. These staff are trained on the Scheme.

The Scheme ceased to expand in 1966 owing chiefly to the uncertainty of the world tobacco market. The prospects for the marketing of Ugandan tobacco having improved following the partial cessation of purchases from Rhodesia, the Scheme is now due to be developed further. The new loans will be provided by one of the expatriate commercial banks because at present the Uganda Commercial Bank does not have sufficient funds available As part of a new project designed to increase the production of flue-cured tobacco, a similar credit scheme is to be introduced during 1967 in Lango, West Acholi, East Acholi and Madi Districts in the Northern Region. The scheme will supply tobacco to a second firm, but the latter will play no part in the provision of credit. Loans will be made and repaid through newly formed primary cooperative societies as part of the Cooperative Credit Scheme. In 1967 Shs. 2.9 million will be used for the construction of buying centres and for lending to the members of the forty-seven societies.(1) Of this, Shs. 1.7 million has been made available in the form of a British Government loan, and the rest will come from the normal sources of funds used for the operation of the Cooperative Credit Scheme.

2.7. 4. Loans for Dairy Farming and Ranching.

Loans for dairy farming were provided in Masaka and Mengo Divisions of Buganda under the Progressive Farmers Loans Scheme.

Following the suspension of the Scheme a few further loans for this purpose have been provided from the Uganda Commercial Bank's own funds to farmers who are able to provide mailo land as security. The loans are supervised by field staff of the Veterinary Department. The scheme is discussed in more detail in Chapter 4.

No loans for ranching have as yet been made to individual ranches, but under the U.S.A.I.D. assisted Ankole Ranching Scheme, it is probable that loan terms for prospective borrowers in Ankole and Masaka will shortly have to be prepared. The background to this scheme is given below.

Ankole cattle are one of the two indigenous breeds in Uganda; they are larger than the Zebu, but not as hardy. For over ten years, investigations have been carried out into the possibility of establishing ranches in Ankole District. In 1957 a Land Use Investigation Unit was established in Ankole, covering approximately 20,000 acres of land varying in type from open Themeda grassland to close Acacia Bushland. Most of the unit was divided up into seven ranches, ranging in size from 1500 to 3000 acres; of these six had been occupied by Bahima graziers[1] by 1960. With the establishment of the unit, three major problems had to be confronted:

> "the reluctance of the indigenous graziers to exchange their semi-nomadic way of life for a more orderly one of economic ranching within fixed boundaries; control over grass fires so that a grazing plan could be put into execution; and the provision of water supplies adequate enough to make permanent occupation possible." (2)

(1) The Bahima are traditonally cattle herders, living predominantly in Ankole District.

(2) Department of Veterinary Services and Animal Industry, Annual Report, 1959, p. 27.

By 1961 it was apparent that the experiment was unlikely to succeed, for two main reasons. Firstly, "irresponsible burning of pasture by ranchers made it impossible to adhere to the rotational grazing system."(1) Secondly, calf mortality in the six herds ranged during 1961 from 9% to 68%. These high mortality rates were attributable in large part to the social organisation and dietary habits of the Bahima tribesmen; milk forms an important part in the Bahima diet; in addition, on each ranch there was a large proportion of humans to cattle. The majority of male calves were slaughtered to avoid competition with the owners for the small quantity of milk produced by the Ankole breed, and even heiffer calves were poorly fed. In 1961, the Veterinary Department concluded:

> "It becomes patently clear that ranching of beef cattle in Ankole will never be an economic proposition under the traditional Hima way of life involving large numbers of tribesmen existing on a milk diet to the detriment of the herd." (2)

While this scheme was abandoned, a new ranching scheme was subsequently introduced in Ankole and the adjacent counties of Masaka, designed to utilise land that had been cleared of tsetse fly under a government project.(3) In 1963, on the recommendation of the United

(1) Department of Veterinary services and Animal Industry, Annual Report, 1961, p. 30

(2) Ibid., p. 30.

(3) This project was assisted by a U.S.A.I.D. loan of £130,000 for 40 years (interest payable at ¾% p.a. for the first 10 years and at 2% p.a. thereafter) which was used mainly for the purchase of insecticides and equipment. See R. Clark "Aid to Uganda", O.D.I. 1966, pp. 60 and 61.

States Agency for International Development, the Uganda Government decided to establish some 125 cattle ranches within an area of 625 square miles that were being cleared of tsetse in the two districts. The ranches will be of an average size of 3000 acres. In the first phase of the scheme the development of 50 ranches is planned. The Department of Veterinary Services and Animal Industry is carrying out the initial work of demarcation, boundary fencing and the installation of a water supply for each ranch before the land is allocated, plus the construction of internal roads and installation of fire-breaks. This capital expenditure is being financed by a U.S.A.I.D. loan worth $ 650,000 repayable in 40 years, and carrying an interest charge of 1% per annum for the first 10 years, and 2½% per annum thereafter. The loan is repayable in dollars.

2.8. The Cooperative Credit Scheme.

Throughout the 1950s the Cooperative Marketing movement developed rapidly. By 1960, there were 1,618 producers' primary marketing societies in Uganda, with a membership of 250,583. Some of those societies were making loans to members for productive and social purposes, although considerable difficulty was encountered in administrating loans and obtaining repayments. In most years the latter were well below the amount paid out, and the efforts of the Cooperative Department in the late '50s were devoted to assisting societies to collect outstanding debts, rather than to expanding the rate of lending. Table 24 shows details of loans made and recovered during 1960 by district. During this year

> "departmental efforts to clear up the unregulated and frequently improper lending by primary producer societies continued and slight increases in the total of loans outstanding in many districts at the end of the year indicated that more improper loans had been disclosed rather than that more improper loans had been made." (1)

In 1961, the Cooperative Credit Scheme was introduced for the provision of seasonal production credit through primary cooperative marketing societies. The scheme was introduced following the recommendations of J.C. Ryan of the Reserve Bank of India, who visited Uganda briefly for the purpose of advising the Department of Cooperative Development on the provision of agricultural credit in November, 1960 (2) Initially the Scheme was intended for the provision only of short-term loans of not more than twelve months duration. Only societies considered by the Cooperative Department to be credit worthy are allowed to participate. Most production credit is now provided under the Scheme which has expanded as shown in Table 25. However, it is still restricted to a minority of farmers: at 31st October, 1965, 18% of all primary producers marketing societies and 9% of all primary marketing society members were participants in the Scheme.

Primary societies can operate the Scheme with their own funds, but the majority obtain short-term credit from the Uganda Commercial Bank at a rate of 7% and a penal rate of 9½% on all amounts in default,

(1) Department of Cooperative Development, Annual Report, 1961, p. 6

(2) The Ryan Report is summarised in Appendix 3, to this Chapter.

Table II. 24

Primary Society Loans by Districts, 1960.

1	2	3	4	5	6	7	8
District	No.of Socs.	No.of Members	No.of Borrowers	Loans granted during year (shs.)	Loans recovered during year (shs.)	Col. 6 as a % of Col.5	Purpose of loans
Acholi East	35	5,666	344	48,173	473	7	Productive & Social
Acholi West	25	3,065	127	7,113	2,318	17	Productive & Social
Ankole	19	2,806	169	14,864	14,406	11	Productive
Bugisu	114	73,440	1,733	312,295	365,949	5	Productive & Social
Bukedi North	31	6,835	156	2,771	1,474	56	Productive & Social
Bukedi South	141	12,114	176	7,612	1,937	23	Productive & Social
Bunyoro	84	10,258	540	78,702	35,752	6	Productive
Busoga	57	7,296	272	24,818	5,432	10	Productive & Social
Lango	113	20,874	43	11,687	2,746	3	Productive & Social
Masaka	72	6,205	763	210,429	91,469	3	Productive & Social
Mengo	2	67	32	6,826	5,323	4	Productive & Social
Mubende	13	839	31	2,053	1,395	15	Productive & Social
Teso	44	3,812	172	2,830	22,216	60	Productive & Social
Toro	19	1,760	53	4,671	2,962	11	Productive
W. Nile	77	14,181	644	29,090	27,026	22	Productive & Social
TOTAL	836	169,218	5,255	763,934	580,878	6	

Source: Department of Cooperative Development Annual Report 1961, p. 7

and relend to members as 12%. The average size of the loans is small - Shs.146/- in 1964/65.

Three sources of funds have been used for the operation of the Cooperative Credit Scheme:

(i) The African Loans Fund and the I.C.A. Funds

(ii) The Cotton Price Assistance Fund, and

(iii)The Group Farming allocation remaining after credit hasbeen paid out to group farm members.

Societies borrow from the Bank on the security of

(i) a "letter of set-off" authorising the Bank to set off any credit balance on the deposit account and/or savings account in the society's name, to clear any outstanding amount on the loan account.

(ii) a letter to the union of which the society is a member (a) instructing that all bonus commission and interest payments, due by the union to the society, be paid into the society's savings account with the Uganda Credit and Savings Bank and that the said instruction will apply to all sums payable by the union to the society should the latter be in default; and (b) offering the society's shares and deposits in the union, as security for the amount of the loan.

(iii) hypothecation of all members' produce either in store or "to be produced."(1)

Members borrow from their society on the security of a bond and two sureties: these loans are character.loans.

To date, the Scheme has operated with low default rates. At 30th June, 1965, 4.8% of loans outstanding were in default for those societies

(1) See Manual for Pilot Credit Scheme, Department of Cooperative Development, August 1962.

Table II. 25

Expansion of the Cooperative Credit Scheme

	1	2	3	4	5	6	7	8
							Default Position at 30.9.66	
Year	Number of Societies	Total Bank Loans Approved	Total Withdrawn from Bank	Amount Lent from Societies' own Funds	Total Lent	Number of Borrowing Members	Number of Borrowers in Default	Total Amount in Default
		Shs.	Shs.	Shs.	Shs.			Shs.
1962/63	101	894,450	666,403	162,793	830,917	6,859	168	10,640
1963/64	250	2,643,050	2,1 95,406	256,994	2,438,366	15,143	441	41,548
1964/65	281	3,626,260	3,043,256	487,259	3,701,965	23,382	1,635	195,291
1965/66	358	6,367,450	5,461,640	652,116	6,097,003	33,827	4,702	691,391
1966/67	286	5,988,300	4,602,295	313,258	4,915,553	27,842	n.a.	n.a.

Note: For each year the default figures in Columns 7 and 8 apply to the default position at 30.9.66. In most areas repayments fall due at the end of March. In Masaka and Ankole Districts they fall due at the end of September.

Source: Department of Cooperative Development.

where "the Credit Scheme Regulations had been fully applied." With the expansion of the Scheme the rate appears to be rising, and twelve months later it stood at 7.5% (these figures refer to repayments by societies to the Bank and not by members to the societies, which are considered by the Department to be less satisfactory. This is borne out by the 1965/66 figures shown in Table II.25, column 8.) The initial good default rates appear to have been due to careful selection of participant societies and to the considerable pressure emanating from the centre encouraging field-staff to ensure that societies repayed their loans. In a number of cases the latter have succeeded in convincing participant societies that membership of the Scheme is a privilege. Where societies have fallen badly in default or otherwise operated the Scheme badly they have been removed from the Scheme. During 1967, approximately 140 societies were suspended out of a total of 486 societies which had entered the Scheme.

2.9 The Group Farming Scheme.

In 1963 the Cooperative Credit Scheme was adapted to the newly introduced Group Farming Scheme in order to enable members of Group Farmers to obtain short-term production credit. The funds for these loans were obtained from a special allocation made by the Uganda Government and administered by the Uganda Credit and Savings Bank. Credit was provided at the same interest rates as to borrowers under the Cooperative Credit Scheme. The expansion of loans to Group Farmers is shown in Table II. 26. Adaptation of the Cooperative Credit Scheme for group farming involved the waiver of certain regulations

Table II. 26

Expansion of Loans to Group Farms

	1	2	3	4	5	6	7	8
							Default Position at 30.9.66	
Year	Number of Societies	Total Bank Loans Approved	Total Withdrawn from Bank	Amount Lent from Societies' Own Funds	Total Lent	Number of Borrowing Members	Number of Borrowers in Default	Total Amount in Default
		shs.	shs.	shs.	shs.			shs.
1963/64	2	139,000	69,895	-	69,895	216	53	13,540
1964/65	21	1,508,980	550,543	22,860	572,421	1,943	457	87,598
1965/66	29	1,666,150	920,244	2,700	922,944	3,351	1,452	229,202
1966/67	37	2,010,700	979,596	-	979,596	4,217	n.a.	n.a.

Note: See note to Table II. 25.

Source: Department of Cooperative Development.

regarding the qualifications of both members and societies. Partly as a result of this leniency the Scheme has a higher default rate: 19% of the loans outstanding at 30.6.1966 for those Group Farms which were allowed to continue to operate were in default. The farms, however, have encountered other difficulties, technical, social and political - and the high default rates even of the operant farms must be seen in the wider context of the overall operation of the farms.

The special loans schemes referred to in the final sections of this Chapter are discussed at greater length, mainly in relation to case studies in Chapters 4, 5 and 7. Private sources of credit are discussed briefly in Chapter 6.

Table 27 summarises for the agricultural sector as a whole, the various sources, channels and recipients of credit.

Table II. 27

Sources, Channels and Recipients of Credit

Type of Credit	Sources	Comment	Channel	Recipient
1. Crop Finance a) Unprocessed Crop	Expatriate Commercial banks	Expatriate banks provide most of this type of credit	Cooperative Producer's Unions	Primary Cooperative Marketing Societies
Unprocessed Crop	Expatriate Commercial banks			Private produce buyers and processors
	Bugisu Co-operative Limited			Affiliated primary societies
Unprocessed Crop	Uganda Commercial bank		Producers' Unions	
Unprocessed Crop	Private produce dealers	Could also be channel for commercial bank loans		Up-country agents
b) Processed Crop	Expatriate Commercial banks	Guaranteed by Government		Lint Marketing Board
Processed Crop	Uganda Government			Lint Marketing Board
Processed Crop	Uganda Government	Includes loans from Coffee Price Assistance Fund		Coffee Marketing Board
2. Production Finance a) Institutional	Uganda Commercial bank	Cooperative Credit Scheme (includes loans for Tractor Hire Service)	Primary Marketing societies and Group Farms	Individual members
	Expatriate Commercial b[anks]			Agricultural estates

Type of Credit	Sources	Comment	Channel	Recipient
	Producers' Unions	Mainly for Tractor Hire Service	Affiliated primaries	Individual members
	Primary Co-operative Societies	Using their own funds mainly under Cooperative Credit Scheme		Individual members
b) Private	Private Traders			Individual farmers
	Lorry owners	for transport of coffee husks		Individual farmers
	Labourers on farms			Individual farmers
	Individual farmers			Individual farmers
3. Capital Finance	Funds established by Uganda Government	administered by Uganda Commercial Bank		Individual farmers
a) Institutional	Uganda Commercial Bank	granted on mailo security only		Individual farmers
b) Private	Expatriate commercial banks	very few outstanding		Individual farmers
	Supplies of machinery	on hire purchase terms		Individual farmers
	Uganda Development Corporation	The U.D.C. is holding company for A.E.L.	Agricultural Enterprises Ltd.	Subsidiary Companies (estate enterprises)

Appendix II. 1

Summary of the "Tyson Report"[1]

C.J. Tyson was requested by the Ministry of Natural Resources to suggest a specific plan for an agricultural credit programme "to cope with priority needs" pending receipt of recommendations for the provision of agricultural credit from the World Bank.[2]

Tyson lists the two main difficulties which have to be overcome as (i) "the difficulties involved in obtaining satisfactory security, and (ii) "the high cost involved in servicing the loans; .. the problem of servicing requires special emphasis because of the demand for small loans at rates of interest which can be expected to cover the costs involved." He states that "a credit programme formulated to meet present requirements of African farmers should emphasise meeting the need for small loans, and at the same time, provide for educating farmers in the use of credit and the management of their farms."[3] No sound basis exists for lending to farmers operating "entirely on a subsistence level"; credit should be reserved for those farmers who are emerging into a monetary economy.

"Government should accept some of the risk involved in a direct credit programme for farmers." It "should permit the making of loans with emphasis on the character, integrity and farming ability of

(1) "Agricultural Credit in Uganda" by C.J. Tyson, October 1960, unpublished.

(2) As contained in "The Economic Development of Uganda" I.B.R.D., John Hopkins Press, 1962, pp. 144-147.

(3) Tyson op. cit., pp. 1 and 2.

individuals, together with the productive capacity of the farming operations and not on security alone. ... In this atmosphere strong administrative safeguards are needed against misapplication of loan funds and improper use of income that should be used to pay off the loan". However, "it would be a disservice to farmers to finance unsound farming ventures".(1)

Tyson goes on to list 8 points which he considers essential to a sound credit scheme to be operated by Government. These are that the Scheme should:-

"1. Be administered through a staff of field technicians trained in agriculture and agricultural finance. It cannot be separated from farm planning, guidance in the proper use of the loan funds, and assistance in farm management practices.

"2. Provide for loan processing and loan collection by the same officer.

"3. Contact with farmers should be at the local level. Farmers should be able to apply for loans in their own area and make payments on their loan at the same location.

"4. Provide for participation of local leaders and farmers in determining the credit-worthiness of applicants. Such committees must be familiar with agricultural needs in the area and sufficiently acquainted with farmers to advise on the character, integrity and farming background of applicants.

"5. Base loan advances to individual farmers on a budget of income and expenditure.

"6. Set outside limits for repayment terms but base the individual's repayment plan on the expected income as reflected in the budget.

"7. Provide for follow-up contact with farmers on the use of loan funds, development progress, security servicing, loan collection and management.

(1) Tyson op. cit. pp. 2 and 3.

"8. Have clean cut regulations with respect to loan making and servicing policies that are applicable to all areas. Such regulations should clearly establish administrative responsibilities." (1)

The remainder of the report is concerned with the amplification of these points with respect to Uganda. Tyson recommends that at the field level Regional and District Agricultural Officers should be responsible for the administration of credit. Either the Treasury or the Uganda Credit and Savings Bank should act as agents for the scheme, to serve as a depository and to perform all central book-keeping functions but not to have administrative responsibility for the funds allocated to the scheme, this being reserved for the Agricultural Department. Loans may be granted for recurrent and/or capital expenses; loans for recurrent expenses should be repayable within twelve months, and loans for capital expenses within three years (by means of annual or twice-yearly instalments). "All notes within the district will fall due on the same dates." The D.A.O. will determine two dates on which payments may fall due each year. Loans will be granted primarily for the purchase of a list of items to be prepared by the District Agricultural and Veterinary Officers. The amount of the loan will normally be determined by the farm budget, but a loan limit might be established. Loans may only be granted to "Master Farmers" who adopt a certain list of approved practises; these lists will be drawn up by the District Agricultural Officers and submitted to the National Agricultural Office in Entebbe for approval. Loans will be secured by the best lien obtainable on the borrower's crops and chattels. The assessment of

(1) page 3.

applications, supervision of the use of the loans, and collection of repayments that are in default are all made the responsibility of the Department of Agriculture.

It is the allocation of the responsibility for the operation of the scheme, and particularly for debt collection, that has received most criticism, on the grounds that the field staff of the Agricultural Department cannot risk alienating those farmers whom they are expected to advise by taking on the task of collecting their overdue loan instalments.

The Report also fails to take into account (i) the need to use credit to develop new enterprises (to which no reference is made), (ii) the advantage (in terms of the more efficient use of funds) that may be derived from limiting credit to a single enterprise on individual farms rather than providing credit for general farm improvement, (iii) the need to restrict credit to those enterprises and techniques which have already proved profitable on peasant farms, unless Government is prepared to carry all or part of the risk of innovation.

Appendix II. 2

Regulations for the Progressive Farmers' Loans Scheme (1962) as circulated by the Department of Agriculture.

Designation. 1. This Scheme shall be known as the Progressive Farmers' Loans Scheme (1962) and is hereinafter designated "The Scheme". The Scheme supersedes the Progressive Farmers Loans Scheme published in Circular Standing Instruction No. 2 of 1961 (Ref:NR.c.788 of 12th April, 1961)

Object of the Scheme. 2. The object is to make credit available from the African Loans Fund through the Uganda Credit and Savings Bank as agent for the Fund to Progressive Farmers for the purchase of tools and equipment, to improve their agriculture and to make capital improvements to their farms. It is intended that this Scheme and the Cooperative Credit Scheme should be complementary and that small loans should normally be obtained under the latter. The aim is to simplify the granting of loans, retaining only the minimum precautions necessary to safeguard public funds.

3. Except in special circumstances and at the discretion of the Bank, no loans for agricultural purposes will for the time being be granted except under this Scheme. Loans under this Scheme will be granted only to Progressive Farmers whose names are recorded as in Paragraph 4 below.

Definitions of Progressive Farmers. 4. A Progressive Farmer, for the purpose of the Scheme, is a farmer who actively follows the advice and puts into practice the instruction given to him by the Department of Agriculture or the Department of Veterinary Services and

Animal Industry, for the proper management of his farm.
The names of all Progressive Farmers in a district shall be recorded in a register kept in the office of the District Agricultural Officer.

Administration. 5. The Director of Agriculture, in consultation with the Director of Veterinary Services and Animal Industry, and the Uganda Credit and Savings Bank as agent for the African Loans Fund, will be jointly responsible for the administration of the Scheme. (References throughout this Scheme to "The Bank" are to the Uganda Credit and Savings Bank).

Division of Responsibilities. 6. The principal responsibilities of the Director of Agriculture will be:-

(i) To issue administrative instructions to his departmental staff for the operation of the Scheme; the inspection of farms and the general supervision of Progressive Farmers to whom loans have been granted.

(ii) To take such action as he may deem necessary and desirable for the collection of overdue loans.

(iii) To consult with the Bank and subsequently to inform his staff of the purposes which are considered suitable for loans under this Scheme.

(iv) To consult with the Director of Veterinary Services and Animal Industry on Policy to be adopted for the issue of loans to Progressive Farmers.

African Loans Fund Organisation. 7. The principal responsibilities of the African Loans Fund will be:-

(i) The approval or refusal of loans.

(ii) To issue instructions to Branch Managers of the Uganda Credit and Savings Bank, or administrative arrangements for granting loans.

(iii) The institution of legal proceedings against defaulters.

Regional Agricultural Officers. 8. Regional Agricultural Officers will be responsible for ensuring so far as possible that loans are devoted to the purposes intended.

District Agricultural Officers. 9. No applications for loans under the Scheme shall be forwarded to the Area Committee unless the District Agricultural Officer certifies that the applicant is a Progressive Farmer and recommends the loan. The number of applications accepted will be at the discretion of the District Agricultural Officer.

African Loans Fund Area Committee. 10. To comply with the law all loan applications must be scrutinised by the African Loans Fund Area Committee. The usual guarantee of fifty per cent of the loan will not be sought from local authorities. Therefore, it is no longer essential to refer applications to Chiefs or other authoritie their advice, however, may be obtained when considered necessary. Applications recommended by the District Agricultural Officer should be passed by him direct to the Secretary of the African Loans Fund Area Committee. The Area Committee should try to clear applications expeditiously

<u>The Control Committee</u>

11. The Control Committee of the African Loans Fund will within certain limits delegate to the General Manager and Branch Managers of the Uganda Credit and Savings Bank authority to approve loans.

<u>Finance</u>.

12. Finance for loans will be provided from the African Loans Fund. Loans will be short term or medium term up to a maximum of five years.

<u>Purposes for which loans may be granted</u>.

13. In general loans will only be granted for farm machinery, equipment, livestock, tea stumps, and capital improvements such as farm buildings, water supplies, and fencing. Except in special circumstances laid down by the Director of Agriculture, loans to meet labour costs will not be recommended unless they form an integral part of a capital work (e.g. the construction of a building). An exception will be labour for tea planting.

Control of Capital. 14. Loans for capital works will as far as possible be issued in instalments at the discretion of the District Agricultural Officer.

Security. 15. While loans will be regarded as character loans, farmers will be expected to offer such security in the form of crops, livestock and chattels as they are able, i.e. the sort of goods which can be subject to seizure should proceedings for default be necessary.

Limitations. 16. As a general rule applications for loans of less than five hundred shillings should not be considered. In special cases smaller loans may be granted on the recommendation of the Regional Agricultural Officer and with the approval of the Control Committee.

Loan Agreement. 17. When his application is approved, a farmer will be expected to pledge the security he has and offered to undertake to continue to accept the advice of the Department of Agriculture or the Department of Veterinary Services and Animal Industry. Loan Agreements and/or charge documents may be signed anywhere, provided the farmer's signature or mark is witnessed by an officer not below the rank of Assistant Agricultural Officer.

Repayment of Loans. 18. (i) The period of repayment will be directed by the Branch Manager as advised by the District Agricultural Officer

(ii) Where a borrower has genuine difficulty in making repayments moratoria may be considered by the Control Committee after taking the advice of the District Agricultural Officer.

(iii) Only in special circumstances and on the specific recommendation of a District Agricultural Officer will an application for a loan be considered from a farmer who already has a loan under this Scheme or from any other fund controlled by the Bank.

Interest. 19. Interest will be at the rate prevailing for loans from the African Loans Fund.

Loan Processing. 20. (i) Application forms will be available at branches of the Uganda Credit and Savings Bank and where there is no Branch of the Bank, from the Office of the District Commission on payment of one shilling. District Administrations will be encouraged to keep supplies of the form.

(ii) In the first instance a farmer should submit his application to the nearest Assistant Agricultural Officer who, if necessary, should assist him to complete the form.

(iii) The Assistant Agricultural Officer is expected to certify that the applicant is a Progressive Farmer, to check his statements regarding his crops and movable assets, to indicate whether he is likely to be able to repay, and give his opinion of the farmer's integrity.

(iv) <u>Each application should contain details of how the loan will be used, giving costs of individual items of equipment. In the case of buildings, details of plinth area, height, materials for foundations, walls and roof should be included. Applications with vague objectives will not be considered</u>.

(v) The application should then be passed to the District Agricultural Officer who will pass it to the Area Committee as required in paragraph 9 above. It should only be recommended if the District Agricultural Officer is entirely satisfied that the project is economic and that the farmer is credit-worthy.

<u>Purchases of Equipment and Materials</u>.

21. (i) Regional Agricultural Officers in consultation with regional Veterinary Officers will issue lists of tools, equipment, etc. for which loans may be granted. Generally these will be similar to the articles for which subsidies are granted.

(ii) In consultation with the Trade, the Regional Officers will also issue lists of approved retail traders and retail prices for approved equipment. A wide range of retailers is desirable.

(iii) When a loan is approved for the purchase of equipment or materials the farmer will obtain from the Branch Manager of the Uganda Credit and Savings Bank an indent on the nearest approved retailer, specifying the items to be supplied, and their cost. The Branch Manager will make payment to the approved retailer on presentation of receipted invoices, which should be presented within thirty days from the issue of the order. The same will apply to materials supplied for capital works. (N.B. It is important that the farmer should be involved as little as possible in the handling of cash.)

Information regarding loans granted. 22. (i) The Branch Manager will provide the District Agricultural Officer each month with a list of loans granted under the Scheme; the latter will then take all reasonable steps to ensure that the loan is being properly used.

(ii) The District Agricultural Officer will inform the District Veterinary Officer of any loans granted to progressive livestock farmers.

Repayment of Instalments. 23. (i) Thirty days before repayment is due the Branch Manager will send to the District Agricultural Officer a note in duplicate showing the amount due. The District Agricultural Officer will be responsible for the delivery of the original to the borrower through his staff.

(ii) Borrowers will normally be expected to make repayments direct to the Branch Office, but may also do so to authorised officers of the Agricultural Department not junior in rank to an Assistant Agricultural Officer. Officers will be personally responsible for any cash thus collected, on behalf of Government, and it must be paid into the Branch office at the earliest opportunity. An authorised officer will be issued with a receipt book by the Branch Manager. The original receipt for loan repayments will be given to the farmer while the duplicate will support the payment to the Branch Office and will be retained by the Branch Manager in the dossier of the farmer concerned. The Branch Manager will issue a bulk receipt to authorised officers.

(iii) When the loan has been repaid in full the Branch Office will issue a certificate to this effect to the farmer concerned, with a copy to the District Agricultural Officer.

Default. 24. (i) Avoidance of default will depend largely on the selection of the applicants and on supervision in the field.

(ii) District Agricultural Officers should make every effort to see that loan repayments are made on time. They must point out the penalties for default and warn defaulters that they will not receive further assistance from the Department of Agriculture until they meet their obligations.

(iii) The Branch Manager will issue default notices in duplicate to the District Agricultural Officers who through the Assistant Agricultural Officers will arrange for them to be served on the persons concerned. Special circumstances preventing repayment on time should be reported to the District Agricultural Officer, who, in consultation with the Branch Manager, will recommend what action should be taken.

(iv) A penalty rate of interest, which shall be that prevailing for the African Loans Fund at the time, shall be charged on any instalments not repaid at the appointed time.

(v) After service of the final statutory notice on a persistent defaulter legal proceedings will be initiated by the Branch Manager.

<u>Personal Financial Responsibility</u>. 25. It is emphasised that no personal financial responsibility, other than that for cash collected under the provisions of paragraph 23 (ii), will be incurred by officers of the Agricultural Department in the operation of the Scheme.

26. It is clear, however, that a District which achieves a wide distribution of loans to its Progressive Farmers, and at the same time maintains a low default rate, will have operated the Scheme more successfully than a District with a high default rate or one where very few loans have been granted.

Circular Standing Instruction AA 1. C.788, June 1962.

Appendix II. 3

Summary of the "Ryan Report".

The author of the Report, J.C. Ryan, was at the time of writing it, the Chief Officer of the Agricultural Credit Department of the Reserve Bank of India, Bombay. He had considerable experience in the provision of agricultural credit to peasant farmers through credit cooperative societies in India. His concern in the Report was with the provision of small short-term production loans, designed primarily to increase crop yields per acre. Having established (i) that the Uganda Credit and Savings Bank could not profitably make loans of less than £50, and (ii) that Uganda already possessed a network of 1535 producers' marketing societies, he concluded that the latter constituted the only viable institutional channel for these loans.

The main part of the Report is concerned with detailed recommendations. Ryan estimated that 1200 of the existing societies could, with government assistance, undertake the provision of production credit to members over a five-year period. The Cooperative Department would need to recruit additional staff for supervision and audit. One supervisor should be made available for every ten societies. Participating societies would need to employ paid managers at a minimum salary of Shs. 100/- per month: managers' salaries should be subsidised by Government at a rate of 75% in the first year, 50% in the second year and 25% in the third year.

With regard to the actual loans, Ryan recommended:

(i) these should be restricted to farmers who deliver their produce for sale through their society,

(ii) loans should be restricted to five times the share capital paid by each member,

(iii) loans should be for such purposes as the purchase of seeds, agricultural implements, and live-stock, and the payment of wages, with the possible inclusion of non-productive purposes such as the payment of school-fees and bride-price,

(iv) as far as possible loans should be disbursed in kind. Societies "should contract with dealers for the supply of articles like insecticides, spray-pumps, ploughs, etc. and issue delivery orders on behalf of their members, debiting their loan accounts,

(v) loans should be given on a bond executed by the borrower together with two sureties,

(vi) the duration of the loans should not exceed one year. Medium-term loans would require landed security and should not be given until experience had been gained with short-term lending,

(vii) interest should be charged at 9% per annum, assuming societies can borrow at 6%.

With some modifications, Ryan's recommendations were adopted in full. The main weaknesses of his report were (i) that it contained no discussion of the relative need for medium- and short-term credit, (ii) it contained no economic analysis of the likely returns to be obtained from the type of short-term loans envisaged. The report was a technical document of limited scope, concerned only with the administration of credit through primary marketing societies.

Chapter III

Fieldwork Methodology

1. Background to the survey.

This study was planned in mid-1965. At that date the only published information that was available concerning the operation of the Progressive Farmers' Loans Scheme and the Cooperative Credit Scheme in Uganda was contained in the annual reports of the African Loans Fund and the I.C.A. Funds and of the Departments of Agriculture and Cooperative Development. In addition, a paper on the operation of the Progressive Farmers' Loans Scheme was presented to Uganda Agricultural Association in 1963.(1) This contained criticisms of the attitudes of farmers towards credit and suggestions as to how individual loans should be assessed, planned and supervised. The references to the Schemes in the Annual Reports were brief.

Despite this scarcity of data, during preliminary discussions concerning the present project held in July-August 1965 with officials in the Ministry of Agriculture and Cooperative Development and the Uganda Credit and Savings Bank the writer found that there were a number of prevalent impressions concerning the operation of the two Schemes.

With regard to the Progressive Farmers these impressions were generally unfavourable. They were based on reports from extension staff

(1) J. Phillips, Occasional Paper No. 1, presented to the Uganda Agricultural Association Seminar, January, 1963.

in the field, and particularly on the response of District Agricultural Officers to enquiries made by the Commissioner for Agriculture in 1964. The minutes of the meeting at which these reports were discussed contain the following conclusions:

(i) on the subject of loan use and distribution in Buganda Region:

> "The purposes for which loans were granted in Buganda appeared to be those for meeting recurrent expenses only... Loans also tended to go to emergent and not progressive farmers." (1)

(ii) on the subject of loan authorisation, distribution and collection in the Eastern and Northern Regions:

> "It appeared that a great number of loans in Amuria and Usuku Counties of Teso District were granted to school teachers who have since been posted elsewhere. It was also most likely that records of progressive farmers in some cases had disappeared; loans tended to be made by the Agricultural Assistants,[2] particularly so in Acholi District and not by Assistant Agricultural Officers[3]... There also appeared to be no pressure exercised by the district staff during the cotton season (and we have had a good cotton season in the Eastern and Northern Regions) to get farmers to repay their loans." (4)

It was also suggested to the writer that money had been misspent by borrowers, and that the Agricultural Assistants had been corrupted in order to secure the recommendation of loan applicants.

(1) Minutes of a meeting held at the Office of the Commissioner for Agriculture, 12.5.1964.

(2) Junior extension staff.

(3) In the hierarchy of extension staff in the Department of Agriculture the Assistant Agricultural Officers are senior to Agricultural Assistants.

(4) Minutes of a meeting held at the Office of the Commissioner for Agriculture, 12.5.64.

With regard to the Cooperative Credit Scheme, for which the published statistics indicated a very good repayment record,[1] comment was more favourable. However, it was acknowledged that no data were available concerning the impact of the Scheme on production. Officials of the Department of Cooperative Development considered the initial impact of the Scheme had been primarily educational. Outside the Department, less attention was given to this aspect of the Scheme and the doubt was voiced whether small unsupervised loans could be expected to have a noticeable impact on agricultural output.

2. <u>The Objectives and Limitations of the Survey</u>.

The decision to undertake a limited field survey of the operation of both Schemes was influenced by (i) the belief that a study of agricultural credit schemes in Uganda would be incomplete without some consideration of the actual use made of individual loans, and (ii) the knowledge that detailed information on this point could not be obtained from other sources. Given the lack of data it was impossible to formulate testable hypotheses of a precise nature prior to the institution of the survey. Instead, the writer established a list of objectives, which were:

(i) to ascertain the purposes for which loans were granted,

(ii) to examine the manner in which the loans were planned,

(iii) to ascertain the extent to which they were supervised and the quality

(1) See Chapter II, p. 118, Table II.25

of supervision available,

(iv) to ascertain the extent to which credit was in fact used for the purposes for which it was granted,

(v) to ascertain whether those enterprises and techniques for the improvement, extension or adoption of which loans were granted, were sufficiently profitable to justify the provision of credit in the first place,

(vi) to ascertain the impact of credit on production,

(vii) to determine the major causes of default.

The proposed study was subjected to the criticism that given the type of survey proposed (employing at most three interviews per farmer over a twelve month period) it would be impossible to estimate the impact of credit on production. That it would be impossible to estimate the precise impact was clear for the following reasons:

the number of variables affecting farm output, particularly in peasant agriculture is high, both between farms and on individual farms between seasons. They include:-

(i) rainfall amount and distribution,

(ii) soil fertility and standards of soil conservation,

(iii) the timing of operation such as opening land and planting,

(iv) the degree of weed control,

(v) the use of inputs such as mulches, manures, artificial fertilisers and insecticides,

(vi) selection of seed varieties

(vii) degree of labour availability,

(viii) the availability, in cash or kind, of resources to pay for the purchase of inputs and the hire of labour,

(ix) incidence of disease in the family labour force,

(x) the aptitude of individual farmers,

(xi) the quality of extension advice,

(xii) receptivity to extension advice on the part of the farmers.

Without undertaking a very intensive survey, with a very high recording frequency, covering all these variables, and including a control of non-borrowers,(1) it would be impossible to establish the precise contribution of credit to any increase in farm output. (The only exception to this would be an instance in which credit is provided for the establishment of a new enterprise and where lack of capital is known to be the limiting factor to investment. Even in this case the picture would be incomplete if it were known that the introduction of a new enterprise had affected the pattern of resource allocation among existing enterprises.)

The disadvantage of carrying out such a detailed survey in the present context was the absence of any sort of framework against which the results could be set. If a very small sample of farmers had been selected and studied, all of whom had apparently used their loans efficiently, there would have been no means of knowing whether this was representative on a broader scale or, if not, why not. With the limited time and

(1) whose farming operations would otherwise be as nearly as possible identical with those who had borrowed.

resources availabe it was clear that the present study could not hope to provide a complete picture of the use of credit in different areas. It was, however, decided to try to maximise the coverage of the survey within the limits imposed by these two constraints. It was decided that a sample of farmers who had received loans under each of the major credit schemes (the Progressive Farmers' Loans Scheme and the Cooperative Credit Scheme) should be interviewed. To these the writer later added a sample of farmers who had received loans under the Tea Outgrowers' Scheme. This was done when it became clear that many general farm improvement loans granted under the Progressive Farmers' Loans Scheme were granted for a series of minor improvements, the potential impact of credit thus being weakened. Loans to tea outgrowers were granted for the establishment of a single enterprise of greater profitability than robusta coffee or cotton - the cash crops grown by most recipients of the "general improvement" loans.

3. Selection of the Sample.

3. 1. Location of the Survey.

Before selecting the sampling areas preliminary field trips were undertaken to seven districts[1] in order to examine the type of information that was available in district files, and to discuss the Schemes with the officials responsible for their operation. Within the districts a total of 44 primary cooperative societies, which were operating

(1) Out of a total of seventeen in Uganda.

the Cooperative Credit Scheme, were also visited, and their loans records examined. The districts visited were Masaka (Buganda Region), Busoga, Bugisu, Teso (Eastern Region), Lango and Acholi (Northern Region) and Bunyoro (Western Region).(1)

The original intention was to purposefully select four districts and to conduct a single interview survey of a random sample of borrowers under both Schemes in each. However, it became apparent, given the number of factors that can affect a farmer's use of credit, that the initial interviews would be lengthy ones. It was, therefore, decided to reduce the size of the sample, and restrict the survey to two districts. Even so, the interviews could not normally, in the absence of farm records, be expected to yield sufficiently precise data to facilitate the accurate calculation of the rate of return to investment or recurrent expenditure financed with credit.(2)

The total number of farmers who could be interviewed was determined by the limited amount of time available. It was decided to aim to interview 60 farmers in each district of whom 36 should have received credit under the Cooperative Credit Scheme, and 24 under the Progressive Farmers' Loans Scheme.

In order to select the districts, the regions in which the two main cash-crops, cotton and coffee, are produced were identified (see Map 2). It was not necessary to delimit these boundaries precisely, but to select

(1) See Map 1.

(2) Such calculations were only possible in the case of tea outgrowers. See Chapter 7, section 1, below.

Map III. 1

The Districts of Uganda.

Key

1. West Nile
2. Madi
3. Acholi
4. Karamoja
5. Bunyoro
6. Lango
7. Teso
8. Sebei
9. Bugisu
10. Toro
11. Mubende
12. Mengo
13. Busoga
14. Bukedi
15. Kigesi
16. Ankole
17. Masaka

Masaka District

A. Mawogola County
B. Kabula County
C. Koki
D. Buddu
E. Sebei

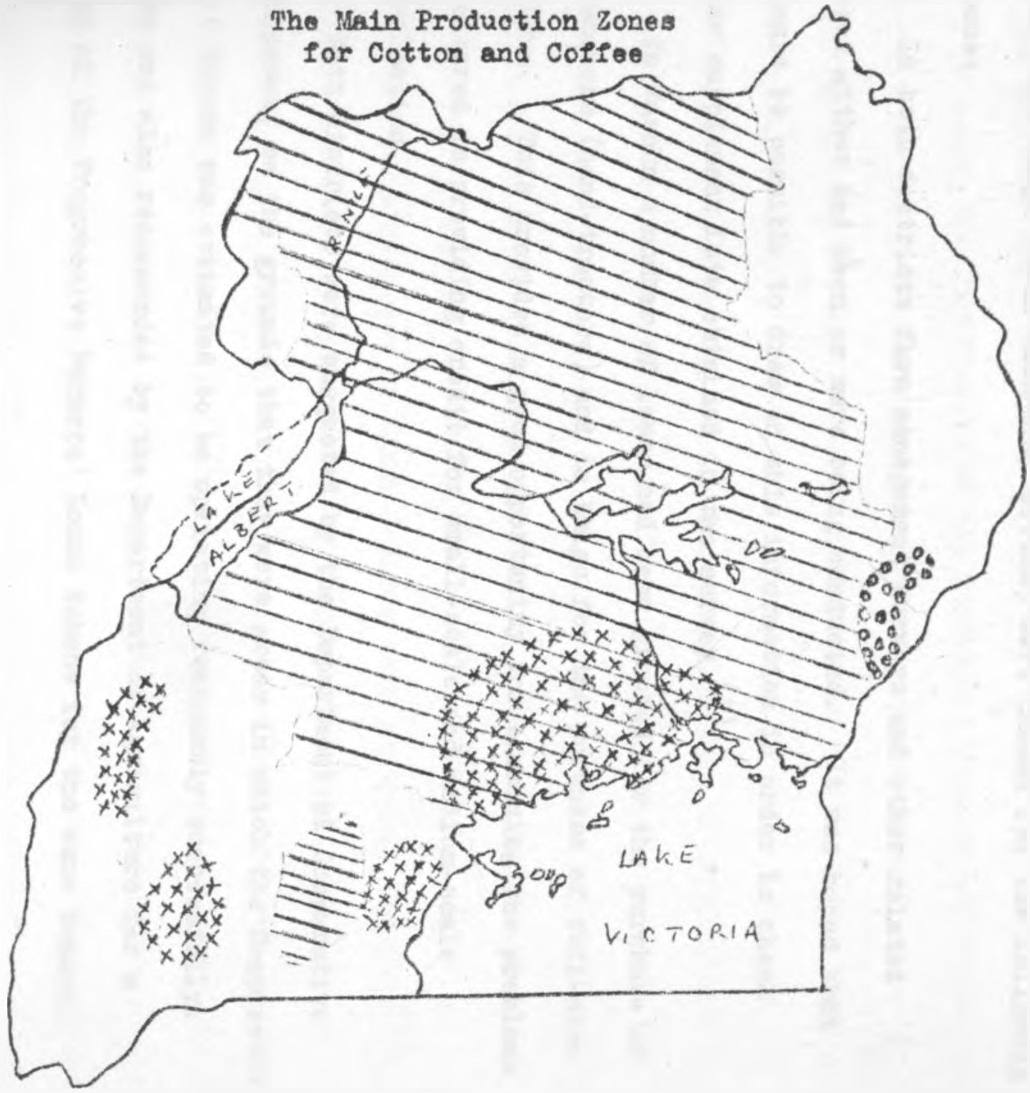
Lango District

F. Oyam County
G. Erute County
H. Moroto County
I. Maruzi County
J. Kwania County
K. Dokolo County
L. Kyoga County

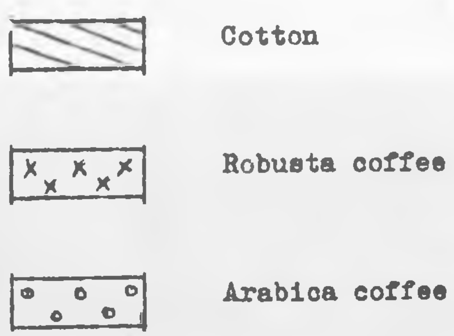
Red lines denote regional boundaries.

Map III. 2

The Main Production Zones
for Cotton and Coffee



Key



Note: While the shaded areas produce most of Uganda's cotton and coffee, these are also important cash crops in Ankole, Bunyoro, Toro and West Nile.

Source: Pattern of crop distribution taken from "The Economic Development of Uganda", I.B.R.D. John Hopkins Press, 1962, map facing p. 127.

from within them two districts to be used as the next stage of the sample. The two districts selected, Masaka (main cash-crop robusta coffee) and Lango (main cash-crop cotton) were chosen for the following reasons:

(i) In both districts farm management surveys and other related studies either had been or were being conducted. It was hoped that it would be possible to draw on this information in order to check and/or supplement data obtained in the survey.(1)

(ii) In Masaka a number of loans had been granted for the purchase of Landmasters (hand-tractors) and in Lango for the purchase of full-size tractors. This provided a good opportunity for examining the problems encountered in providing credit for small-scale and medium-scale mechanisation.

(iii) Both districts were suggested by the Department of Cooperative Development, on the grounds that they were areas in which the Cooperative Credit Scheme was estimated to be operating reasonably successfully. Masaka was also recommended by the Department of Agriculture for a survey of the Progressive Farmers' Loans Scheme for the same reason.

(1) These included: (i) The Farm Management Survey of the Coffee/ Banana Zone of Buganda and Busoga, currently being conducted by Malcolm Hall. (ii) "The Performance of Single Axle Tractors on Peasant Coffee Farms in Buganda." W.H. Boshoff and D. Innes in East African Agricultural and Forestry Journal 1961. (iii) Report on "Dairy Farming in Kyaggwe and Bugerere Counties." R.I. Grimble, 1965. (iv) Special studies by Makerere Students on dairy-farming in Buganda. (v) The Cambridge University Survey of large farmers in Buganda (vi) M. Okai "The Adequacy of the Technical Base for the Agricultural Extension Services in Uganda: A case study in Lango District, Makerere University College, Department of Agriculture Rural Development Research Project, paper no. 6, 1965.

Since in the course of the preliminary field trips it became evident that the schemes were far from operating with total success in any of the districts visited, the writer saw no cause to object to the recommendation of the Departments.

(iv) In Lango, the familiarity of the District Agricultural Officer with the District (he had been working there prior to the introduction of the Progressive Farmers' Loans Scheme and throughout its operation) was felt to be an advantage.

(v) The areas are typical of the two basic systems of agriculture in Uganda (the coffee-banana zone of southern Buganda and south-west Busoga, and the cotton-growing, cereal eating areas of Northern and Eastern Uganda. They therefore cover a large proportion of the agricultural credit possibilities range in the country.[1]

The choice of areas in which Schemes were generally thought to have operated successfully gave rise to the possibility that the outcome of the survey might give an unrepresentative picture of the operation of the schemes. (In the event, the conclusions drawn were not very favourable.) Firstly, however, it was impossible, since only one area could be selected from each of the main ecological zones, to obtain a sample that was in all respects representative. While it would have been possible to select an area such as West Acholi where both Schemes had high default rates, this would have been to court the risk of a high rate of refusal to cooperate on the part of the farmers interviewed, and also, possibly on the part of district staff who could be held partly responsible for the Schemes' failure.

(1) See M. Hall and E.B. Riordan "Trends in the Production of Foodcrops in Uganda", Makerere University College, Faculty of Agriculture, mimeoed paper, 1966, p. 1.

3. 2 Selection of the Progressive Farmers' Loans Scheme sample.

For the Progressive Farmers' Loans Scheme, the method of selecting the sample varied (i) as between districts, owing to the number of medium-term loans granted in the two areas, and (ii) according to the purposes for which loans were made, in order to ensure that data were obtained on livestock and landmaster loans in Masaka.

In Lango, where only 19 loans were granted, all of the borrowers were interviewed. In Masaka, the sample of 12 general farm improvement loans was selected at random(1) from the list of loans granted in the gombolola containing the most (60) borrowers. The list was subdivided into 30 farmers having loans worth less than Shs. 2,500/- and 30 with loans worth Shs. 2,500/- or more. Six farmers were selected from each list. The eleven Landmaster loans that had been made in the district were listed, and nine of the eleven loans were investigated. With one exception, all the interviews in Masaka were confined to Buddu County, where most credit is outstanding: both the other Landmaster owners lived outside Buddu. A list was also compiled of all the dairy farmers who had received loans: the list was so small that all those who were available were interviewed.

3.3. Selection of the Cooperative Credit Scheme sample.

For the Cooperative Credit Scheme it was decided to select societies from the first year of intake into the Scheme, in order to be able to examine their operations over four years. In Masaka 6 societies

(1) Using a table of random numbers.

joined the Scheme in 1961/62 and in Lango 8 societies. The Cooperative Credit Scheme specialists were asked to state which of these societies was operating the Scheme successfully and which either less successfully or badly. They both divided the societies into two groups with little hesitation, and the writer then selected one society from each group. The managers of the four societies were then asked to submit a list of all the farmers who had borrowed from their societies in 1962/63 (the first full year of the Scheme's operation). In three cases a random sample was selected from these lists. In the fourth case(1) the Cooperative Credit Scheme Specialist was found to have asked the society committee to draw up a list of borrowers in 1962/63 whom they knew were willing to be interviewed. Although the list was subsequently adjusted, the final sample included a disproportionate number of the better farmers in the society. However, to have reselected the entire sample would have alienated both the society committee and members.

As can be seen from the following Table, the number of farmers interviewed in each society were very varying proportions of the number of farmers who had received loans in 1962/63.

In total, 23% of the members who obtained credit in 1962/63 were interviewed.

3.4 The Interviews.

The questionnaire that was used for the initial interviews is reproduced in Appendix 1 to this Chapter. All interviewing was carried out by the writer, with the aid of an interpreter provided by either the Department of Agriculture, the Department of Cooperative Development, or

(1) Awelo Growers' Cooperative Society Limited, Lango District.

Table III. 1

Number of Farmers who obtained Credit in 1962/63, as compared to the Number of Farmers Interviewed.

Society	Number of Borrowers in 1962/63	Number of Borrowers Interviewed
1. Kyanamukaka G.C.S.L., Masaka	24	19
2. Kyamusoke G.C.S.L., Masaka	56	18
3. Akan Akwo G.C.S.L., Lango	82	19
4. Awelo G.C.S.L., Lango	163	20
Total	325	76

the Ministry of Animal Industry and Veterinary Services.(1) With regard to the use of government officials as interpreters the following quotation taken from the draft report of the 'Toro Small Farm Survey' describes the present writer's normal experience in interviewing.

> "Some people consider that it is easier to undertake this type of work if one is not working for government but rather for an academic body. The response of farmers has not supported this view; to work for the agricultural department is much more easily comprehended ... and when a government servant actually appears on their doorstep they (the farmers) feel that at last that august body is taking an interest in them. This greatly facilitated the approach to farmers, since one was able to appeal to their sense of expectancy

(1) The status of the interpreters was either (i) Agricultural Assistant, (ii) Cooperative Credit Scheme Specialist, (iii) Cooperative Assistant, (iv) Veterinary Extension Officer.

> of Government help and explain that it is impossible to help people unless their problems are known, and that the object (of interviewing) was to bring these problems to light. At the same time, however, it was stressed that any help would not be directly felt but would reflect itself in agricultural policy." (1)

In a few instances the status of the interpreters was a disadvantage. For example, some progressive farmers were evasive when asked how many times they had been visited by the local Agricultural Assistant since the receipt of their loan. The majority of questions, however, did not reflect on the relationship between the interviewees and the extension services. It was felt by the writer that the advantages of having as interpreters people who knew the district, and in some cases the farmers, and who were familiar with the two schemes, more than outweighed the disadvantage described above. In Lango, for example, the Agricultural Assistant in charge of the borrower's gombolola did not interpret himself, but listened to the interviews while another A.A. interpreted. Afterwards, doubtful answers were checked with the first Assistant

All the farmers in the sample were interviewed between January and March, 1966. With one exception each interview took place on the interviewee's shamba (holding). By walking round the shambas it was possible to make a general check on responses to questions concerned with farm management. The interviews lasted an average of two hours.

3.5 Follow-up Interviews.

The first interview was followed by either one or two further interviews, the first of which took place four - six months

(1) D. Pudsey 'Toro Small Farm Survey', Draft Report, Department of Agriculture 1966.

after the initial visit. At these interviews questions were concentrated on the use of inputs or equipment bought with credit and related points concerned with farm expenditure and income. The questionnaires used are reproduced in Appendices 2 to 6 of this Chapter.

With the exception of two dairy farmers in Masaka, all the progressive farmers in the sample were reinterviewed once. The former could not be revisited owing to the state of emergency in Buganda. Farmers who obtained loans under the Cooperative Credit Scheme were reinterviewed at least once and in a few instances twice.

3.6 Use of Control.

In both districts a control sample of farmers was interviewed who had not received loans under the Cooperative Credit Scheme. The object was to compare cash expenditure on farming, and the use of improved techniques by the two groups. The members of the control sample were required (i) to be members of the same cooperative societies as the farmers who received credit, (ii) to have approximately the same size shambas as those who obtained credit, and (iii) to be as nearly as possible their neighbours. It will be observed that while a 50% control was selected for borrowers under the Cooperative Credit Scheme in Lango, a 100% control was selected in Masaka.[1] In Lango the introduction of the control was to some extent experimental. After the potential usefulness of a comparison between borrowers and non-borrowers became clear, the decision was made to increase the size of the Masaka

(1) See Chapter 5 below.

control.

In Lango nine individuals owning tractors and twelve progressive farmers owning other forms of improved equipment were interviewed in order to find out what sources of capital they had used to purchase this equipment. In Masaka, thirteen additional owners of exotic dairy cattle were interviewed to obtain more data on the general standard of operation of dairy farms in the division.

3. 7. Response.

Response to the interviews was good. Only one progressive farmer who received credit refused to be interviewed. One borrower under the Cooperative Credit Scheme also refused, and three further interviews were cancelled owing to the inconsistency of the responses. Of the interviews with farmers who did not receive credit, four had to be cancelled in Lango owing to errors in selection. In Masaka, 39 out of the projected interviews were achieved. All but two of the cancelled interviews were replaced.

In addition to the survey outlined above it was felt necessary to visit briefly one of the two schemes concerned with the provision of credit for single crops; the Tea Outgrowers' Scheme was selected and the methodology used for the survey is described in Chapter 7, section 1, page 381.

Appendix III. 1
The Initial Questionnaire.
Schedule I

Date: Sub-County

Parish

Village

F'R Name

1. " Group

2, 3. " No.

The Farmer.

4. Age: (1) __25 (2) 25 - 29 (3) 30 - 39 (4) 40 - 49 (5) 50 __

5. Education: (1) None (2) P1 - P 4 (3) P5 - P8 (4) Farm School
(5) R.T.S. (6) Junior Secondary (7) T.T.C.

6. Any Present Employment Other Than Farming
(1) Full-time (2) Part-time (3) None

7. Annual Income from '6' above:

8. Any Previous Employment: (1) Full-time (2) Part-time (3) None

9. No. of years since '8' above given up:

The Holding.

10. Approximate No. of years for which F. has cultivated existing holding:
(1) ___2 (2) 3 - 4 (3) 5 - 6 (4) 7 - 8 (5) 9 - 10 (6) 11 - 15
(7) 16 - 20 (8) 21 ___

11. Into How Many Blocks is Cultivated Area Divided: 1 2 3 4

12. If the Holding has been Measured what isthe Acreage: (1) ___
(2) 3 - 4 (3) 5 - 6 (4) 7 - 8 (5) 9 - 10 (6) 11 - 15
(7) 16 - 20 (8) 21 - 25 (9) 21 ___

13. Present Extent of Cotton/Coffee, if measured:

14. Expansion or Improvement of Holding since occupied, prior to P.F.L.S. or C.C.S. Loan.
    (1) Area under Cotton/Coffee expanded
    (2) " " Other Crops "
    (3) Condition of Perennial Crops improved
    (4) Building erected
    (5) Fencing "

15. Main Source of cash for '12' above (if needed)

(1) Sale of crops	(2) Income from off-farm employment
(3) Sale of cattle	(4) Receipt of dowry
(5) Repayment of debt to F.	(6) A.L.F.
(7) Other bank loan	(8) Bank Balance (as opposed to current income or savings kept at home)

16. Has the Farmer an official Document (Title-Deed) proving his ownership of holding: (1) Yes (2) No

17. Annual Value of Rent paid

18. Additional Land available for Cultivation:

(1) None	(2) Adjacent to holding and owned by F.
(3) Adjacent; not owned	(4) In same village and owned by F.
(5) In village: " "	(6) Further afield and owned by F.

The Household.

19. No. of Adults (over 15 years)

20. No. of Adult Males normally available for work on farm:

21. Adult females normally available for work on farm:

22. No. of children in household

Expenditure on School-Fees and Major Food Items:

23. Total expenditure on education this year:

24. Estimated annual cash-outlay on food items bought in bulk (if any):

Permanent Labour:

25. No. of Permanent Labourers living on Farm:
(1) None (2) 1 (3) 2 (4) 3 (5) 4 (6) 5 (7) 6 (8) 7
(9) 8

26. Total Monthly Cash Value of Wage Paid to Above:

27. Form in which wage paid: (1) Cash (2) Kind (3) Plot of land
(4) Cash and Kind.

Maintenance of coffee or cotton (to be observed where possible)
A. Coffee (Questions 28 - 34)

28. Do you Mulch your Coffee. (a) P.F.L.S. .. No. of acres mulched
(b) C.C.S. .... (1) All (2) Most (3) Some (4) None.

29. Do you fertilise your coffee: (1) All (2) Most (3) Some (4) None
(5) According to Agric. Dept. recommendations

30. Do you apply F.Y.M. to your coffee: (1) All (2) Most (3) Some
(4) None

31. Do you prune your coffee: (1) All (2) Some (3) None (4) According to Agric. Dept. recommendations.

32. Do you spray your coffee; (1) All (2) Most (3) Some (4) None

33. Is present weed-growth heavy: (1) overall (2) where shamba unimproved
(3) No

34. How much do you pick: (1) All (2) Most (3) Some (4) None

Cotton (Questions 35 - 41)

Farmer's account of last performance of following operations.

35. Obtain months (if possible fortnights) in which cotton planted

36. At what spacing did you plant: (1) All at recommended spacing
(2) wider than recommended, with 2nd crop interplanted
(3) wider than recommended, W/O 2nd crop interplanted

37. How many times did you weed:

38. Extent of weed-growth (if observed): (1) Clean (2) thin (3) fair (4) thick

39. Did you spray your Cotton: (1) All (2) Most (3) Some (4) None

40. Observation of spraying recommendations as described
(1) Complete (2) Incorrect Strength
(3) Incorrect No. of applications (4) Incorrect Timing

41. How much of the crop did you pick (1) All (2) Most (3) Some (4) None
If most unpicked, what = reason?

42. From completed input chart a) approximate total expenditure on all inputs excluding temporary labour.

43. b) approximate expenditure on temporary labour

44. c) form of payment of temp. lab. (1) Cash (2) Kind (3) Both

45. d) approximate expenditure on 42 and 43 above combined

46. Livestock.
Farmer's estimate of no. of cattle owned (excluding trained oxen)

47. Farmer's estimate of value of cattle owned

48. No. of trained oxen owned

49. When did Farmer last sell any cattle.
Circumstances in which they were sold (No., Price, Purpose)

50. Has farmer ever sold cattle to finance expenditure on holding (1) Yes (2)No

Questions 51 to 59 further details for livestock loans.
General Expenditure and Income:

60. Approximate expenditure on major improvements to the House in last few years, distinguishing the last 12 months if possible; State no. of years over which expenditure spread.

61. Value of annual graduated tax payment.

62. Total value of particular items of expenditure, if any, incurred over last year; e.g. payment of dowry.

Chart of Inputs or Equipment Hired or Purchased at Last Performance of Appropriate Operation.

A/	Quantity Bought/Approx. Number of Labourers	Cost per Unit	Timing of Operation	Strength of Application	Crop	Proportion of crop	Total Cost
Tractor-hire							
Ox-Plough (+Oxen)							
Seed Purchase							
Insectidice Purchase							
Hire of Seeder							
Pump Hire							
Mulch Purchase							
Fertiliser Purchase							
Herbicide Purchase							
Transport Hire							

Chart of Inputs or Equipment Hired or Purchased at Last Performance of Appropriate Operation

B/	Quality Bought/Approx. number of Labourers	Cost per Unit	Timing of Operation	Strength of Application	Crop	Proportion of crop	Total Cost
Temporary labour for opening land							
Labour for planting/thinning							
Labour for weeding							
Labour for mulching							
Labour for spraying							
Labour for pruning							
Labour for picking/sorting							

63. Value of items of farm equipment purchased this year.

64. Income from sale of coffee/cotton last season
X = recorded or remembered clearly
Y = rough estimate

65. In lbs. weight were farmer's sales (1) higher than usual (2) average (3) Below average

66. List other crops sold

67. Estimated value of sales of other crops over last 12 months
X = recorded or remembered clearly
Y = rough estimate

68. Income from other activities, e.g. Beer-brewing or hiring out oxen

69. Total farm expenditure in last 12 months, as given in answers 23, 24, 60 - 62.

70. Total expenditure on farming in last 12 months, as given in answers 17, 26, 42, 63.

71. Total income as given in answers 7, 64, 67, 68.

Water Supply.

72. Is the water-supply on the farm adequate
(1) Yes (2) Deficient in dry season (3) generally inadequate.

73. Bunding: (1) regular (2) Some fairly maintained (3) poor or none.

SCHEDULE 2

(1) Group No.

2, 3 Farmer's No.

4. Sources of Institutional Credit used by Farmer:
   (1) C.C.S. (2) P.F.L.S. (3) Com. Bank (4) ALF. (prior to P.F.L.S.)
   (5) Other Gov. Loans Schemes.

   C.C.S. Questions 5 - 17 inclusive

5. No. of C.C.S. loans received: (1) (2) (3) (4)

6. Size of present loan: (1) 100/- (2) 101-200/- etc.

7. Have these loans increased in size: (1) yes (2) No.

8. Farmer's statement of purpose of loan:

   (1) Transport of Mulch (2) Labour to put down mulch
   (3) Labour to cut el.grass (4) Purchase of fertilizer
   (5) Purchase of insecticide (6) " " spray-pump
   (7) Labour to weed (8) Labour to pick
   (9) " " open land (10) Tractor-hire
   (11) Ox-plough hire (12) Other

9. Was full amount of loan applied for always granted:
   (1) Always (2) sometimes (3) never.

10. What size of loan did farmer apply for this time.

11. What size would farmer like loan to be in order to enable him to make an increased profit from the sale of crops:

12. Reason for selection of amount in '11' above.

13. Was loan received in (1) Cash (2) Kind (3) Both

14. If labour was hired and paid cash, was payment made direct by society to porters (1) Yes (2) No.

15. Would farmer prefer to receive loan in (1) Cash (2) Kind (3) No Preference

16. Reason for opiniongiven in '15' above.

17. Was loan received in time to derive optimum benefit from it:
    (1) Yes (2) No

P.F.L.S. Question 18-35 inclusive On attached sheet give detailed plan of loan and break-down of expenditure as obtained from District Agricultural Office.

18. Size of loan
19. Duration (1) 1 year (2) (3) (4) (5)
20. Security
21. Broad description of purpose
22. Total amount drawn to date (1) All
23. Was the amount granted = to amount farmer originally requested
    (1) Yes (2) No
24. If not, who was responsible for reduction:
    (1) A.A. (2) A.A.O. (3) D.A.O. (4) Area Committee (5) U.C.S.B.
    (6) Don't know
25. Approx. No. of months elapsed between submitting application to D.A.O. & notification that loan granted: 1. 2. 3. 4. 5. 6. etc.
26. Approximate No. of months elapsed between granting of loan and withdrawal of 1st instalment.
27. If there was a delay under 25 or 26 above did this effect benefit that it was possible to derive from loan: (1) Yes (2) No.
28. Subsequent advisory visits received from Agricultural Dept. staff:
    (1) None (2) 1-2 visits by F.A. or A.A. (3) 3 or 4 visits by F.A. or A.A
    (4) Over 4 visits by F.A. or A.A. (5) 1 visit by A.A.O. or D.A.O.
    (6) 2 visits by A.A.O. or D.A.O. (7) over 2 visits by A.A.O. or D.A.O.
    (8) F.A./A.A. visits monthly.
29. Who helped prepare original plan (1) Field Assistant (2) A.A.
    (3) A.A.O. (4) D.A.O.

30. Does Farmer belong to a Cooperative Society (1) Yes (2) No.
31. If so, does it provide loans under the Cooperative Credit Scheme: (1) Yes (2) No.
32. No. of other P.F.s with loans under supervision of A.A. responsible.
33. No. of P.F.s w/o loan under supervision of A.A. responsible.
34. Transport available to A.A.: (1) None (2) Push-bike (3) Motor-bike.
35. Distance of Farmer from district agricultural office.

<u>General</u> Techniques and Equipment involved.

36. Has loan facilitated use of improved techniques: (1) Yes (2) No.
37. List equipment so far purchased with loan.
38. Is any equipment bought with loan broken or otherwise unusable.
    (1) Broken (2) Unsuitable (3) Farmer can't operate it
    (4) Farmer doesn't want to use it (5) All used.
39. Are any new farming methods that should have been adopted obviously not used or misused: (1) Not used (2) Misused.
40. If farmer has bought new equipment or adopted new techniques, have neighbouring farmers
    (1) Shown no interest (2) Shown interest
    (3) Subsequently done the same.
41. Does farmer hire or lend equipment to other farmers.
    (1) Hires (2) Lends (3) Neither.
    List equipment, hire-charge and approximate no. of hirers.
42. Does farmer hire or borrow equipment from other farmers?
    (1) Hires (2) Borrows (3) Neither.
    List equipment: Hire-charge; frequency of hiring.
43. Where were items bought with loan purchased:
    (1) Co-op. Soc. (2) Local duka (3) Store in district centre
    (4) Kampala firm with agent in district centre (5) Kampala firm w/o agent in district centre (6) Coffee hullery (7) Gombolola headquarters (Agric.Dept. stock) (8) Local building contractor.
44. Servicing and repair facilities for equipment bought,
    (1) Available within 10 miles (2) 10-19 miles (3) 20-40 miles
    (4) Over 40 miles.
45. Was equipment subsidised:
    (1) All (2) Most (3) Some (4) None.

Farmer's expectations:

46. What did farmer chiefly expect from receipt of loan: (1) increase in output (2) improvement in quality of yields (3) increase in income from a new enterprise (4) saving in labour-time.

47. Have his expectations been realised (1) Yes (2) No.

48. Farmer's views on suitability of original plan: (1) suitable (2) in view of later developments needed amending (3) unsuitable at start.

49. Views of Agric.Dept. staff on same: (1) suitable (2) needed amending later (3) unsuitable at start.

50. Deviation from original purpose of loan (1) considerable (2) some (3) none. Give details:

51. Was deviation with advice of Agric. Dept. (1) Yes (2) No.

Effect on Labour-use

52. Effect on total labour-time needed: (1) not known (2) none (3) redistributed (4) more needed (5) less needed. Reason for change:

53. Employment of non-family labour: (1) permanent labour increased (2) temporary labour increased (3) permanent labour reduced (4) " " reduced (5) no obvious change observed.

Effect on Income

54. Does farmer consider loan has helped increase his net cash income (1) Yes (2) No.

Repayment:

55. Default (1) Never (2) in past (3) now. If now, give amount:

56. Does it appear extent of default could have been modified by: (1) adjusting cropping pattern (2) adjusting repayment pattern (3) obtaining supplementary loan.

Further borrowing:

57. If farmer wanted to borrow more cash for farming where would he go: (1) U.C.B. (2) Co-op. society (3) Commercial bank (4)
Reason for choice:

58. Does farmer appear to understand regulations under which present loan granted (1) Yes (2) No.

Other Credit

59. When short of cash is farmer (1) able to postpone payment at local duka (2) able to postpone payment of school fees (3) able to postpone payment of tax (4) able to postpone payment of labourers.

60. Does he pay interest on 59 (1) above (1) Yes (2) No.

61. If farmer wanted to borrow for any purpose other thanfarming where would he turn: (1) friends (2) relatives (3) local money-lender (4) additional trade-credit only. (5)

62. If farmer hires equipment, does he ever make or obtain payment in kind (1) yes (2) no.

63. If farmer buys/sells inputs to/from neighbouring farmers, does he ever make or obtain payment in kind (1) Yes (2) No.

Savings:

64. Cash savings: (1) none (2) at home (3) deposited with Co-op Soc. (4) in P.O.S.B. (5) in U.C.B. (6) Commercial Bank (7) 1st Permanent Building Soc. (8) life insurance policy. Reason for choice: Approx. amount: Purpose.

65. Does farmer withhold any crop from sale in order to be able to meet a subsequent unexpected demand for cash: (1) Yes (2) No.

Farmer's suggestions for future loan, if available:

66. Can farmer suggest any other purposes for which he could usefully employ a loan:

Appendix III. 2

Basic Questionnaire used for Follow-up Interview with Members of Masaka sample.

Date of interviews: May, 1966.

1. Condition of coffee shamba:
   (1) How much of the shamba is weeded?
   (2) How much of the shamba is mulched?
   (3) Have you pruned and desuckered your coffee trees?
   (4) Does your shamba need bunds? If so, have you made any?
   (5) Do you consider your coffee needs spraying? If so, why?

Farm Income:

2. Please enumerate what income you have received from the sale of crops, bear, waragi, livestock and livestock produce since the beginning of this year.

3. Hire of labour: (1) Have you hired any labourers since the beginning of this year?
   (2) For what purposes?
   (3) How many people?
   (4) For how long did you hire them?
   (5) What rate did you pay?

Other On-farm expenditure:

4. Have you bought any tools, seed, insecticide, fertiliser, mulch, or manure since the beginning of this year?

5. Credit and Debts:
   (i) Does anybody owe you any money or anything in kind? If so, how much do they owe you, what was/were the loan(s) for, and when was/were it/they incurred?

   (ii) Do you owe money or anything in kind to anybody else? If so, how much do you owe, when was/were the debt(s) incurred, and for what purpose?

Notes: (1) On this questionnaire only the responses to questions 1. and 5. have been used in the final analysis, plus supplementary questions asked of specific borrowers, e.g. landmaster owners were asked to give details of the use of their machines over the first four months of the year.

(2) Questions 2-4 were used as checks on data obtained for 1965 in Questionnaire 1.

(3) A visual check was made of the answers to question 1.

Appendix III. 3

A. Questionnaire used for March, 1967, Survey of 40 recipients of Credit at Kyannamukaka Growers' Cooperative Society Ltd. (Loans paid out in Jaunary 1967)

1. Expenditure on Maintenance of Coffee shamba and Lusuku (banana)plantation

   (i) How much have you spent on weeding since beginning of the year?
   (ii) How much have you spent on cutting, transporting and laying mulch?
   (iii) How much have you spent on the purchase of manure or artificial fertiliser?
   (iv) How much have you spent on other purposes such as pruning coffee, opening land, uprooting old banana stems or the purchase of a new plot of land?
   (v) How much have you spent on paying old debts to porters?

2. Did you put down any mulch after the main coffee harvest last year?

3. How large a loan did you receive in January this year?

4. How much did you apply for?

5. How did you spend that part of the loan which you used for farming?

6. How did you spend the rest of the loan?

Notes: (i) Questions on farm expenditure emphasised coffee and lusuku since these are the crops for which credit was almost invariably used in this part of Masaka.

(ii) Where farmers could not distinguish between items such as weeding and mulching, figures for total expenditure were obtained. Most farmers could make this distinction either (a) because they had assessed the activities separately, or (b) because they could attribute total expenditure to different activities in proportion to the approximate time spent on each.

Appendix III. 3

B. Questionnaire used for March 1967 Survey of Members of Kyannamukaka Growers' Cooperative Society Ltd. who had not received credit.

1 and 2 Questions 1 and 2 in preceding questionnaire.

3. Why did you not obtain a loan this year?

Note: A question was not asked on farm size because one of the criteria for the selection of the control was that the members should have approximately the same size farms as those farmers who received credit.

Appendix III. 4

Basic Questionnaire used for Follow-up Interview with Members of Lango sample.

Date of Interviews: September, 1966.

1. Cotton Shamba:

(i) How many cotton plots have you opened this year?
(ii) How large are they?
(iii) When did you open them?
(iv) What spacing did you use?
(v) How many times have you weeded them? When?
(vi) Have you sprayed your cotton?
(vii) If so, how many times have you sprayed?
How long after planting did you spray for the first time?
At what interval did you spray after that?
How did you mix the spray?
(viii) How many cotton plots did you open last year?

2. Other Crops:
(i) What other crops have you planted this year?
(ii) How large are the plots?
(iii) When did you plant, weed and harvest them?

3. Farm Income:
Please enumerate what income you have received from the sale of crops, beer, waragi, livestock and livestock produce, and from the hire of farm implements since the beginning of this crop year (i.e. February).

4. Hire of Labour:

(i) Do you belong to a 'wang-tic' or 'alea' group?
(ii) Have you rewarded any people who worked on your farm this year by the system called 'Dira'? If so, for how long did you postpone payment?

(iii) Have you hired any labourers either for cash, or for a reward (e.g. cigarettes) on which you had to spend cash, since the beginning of this year?

(iv) For what purposes?
(v) What rate did you pay?

5. Other On-farm expenditure:

(i) Have you bought any seed, tools, spray or oxen this year?
(ii) Have you spent any money on the hire of a tractor or oxen?
(iii) Have you bought any spare parts for your farm implements (e.g. plough or spray pump)?

6. Cooperative Society:
(i) Do you belong to a Cooperative Society?
(ii) Does it provide loans under the Cooperative Credit Scheme?
(iii) Have you received a loan this year? If so, how large is it?
(iv) How much did you apply for?
(v) How did you spend the loan?
(vi) How many cotton plots did you open in the last year in which you did not receive a loan?
(vii) If you have not obtained a loan thisyear, why have you not done so?

7. Credit and Debts:
(i) Does anybody owe you any money or anything in kind? If so, how much do they owe you, what was/were the loan(s) for, and when was/were it/they incurred?
(ii) Do you owe money or anything in kind to anybody else? If so, how much do you owe, when was/were the debt(s) incurred, and for what purpose?

Note: This questionnaire was also used for the Cooperative Credit Scheme control in Lango, and for the Progressive Farmers' Loans Scheme "control".

Appendix III. 5

Additional Questionnaire used with Progressive Farmers in Lango owning Ox-drawn Equipment, Spetember 1966.

1. Farm Equipment

   (i) What farming equipment do you own other than traditional tools?
   (ii) When and where did you buy these items?
   (iii) How much did they cost?
   (iv) On whose advice did you buy them?
   (v) Had you ever tried them out yourself?
   (vi) How many trained oxen do you own?
   (vii) Did you train your own? If so, who helped you?
   (viii) If you bought your oxen where did you buy them and how much did they cost?

2. What source(s) of cash did you use to make these purchases?

3. Which items of equipment are in working order?

4. Please enumerate any difficulties you have in operating any of this equipment.

5. Do you consider you need any more equipment? If so, what do you need?

Note: This questionnaire was used with farmers who did and who did not receive loans under the Progressive Farmers' Loans Scheme.

Appendix III. 6

Additional Questionnaire used with Tractor Owners in Lango District, September, 1966

1. The Tractor

   (i) What make of tractor do you own?
   (ii) When did you buy it?
   (iii) How much did it cost? Did you have a Government subsidy?
   (iv) Why did you choose this make?
   (v) What implements do you own?
   (vi) How much did they cost?
   (vii) When did you buy them?
   (viii) Where did you buy the tractor and the implements?

2. How did you finance the purchase of the tractor and the implements?

3. Do you now open more land on your own farm than you did before you bought the tractor? If so, how much and for which crops?

4. Is the tractor in working order?

5. Breakdowns:

   (i) Please give details of all the breakdowns that have occurred this year.
   (ii) In which months did the breakdowns occur?
   (iii) How long was the tractor out of order each time?
   (iv) Where were the repairs done?

6. What revenue have you earned this year from tractor hire service?

7. How much have you spent on:
   (i) Driver's salary
   (ii) fuel and grease
   (iii) spare parts and repairs?

8. How far do you travel to provide tractor hire service?

9. The Driver:

   (i) Did your driver have any previous experience?
   (ii) Where was he trained?
   (iii) At whose expense?

Appendix III. 7

QUESTIONNAIRE ON MILK YIELDS IN MASAKA.

NAME: DATE:

1. Date when exotic herd started:
2. Total number of exotic milking-cows now owned:
3. Total number ofexotic milking-cows now giving milk:
4. a) Average yield per day from all exotic stock now giving milk:
   b) Number of first-calvers being milked:
   c) Number of first-calvers now in last 3 months of lactation:
   d) Number of other milking cows now in last 3 months of lactation:
5. a) Average yield per day from best cow in herd:
   b) Is she a first-calver, 2nd or 3rd, etc.?
   c) What month of lactation?
   d) Are all teats milking normally?
6. a) Average yield per day from lowest-yielding cow:
   b) Is she a first-calver, 2nd, or 3rd, etc.?
   c) What month of lactation?
   d) Are all teats milking normally?
7. a) Average yield per day from best Nganda cow:
   b) Is she a first-calver, 2nd or 3rd, etc.?
   c) What month of lactation?
   d) Are all teats milking normally?
8. a) Number of exotic cattle (male and female) that have died since her dtarted:
   b) How many of the deaths were milking-cows?
   c) Causes of death:
9. Did you receive a bank-loan to help you establish your dairy farm?

Chapter IV

The Progressive Farmers' Loans Scheme

1. Introduction.

This chapter is devoted to a discussion of the operation of the Progressive Farmers' Loans Scheme in Masaka Division, Buganda Region, and Lango District, Northern Region. However, since both this and the two following chapters are concerned with a discussion of various forms of agricultural credit provided in Masaka and Lango, the chapter begins with a general description of the two districts.

1. 1 The Main Cash-crops

The major cash crop of Masaka Division is robusta coffee (see Table IV. 1) grown predominantly in Buddu County (over 90% of the crop). Cotton is grown in Mawogola and in north and south Buddu, but the value of divisional output falls well below that of coffee and yields per acre are below the national average of 400 lbs. seed cotton.

A variety of other crops are grown partly for sale, the most important being plantains, maize and beans.(1) There are two estate crops: tea, grown on three privately owned plantations in Buddu County, and sugar, grown on the new estate at Sango Bay (opened in 1966) and also privately owned. Since 1960, twenty-nine dairy-farms maintaining exotic cattle have been established, mainly in Buddu. A ranching scheme connected with the Ankole ranching scheme is planned in Kabula.

(1) Other crops produced wholly or partly for sale include sorghum, soya beans, chillies, castor seed, groundnuts and vegetables.

Table IV. 1

Output of coffee and cotton in Masaka Division since 1950

Year	Coffee			Cotton		
	1 Tons of kiboko & wet cherry bought; (wet cherry in kiboko equivalent.)	2 Price p. lb.(1) of kiboko, to grower	3 Total Ugandan Production of Robusta (kiboko equivalent) tons	4 Tons of seed cotton bought	5 Price per lb.	6 Total Ugandan Production of Seed Cotton tons
1950	19,218	0/40, 0/50	58,000	11,462	0/33	208,000
1951	26,394	0/50, 0/70	78,000	10,100	0/45	215,000
1952	21,992	0/70, 1/-	70,000	5,020	0/55	222,000
1953	19,060	1/-, 1/50	66,000	4,686	0/50	191,000
1954	15,710	1/25,	74,000	5,806	0/50	234,000
1955	40,000	1/25, 0/75	136,000	3,741	0/51	176,000
1956	35,018	0/75	114,000	4,846	0/61	216,000
1957	36,564	0/75, 0/80	146,000	4,184	0/55	219,000
1958	33,862	0/80	156,000	3,648	0/56	208,000
1959	58,932	0/80, 0/65, 0/62	202,000	3,973	0/47	237,000
1960	60,608	0/62, 0/52, 0/50	224,000	2,383	0/48	210,000
1961	49,076	0/60	174,000	1,460	0/55	215,000
1962	96,298	0/48	208,000	3,359	0/51	105,000
1963	96,122	0/48, 0/45	282,000	3,444	0/57	207,000
1964	127,056	0/45, 0/65	350,000	3,488	0/57	221,000
1965	73,844	0/50, 0/40	416,000	n.a.	n.a.	243,000

(1) Where more than one price is given, these represent adjustments later in the season.

Source: Divisional Agricultural Office records, and Uganda Government Statistical Abstracts 1957 p.47 and 1966 p. 41.

In Lango, the main cash crop is cotton. Since the establishment of a cassava processing factory in 1964 it has become possible for some farmers to regard cassava as a second cash-crop. The cassava is processed at Lira in a factory jointly owned by the Uganda Development Corporation and the Lango Development Company. From statements made by some of the farmers interviewed, it appears that there are more farmers hoping to sell to the factory "at the farm gate" than the factory is at present able to buy from.

Little tobacco has previously been grown in the District but there are plans for a rapid expansion of output with the aid of short-term and medium-term credit provided under the Co-operative Credit Scheme.

The more important food-crops (particularly finger millet, ground-nuts, beans, maize, sim sim and sorghum) are also grown partially as cash crops and sold either in small quantities in local markets or occasionally in bulk to neighbours or primary produce buyers.

1. 2 Agricultural Implements in Normal Use.

The standard agricultural implement in Masaka is the short-handled Buganda hoe. Ox-cultivation has not been adopted. Attempts to introduce this technique into Buganda in the '50s proved unpopular, partly owing to the heaviness of the soils. Moreover, the small plots of annual crops interspersed with plantains and coffee are less suited to ox-cultivation than the more open tracts in the Northern and Eastern Regions. Other implements used include axes (for cutting down trees), pangas, baskets for the transport of crops, and coffee drying mats. There is one tractor hire service station in the division.

The standard agricultural implement in Lango is the heart-shaped, long-

handled

Table IV. 2

Output of Cotton in Lango District since 1950

Year	Lbs. of Seed Cotton (Safi & Fifi)	Price per lb. Safi	Price per lb. Fifi
1950/51	34,200,320	-/43	-/15
1951/52	48,574,400	-/48	-/17
1952/53	2,866,580	-/48	-/17
1953/54	35,069,440	-/50	-/17
1954/55	31,189,760	-/60	-/23
1955/56	37,674,560	-/54	-/20
1956/57	30,992,640	-/55	-/20
1957/58	36,124,480	-/55	-/20
1958/59	50,868,160	-/57	-/23
1959/60	32,289,600	-/46	-/18
1960/61	58,405,760	-/47	-/18
1961/62	24,754,240	-/56	-/20
1962/63	55,366,080	-/56	-/20
1963/64	68,790,400	-/50	-/28
1964/65	76,496,000	-/56	-/28
1965/66	82,541,760	-/59	-/28
1966/67	68,967,188	-/40	-/25

Source: Department of Agriculture, Lango District.

hoe. A short-handled hoe copied from the Kiganda pattern is also used. Other implements used include axes (for cutting down heavy bush), pangas, a thumb-ring for harvesting finger millet, and baskets for the transport of crops. Most farming operations are traditionally performed by hand labour using the hoe for digging and weeding. Labour constraints operative at certain times in the year restrict opportunities for increases in output using traditional methods.(1) There has been an apparent indecision in the District, based mainly on lack of comparative costings and the prevalence of tsetse fly in parts of West Lango, as to whether to encourage ox-cultivation or tractor cultivation.

In the West the use of oxen has not proved popular. In this area the use of Tractor Hire Service (Government owned and private) has developed steadily during the last ten years. The number of units providing this service has developed from one in 1956, to one Tractor Hire Station operated by Special Development Section (running 3 tractors), five Group Farms (operating approximately 24 tractors) and some twenty operational privately owned tractors in 1966. In the East there is one Tractor Hire Service Station, running 3 tractors.(2) In this area ox-ploughing has been developing since the 1930s; of the 17,222 ox-ploughs now owned by farmers in the District, 16,299 are in the three eastern counties of Moroto, Dokolo and Kyoga.

(1) See D.F. Watt, "Interrelationships and the Allocation of Scarce Labour between competing Cash and Food Crop (Subsistence) Activities in a Peasant Economy", East African Institute of Social Research, Economic Development Research Project, paper no. 104, 1966, passim.

(2) There is also a third station at Lira, in Central Lango, operating 4 tractors.

1 1. 3 Availability of Costings for the Production of Cash Crops and "Minor" Crops.

There are no detailed costings obtained on peasant farms available in either district, either for the production of the main cash-crops or for the production of "minor" crops. In these circumstances the provision of medium-term credit between 1962 and 1964 was not used to encourage any radical change in or diversification of cash-crops. (Present plans to provide medium-term credit in Lango for the production of flue-cured tobacco are based on the creation of a new market for tobacco and the knowledge that flue-cured tobacco has already proved a more profitable crop than cotton in other districts of the Northern Region.) The need for analysed input-output data had become particularly important in Lango since the Report of the 1966 Cotton Commission recommended a 33% reduction in the 1965/66 price to growers, but it is also important because any increase in cotton acreages implies an increase in the acreage of other crops grown in the rotation. In Masaka, the need for such data has increased with (i) the fall in the robusta coffee price paid to growers (this remained at -/40 per lb. in 1966) and (ii) the difficulty encountered by the Coffee Marketing Board in selling Uganda's surplus production.

1. 4 Factors Affecting Output.

A wide variety of factors affect agricultural output in both districts. Not all of these can be effected by the injection into the districts of limited quantities of credit. The more important factors are listed below:

1. Variations between years in the quantity and timing of rainfall. (The importance of this is illustrated by the 1965 drought when the output of coffee from the Division[1] fell substantially: ~~see the rainfall figures in Table II. 2~~)

2. Extension activities of agricultural extension staff and local chiefs.

3. Variations in acreages (due mainly to alterations in prices and to the extension activities of agricultural staff and local chiefs.)

4. Occasional shortages of labour, and the cost of labour.

5. Timing of planting of annual crops. (Failure to use the optimum planting season is generally due to the timing of rainfall and competition between crops for labour)

6. Hesitation in adopting techniques other than timing of planting which are designed to improve productivity per acre; e.g. use of recommended soil conservation methods, use of mulches and manures, pruning and desuckering perennial crops, uprooting lumbugu (couch) grass, spraying and using artificial fertilisers.

7. Lack of expertise in the operation of certain enterprises such as dairy farming, ranching, maintenance of exotic poultry, and fruit and vegetable production.

8. Insufficient knowledge within the Department of Agriculture on such subjects as optimum crop rotations and the cost benefit relationship of the use of new inputs such as fertilisers in local farming conditions.

9. Low productive capacity of local cattle, due chiefly to prevalence of ticks and East Coast Fever.

(1) Masaka Division

10. Poor standards of storage, which lead to high levels of wastage and reduce the attraction of producing surplus crops for retention and sale several months after harvesting.

1. 5 Marketing Arrangements.

Equally important for the present provision of agricultural credit, has been the development of the cooperative marketing movement in the districts and the increase in the membership of primary marketing societies. In 1950 there were 19 primary marketing societies in Masaka with a total membership of 568, and none in Lango; in 1966 there were 187 societies with a total membership of 20,654 in Masaka(1) and societies with a membership of 53,310 in Lango.(2) There are now four marketing unions in Masaka; two for coffee, one for cotton, and one for milk, and one cotton marketing union in Lango. In Masaka the membership of primary marketing societies involves less than 15% of the adult male population. In Lango total primary society membership in 1966/67 was equivalent to 60% of the male population. The difference in the absolute level of primary society membership is due to the fact that in Lango the cooperatives have a greater degree of monopoly over the marketing of the main cash crop. The difference in proportional membership is enhanced by the presence of large numbers of immigrant labourers in Masaka. The cooperative societies deal predominantly with cotton and coffee. Government controlled marketing arrangements exist only for coffee and cotton. With the fall in price of these crops, the more prosperous farmers of the early '50s have experienced a substantial drop in annual income. Prices for other crops fluctuate heavily both between and within crop seasons.

As previous writers have pointed out,(3) a reorganisation of the

(1) Source: Department of Cooperative Development, Masaka Divisional Office.
(2) Source: Department of Cooperative Development, Lango District Office.
(3) cf. Particularly Anne Martin "The Marketing of Minor Crops in Uganda", H.M.S.O. Dept.of Technical Co-operation,Overseas Research Publications, No.1

marketing structure for minor crops would enable farmers to obtain a higher and more reliable income from these crops. At presentfarmers tend to sell shortly after harvest, to satisfy an immediate demand for cash and to buy back the same crops (for food and seed) in the pre-harvest period when prices may have doubled. Primary cooperative societies could buy from members in the post-harvest period, store the produce, resell it before the next harvest, and redistribute the profits to members. A few societies are already attemping to do this, but any radical expansion of this activity would be hampered in the short-run by lack of storage space and by managerial inefficiency in some primaries.

Little investigation has been made by District Agricultural staff of markets outside the districts for food-crops grown within it. There is no officer in either district responsible for the investigation of new outlets.[(1)] That such markets may exist is illustrated by the fact that two years ago a Group Farm Manager in Lango obtained a bulk contract outside the district for sorghum produced by the Farm members. The exploitation of these markets would also need incraased organisation on the supply side.

It ishoped that the Agricultural Produce Marketing Board (to be created in 1967) will contribute to the organisation of the marketing of these crops both inside and outside the districts. The Board will organise the marketing of produce through the cooperatives and is therefore

(1) A regional Marketing Officer is stationed at Gulu in Acholi District, with responsibility for the five districts in the Northern Region.

likely in the short-run to encounter the constraints mentioned above. At present, existing primary and union stores are already filled to capacity with coffee and cotton at certain times of the year, and, in Masaka, some of the areas best suited for the development of annual crops are situated furthest from the majority of trading centres.

1. 6 Credit.

Institutional credit has only been available to farmers in Masaka and Lango on any scale since 1961/62 when first the Progressive Farmers' Loans Scheme and then the Cooperative Credit Scheme were introduced. Prior to 1951 there was no bank in Masaka. Credit was provided either privately, or by traders in the bazaar, or obtained from a commercial bank in Kampala. Several of the European and Asian estates (of which there were then about fifteen in all) were mortgaged in the inter-war years to provide security for loans, but it is probable that the funds were used mainly to establish processing factories, to finance crop buying and for general trading purposes, rather than for agriculture. There are now branches of the three main expatriate banks[1] in Masaka town, and a branch of the Uganda Commercial Bank was opened in 1957. In Lango, three commercial banks operate agencies in the main town, Lira, but none operate full-time branches.

This marked difference in the scale of operation of the commercial banks in the two areas is indicative of the fact that the transfer to a monetised economy has progressed further in Masaka. Masaka has been associated with the development of cash-crops and a monetary economy since the beginning of the century. It is one of the two richest divisions in the wealthiest region of Uganda. The division lies partly on the "fertile crescent" that extends round the northern shores of Lake Victoria and has benefited from its proximity to Kampala.(1) Lango, on the other hand, is situated further from the Lake-shore areas that have constituted the centre of economic activity in Uganda.(2) Cotton was first introduced in the district as a cash-crop in the 1920s.

Between the establishment of the African Loans Fund in 1955/56, and the introduction of the Progressive Farmers' Loans Scheme in 1961, 29 loan applications were approved to farmers in Masaka Division from the African Loans Fund for a total value of Shs.73,500/-. Little information is available regarding the use of these loans. In June 1966, however, at least two years after the last of them should have been repaid, the loans were in default for a total of Shs.13,188/-. Most of them were granted for purposes described by Parsons as "rather nebulous undertakings such as 'general improvements'".(3)

Prior to 1961, the only instance of the provision of institutional credit in Lango was the loans scheme operated in 1959/60 by the Lango District Council through the African Loans Fund. The Council obtained a bulk loan from the Fund and relent small sums to individual farmers mainly for the purchase of spray-pumps at an average cost of less than Shs.100/-.

(1) The district centre, Masaka town, is 80 miles from Kampala.

(2) See Map 1, p.147 for the location of the two districts.

(3) D.N. Parsons, Memoirs of the Research Division, Series 3, No.2, p.52.

1. 7 Availability of Supervisory Staff.

The number of agricultural extension staff in each District is constantly liable to fluctuation. In Lango, in February 1966, the following personnel were available:

1 District Agricultural Officer

1 Director of District Farm Institute

1 Assistant Agricultural Officer

15 Agricultural Assistants

13 Field Assistants

8 Field Assistants Ox-cultivation

6 Field Assistants Group Farms (working only on the Farms).

From 1962 to 1964 the Field Assistants Ox-cultivation were not working in the District. They were introduced for the first time in 1965. Since 1963 three Agricultural Assistants have joined the District staff who have attended a three-year training course. All the other Agricultural Assistants are junior secondary III leavers who attended a one-year course in the 1940s or '50s. The Field Assistants have had less training. With forty-two gombololas in the District (average adult male population per gombolola 2,113) the Assistants are responsible for one or two gombololas each. None of them was responsible for more than four farmers with loans obtained under the Progressive Farmers' Loans Scheme, nor for an average of more than six registered "progressive" farmers per gombolola. In Masaka, the staff establishment, in May 1966, consisted of the Divisional Agricultural Officer, the Director of the

Divisional Farm Institute, three Field Assistants and twenty-five Agricultural Assistants of whom twenty-two had attended one year training courses in the 1940s and '50s. Excluding the two senior officers, this gives a ratio of one extension officer per 5,000 adult males (1959 Census figures), a much less favourable position than in Lango. The Agricultural Assistants and Field Assistants were responsible for an average of seven borrowers, but in practice the range was considerable: from none to 60. Assistants responsible for a large number of borrowers failed both to keep any record of their loan use,(1) and to visit all of them regularly.

The supervision of progressive farmers is not the only responsibility of field staff. The Agricultural and Field Assistants are also expected to encourage the use throughout their gombololas of improved techniques (correct timing of planting, row-planting, correct spraying, sufficient weeding, thorough picking and up-rooting of cotton, etc.), to encourage the purchase and use of equipment such as ploughs and spray pumps, and the emergence of more "progressive" farmers, to complete monthly reports and certain other returns, and, since early 1966, to make recordings for the current stage of the F.A.O. Census. The majority of the Assistants only own push-bikes.

The staff are limited in the advice that they can give to progressive farmers by the brevity of their own training. The writer, when trying

(1) See pages 189 and 195 below.

to assess the standards of coffee husbandry of short- and medium-term borrowers in Masaka Division, found that the three A.A.s with whom she worked were often unable to recognise crop diseases, or if they recognised them did not always know what remedy to suggest. They themselves are hampered by the lack of specific information on optimum methods of crop husbandry (e.g. on the comparative merits of application of artificial fertiliser, mulching or soft weed slashing).

The energy with which they carry out their responsibilities varies, as was apparent in the varying degree of assistance that had been given to the farmers who received loans. By March 1966, the farmers interviewed (who received loans in 1963 and 1964) had received an average of 6 to 8 visits from extension staff. One farmer had only been visited 3 times. It was difficult for the Assistants to give more than limited advice to the owners of tractors and hand-tractors, since none of them had themselves been trained to drive or maintain tractors and very few had any experience with hand tractors. If the Assistants had been shown how to keep simple costings they might have shown the farmers how to do this, but unfortunately no attempt was made to encourage farmers to record the cost of running tractors, beyond the keeping of a disorganised file of receipts.

The five owners of polyculteur units were all in quite close contact with the ordinary extension service, but several of the farmers who bought ox-drawn equipment complained about lack of specialist advice in its use. The Lango District Agricultural Annual Report for 1963 stated concerning ox-cultivation:

> "Instructors are too thin on the ground to spend much time with each individual" and they "are not very conversant with the uses of polyculteur equipment as they are only locally recruited and have had no proper training in the use of this type of equipment."

With the introduction of trained Field Assistants in 1965, the situation has marginally improved, but in the three eastern counties the Assistants cannot hope to visit more than a small minority of the owners of ox-drawn equipment. In one of these counties the Assistant is reported by farmers and other extension staff alike to be neglecting his duties,(1) but for supervision the Field Assistants Ox-cultivation come under the Agricultural Assistant Ox-Cultivation (Northern Region) who is stationed in another district.

2. 1 The Progressive Farmers' Loans Scheme: Masaka Division.

207 loans worth 757,280/- were made in Masaka Division under the Scheme between its amendment in July 1962 and its suspension in February 1964. Figures for loans made prior to this period are apparently not available but the number is very unlikely to have exceeded 20. The Scheme started slowly owing to the number of stages at which applications had to be assessed.

Thirteen of the loans, worth 111,900/- were made to Farmers' Clubs,

(1) One recipient of credit in this county is still not using a cultivator because his oxen have not been trained to weed, the Field Assistant is aware of the difficulty but has taken no steps to train the oxen.

who relent the money to individual members. The provision of credit to these clubs was in part a reflection of the preference of the Agricultural Assistants for dealing with groups of farmers which they had helped to formulate rather than primary cooperative societies. The loans which the clubs paid out to individual members were granted to them ostensibly for the same purposes as the loans provided to farmers under the Cooperative Credit Scheme. (This does not mean that the farmers themselves could necessarily obtain credit from both sources: the majority of club members were not members of credit-worthy cooperative societies.) The Clubs were not, from the point of view of the Bank, good borrowers, and it was extremely difficult to control their lending activities to members since, unlike the Cooperative Societies, there was no legal provision for Government control. As of May 31st 1966 eleven of these loans were in default for Shs.34,963/- out of Shs.44,024/- outstanding.(1)

The remaining loans, worth Shs.645,380/- were lent direct to 194 individual farmers. The direct beneficiaries under the Scheme, therefore, equalled a very small proportion (less than 0.14%)(2) of the farming population of the Division. These loans were of an average size of Shs.3,200/-,(3) lent for a period of three years; they ranged from a

(1) Source: Uganda Credit and Savings Bank, Masaka Branch.

(2) There were 140,118 adult males in the Division in 1959; the percentage is based on the male population only. Very few loans were made to women, and none to the wives of borrowers.

(3) The remaining figures in this paragraph are taken from a list of 176 of the 194 loans made to individual farmers, provided by the Uganda Credit and Savings Bank in August 1965. The other accounts were apparently closed.

one year loan for Shs.500/-, to a five year loan for Shs.20,000/- for the purchase of a tractor. Most of the loans were worth between Shs.2,000/- and Shs.5,000/- (147 fell in this range), and most of them were made for general farm improvement, although there were some exceptions: one farmer bought a tractor, eleven bought Landmasters (hand-tractors), seven bought exotic cattle, and at least four bought exotic poultry. Most of the loans (159) were granted in the short space of time between May 1963 and early February, 1964. By compressing the assessment of so large a number of loans into the space of nine months the Divisional Agricultural staff undoubtedly increased their own difficulties. The regulations of the Scheme required that loan plans should be drawn up by Assistant Agricultural Officers.(1) During the operation of the Scheme there were never more than three staff of this calibre in the District. Not surprisingly, the initial assessment of the applications, assistance in drawing them up, and supervision of the use of the loans was performed by the Agricultural Assistant in charge of the gombolola in which the borrower was living as an addition to his (the Assistant's) normal duties. Assessments by the A.A.s of a farmer's integrity and ability to repay frequently took the cursory form: "The man is a progressive farmer, and I recommend him for a loan." Final assessment of the applications was made by the Divisional Agricultural Officer, sometimes with the advice of an Assistant Agricultural Officer, and then by either the Branch Manager of the Uganda Credit and Savings Bank (for

(1) See Chapter II, Appendix 2.

all loans not exceeding Shs.5,000/-) or by an official at the Head Office in Kampala for loans in excess of this amount. The concluding paragraph of the Scheme's regulations stated that the Scheme would have been considered to have operated most successfully where a large number of loans had been paid out.(1) This was a very crude criterion of success.

Most farmers were expected to repay Shs.1,000/- per annum, although for the six loans worth more than Shs.5,000/- the rate was higher. Two half-yearly instalments of Shs. 500/- were difficult to meet in a bad year, and this had a noticeable effect on default figures in 1965.(2) The planning of repayments is open to criticism on the grounds firstly that there was no moratorium on any of the loans, although it is arguable that there should technically have been at least a twelve-month moratorium on loans for mulching, for the purchase of certain items of equipment, and the construction of produce stores, and secondly there was no rationalisation of repayment dates; repayments were expected to begin six months after the loan was granted, irrespective of whether this coincided with a pre-harvest or post-harvest period. The argument that moratoria should have been granted in some instances is based firstly on the fact that some of the equipment bought or constructed could not be expected to yield a

(1) See Chapter II, Appendix 2.

(2) In 1965 there was a serious drought, total rainfall was 10% - 20% (in different areas) below the 10 year average.
Source: Divisional Agricultural Office Records.

sufficiently high annual return to the farmer to enable him to repay the loan witiin 3 - 5 years. This applied, inter alia, to coffee drying trays, water tanks, Landmasters and produce stores. Secondly, the yield increases that should result from mulching coffee do not occur until at least twelve months after the application ofthe mulch. Against these arguments must be set the Bank's fear that the granting of any moratorium would encourage the impression that the loans did not have to be repaid. In Masaka, where the follow-up of loans, with the exclusion of those granted for dairy-farming, was often poor this fear may have been justified in many cases. This constitutes one reason for providing fewer, more carefully planned loans.

At May 31, 1966, the default position on the 156 individual loans for which statistics were available was as follows: of a total of Shs.540,027/- approved, Shs.278,994/- was outstanding; 109 loans worth Shs.101,291/- were in default. Thus approximately 18% of the amount originally granted was in default. This is substantially higher than the national and Divisional default figures given for the Scheme in 1964.(1) These figures are clearly too high to be ascribed only to poor planning of repayments. An attempt will be made below to show that they arise also from poor planning and supervision of the loans themselves, from the lack of an efficient system of chasing up defaulters or any sanction to use against them, and from the impact of the 1965 drought.

(1) See Chapter II.

2. 2 "General Improvement" Loans.

The sample was selected from the list of sixty loans that were made in Sabawali Gombolola, Buddu County. Sabawali contained the largest number of borrowers in a single gombolola, and is one of the largest gombololas in the county. With an area of 144 square miles and a population in 1959 of 57,000, of whom 56.5% were adults,[1] it is under the supervision of one Agricultural Assistant (A.A.) who received one year's general agricultural training in the early '50s. The previous Assistant had the same qualification. During 1962 and 1963, the supervision of 60 medium-term loanswas abruptly added to the previous duties of the A.A. In 1965 the gombolola was handed over to the the A.A. with whom the writer worked. No record of any form had been kept of the borrowers in the area by his predecessor, and he himself was not acquainted with more than 10 of them.

A list of the borrowers was obtained from the Uganda Credit and Savings Bank. The loans were divided into two equal groups: those worth less than Shs.2,500/- and those worth Shs.2,500/- or more; six were then selected at random from each.

In the event there was little difference between the two groups; the loans were granted for the same purposes and the distinction lay in the amounts paid out for various purposes, particularly for mulching and construction of produce stores. On the whole the larger loans went to farmers who were in any case wealthier and who in four cases had incomes in their own estimate of Shs.2,500/- net, or more, per annum from non-farmin

(1) 1959 Uganda Census.

activities. Seven of the twelve had full-time or part-time employment off their shambas (cf. those farmers who purchased Landmasters in Masaka and tractors in Lango), and four of these estimated that their income from non-farming activities was higher than their income from farming. Where the other activities involved running a duka or cattle-trading, the temptation to divert the loan to what appeared the more profitable occupation is obvious. However, it may be argued that while loans have been made to borrowers that were not for their most profitable enterprise these may still have been put to better use than those provided to other borrowers, either on the enterprise for which they were granted or on another enterprise. This might be so if these individuals were all more efficient entrepreneurs than other farmers. The writer found no evidence to this effect. The farmers interviewed who had off-farm occupations operated their farms at widely different standards. In a study of large farmers in Buganda, many of whom either have or have had off-farm occupations, Hougham and Mafeje found the same variation in standards.(1) With regard to the diversion of cash to another enterprise, it would seem preferable that loans should be used for the purposes laid down in the regulations of the scheme under which they are obtained. Where loans intended for agricultural development are used for trading, it is clear that the objectives of the scheme are not being achieved. The diversion of credit may also indicate the need for more credit in other

(1) Personal communication by A. Mafeje, and see D. Hougham, "Half an Agricultural Revolution in Buganda", Makerere University College Faculty of Agriculture, Rural Development Research Paper No 38, 1966.

occupations. This gives rise to the criticism that it was not good policy to pay out loans for activities of only secondary profitability to the borrower.[1] One borrower, who was and is working full time in a profitable shop-keeping enterprise in Masaka from which he draws a monthly salary of Shs.400/- plus an average annual net profit of Shs.5,000/-, has also had two Government loans for shop-keeping.

2.2. 1 Loan Use.

Table IV. 3 gives the amounts for which the loans were originally granted and paid out, the amounts which farmers could prove having spent on each purpose or in the writer's opinion almost certainly had spent on these purposes, the amounts which they either acknowledged mis-spending or could be shown to have misspent (e.g. a produce store not built), and a residual column for which no satisfactory information was obtainable. This is filled mainly by the amounts paid out for mulching. As it was eighteen months or more since most of the loans had been paid out, even if a farmer had obtained a mulch most of it would have rotted. Probably a maximum of 40% of the amount shown in column 7 was actually used for mulch. As it was originally intended that loans should be paid out in kind wherever possible, the total paid out (Col. 4) is divided into the amounts paid out in cash and in kind (Cols. 2 and 3). A comparison of column 4 with column 1 shows, although not as well as individual loans, those parts of the loans that were not

(1) Unless it was not seriously intended that the cash should be spent on these activities. It should also be noted that from the point of view of the farmers their behaviour was entirely rational.

paid out for the purposes for which they were originally granted.

Table IV. 3

Use of Credit by 11 Farmers in Masaka Division who received Credit for General Farm Improvement.

(each column is in shillings.)

	1	2	3	4	5	6	7
Purpose	Total Granted	Total Paid Out Cash	Kind	Total	Total Used	Not Used	Uncertain
i) Mulching	14,780	14,020	-	14,020	-	1,200	12,820
ii) Water Tanks	4,390	2,420	1,480	3,900	2,210	1,490	200
iii) Coffee Drying trays	1,875	500	750	1,250	437/50	625	185/50
iv) Produce stores	6,350	7,210	-	7,210	1,700	4,710	800
v) Spray pumps	135	100	135	235	215	20	-
vi) Wheel barrows	300	-	210	210	210	-	-
vii) Tractor hire	300	1,070	-	1,070	-	1,070	-
viii) Cement drying floors	-	250	-	250	500	-	-
ix) Artificial Fertiliser	-	-	300	300	300	-	-
TOTAL	28,130	25,570	2,875	28,445	5,572/50	9,115	14,007/50

Column 5 in this Table is based on information obtained by two methods: (i) visual observation, by which the purchase or construction of items (ii) - (vi) and item (viii) could be checked, and (ii) conversation with the farmers, who were initially asked to describe their loan use at the first interview. They were requestioned about uncertain items at a second interview conducted four months later. It is because there could be no visual check on the use of mulch that expenditure on this item is listed mainly as uncertain. On the basis of information provided by the farmers themselves, it would appear that an estimate of 40% of use of credit granted for mulching actually used this purpose is not an underestimate. Four respondents gave different estimates of expenditure on mulch at the two interviews, whereas their other responses were consistent. One stated that he did not know how much the mulch had cost, and one whose shamba was severely eroded, unmulched, unweeded and unpruned, but who originally claimed he had spent part of his loan on mulching, absented himself from the second interview. From Column 1 of the Table it can be seen that 50% of the total credit granted was for mulching. Only four of the farmers appeared to have actually spent a large portion of their loans on mulching, and in one case on artificial fertiliser. Loans for mulching were paid out at a standard minimum rate of Shs.300/- per acre (in one instance this rose to Shs.1,000/-) irrespective of where the farmer obtained the mulch. The costs of mulching in different circumstances are not known exactly, but it is quite obvious that the range is considerable, from the farmer who uses his own sorghum and maize stems, or swamp grass cut at the bottom of his shamba, to the farmer who lives some distance from a coffee factory, but buys husks, or who has to pay labourers to go a long distance to cut and transport elephant grass, possibly paying the owner as well. On two farms mulch to the value of Shs.5,270/- even if applied could be written off as having had no impact on output. Both farms were on heavily eroded slopes with no bunds, the coffee bore no signs of pruning, and in one case was carrying no berries at all. These farms constitute extreme examples of the outcome of failure to integrate one improved technique requiring purchased inputs with others without the use of which it can have little impact on production. Of the twelve shambas, only one was well-pruned; four were badly eroded. No records are available in the Division of the impact of mulch on poorly maintained coffee, but the informed estimate of two senior extension officers currently working there was: (i) that expenditure of more than Shs.100/- per acre was uneconomic, and (ii) that output can be increased more efficiently by the application of artificial fertilisers or soft-weed slashing instead of mulching. Despite the fact that mulching is an input for which there is a recurrent need, few of the shambas had been mulched before the loans were granted, and only two had been since.

43% of the funds paid out were not for immediately productive purposes, (e.g. construction of produce stores, purchase of coffee drying trays and water tanks) and they could not be expected to yield a rate of return to investment that corresponded with the duration of the loans. The funds for produce stores were granted with virtually no regard to the size store a farmer was likely to need, or its likely cost. The amount granted for the construction of stores was in most cases between Shs.1,000/- to Shs.1,500/-, but none of the farmers in the sample required stores of the capacity that this entailed.[1] Coffee drying trays, if used, may improve the quality of kiboko, but the farmer is not normally paid any premium for this improvement, although in a bad drought year he might be.[2]

The majority of drying trays that had been purchased were not in use. The trays will only hold a small amount of coffee, and are inconvenient to use. Water tanks are being used for the benefit of the family, and not for watering crops. (Extension staff corroborated that this is true not only for farmers in the sample.) When the tanks are full their use may save man-hours otherwise used for fetching water, but the impact of this saving on production is not only indirect but also uncertain, since there is no proof that the released man-hours are devoted to farming. The total paid out as shown in Column 4 of the Table exceeds the total granted for items (iv), (v) and (vii). The files on the individual farmers bore no record of the modification of loan plans. The alterations took place without any check being made of the use of earlier instalments by either the District Agricultural Officer or an Assistant Agricultural Officer. Column 6 of Table 3 shows that almost one-third of the value of the loans could not be accounted for. Only three farmers acknowledged having spent part of their loans on school fees, improvements to houses, and domestic consumption, but from the failure of six others to account for their total expenditure it seems reasonable to conclude that they also

(1) See also related comments in the section below on general improvement loans granted in Lango.

(2) cf. D.J. Parsons, "The Plantain-Robusta Coffee Systems", Memoirs of the Uganda Government Department of Agriculture Research Division, Series 3, No. 2, 1960, page 52.

had used part of their loans for off-farm expenditure. In four instances it appeared likely that borrowers had diverted cash to running dukas and cattle-trading. However it was impossible to estimate the extent to which the diverted credit was used for non-productive or productive purposes.

The Table is compiled from information available for eleven of the twelve loans. Similar data is not available for the twelfth loan but from a description by the borrower of how it was spent it appears that approximately Shs.1,600/- were used for farming and Shs.2,400/- for an extension to his house. In the course of discussion it became apparent that the two Agricultural Assistants who assisted the survey saw nothing wrong in permitting a farmer to divert part of a loan from farming to constructing a house. One Agricultural Assistant, asked whether he had successfully recommended any farmers for loans since the Progressive Farmers' Loans Scheme was ended, replied in the affirmative, and went on to describe a farmer who had misused a loan in this way. Probably the possibility of becoming unpopular locally is felt more strongly than the remote risk that an A.A.s Departmental superiors would discover what had happened, but there seems to be considerable apathy on the part of some A.A.s toward the need to supervise loans. It would appear that if A.A.s are to continue to be responsible for the detailed supervision of loans, an effort should be made to explain to them the difference between productive and non-productive expenditure. They should also be shown the correct manner of keeping records of farm incomes and expenditure so that they may assist borrowers to do this. No attempt had been made by the extension services to show the borrowers how to do this.

The only available figures on the use of general farm improvement loans in Masaka are those shown in Table IV. 3. This makes it impossible to determine accurately the effect that they had on production. For the farmers studied it is almost certain that any increase in output was well below the value of the loans paid out. It is improbable that farmers who misspent part of their loans were consequently able to release much cash at a later date for farm expenditure. Certainly no farmer suggested that this had happened.

The purposes for which these twelve borrowers obtained loans coincide with those for which most loans in the Division were granted. Examination of the documents of a sample of 63 (30%) of these loans showed that they were granted for the purposes listed in Table IV. 4.

The degree to which the loans were paid out in cash and the preponderance of payments for mulching and the construction of produce stores also coincides with the majority of loans made in the Division. A random sample of 52 (25%) of all the loans revealed that out of a total of Shs.168,530/- granted, only Shs.19,398/- (12%) were paid out in kind, Shs.71,365/- (42.5%) were paid out in cash for mulching and Shs.30,461/- (a further 17.5%) for the construction of produce stores.

None of the twelve loans (nor the majority of loans in the Division) assisted in the introduction of new enterprises or seriously encouraged movement out of the production of robusta coffee. In fact, a major part of the credit provided was designed to increase the robusta output. Whether this yielded a net profit to individual farmers is highly

Table IV. 4

Progressive Farmers Loans Scheme:

List of Purposes for which 63 (1) of the 207 loans made in Masaka Division were granted

Purpose	No. of borrowers
To mulch coffee and bananas	56
To purchase coffee-drying trays	40
To construct produce store	39
To purchase water tank	36
To purchase wheel-barrow	14
To purchase spray-pump	13
To purchase fencing materials	11
To purchase manure	9
To plant elephant grass	8
To purchase exotic cattle	7
To prepare plots	7
To purchase Land-master	6
To construct/improve dattle shed	4
To construct/improve cattle kraal	4
To purchase insecticide	3
Other	13

(1) These were the 63 largest loans. With 6 exceptions they were worth between Shs.4,000/- and Shs.5,000/-.

Source: Files of the Divisional Agricultural Office.

questionable. For the Ugandan economy as a whole, which is already over-producing the International Coffee Agreement quota and stockpiling robustas, the marginal value of increments in output of robusta coffee is negative, the Coffee Marketing Board having to store the additional surplus production.

2. 3 Loans for the purchase of Landmasters.

Apart from the "general improvement" loans, one other group in Masaka, for the purchase of Landmasters, was predominantly unproductive. Before describing the use of these loans a summary is given of the information that was available at the time the loans were granted as to the probable costs of operating a Landmaster.

A Landmaster is a walking type tractor to which a range of implements can be fitted, including a plough, cultivator, grass-slasher, and trailer; stationary, it can be used to pump water and hull coffee. Its importance lies in that it is a comparatively cheap labour-saving device, and is also fairly easy to operate; it costs roughly one tenth the value of a full-sized tractor. The price has not remained constant, but most farmers in Masaka bought the basic machine plus the cultivator for Shs.2,845/25, less a Shs.600/- Government subsidy. The only additional implements known to have been bought were several trailers, at a cost of Shs.2,066/75 less a Shs.600/- subsidy, two ploughs and one grass-slasher. Where Landmasters were to be used predominantly on coffee, it was not envisaged by those who had conducted research into the use of the machine that farmers would use the plough - a time-consuming alternative to rotary cultivation in weeding coffee - but that they would use the cultivator and slasher, and where necessary the trailer or pump.(1)

(1) See W.H. Boshoff and D. Innes: "The performance of Single Axle Tractors on Peasant Farms in Buganda." East African Agricultural and Forestry Journal, October 1961, page 77.

A survey was made of the performance of the Landmaster and other single axle tractors on peasant coffee farms in Buganda in 1961[1] in order to compare the total costs of operation (recurring costs plus depreciation) with the assumed annual costs of weeding and slashing an acre of coffee by hand-labour on similar farms. "The common operations on coffee, using hand-labour only, usually consist of one hand digging followed by three to four weed slashings per annum."[2]

The assumption was made that weeding and slashing by hand-labour cost Shs.100/- per annum on a "planned farm", where standards of maintenance are higher, and Shs.50/- to Shs.60/- per annum on an ordinary peasant holding.[3] Making certain other assumptions also,[4] the following cost curve was derived for the Landmaster, which appeared to be the most suitable tractor. (The Landmaster was preferred because it (i) operated more cheaply than the other tractors on comparatively small farms (12½ acres

(1) See W.H. Boshoff and D. Innes: "The performance of Single Axle Tractors on peasant Farms in Buganda." East African Agricultural and Forestry Journal, October 1961, page 77.

(2) Boshoff and Innes, op.cit., page 77.

(3) i.e. while unit costs of labour are the same, labour inputs are more intensive on the planned farms.

(4) The main assumptions were:

(a) All activities are performed during a 12-week period, for 3 hours per day, 6 days per week. The total of 12 weeks may be distributed throughout the year.

(b) Slashing occupies the Landmaster over the balance of the year.

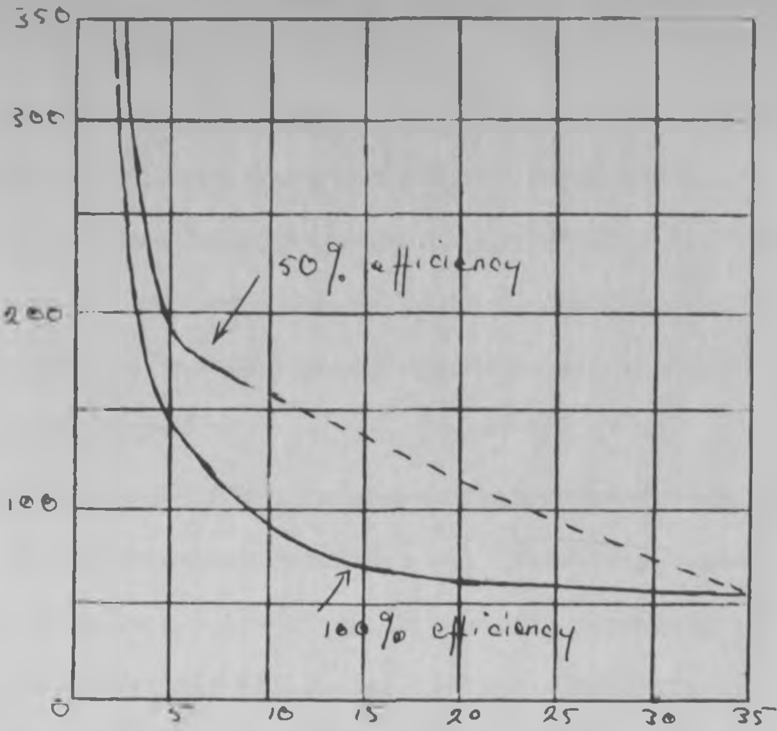
(c) The tractor and implements depreciate over five years.

(d) The level of performance achieved in the trial is also achieved by the peasant farmers.

Cost/Acre/

Annum

(Shillings)



Size of coffee farm (acres)

Source: W.H. Boshoff and D. Innes: "The performance of Single Axle Tractors on Peasant Farms in Buganda". East African Agricultural and Forestry Journal, October, 1961, page 83.

and over), (ii) at 10 acres slashed and weeded the cost per acre per annum fell just below Shs.100/-, (iii) the work produced was good, (iv) the initial capital outlay comparatively small, and (v) the local agents were apparently competent.)

The graph shows that the Landmaster will operate at just under Shs.100/- per acre on ten acres of coffee, at 75/- per acre on fifteen acres, and on a thirty to thirty-five acre holding it becomes competitive with the costs of hand-labour on an ordinary peasant holding, which one would not normally expect to be this large. All the conclusions depend on the assumption that the Landmaster does 360 hours work on rotavating per annum, and is used for the rest of the year on slashing. For less work, costs per acre would be higher.[1] Further trials demonstrated that the Landmaster cannot compete with the standard charges for local transport of 80 cents per ton mile, but that benefits might be anticipated "on the farm itself for carrying mulch, farmyard manure or livestock feed, and possibly to transport produce to the main roads" where no alternative means of transport is available.

During 1962 and 1963 the purchase of Landmasters was encouraged in Masaka Division, Government subsidies and loans being made available to assist their purchase. According to a survey conducted in June 1965[2] there were and presumably still are, fifty-six hand-tractors in the Division (all except three purchased during or after 1962), fifty-two of them being Landmasters. Two Landmasters are owned by the District Farm Institute, two by the owners of a private coffee estate and forty-eight by individual farmers. So far as is known none of the farmers has a planned farm, although one was in the course of being planned in late 1965. All the owners have rotary cultivators, and the 1965 survey, in which twenty-five owners were interviewed (excluding the District Farm Institute[3]), showed that fourteen of these had no other implements, nine had trailers, two had ploughs, and only one had a grass-slasher, the implement which Boshoff and Innes assumed would be used during most of the year. Not all of the implements, nor all of the machines, are in use.

(1) For comparison a graph suggesting costs at 50% efficiency has been inserted.

(2) Unpublished survey by M. Quenby, then Assistant Agricultural Officer, Masaka Division.

(3) Referred to hereafter as the D.F.I.

Eleven farmers received Government loans for the full value of the machine (generally less subsidy) and where it was bought, the trailer (also less subsidy). The 7% interest rate on the loans, and the 9% penalty rate on amounts in default, added to the total cost per acre per annum as compared to that calculated by Boshoff and Innes but this was more than off-set by the Government subsidy. However, the loans were repayable in three to four years, depending on whether a trailer was bought and whether the loan was for any additional purposes, which meant that a farmer had to meet repayments in a shorter time period than Boshoff and Innes allowed for depreciation. He therefore had to find the additional cash from another source or from exceptionally high savings on expenditure on labour.

The payment of the loans took place over the period 1963- early 1964. Whereas it will be suggested that in Lango the provision of loans for the purchase of full-size tractors was instrumental in encouraging other individuals to make the same investment, this suggestion cannot be maintained in Masaka. Of the eight farmers who purchased Landmasters in 1961(2) and 1962(6) none received credit and only one quarter of the farmers who did so subsequently obtained loans. Thirty-three farmers, on the other hand, obtained subsidies. It appears the provision of subsidies combined with strong encouragement of Landmaster purchase by the divisional extension staff were responsible for the rapid expansion in the number of machines in the division. It is possible that some owners were partly motivated by the prestige attaching to motorised farm-equipment.

In 1965 the impression was that most of the Landmasters in the Division were not in use or working order owing to extreme difficulty in obtaining repairs, and to the mechanical inexperience of the owners. The Divisional Agricultural Annual Report for that year stated that 20% of the Landmasters in the Division were in working order, while the other 80% were in need of major or minor repairs.

In January and May 1966 enquiries were made about fifteen Landmasters, including those owned by the D.F.I. and the estate, and nine belonging to farmers who had received loans.

The following information was obtained:

(a) The D.F.I. is getting full use from two machines, using the cultivator, slasher and trailer, and occasionally the plough. The two slashers, however, are used mainly for slashing grass on the D.F.I. compound. The D.F.I. does not grow coffee; it is not, therefore, a good standard for comparison with ordinary farms growing coffee as a main cash crop.

(b) In May, both the Landmasters on the private estate were out of order. The owner in any case considered a full-size tractor to be more efficient for cultivating the 30 acre estate, owing to the higher rate of cultivation.(1)

(c) Of the two farmers who had not received loans, one had not used the machine since it was bought in 1964, having been preoccupied with developing a dairy farm, and then absent in America for 9 months on a farm management course. The other was using his irregularly for small amounts of on-farm transport, and to cultivate less than ten acres of

(1) As both the large tractor and the Landmasters had been bought second-hand with the estate, the owner was not concerned with the cost of capital depreciation.

coffee. He also uses hand labour.

(d) Of the nine farmers who received loans, onehad not used his Landmaster since mid-1964, and two not since early 1965;[1] one had died, and the present owner was not traced.

Of the five who, by May, had used their machine at all during 1966 one had used his once to cultivate approximately one acre; one had used his "several" times but it was out of order in May; one had used his in February to transport provisions and furniture for his son's wedding (the son, who had also been the driver, then moved to another shamba); one, who had a full-time job and no driver, claimed he had used his occasionally at the weekend to transport husks before hiring it out on a permanent basis in April; the last had used his for approximately 44 machine hours both to cultivate his coffee and to transport crops and coffee husks.

No farmer had approached one-third of the 360 hours per annum for cultivating assumed necessary in the 1961 survey. In addition none of the farmers had used the machine for slashing, and only a minimal amount of transport work had been done. Extra income might have been earned by hiring out the Landmasters, but up to April this year no farmer had done this. The main reasons were apparently a fear that the owner would not be paid, or if paid at all, only inadequately, or that the machine might be damaged.. Probably the owners had made little effort to find out about the the possibilities for hire-work and there were some misconceptions, one owner stating he would not only have to buy the petrol himself, but to send one or two people in addition to the operator to pull back branches, clear stones, etc. One farmer, however, did make a

(1) The reasons are given below.

little income from the transport and sale of coffee husks.

The owners themselves obviously do not see their Landmasters as an investment from which they expect a minimum return (in terms of labour saved or otherwise) in order to recover their recurrent and capital outlay and they are in fact meeting the costs of their investment with income from some other source. Certainly there is no determination to get as much use as possible out of the Landmasters. Some of the more general reasons for this are listed below, but it impossible to generalise as to the more immediate causes of disuse. These are listed immediately below for five of the nine farmers who obtained loans:

1. Landmaster bought in 1961. Owner thought by the Agricultural Department to be promising farmer. (The encouragement of Landmaster purchases in the Division was apparently based on the probably erroneous conclusion that this farmer was using his very profitably. The costings available at the Divisional Agricultural Office were optimistically weighted against hand-labour; see Appendix II). In 1964 he began building a permanent house and stopped using the Landmaster in order to save fuel costs. It had not been used since.

2. Owner has only shamba visited with layout well suited to mechanical cultivation (flat, row-planted, well pruned). He stated he could not find a driver, and had not attended a training course himself. He had had little or no contact with the Agricultural Department since the machine was bought in 1963. It had been used for a total of one month, when it was operated by a relative. The shamba is in a remote gombolola 40 miles from Masaka, where repairs would have been delayed and expensive.

3. Owner is full-time trader, shamba neglected. No other driver. Landmaster broke down early in 1965, was taken to be repaired and has not been collected.

4. Owner is full-time Government clerk, with poorly maintained shamba. In financial difficulties (recently divorced and re-married); sacked driver, sold part of shamba and hired out Landmaster on permanent basis.

5. Full-time farmer. Prefers hand-labour. Estimates Landmaster can cultivate one acre a day, given dry soil, but requires two extra labourers to pull back branches and weed round base oftrees. In same time could do the work as cheaply by hand-labour.

For one reason or another all except one of the nine preferred hand-labour. It is notable that those who wish to save money do not use their Landmasters. Several farmers complained that they were unable to use them on wet soil, and that this restricted the time during which they could be used for cultivating. Most of the shambas were not row-planted or even if they were, were poorly pruned. This would tend to decrease the efficiency of operation.(1)

The mechanical know-how of the farmers themselves was minimal. This meant firstly that more repairs were necessary than might otherwise have been the case, and secondly that when minor repairs were necessary, the farmers either couldn't do them, or did them inadequately. The

(1) The rows are approximately 9' wide. The more suckers and unpruned branches there are spreading across the rows, the harder it is to cultivate. Efficiency is also reduced because some farmers are growing the spreading variety of robusta.

Uganda distributors mentioned incorrect mixing of petrol and oil and failure to perform simple maintenance correctly (e.g. cleaning a dry filter with water) as examples of the kind of things that went wrong. The farmers themselves also complained of the speed with which parts wore out,[1] and the same complaint was made by the District Farm Institute. Repairs, however, are hard to obtain. Limited facilities are available in Masaka; most spare parts must be obtained from Kampala, and all major repairs done there. Part of the difficulties of operation and repair may be due to the short training course for operators.

Most of the Agricultural Assistants and Supervisors in the Division had no training in Landmaster use and maintenance, and had no conception of the full cost involved or the amount of work which had to be done before a Landmaster could be an economic investment. They advised farmers whose shambas and whose operating costs with land labour were not large enough to justify mechanisation to buy Landmasters, and the checking of their advice by senior staff was totally inadequate. It is unlikely that any of the nine farmers with loans were spending more than 60/- per acre per annum on weeding and slashing. According to the costings quoted earlier they should not, therefore, have expected to find a Landmaster a profitable substitute for hand-labour on anything less than 30 acres of coffee. Only two of them claimed to own this much coffee: one was not using the machine and the other cultivated only a very small fraction of his shamba (one acre in the first 5 months of 1966) with the Landmaster.

(1) One farmer had had to replace, in two years of spasmodic use, the rear-wheel shaft, all the rotary hoes, the clutch cable, the throttle lever and a piston-ring, in addition to various nuts and bolts.

The second farmer mentioned on page 212 exemplifies the importance of providing loans for only one enterprise, whenever possible.(1) This farmer was granted a loan not only for a Landmaster but also for the purchase of cattle and fencing materials and for mulching (plus various minor items such as a spray pump). He did not use the Landmaster, did not buy the mulch, and did not use the fencing materials. Judging by previous performance, he would have done better if he had been in contact with the extension services.

To summarise the results:

1. No farmers in the Division were selected as test-cases on whose farms Landmaster use could have been carefully studied and recorded.
2. The Landmasters were sold to unplanned farms where labour costs were low and it was hardest for the Landmasters to compete.
3. Some of the farms were too small.
4. Repair facilities were inadequate.
5. The courses for operators were extremely short, lasting for one or two weeks.
6. Most of the Agricultural Assistants, from whom owners might have expected advice were not given instruction either in Landmaster use or maintenance.
7. Although most of the loans for Landmasters will probably be repaid, they will not be repaid from profits or savings accruing from their use.

(1) However, a loan may still be required to finance more than one input on the selected enterprise, see Chapters V and VIII.

2. 4 Dairy Farming Loans.

The most profitable enterprise open to fammers in Masaka at the moment is probably dairy farming. A milk pasteurising and packing plant was opened in Masaka Town in 1965 by the Masaka Livestock Union Ltd., and there is now a guaranteed market for milk at 40 cents a pint for all farmers who join the Union. In mid-1966, the plant was operating at 50% capacity. Farmers can also frequently sell a considerable proportion of their production locally, at prices that often reach 60 cents and sometimes 70 cents a pint. Unlike coffee growing, dairy farming has the advantage that a farmer who continually has at least one cow in milk can expect to earn a daily, weekly, or monthly cash income. The return to investment in a dairy farm is quicker than with beef production, where a farmer who buys young bullocks for fattening must normally expect to wait from 12 to 24 months before making the first sales. A farmer usually buys milking-cows that are due to calve within three months of the date of purchase; thereafter he can expect to start selling milk. In Buganda, at current milk prices, it should be possible to recoup the capital invested within approximately 4 years.(1)

Owing to their much higher milk potential, it has generally been considered advisable for a dairy farmer to purchase exotic cattle. Ugandan farmers have bought these in Kenya at a cost including transport of between

(1) cf. J. Njukia "Smallholder Tea Production in Mathira Division of Nyeri District, Kenya". Makerere University College, Faculty of Agriculture, unpublished special study, 1965. In comparing the capital and recurrent costs of dairy-farming and tea outgrowing, Njukia, found that for the 16 dairy-farmers studied the pay-back period for capital invested was 5 years, with a price for milk 50% lower than that paid by the Masaka Livestock Cooperative Union.

Shs.1,000/- and Shs.1,500/-. The breeds most commonly purchased by Masaka farmers are Jerseys and Guernseys, although it is unlikely that the majority are pure bred.

In 1961, one farmer in Masaka Division owned exotic dairy cattle. By March 1966 there were exotic cattle on twenty-six farms including three mission farms. A year later three more farms had been started.(1) Of the twenty-six non-mission farms, nine were established with the assistance of credit. Eight of these farmersobtained loans from the Uganda Credit and Savings Bank or its successor the Uganda Commercial Bank, five of them under the Progressive Farmers'Loans Scheme, and three from the Bank's own funds following the suspension of the Scheme.

Prior to 1964 loans for the purchase of exotic cattle were approved by the Divisional Agricultural Officer. Communication between the Divisional Agricultural and Veterinary Offices was poor, and the latter was not always notified of such approvals. In at least three cases loans granted for the purchase of exotic cattle were not used for this purpose. In 1964, all loans for the purchase of exotic stock (cattle and poultry) were placed under the supervision of District Veterinary Officers. The Veterinary Department drew up regulationsfor the granting of loans for the purchase of exotic cattle which stipulated that loan aplications would not be approved unless the applicant had with his own resources cleared and fenced adequate pasture and ensured an adequate initial water supply. Having done this, a farmer would be eligible for a loan to

(1) This rate of expansion is just below 50% of the rate achieved between 1959 and 1965 in Mukono Division, Buganda Region (situated between and to the north of Kampala and Jinja), which is where the rate of expansion of dairy farms has been highest.

finance the transport and purchase of cattle from Kenya, and also to carry out further capital improvements such as the installation of a water pump. The Scheme had two chief merits: (i) by requiring a farmer to meet the cost of initial farm improvement from his own resources it reduced his debt burden and, (ii) it provided some test of the applicant's enthusiasm.

In practice the Scheme was operated leniently, and three of the five borrowers interviewed had received part of their loans for clearing and fencing pasture. Nonetheless, the Veterinary Department has sole authority for authorising the purchase of exotic cattle, and it appears that this, combined with the special circumstances of dairy farming in Masaka (a new enterprise, potentially highly profitable, requiring a substantial capital outlay and special skills) has led to the maintenance of close contact between dairy farmers and the Veterinary extension staff. The maintenance of contact between farmers and extension staff is further facilitated by the fact that there are only 29 dairy farms in this Division. This, of course, is made easier by the small number of farms. It is notable that the default rate on these loans islower than for the "general improvement" loans. At May 31, 1966, loans worth Shs.111,300/- had been approved by the Uganda Credit and Savings Bank for dairy farming, of which Shs.66,098/- were outstanding. Of this amount only Shs.9,941/- was in default (i.e. approximately 9% of the total granted, and 15% of the amount outstanding.)

The cost of establishing a dairy farm varies in accordance with its size, the system of feeding used, i.e. stall-feeding versus grazing, and the cost of establishing an adequate water supply.

In a comparative study of returns to tea production and dairy farming made in Nyeri District of Kenya in 1965(1) it was estimated on the basis of records kept by three farmers of the cost of establishing their farms that capital costs per acre are as follows:

Table IV. 5

Cost of Establishing One Acre for Milk Production, in Nyeri District, Kenya

Item	Shs. cts.
1. Digging of field and establishing grass	125. 00
2. Fencing (barbed wire, 2 rolls)	75. 00
3. Labour for fencing, digging holes for poles, etc.	30. 00
4. Cost of poles, nails and transport	45. 00
5. Cost of European typecow (in calf)	650. 00
6. Cost of cattle shed (4 cows = 1,000/-)	250. 00
7. Cattle sprayer (4 cows = 150/-)	37. 50
8. Milking utensils: 1 2-gallon container @ 35/50	68. 00
1 1-gallon container @ 27/50	
1 pail @ 5/-	
Total Capital Investment	1,280. 50

Source: J. Njukia "Smallholder Tea Production in Mathira Division of Nyeri District, Kenya." Makerere University College, Faculty of Agriculture, unpublished special study, 1965.

(1) Njukia op. cit., page 31.

In Uganda the total investment must be higher due to the higher price paid for cattle and to the fact that a number of the larger farmers have found it necessary to install water pumps.

Of the eight farmers who obtained credit from the Uganda Credit and Savings Bank, five were interviewed. All had fenced pasture exceeding 20 acres, and were pursuing a more extensive form of dairy-farming than the farmers studied by Njukia in Nyeri, Kenya. As will be seen below, a major short-run problem for these farmers has been understocking, with consequent low returns to investment. Two of the farmers had received second loans to improve their stocking rates, but in one case (Farm A in the following Table) the rate was still inadequate. Four of the farmers made available records of the capital cost of establishing their farms.

Notes to Table IV. 6, page 221.

1. 'T' represents total costs: 'A' represents costs per acre.
2. Includes draining swamp
3. No water pump
4. Excludes hire purchase credit obtained by two farmers for water pumps and engines, and interest free credit obtained for 12 months by owner of farm B from a local company for laying pipes
5. Milking cows and mature bulls equal one livestock unit; all calves, bullocks, and heifers who have not calved equal 0.5 livestock unit. Actual stock at mid-March, 1967, were as follows:

   Farm A 10 milking cows, 10 calves (15 livestock units)

   Farm B 15 milking cows, 13 calves, 3 bullocks (23 livestock units)

Table IV. 6

Capital Costs Incurred in Establishing Four Dairy Farms

Masaka Division, Buganda Region

Item		Farm A 57 Acres fenced	Farm B 45 Acres fenced	Farm C 22 Acres fenced	Farm D 20 Acres fenced
		Shs.	Shs.	Shs.	Shs.
1. Clearing pasture and fencing	T(1)	14,820(2)	8,150	2,146	3,300
	A	260	181	98	165
2. Establishment of water system (Pump, engine house, piping, water tanks, troughs, labour for installation.)	T	9,914	13,780	2,500(3)	1,090
	A	174	306	227	55
3. Cost of cattle	T	16,600 (12 head)	18,750 (16 head)	4,000 (4 head)	4,211 (4 head)
	A	277	417	182	211
4. Erection of milking shed, cattle shed, calf pens	T	4,000	3,150	1,280	1,020
	A	67	70	58	51
5. Spray pumps	T	300	300	300	150
	A	5	7	14	8
6. Milking utensils, other minor equipment, e.g. wheelbarrow	T	475	900	225	273
	A	8	20	10	14
7. Housing for Manager and Porter	T	-	8,104	-	-
	A	-	180	-	-
8. Electrolux refrigerator	T	-	3,050	-	-
	A	-	68	-	-
Total Cost		46,109	48,220	10,451	10,044
Total Cost per Acre		769	1,072	475	502
Value of Bank Credit(4)	T	30,000	13,000	5,000	5,000
	A	500	289	227	250
Present stocking rate per acre (5) (7)		1: 4	1: 2	1: 1.5	1: 10(6)

Farm C 9 milking cows, 9 calves (13.5 livestock units)
Farm D 2 milking cows, 3 calves

6. Farm never viable due to understocking and poor management; now closing down.

7. Stock mortality on the four farms was as follows:

Farm	Date Established	Deaths up to March, 1967	
		milking cows	other
A	August, 1965	2	2
B	June, 1964	3	5
C	March, 1963	1	2
D	December, 1963	2	1

In Mathira Division, Nyeri, the recurrent costs per acre of three farms with a stocking rate of one livestock unit per acre were estimated as follows:

		Shs.	cts.
1.	Clearing pasture	65	00
2.	Labour (milking spraying, feeding,etc)	120	00
3.	Cost of sprays, drugs, etc.	50	00
	Total	235	00 (1)

In Masaka the same four farmers incurred recurrent costs as shown in Table IV. 7.

Notes to Table IV. 7:

(1) Imputed cost: exact figure not available.

(2) Excluding dried milk

(3) Including dried milk

Table IV. 7

Recurrent Costs Incurred on Four Dairy Farms, Masaka Division, (Costs on farms A, B and C incurred in 1966; costs on farm D incurred in 1965)

Item		Farm A 57 Acres	Farm B 45 Acres	Farm C 22 Acres	Farm D 20 Acres
		Shs.	Shs.	Shs.	Shs.
1. Engine Fuel	T	468	450 (1)	-	-
	A	8	10		
2. Clearing pasture, maintaining fencing, milking and other labour	T	2,269	2,000	2,000	738
	A	40	44	91	37
3. Supplementary feeds dried milk, minerals	T	1,240	1,750 (2)	1,900	181
	A	22	39	86	9
4. Artificial insemin-ation, sprays, drugs & veterinary treatment	T	474	750 (3)	763	413
	A	9	17	35	21
5. Transport of milk	T	Included under 2	1,800	600	Included under 2
	A		40	27	
Total Costs without loan interest	T	4,918	6,750	5,263	1,332
	A	86	150	239	67
Total Costs including loan interest	T	6,143 (4)	7,296 (5)	5,538 (6)	1,551 (6)
	A	108	162	252	78

Table IV. 8

Masaka Dairy Farmers: 1966 Revenue (1965 for farm D) related to recurrent costs.

Farm	Milk Acreage	Value of Milk Produced	Value per Acre	Value of Marketed Milk	Value per Acre	Total Re-current Costs	Re-current Costs per Acre	Gross Profit-Recurrent Costs	G.P.per Acre-R.C.per Acre	Revenue from Sale of Stock	Total gross profit-Recurrent Costs	Total G.P. per acre-R.C. per Acre
		Shs.	Shs.	Shs.	Shs.	Shs.	Shs.	Shs.	Shs.	Shs.	Shs.	Shs.
A (i) 1st full year of operation. Two cows giving milk.	57	3,000	53	3,000	53	5,968	104	-2,968	-52	740	-2,228	-39
(ii) Assumes average of 7 cows giving milk	57	12,775	224	12,775	224	7,084 (1)	124	5,727	100	740	6,467	113
B	45	n.a.	n.a.	28,800	640	7,299	162	22,601	480	6,500	28,101	624
C (average of five cows giving milk)	22	11,680	531	8,039	365	5,538	252	2,492	113	1,220	3,712	169
D (average of two cows giving milk)	20	3,319	166	2,609	130	1,542	77	1,058	53	-	1,058	53

(1) Recurrent costs raised to level being incurred in 1967.

(4) Loan Interest averaged over 6 years

(5) Loan Interest averaged over 5 years

(6) Loan Interest averaged over 4 years

At existing (March, 1967) stocking rates the recurrent costs per livestock unit are high. For farms A, B and C, they work out at Shs.410/-, Shs.317/- and Shs.396/- respectively. This has to date had a considerable impact on the rate of recovery of the capital investment. Farms B and C are now in a position to recover their capital outlay within four years. Farm A cannot hope to do so in lessthan 10 years unless stocking rates are intensified. Farm D is in a similar position, but is in any case going out of production. The position of the individual farms is illustrated in Table IV. 8. Farm A is considered twice: firstly for 1966, when two of the four milking stock initially purchased died and two cows only were milked for ten months, and secondly the same average returns per cow are estimated assuming an average of seven cows in milk, which the farmer may achieve in 1967/68. (The farm was established in August, 1965).

The milk yields currently being obtained from exotic stock in Masaka are not high. When visited in 1966, the highest average yield being obtained on farms A, B, C, D and one other was 12.5 pints per day per cow on farm A. A survey of the 23 privately owned dairy farms in the Division revealed the average daily yield being obtained from all milking stock(1) by the eighteen respondents was 9.4 pints. This corresponds quite closely

(1) Including dry cows.

with the daily average of 8 pints per cow recorded by Grimble in his 1965 survey of 53 dairy farmers in the Bugerere and Kyaggwe Counties of Mengo (Buganda Region).[1]

Not only are yields low but stock mortality rates are high. The same survey in Masaka revealed that on seventeen farms of an average age of 2.2 years now owning an average of 8 milking cows (total 137) there had been 193 deaths including 73 milking stock. These figures are heavily inflated by the figures for one farm where 105 stock died of which 40 were milking cows, mainly during the 1965 drought. Excluding this farm there have been 88 deaths on 16 farms of which 33 were milking cows. These farms are an average of 2 years old and carry an average stock of milking cows of 5.75. Deaths average 5.5 per farm and deaths of milking cows alone average 2 per farm. The single most important cause of death was East Coast Fever.

These deaths result in (i) a loss of recurrent income either from the sale of milk or of male calves or bullocks, and (ii) decrease in the natural growth of capital which should occur through the birth of new stock. It might be argued that where the mortality risk is so high there is a case for the provision of a Government subsidy on exotic cattle. However, it is the opinion of the senior veterinary staff in Masaka that the majority of deaths arise from inadequate spraying, for which the farmer is to blame. There is certainly no case for subsidising low standards of management.

There is little doubt that there is room for considerable improvement in standards of stock management in the Division, and that an expansion of

(1) R.J. Grimble, "Report of an Economic Survey of 'Dairy Farming in

credit for the establishment of more dairy farms would not be justified without an expansion in the number of divisional veterinary extension staff having more than one year's training. At present there are only two such staff in the Division; the Divisional Veterinary Officer (a graduate, who is, to a considerable extent, compelled to devote his time to office work) and the Veterinary Extension Officer. The division has had three different Divisional Veterinary Officers in less than two years.

As can be seen from the preceeding tables there is as yet relatively little uniformity in the capital and recurrent costs incurred by dairy farmers in the Division. There is also wide variation in management standards. At least three farmers are getting yields from their exotic stock that are no higher than those being obtained from their Uganda cows.

While dairy farming is an enterprise requiring sufficiently high capital expenditure, even with stall-feeding, to justify the provision of medium-term credit, there is no point in providing these loans unless the credit-assisted enterprises are operated profitably. The figures presented above show that owing to the relatively high price obtainable for milk in Masaka Division, even with poor milk yields capital costs can be recovered in five to six years provided the farmer builds up a satisfactory stocking rate. If, however, a high mortality rate within the herd prevents fulfilment of this condition then the farmer is faced with the opportunity cost in income foregone from alternative uses of his capital. Equally, from the point of view of the community as a whole, scarce loan capital is tied up in an unprofitable operation.

2. 5 Other Livestock Loans.

While the Veterinary Department in Masaka was notified of all loans granted for the purchase of exotic stock after 1963, it was not notified of loans granted for the purchase of indigenous cattle, and was not responsible for their supervision. Neither of the two loans granted for the purchase of indigenous cattle among the sample of farmers interviewed had been used for this purpose, and the present Divisional Veterinary Officer was unaware that they had received credit.

Both the farmers were granted credit for the cleaning and fencing of pasture and the purchase of a few indigenous stock. The value of granting small loans for the purchase of indigenous cattle is questionable except for the additional stocking of a farm that is already equipped - i.e. fenced and provided with adequate water. The cost of clearing and fencing pasture is in the region of Shs.130/- to Shs.150/- per acre, and up to two acres of pasture is necessary per animal. A six-month old bullock costing Shs.100/- can be expected to fetch Shs.450/- three years later if well looked after and fattened to a weight of 728 lbs. Alternatively a thin but mature bullock bought for Shs.300/- and fattened might be sold for Shs.450/- six months later. If the farmer has no breeding stock, then the proceeds of sale must be used partly to finance the purchase of more bullocks. Employing the second strategy the loan might be recovered quite quickly (within three years) given good management.

Six of the farmers interviewed are keeping exotic poultry. In two cases the standards of management were very low and it is unlikely that the owners were making a profit. There is no well-qualified poultry specialist in the Division, and all exotic poultry owners come under the supervision of a Veterinary Assistant whose qualifications are a Junior Secondary education plus a six-month course in poultry management. The inefficient producers were unable to furnish any form of costings. However, costings were obtained from two of the more efficient producers, one of whom established the enterprise with a loan obtained under the Progressive Farmers' Loans Scheme.

There is only a limited market for eggs in Masaka, and some producers in the Division are already finding it necessary to look for outlets in Kampala. Egg and broiler production using exotic birds started in the Division in 1960. By March, 1967, there were 43 exotic poultry keepers in the Division, owning 15,671 laying birds and 2,316 broilers.

A farmer establishing a poultry farm may need credit for two purposes: firstly to build, equip and stock a deep litter, and secondly, to cover initial running costs. An adequate deep litter can be constructed from mud and wattle at relatively low cost.

The smaller of the two producers established a small deep litter at the following approximate cost:

Table IV. 9A

	Shs.	Cts.
Erection of mud and wattle deep litter (with C.I.roofing)	1,500	00
Purchase of drinking troughs @ Shs.32/- and feeders @ Shs.15/-	203	00
Purchase of 250 layers @ Shs.20/- per bird	5,000	00
Purchase of one water-tank (used also by family) @ Shs.1,000/-, 50% of cost imputed to poultry enterprise.	500	00
Total	7,203	00

In the first full year of operation, this farmer achieved a gross margin on egg sales of Shs.2,900/-, selling at a price of Shs.-/25 per egg. Deducting from the gross margin one year's expenditure on labour at Shs.1/50 per day but excluding bird depreciation,[1] the farmer remained with a profit over recurrent costs of Shs.2,350/-. This farmer's records for 1964 revealed an average monthly expenditure on feed, grit and drugs for 250 birds of Shs.341/- and an average gross return of Shs.582/- (implying an average production of 2,330 eggs per month.)[2] Although at this rate of profit he could have recovered his capital expenditure within three and a half years, this farmer has subsequently abandoned his poultry enterprise and turned to coffee buying. The reasons given were: (i) that he expected to make higher profits from the second operation, and (ii) that it was too difficult to find an outlet for his eggs.

Despite a high level of capital investment, 93% of the capital expenditure on the second poultry farm was recovered in its first full year of operation. The costings are given below not because they are representative of general standards of poultry farming in the Division but because they illustrate the rate of profit that can be achieved on an efficiently run farm.

(1) Layers bought as day-old chicks generally have a negative depreciation since they canbe sold off as table birds.

(2) Even allowing for the possibility that some additional eggs were consumed at home and not sold, this level of production is obviously low.

Table IV. 9B

I - Capital Costs

		Shs.	Cts.
a.	Poultry Section	4,875	00
b.	50% Cost of farm Manager's and two Porter's housing	15,000	00
c.	Cost of birds:		
	(i) 700 layers (day-old chicks) @ 5/10	3,570	00
	(ii) 75 hens for fattening @ 2/-	150	00
	(iii) 250 day-old ducks @ 4/-	1,000	00
	(iv) 2 breeding turkeys @ 60/-	120	00
	Total	24,715	00

II - Recurrent Costs, 1966

		Shs.	Cts.
a.	75% Manager's salary	2,700	00
b.	1 porter	300	00
c.	Poultry feed	8,982	00
d.	Poultry, drugs and treatment	550	00
	Total	8,832	00 (1)

(1) Costs omit transport of table birds to Kampala. Inclusion of this item would not add more than Shs.700/- to the costs shown.

Table IV. 9B (Cont'd.)

III - Revenue, 1966

		Shs.	Cts.
1.	Sale of eggs:		
	(i) 700 birds laying for 6 months: 39,000 eggs @ -/25 (1)	9,750	00
	(ii) 600 birds laying for 4 months: 19,600 eggs @ -/25 (1)	4,900	00
	(iii) 200 birds laying for 2 months: 7,600 eggs @ -/25 (1)	1,900	00
2.	Dressed Chickens (old layers) 3,500 lbs. @ 3/50 per lb.	12,250	00
3.	Undressed Chickens, 75 @ 12/50 each	937	00
4.	Table ducks, 150 @ 15/- each	2,250	00
5.	Turkeys, 25 @ 50/- each	1,250	00
		33,237	00

(1) The monthly rates of lay in the three groups vary from 8 - 19 eggs. No explanation as to the cause of the variation has been obtained.

The records provided by the second farmer reflect a much larger scale of operations and more efficient management. They reveal the profits that can be obtained from poultry farming given sufficient capital, and managerial and technical skill, plus the ability to explore and exploit new markets. This farmer for example sends weekly bulk supplies to Masaka Technical School, Masaka Bakery, and a hostel at Entebbe.[1] Very few farmers in the Division are operating at this level of efficiency.

(1) The farmer concerned was Masaka Divisional Cooperative Officer in the the early '60s and has subsequently been the Secretary/Manager of Masaka Bwavu Federated Cotton Union. He attended a nine-months farm management course in America in 1965, and employs a full-time farm manager. He owns Farm B, discussed in the preceeding section on dairy farming.

3. The Progressive Farmers' Loans Scheme: Lango District

3. 1 Opportunities for the Use of Credit in Lango.

Only nineteen loans, worth Shs.153,000/-, were granted to farmers in Lango. The reasons for this are discussed below.

The two most obvious needs for medium-term agricultural credit are for the purchase of equipment and the development of perennial crops. Although there may be long-term opportunities for the development of certain perennial crops in Lango, particularly citrus fruit, no such crops are being extensively promoted at the moment, no costings are available for their production by private farmers; and no comprehensive information is available on likely markets, or on the cost of reaching them. None of the medium-term loans were used for their promotion.

The remaining alternative was that credit should be used for the purchase of equipment. At present labour scarcities at certain points in the year constitute constraints to increased production in the District. For example, at the beginning of the first rains finger millet weeding competes with the demand for labour for weeding cotton. The important factor in a decision to provide medium-term credit to relieve these constraints is whether or not suitable equipment is avialable to substitute for, or add to, the scarce labour. In March, 1966, however, the District Agricultural Officer expressed the opinion that it was very difficult to identify purposes for which farmers in Lango genuinely needed credit. The evidence obtained in the present study mainly corroborates this opinion, although there is no reason to suppose that in the future there may not be an increasing, though fluctuating, demand for medium-term loans in the District. (In fact the recent creation of expanded opportunities for the production of flue-cured tobacco will give rise to a demand for medium-term (two-year) loans for the construction of curing barns.)

From 1962-1964, however, two major factors limited the opportunities for providing loans for the purchase of equipment in Lango. These were, firstly, the lack of adequately tested ox-drawn equipment known to be of potential benefit to farmers in the District, and secondly, the indecision, already referred to, as to whether to encourage the use of ox-drawn implements or tractors. The latter is further illustrated by the opening of a Tractor Hire Service Station in the East, by Special Development Section, and by the appointment of Field Assistants in charge of ox-cultivation to every county in the District with the exception of Maruzi. If the indecision did not exist, it would obviously be more beneficial to redistribute the extension personnel in charge of ox-cultivation and intensify their distribution in the east. The same ambiguity in policy is illustrated by the list of purposes for which the nineteen loans were made: seven for the purchase of tractors and twelve for the purchase of ox-drawn equipment.

Diversification of purchases for which loans are granted is acceptable if these are all known to be profitable, taking into account the technical skill and managerial ability of the borrowers, and the degree and quality of advice that can be expected from the extension staff. In Lango there was little information available concerning the likely profitability of most of the equipment for which loans were granted. If any of the equipment had been costed on private farms and compared with the cost of hand-labour (and the time taken by hand-labour) for the same tasks, these costings had not been made generally available. A list of the purposes for which the loans were granted is given below.

Table IV. 10

List of Purposes for which Loans were Granted under the Progressive Farmers' Loans Scheme in Lango District

Purpose	No. of Borrowers
To purchase a tractor	7
To purchase a polyculteur basic unit	5
To purchase a groundnut lifter	2
To purchase a ridger	1
To purchase a harrow	3
To purchase a large spray pump	7
To purchase a small spray pump	2
To purchase a weeder or cultivator	5
To purchase a Serere Frame	10
To purchase Bentall Seeders	9
To purchase ploughs	6
To purchase oxen	4
To purchase barbed wire or chicken wire	8
To build produce stores	5

The only items which had previously proved acceptable to a reasonable number of farmers in the District were ox-ploughs, oxen, spray-pumps and, possibly, cultivators and fencing. In terms of the amount of money lent, the loans were used predominantly to encourage the use of new techniques not all of which have proved acceptable to the farmers concerned. This point is discussed further below, when the loans are considered in more detail. Whether credit should be used for experimental purposes is a policy decision. Two points that ought to be considered in this context are, firstly, the distribution of responsibility if the enterprises or techniques do not yield a sufficient return to facilitate repayment of the loans,[1] and, secondly, the possible effect on the attitude of farmers to further extension advice.

3. 2 Assessment of Applications, and Payment and Collection of Loans.

Since none of the application forms had been filed at the Lango District Agricultural Office, it was not possible to determine the extent to which the applications were drawn up by Assistant Agricultural Officers or by Agricultural Assistants. From conversations with extension staff and borrowers, however, it appears that the majority of initial applications inLango were drawn up by Agricultural Assistants.

The applications were then submitted to the Area Committee of the African Loans Fund, after scrutiny by the District Agricultural Officer. There is evidence that in Lango, where few loans were made, the latter was able to give time to the consideration of applications and to interview or visit the majority of applicants. He concentrated his attention on the eleven applicants for the larger loans for tractors and polyculteur outfits.

Following the amendment to the Scheme's regulations in 1962 the District Government was not required to guarantee any part of the loans, and in some Districts, including Masaka, the Area Committees were dispensed

(1) See Chapter VIII.

with. Applications went directly from the District Agricultural Officer to the Uganda Credit and Savings Bank. In Lango, the Area Committee was retained and consideration of applications was occasionally delayed by inability to arrange meetings. The committee was composed of five representatives of the Central Government - the District Commissioner, and the District Officers for Trade Development, Agriculture, Veterinary Services and Cooperative Development, and five representatives of the District who were appointed by the Lango District Administration. In 1962 these included the Secretary/Manager of Lango Co-operative Union, two farmers, one shop-keeper and one person of unspecified occupation; the last four were all members of the District Council. The District Commissioner was Chairman of the Committee and the Branch Manager of the Uganda Credit and Savings Bank at Gulu was Secretary. A complaint by the District Commissioner that his other work left him little time for acting as Chairman of the Committee, accompanied by a request from Lango District Administration that it should have 100% representation on the Committee since it had to guarantee the loans(1) were both rejected by the Bank.

The minutes of the Committee show that it took its responsibilities for assessing applications seriously, and that quite often applications were rejected or referred for further information. No complete record was made of the number of applications submitted, but in the minutes references were found to about fifteen applications for agricultural loans

(1) This request was made in November 1962, five months after the Agricultural Department had issued instructions that District Administrations should no longer guarantee 50% of the loans.

that were referred or rejected. The reasons included requests for more information, incorrect completion of the application form, and in one instance a poor standard of farm layout.

After approval by the Area Committee, applications for loans worth Shs.5,000/- or less were submitted to the Branch Manager of the Uganda Credit and Savings Bank in Gulu. Applications for loans in excess of Shs.5,000/- were, as in all districts, submitted to the Central Committee of the African Loans Fund at the Head Office of the Uganda Credit and Savings Bank in Kampala. In 1964 the Central Committee rejected two out of seven applications submitted for tractor loans. The Central Committee was not obliged to disclose its reasons for rejecting applications.

93% of the full value of the loans made in the District was paid out in kind. This figure is high partly because seven of the loans were for the purchase of tractors. This immediately meant that Shs. 128,000/- out of a total of Shs. 153,850/- was provided in kind.

That most of the remainder was also paid out in kind was due to the refusal of the District Agricultural Officer to authorise the payment to most farmers of large sums in cash. This compares favourably with the situation in Masaka, where the D.A.O. delegated the responsibility for authorising the distribution of loans to farmers, and loans were paid out predominantly in cash.

At least twelve of the borrowers have at some time been in default. Even in 1963, the year in which most of the loans were paid out, the

District Agricultural Officer commented in his Annual Report that collection of repayments was becoming difficult. For the twelve farmers who did not buy tractors, the monthly default figures for the year following February 1964 read as follows (instalments were due in March and September.)

Table IV. 11

Default 1964/65, Lango District[1]

Shillings

	Size of loan	Mar.	April	May	Jun.	Jly.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
A	1,000	-	-	-	-	-	-	-	-	-	-	-	-
B	5,000	-	-	-	-	634	634	634	1245	1245	415	415	170
C	1,000	289	289	289	289	289	289	289	323	323	323	-	-
D	1,000	529	529	529	529	529	529	529	797	797	495	345	345
E	3,000	288	45	45	45	45	45	45	589	589	589	589	589
F	4,000	771	-	-	-	-	-	-	234	234	234	234	-
G	1,200	-	-	-	-	-	-	-	-	72	305	305	-
H	1,000	286	-	-	-	-	-	-	278	278	278	278	278
I	650	137	-	-	-	-	-	-	-	-	-	-	-
J	2,000	-	-	-	-	-	-	-	-	544	544	544	-
K	5,000	858	858	858	858	858	858	858	1684	1684	1004	1004	1004
L	1,000	-	-	-	-	-	-	-	271	-	-	-	-
Total	25,850	3158	1721	1721	1721	2355	2355	2355	5417	6033	4754	4280	2386

These figures illustrate that the hardest time to meet repayments is in the latter half of the year, six months after the end of the cotton harvest, which is completed in April. Where farmers depend heavily for

(1) Source: District Agricultural Office files.

theircash incomes on a seasonal crop yielding one harvest a year, then it might be better to ask them to pay either annual instalments or two instalments of unequal value of which the largest follows the cash-crop harvest. The latter alternative constitutes the pattern of payments adopted in practice by farmers who pay off their default following the cotton harvest.

Of the seven farmers who bought tractors at least three were in default in September 1966 for a total of Shs.8,200/-.(1)

Although two of the nineteen borrowers have been persistent defaulters no attempt has been made to seize their security. These are farmers E and F who were in default for Shs.1,168/- and Shs.1,784/- by April, 1965, and remained in default afterwards.

3.3. Loans for the Purchase of ox-drawn Equipment.

The loans are discussed in two groups: firstly, those for the purchase of ox-drawn equipment and other miscellaneous items, and secondly, those for the purchase of tractors.

It is now over three years since the loans for the purchase of ox-drawn equipment were paid out. None of the twelve farmers claimed evident increases in production or savings in expenditure on labour as a result of using the equipment purchased. This was partly because there was a serious degree of failure to use some of the equipment; Table IV. 12 summarises the extent to which the various items are actually being used, and, where this information is available, their cost both to the borrowers

(1) Figures obtained in September, 1966, from the borrowers themselves.

and to the Government (most of the items were subsidised.)

Table IV. 12

	No.of farmers buying	No. bought	No.of farmers not using	No.not in use	Cost to borrowers per item	Total cost to borrowers	Cost to Govt. per item	Total cost to Govt.of items not used
Chicken wire	2	-	2	-	n.a.	n.a.	$33\frac{1}{3}$% subsidy	n.a.
Barbed wire	6	-	3	-	c. 25/-	-	c. 25/-	n.a.
Produce store *	5	-	5	-	-	-	Nil	Nil
Oxen	4	n.a.	-	-	n.a.	n.a.	Nil	Nil
Plough	6	8	2	2	41/- or 48/-	360/-	83/- or 96/-	179/-
Bental Seeder	9	22	6	13	29/-	638/-	116/-	1,508/-
Safim weeder/ Planet Jünior cultivator	5	5	3	3	68/-	340/-	137/50	412/50
Boom spray pump	7	7	2	2	100/70	704/90	316/30	632/60
Plantector spray pump	2	2	-	-	23/50	271/-	27/50	Nil
Planter	1	1	1	1	n.a.	n.a.	Nil	Nil
Harrow	3	4	3	3	n.a.	n.a.	Nil	Nil
Polyculteur	5	5	2	2	1,108/75	5,543/75	1,100	2,200
Groundnut lifter	2	2	2	2	132/-	264/-	Nil	Nil
Ridger	1	1	1	1	82/50	82/50	Nil	Nil

* Approximately Shs.6,500/- was paid out for the construction of produce stores, but no stores were built.

The items listed as "not in use" are those which are not in use at all. In a few cases this is because they are broken, but in the majority it is because the owners have elected not to use them. In addition to these items a number of othersare only used infrequently.

The failure to use the Bentall Seeders is important since the seeders, intended to facilitate row-planting, were considered crucial to the development of the use of oxen for weeding - a technique which can only be used with row-planted crops. The faults of the Bentall seeder have been referred to by both Okai and Foye.(1) The following quotation from Foye's report summarises six of them:

"(a) Seed distribution was not very even

(b) The seeder did not hold enough seed.

(c) Its small circumference made it difficult to keep the seeder rotating. It often stopped rotating and left fairly large gaps unless being used by a skilled operator.

(d) It would not work in wet conditions as the seed guides clogged up with mud.

(e) It did not have any bearings. This had two effects:

(i) the axle wore the sides of the seeder and eventually wore it sufficiently to allow wimbi seeds to fall out, thus scattering seed on either side of the rows.

(ii) It was rather difficult to keep rotating.

(f) The chain coverer fitted to the seeder did a poor job of covering. A lot of seed was left uncovered and it also had a tendency to drag some of the seeds along the row with it."

Those who bought seeders supported these criticisms. Of those who

(1) M. Okai, "The Adequacy of the Technical Base for the Agricultural Extension Service in Uganda: A Case Study in Lango District." R.D.R.6, Faculty of Agriculture, Makerere University College.
Foye, Unpublished report on "Ox-cultivation in Uganda", Serere Research Station, 1966.

were using the seeders at all, none used them to plant all their crops, nor even all their finger millet or cotton.

The Serere Frames were intended to facilitate hand-pushing of the seeders, and the failure to use them is linked to the faults of the latter. The following table demonstrates the immediate fall-off in purchases of Bentall Seeders and Serere Frames after 1963, and hence the lack of demonstration effect:

Table IV. 13

Item	1962/63	1963/64	1964/65	Total to Date
Bentall Seeders	-	63	6	69
Serere Frames	-	39	19	58

Source: 1965 Annual Report, Department of Agriculture, Lango District.

The provision in one year of 63 subsidies and loans for the purchase of seeders constitutes an example of the use of Government funds to encourage the purchase of inadequately tested equipment, on an unnecessarily large scale. Where subsidised equipment is sold which needs further testing on peasant farms, the number of buyers should be restricted.

In Lango (as in Masaka) there has been an unrealistic approach to the provision of credit for the construction of produce stores. Shs.6,921/30 was made available to five farmers for the construction of stores. A part of this sum may not have been released but no evidence was available to this effect. None of the stores were built, but three of the farmers had used the corrugated iron sheeting that was intended for the stores for roofing their houses. One, possibly two, of the farmers had spent the cash on building complete houses. To the writer, it seems over-optimistic to provide the owners of mud and wattle houses with corrugated iron sheeting and cement for the construction of large stores. Given the quantities of produce that these farmers were likely to want to store before sale, it would seem more realistic to encourage them to store it in a part of the house set aside for the purpose, or to build a small extension to the house, which at a maximum would cost Shs.400/-. If larger stores of a higher standard are to be built they might be constructed by primary cooperative societies. These societies already have stores, normally cement-plastered mud and wattle buildings with corrugated-iron roofs, but in many cases more storage capacity will be needed when the societies become further engaged in the storage and marketing of minor crops. Credit for the construction of stores of this nature might be provided to the societies rather than to individual farmers.

Of the four harrows that were bought, one had been used this year, on one plot of finger millet. The owner said he did not use it more because it prepared too fine a seed-bed, which encouraged weed-growth. A second farmer who had never used his said he couldn't do so because his land still had too many stumps. This was three years after he was granted the loan.

The third owner had never used the harrow nor any of the other ox-drawn equipment which he bought on credit because he did not own any oxen. This farmer had left Aler Farm School in 1962, and with four other leavers formed a farming group, opening up new land in the bush. The money which he borrowed for building a produce store, he not surprisingly spent on building a house. Each year the group pays for Tractor Hire Service while the ox-equipment remains unused. The chicken wire which was also bought was erected, but the run isneglected and unused. The farmer is enterprising and this year,[1] because the tractor for which his group paid did not come, [illegible] started growing vegetables as a cash-crop. The impression given was that he would have done better with more technically qualified advice. Since early 1963 he had received only one visit from an official of the level of Assistant Agricultural Officer, and none from a Field Assistant (Ox-cultivation).

Of the two owners of ground-nut lifters, one did not use his this year because it was broken, he is an any case unable to use it without help from the local Agricultural Assistant. The other does not use his because he no longer knows how to fit it.

The ridger is of little use in the present system of cultivation employed in Lango, since all crops apart from sweet potatoes are grown on the flat.

When the borrowers were first interviewed in March 1966, only one farmer had used his fencing materials. Two more, however, tentatively began to do so later in the year.

The equipment that was bought by borrowers and is most frequently used - ploughs, oxen and spray pumps - is the same as that which much larger numbers of farmers in Lango have bought without medium-term

(1) In 1966.

credit. The 1965 District Plough Census showed that there were (in November, 1965) 21,027 ploughs in the District of which 17,222 were in working order.(1) Of these eight were bought by six farmers under the Progressive Farmers' Loans Scheme. Unfortunately figures are not available for the total number of spray pumps in the District, but 17,606 tins of D.D.T. were sold in Lango for the 1965/66 cotton crop, which implies that several hundred farmers at least own pumps.

The Polyculteur:- The remaining item of ox-drawn equipment that was purchased was the polyculteur multipurpose unit. This comprises a basic tool-bar to which various implements can be fitted. These include seeders, a cultivator, harrow, ridger, groundnut lifter, and trailer.

In his report on ox-cultivation in Uganda, Foye describes the polyculteur as:

(1) Probably 75% of the 4,000 ploughs recorded as out of order had been bought in the 1930s, '40s and early '50s. Nonetheless there is a fairly substantial number of newer ploughs in the district that are also inoperative. This is normally because farmers have removed or broken parts which they have not replaced. In some cases this is due to mechanical ineptitude. In addition, farmers have recently experienced difficulty in obtaining spare parts for the ploughs which were previously imported from Rhodesia. One model, the V.S. 12, also proved unpopular with some farmers owing to its weight and less trouble had been taken to repair it when it was broken.

> "an excellent tool-bar (which) was sold at a price that was in reach of quite a number of farmers. It did have its limitations, however, as it could not be used for ploughing and it had a clearance of only 11 inches which is considered insufficient for the final weeding of cotton." (1)

It is important to note that ploughing and weeding are the two main operations for which ox-drawn dequipment is used in Lango.

Following two years of trials, the Polyculteur was imported into Uganda in late 1962 and put on the market with Government encouragement in the form of demonstrations, subsidies and loans. The full cost of the basic unit (chassis, wheels, tool-bar, trailer frame and cultivator) was Shs.2,208/75, of which the farmer was expected to pay Shs.1,108/-. The Uganda Government paid a subsidy of Shs.1,100/- per outfit.

Three of the five farmers owning polyculteurs are attempting to use them on their own farms. The first received a Shs.5,000/- loan in 1963 with which he stated that he bought the following:

1 Polyculteur basic unit	@	Shs. 1,108/-
6 Bentall Seeders	@	174/-
1 Serere Frame	@	37/50
1 Planet Junior cultivator	@	68/-
3 V.S. 8 ploughs	@	249/-
3 Oxen	@	809/- (2)
		Shs. 2,445/50

An unused balance of Shs.1,800/- was not paid out and the remainder was unaccounted for. The cost to the Government in subsidies was Shs.2,100/-

(1) Foye: Draft Report on Ox-cultivation in Uganda, 1960

(2) This is the price the farmer stated he paid; 270/- represents a reasonable average price per oxen.

including Shs.702/- for the Bentall Seeders (subsidy rate 80%).

So far, in relation to the amount spent by the borrower and Government combined the equipment has had very limited impact on his farming operations. Firstly, it should be pointed out that the farmer has been using oxen and ploughs since 1931. He now owns twelve trained oxen of which nine were taken from his own herd of seventy-two cattle. Two items in the loan therefore, did not introduce new techniques and could certainly have been obtained by the farmer without credit. Secondly, the Bentall Seeders have proved unsatisfactory. Thirdly, the cultivators were not used in 1966, partly because the farmer himself was in hospital for two months and no one else on the farm could operate them, but, more important, because since buying the cultivators this farmer has never broken with his previous dependance on hand-labour. The trailer is therefore the only implement for which the polyculteur tool-bar was used in this year; and for on-farm transport the trailer is frequently used without oxen. It appeared that the farmer was familiar with the techniques required to manage a seasonal labour force and found that use of unfamiliar equipment designed to be substituted for labour was time-consuming rather than the reverse. So far as the seeders were concerned, they were not only unfamiliar, but technically deficient; at least 66% of this farmer's crops had been hand-sown.

The other two farmers who were using their polyculteurs also obtained little use from them. In 1966, the first, owning three seeders, two cultivators, two harrows, a groundnut lifter and a trailer, had used the polyculteur to weed two $\frac{1}{2}$ - $\frac{3}{4}$ acre cotton plots twice, and to harrow one cotton plot once, plus a little transport work. At least 50% of his crops were hand-sown. The second farmer, owning two cultivators, a ridger, a groundnut lifter and a trailer, had in conjunction with four adult sons used the polyculteur for two weedings on nine acres of cotton. He had not used the groundnut lifter or the ridger.

The two remaining owners both operated their farms using a combination of Tractor Hire Service and hand-labour. The first bought a polyculteur and Bantall seeders with credit obtained in 1963. After trying unsuccessfully to use the seeders in wet soil he abandoned them. He stated that he did not use the polyculteur for weeding because he had no trained oxen, nor for groundnut lifting because when using the lifter he found it could not operate in stumpy soil. The second owner had become alienated from the agricultural extension service when on receipt of the polyculteur he found that the staff who brought it to the farm could not show him how to fit and operate it. He never attempted to use the tool-bar on his farm.

The recommended cotton planting period in Lango is late March to early May. The three farmers who were using their polyculteur units planted their 1966 cotton between May and August. The two using tractor hire service and hand-labour planted between May and July. There was no significant difference in the number of weedings performed or the quality of weeding observed.

Thus no polyculteur had made an obvious impact on the farming operations of the purchaser either through labour substitution and increased timeliness of operations, or through increased output resulting from the cultivation of additional acreages.(1)

(1) See page 268 below.

The 1965 Regional Annual Report for the Northern Region stated that there were 20 privately owned polyculteurs in the Region. Five of these were owned by farmers in Lango who had bought them in 1963 and 1964 with Government loans. No other farmer in the District owns a Polyculteur. The loans can therefore be said to have facilitated the purchase of equipment which was unfamiliar to farmers, the purchase of which the Government wished to encourage, and which apparently would not have been bought without the provision of credit. So far, other farmers have not been encouraged to buy similar equipment.

Note to Section 3.3.

While the polyculteur has proved uneconomic on the five farms concerned, it nonetheless appears that a similar tool-bar, the Tropiculteur which is somewhat better adapted to conditions in Uganda,[1] would prove profitable given efficient management. Costings obtained on Serere Research Station, Eastern Region, show that operations performed by oxen using the Tropiculteur are very much cheaper than the same operations performed by tractor.

The relevant costs are given in Table IV. 14 below. The ox-cultivation costings are given in greater detail in Appendix 2.

However, the tropiculteur is expensive (Shs.8.200/- with attachments), and it has so far been tested predominantly at Serere, rather than on peasant farms, and it is relatively complicated. It is still possible,

(1) See Foye "Draft Report on Ox-cultivation in Uganda", Serere Research Station 1966, pp. 21 - 23.

Table IV. 14

Comparative Costs of Certain Operations: Tractor Hire Service Charges Compared with the Actual Costs of Operations Performed by Oxen at Serere Research Station

Operation	Tractor Hire Service	Oxen
	Shs.	Shs.
Ploughing	45.00	13.14
Discing	25.00	4.38
Planting	15.00	5.68
Weeding	n.a.	4.52

assuming the tropiculteur proves mechanically suitable in peasant farm conditions, that the cost will be too high to justify its introduction on the majority of peasant farms. In addition there will, as with the polyculteur, be problems of technical efficiency on the part of the operators. This is in contrast to the Group Farms where maximum use can be obtained from the equipment under more experienced management.

3. 4 The provision of Credit for the Purchase of Tractors.

The tentative provision of credit for ox-drawn equipment was accompanied by the provision of seven loans for the purchase of tractors.

A total of Shs.128,000/- was lent to the seven farmers in 1963 and 1964 for periods of four and five years. The Government paid out in addition a Shs.4,000/- subsidy per tractor. The cost incurred by the

Government is assisting the purchase of the tractors will ultimately equal Shs.28,000/- plus any part of the loans that is not repaid, plus the opportunity cost of tying up Shs.128,000/- for a period of several years. (The latter could also be counted as an opportunity cost affecting other farmers in the District.)

At the time the first two loanswere paid out in 1963, there was one other privately owned tractor in the District in operating order (for which no detailed costings were available) and two out of order. In addition, there were two Tractor Hire Service stations, neither of which was covering its costs. The loans were therefore highly speculative in nature, the more so since it was Government policy that the tractors should be used by the owners as much for cultivating their own shambas as for providing a private tractor hire service. By 1965 the Governments policy in relation to the granting of subsidies for tractor purchase (by then no loans were available) was stated as follows:

(i) the applicant must be "a bona fide progressive farmer"

(ii) the tractor must be "primarily for the agronomic benefit of his own farm"

(iii) it must not be "his intention to set himself up in business as a Hire Service Contractor".[1]

Private tractor ownership in Lango District has developed as shown in Table IV. 15. Of the nine private tractor owners known to the District staff in 1964, eight had bought tractors with the aid of Government loans.

(1) Circular issued in May, 1965 by the Mechanical Cultivation Officer, Northern Region.

Table IV. 15

The Development of Private Tractor Ownership in Lango District.

Year	No. of Private Tractor Owners
1960	2
1961	3 (2 tractors out of order)
1962	3
1963	5
1964	9
1965	20
1966	28

Up to then it appears that only two, possibly three, farmers had bought tractors either with their own funds or on a hire purchase agreement with the supplying company.

3. 4. 1 Tractor costings available in Lango in 1964.

Only one detailed set of tractor costings were available in the District files. These were hypothetical costings compiled by the Agricultural Economist (Northern Region), M. Hall, in 1964. They were concerned primarily with the projected purchase of a tractor by a group of 100 farmers in Aboke Gombolola, but they are also relevant to the purchase of a tractor by a single owner and are quoted below at some length. The capital cost of the tractor (a Super Dexta) is taken to be Shs.17,200/- without a Government subsidy or Shs.13,200/- net of a Shs.4,000/- subsidy. The cost of a Massey Ferguson 765 Plough for which no subsidy was available is taken to be Shs.3,300/-. Hall then made the following calculations with regard to fixed and variable costs and probable revenue:

"1. Fixed Costs

	With Subsidy	Gross Price
	Shillings.	Shillings.
Tractor Depreciation per annum (over 5 years)	2,640. 00	3,440. 00
Depreciation on plough	672. 00	672. 00
Vehicle Tax and Insurance	150. 00	150. 00
Drivers wages (12 x Shs.200/-)	2,400. 00	2,400. 00
Total Fixed Costs:	5,862. 00	6,662. 00

"2. Variable Costs (Calculated on 1,000 hours running time per annum)

	Shillings
Repairs @ 3/- per hour	3,000. 00
Diesel Oil: 1,200 gallons @ Shs.4/50	5,400. 00
Oil: 30 gallons @ Shs.15/-	450. 00
Grease	90. 00
Total Variable Costs:	8,940. 00

Total Cost per annum, (fixed costs plus variable costs per 1,000 hours): Shs. 14,802. 00 or Shs. 15,602. 00

Total Cost per hour: Shs. 14/80 or Shs. 15/60

Variable Costs per hour: Shs. 8/94.

"3. Revenue for hiring out tractor:

Ploughing Charges:

(i)	1st Ploughing	Shs. 45/- per acre
(ii)	2nd Ploughing	Shs. 40/- per acre
(iii)	Discing	Shs. 25/- per acre.

Assume 10% of total running time is non-revenue earning; i.e. for every 1,000 hours of running time 900 hours are revenue earning.

Assume first ploughing takes two hours per acre @ Shs. 45/- per acre = Shs. 22/50 per hour.

For second ploughing and discing the charges are lower but a higher working speed will give a similar revenue per hour.

Therefore Total Revenue = Shs. 22/50 x 900

= Shs. 20,250/-

Therefore Net Profit on a subsidised tractor = Shs. 20,250/- - Shs. 14,802/-

= Shs. 5,448/-
(Shs.4,602/- on an unsubsidised tractor)

"4. The Break-even Point:

Given (i) Gross Revenue = Shs. 22/50 per hour

(ii) Running Costs = Shs. 8/94 plus 10% (non-revenue earning hours) per hour

= Shs. 9/80 per hour

Gross Revenue - Running costs = Shs. 12/70 per hour

(iii) Fixed Costs = Shs. 5,862/- per annum.
(on a subsidised tractor)

Therefore hours of hire work required to cover overheads:

$$= \frac{5862}{12.7} \text{ hours}$$

$$= 461 \text{ hours.}$$

This represents approximately 230 acres of first ploughing or the equivalent acreage of second ploughing and discing. If the tractor is not subsidised the fixed costs are Shs. 6,662/-. In this case 524.5 hours of hire running or 262 acres of first ploughing (or equivalent) are necessary to cover overheads. (Interest charges have been excluded from the calculation of both these break-even figures: their inclusion would raise the number of working hours required.)

"5. Assume revenue to be derived from cotton growing and not hire work:

If two ploughings and a discing are carried out on 100 acres, the following approximate costs are incurred:

		Shillings
(i)	Fixed Costs	6,662
	Depreciation on disc harrow	600
	Total	7,262
(ii)	Variable Costs (on 500 running hours)	
	Repairs	1,500
	Diesel oil	2,250
	Oil	75
	Grease	45
	Total	3,870

Total Costs (fixed and variable) = Shs. 11,100/-.

Total Revenue from 100 acres of cotton, yielding an average of 800 lbs. seed cotton per acre, sold @ -/50 per lb.:

= Shs. 40,000/-

∴ Gross Margin (not charging labour) = Shs. 28,900/-

"The cultivation costs for 100 acres of cotton work out at Shs. 111/- per acre. If a tractor were hired the cost would be Shs. 45/-, plus Shs.40/-, plus Shs.25/-, equals Shs. 110/- per acre.(1) Thus, for all the possible interest on capital foregone, the cultivation costs have not been lowered. While theoretically there is on the credit side the advantage of time loss, this may be offset by tractor breakdowns where an inexperienced group or individual owns the tractor. It should also be emphasised that the acreage of cotton should be in addition to that already grown or else the owner is simply buying more leisure at a very high price."

The report revealed the following additional information:

(i) Allowance must be made for the following cash requirements during the first season's operation:

	Shillings
Repairs	4,000
Fuel	3,000 (2)
Driver's Salary	2,400 (2)
Total	9,400

(1) Comparison with the cost of opening one acre with oxen or by hand is impossible due to lack of data.

(2) The combined figure for these two items was given as Shs.2,500/-; this has been amended since from an examination of the detailed costings given above it would appear that one item had been omitted.

These costings do not give an optimistic picture of the potential profitability of using a tractor for preparation of land for the cultivation of 100-150 acres of cotton on a single farm. Not only does the use of Tractor Hire Service appear slightly cheaper, but for a single owner the opening of cotton acreages on this scale would create unprecedented(1) labour problems for weeding, picking and sorting for which no short-run solution has been suggested. The tractors will only perform certain labour-saving and time-saving operations for the farmer. Most farmers own either a disc-plough alone or a disc-plough and a trailer. A few have harrows. None of them weed or harvest crops mechanically; it being technically impossible to use a tractor for harvesting given the unevenness of the cotton plots, and difficult to do so for cotton.(2) Both these operations, plus cotton-sorting, make heavy demands on labour. It is the labour requirements for these operations rather than for the opening of land which constitute the bottleneck that prevents an increase in cotton production. Substantially, these problems never arose because none of the seven farmers who received credit have attempted to open acreages of this size. The one farmer who opened 19 acres of cotton (in conjunction with his son) in 1965 was reported by the local Agricultural Assistant to have experienced

(1) On a private farm in Lango.

(2) It is possible to weed cotton mechanically. The main reason why private owners have not purchased weeders would appear to be that there is no precedent for their use. This service is not provided by the Government Tractor Hire Service.

considerable difficulty with both weeding and picking. Perhaps a more energetic man might overcome this difficulty and gradually expand his farm. The only one of the seven who planned to do so this year was prevented by a combination of mechnical breakdowns and his decision to give priority to hire-work.(1) Two farmers said they were prevented from opening more land, one by a land dispute, the other by an excessive number of stumps.

In addition to the conclusionsreached by Hall, costings were also available for the operation of the Government Tractor Hire Service stations in Lango District. These stations have never operated at a profit.(2) In this they did not differ from other Tractor Hire Service stations in Uganda. The World Bank estimates that in 1964 the revenues accruing to Tractor Hire Service covered approximately 40% of the cost of the service excluding the cost of running the headquarters near Kampala.(3) Various explanations of the high costs incurred by the Uganda Government Tractor Hire Service have been put forward: in particular, the high cost of overheads and the time spent in non-revenue earning travelling to find work have been referred to. However, even if the costs of the Government service are not directly comparable to those incurred by private farmers, the degree of loss was sufficiently marked to indicate that it would probably be difficult for inexperienced private operators to recover their full costs.

(1) All the 28 private tractor owners in Lango are concentrating on hire-work.

(2) See Annual Reports for Lango Special Development Section, 1965 and previous years.

(3) International Bank for Reconstruction and Development, "Agricultural

3. 4. 2 The Demonstration Effect of Tractor Purchase.

Concentrating on hire work, the owners experienced a substantial increase in current income during the first two years of operating the tractors. This had an important demonstration effect; by mid-1966 there were twenty-eight privately owned tractors in the District, although the Uganda Government provided no loans or subsidies for their purchase after 1964. Fifteen owners (of whom seven received loans) were asked why they had bought tractors. They gave two reasons: (i) that they wanted, and had been told by the Agricultural Department that they should use a quicker method of cultivation. This is of little meaning given the fact that a) all the owners were concentrating on providing tractor hire service; b) those owners who planted cotton did so mainly in June and July in 1966 and planted no earlier than the average planting dates achieved by all farmers in Lango District: this is not surprising since in February, March, April and May their tractors were all engaged on hire-work; c) some didn't farm their own land at all.

(ii) the second reason given, that the owners expected to achieve an increase in income through providing tractor hire service is obviously correct. Four of the sixteen owners interviewed had urban employment: three lived continuously away from their farms and a fourth normally did so. They and the owners who lived on their farms regarded the tractors as an investment from which they expected to derive a relatively high annual cash income. It might be argued that the popularity of Government Tractor Hire Service in Western and Central Lango, which is where all the private tractor owners operate, has encouraged the latter to buy tractors, but the Government Hire Service began operating in Lango over ten years ago. It is notable that the sudden increase in private ownership immediately followed the two years (1963 and 1964) in which the Government actively encouraged the development of private ownership with the aid of loans and subsidies.

However, from the costings provided it appears that there was a rapid rise in the repair bills on most tractors with a related reduction in income as the tractors in the second, third, and fourth years of operation were more frequently out of operating order. Farmers who bought tractors were apparently misled by the level of profits that could be earned in the first two years.

3. 4. 3 Tractor Costings.

None of the farmers were keeping complete accounts. In order to obtain some idea of the type of costs actually being incurred the seven owners who purchased their tractors under the Progressive Farmers' Loans Scheme were asked in February 1966 to give what details they could of costs incurred in 1965 and of revenue earned from hire work. In the latter half of September 1966 they were asked to give the same figures for the first 8½ months of this year. (This period contains the main revenue earning months - February to July - and little income, if any, would be earned - from small amounts of transport work - during the rest of the year.) A further nine tractor owners were also interviewed and asked to detail their costs and revenue for the same period.(1) The

(1) i.e. January - mid-September, 1966.

lack of well-maintained accounts meant that considerable time was spent going through files of bills and receipts. Approximate figures were obtained in 19 cases out of a possible 23 for the cost of spares and repairs, in 16 cases for the cost of fuel (mainly obtained from farmers buying in bulk, the figures still had to be adjusted in most cases to bear a more accurate relationship to the amount of work done), and in 16 cases for the driver's salary.

In the costings given below in Table IV. 16 the figures quoted for the first three items are the means of all costs quoted for each item. The range of costs quoted was as follows:

Table IV. 16

Range of Recurrent Costs Incurred in Tractor Operation.

Item	Minimum Cost	Acreage Ploughed	Cost per Acre	Maximum Cost	Acreage Ploughed	Cost per Acre
	(Shillings)		(Shs.)	(Shillings)		(Shs.)
Spares and Repairs	400(1)	286	1.70	10,016(2)	97	103.25
Fuel	451	53.5	8.33	3,734	400	9.33
Driver	150(3)	-	-	300	-	-

Notes: (1) Tractor in first year of operation

(2) Tractor in third year of operation

(3) The driver's salary bears no relation to the acreage ploughed

(A table of the costs incurred by each owner is given in Appendix 3 to this Chapter.)

Depreciation has been computed over four years at a constant rate of 25% per annum for the following items:

		Cost (Shillings)
(i)	1 Diesel-powered tractor	17,980
(ii)	1 Three-furrow Disc Plough	3,800
(iii)	1 Trailer (1)	6,300

The tractor is assumed to have received a Shs.4,000/- Government subsidy, and to have cost the owner Shs.13,980/- net. These prices are slightly higher than those used by Hall, but they are the prices which the District Agricultural Officer recorded as available to farmers in 1964.(2) The tractor and implements have been depreciated over four years instead of five (the figure used by Hall) since on the basis of the information provided it appears that few of these tractors are likely to do more than cover their running costs even in the fourth year of operation, owing to the increasingly high frequency of breakdowns.

The resulting average costingsare given in Table IV. 17.

From the figures for annual revenue listed in Appendix IV. 3, it was calculated that in 1965 and 1966 combined, the average revenue earned by the fifteen owners interviewed (who, with one exception, were operating tractors in their first to third year of operation) was Shs.11,151/-. This gives a net loss of Shs. 1,849/-.

The loss referred to in the preceding paragraph, derived from Table IV. 17 is a book-keeping loss. Tractor owners will not experience an actual loss until two or three years after purchase when the cost of repairs will rise

(2) Source: Lango District Agricultural Office files.

(1) Eight of the fifteen tractor owners owned trailers, while only three owned disc-harrows, hence the inclusion of the trailer and the omission of the disc-harrow from the costings.(c.f. Hall)

Table IV. 17

Annual Costs of Operating One Tractor in Private Ownership.

Item	Cost (Shillings)	Cf. Cost assumed by Hall (Shillings)
1. Fixed Costs:		
Tractor depreciation (with subsidy)	3,495	2,640
Depreciation on Plougn	950	672
Depreciation on Trailer	1,575	-
Driver's wages	1,516 (1)	2,400
Insurance	240	150
Total:	7,776	5,862
Item	Cost (2) (Shillings)	Cf. Cost Assumed by Hall on 1000 working hours (Shillings)
2. Variable Costs:		
Spare parts and Repairs	2,867 (3)	3,000 (3)
Fuel and Grease	2,357	5,940
Total:	5,224	8,940
Total Costs: (fixed plus variable)	13,000	14,802

Notes: (1) It was found that while salaries ranged from Shs. 150/- to 300/- per month during the operating season, most drivers either received a reduced salary or were not paid at all while the tractor was idle.

(2) The exact number of working hours to which these costings apply is not available, but on average they were substantially below the level assumed by Hall.

(3) Discrepancy due partly to high average number of working hours assumed by Hall; in addition the owners interviewed may have underestimated their expenditure on fuel. A number did not buy in bulk and did not have a complete collection of receipts.

and revenue fall because the tractors are non-operational at increasing frequencies.

The following Table gives average cash flows derived from the costings obtained from the 16 farmers interviewed for 1965 and 1966 in seven instances and for 1966 only in nine instances.

Table IV. 18

Average Cash Flows of 16 Lango Tractor Owners.

Year 1.	Expenditure Item	Shs.	Revenue Shs.	Average Acreage Ploughed
	Fuel and Grease	3,139		
	Spares and Repairs	1,239		
	Driver	1,516		
	Insurance	240		
	Total	6,134	15,364	349
	Loan Instalment(1)	3,600		
	Interest	1,260		
	Grand Total	10,994	15,364	349
	Net Profit Before Loan Repayment	= Shs. 9,230/-		
	Net Profit After Loan Repayment	= Shs. 4,370/-		

(1) Loan: Shs.18,000/- for 5 years @ 7½% per annum interest.

Table IV. 18 (Cont'd.)

Year 2. Expenditure Item	Shs.	Revenue Shs.	Average Acreage Ploughed
Fuel and Grease	2,589		
Spares and Repairs	1,847		
Driver	1,516		
Insurance	240		
	6,192	13,257	292
Loan Instalment	3,600		
Interest	1,008		
Grand Total	10,800	13,257	292
Net Profit: Before Loan Repayment = Shs. 7,064/-			
Net Profit: After Loan Repayment = Shs. 2,457/-			
Year 3.			
Fuel and Grease	1,600		
Spares and Repairs	4,582		
Driver	1,516		
Insurance	240		
	7,938	8,340	176
Loan Instalment	3,600		
Interest	756		
Grand Total	12,284	8,340	176
Net Profit: Before Loan Repayment = Shs. 402/-			
Net Loss: After Loan Repayment = Shs. 3,994/-			

3. 4. 4 Conclusions.

Only one of the seven borrowing farmers had made an accounting profit (Shs.434/-) in 1966. The main reasons for this appear to be:

(i) Inexperience of drivers;

(ii) Poor standards of supervision by the owners.

(iii) Poor planning of work and wastage of revenue earning time in driving up to 25 miles to work.

(iv) Frequency and cost of repairs.

Only three of the sixteen tractor drivers had any previous experience. Most of them came straight to the job from a three-month Government training course, and then worked for owners who themselves had no mechanical experience, and who in four cases were absentee-owners. (Six of the drivers were relatives of the owners.) There is no doubt that the cost of repairs rose rapidly largely as a result of inexperienced management.(1) In addition some owners took their tractors to local mechanics for repairs. These tended to charge high prices for what must have been poor quality work.

In conclusion, (i) the loans provided for the purchase of tractors failed in five out of seven cases to encourage the purchasers to increase their cash crop acreages. Government policy with regard to private

(1) Cf. the mechanical inexperience of Landmaster owners in Masaka and of some of the owners of ox-drawn equipment in Lango.

tractors as outlined at the beginning of this section has therefore failed. The two farmers who did expand their acreages are still dependant on hire-work for the greater part of the revenue earned by their tractors; (ii) in so far as the loans have had any demonstration effect this appears to have been based on the misconception of the rate of profit obtainable from hire service given the frequency of breakdowns and cost of repairs; (iii) it is unlikely that the majority of the fifteen owners interviewed will earn sufficient revenue to recover the value of their initial investment plus annual running costs.

3. 5 The Impact of Credit on Acreages Cultivated and Marketing.

When the introduction of new techniques is intended not only to save labour but to expand the output of cash-crops, adequate knowledge of possible markets for these crops is normally necessary. In Masaka, the main emphasis was on increasing the output of coffee, for which there is a guaranteed market, and matoke, for which there is relatively elastic demand, but which is used predominantly for home consumption and the payment of labourers in kind. The extent to which the output of each was actually increased is questionable. For milk, a new, guaranteed market was created.

In Lango, only one of the nineteen farmers who received loans complained about lack of markets for his crops, but only two had noticeably (by seven - fourteen acres) increased their cash-crop acreage as a result of receiving credit. (Both were tractor owners). The second farmer had not met with marketing difficulties because his other cash-crops are maize, which he processes in his own mill, and cassava which he hopes to sell to the Cassava Factory. In addition to these two farmers one of the five farmers who purchased a polyculteur unit may have expanded his cash-crop acreage since receiving a loan. The expansion of his farm, however, appears to have been predominantly due to the receipt of a farm plan, followed by sustained extension advice, rather than the use of new equipment.(1) Three other farmers claimed to have extended their crop acreage; in one case the claim wasnot credible. The second farmer, the owner of a polyculteur unit, probably had increased his acreage but because he is an ex-teacher and ex-chairman of the Land Board still fulfilling various public functions and often absent from his farm, his standard of farming is not high, and his total yields probably have not risen. His only important cash-crop is cotton. The third farmer may have increased his acreages slightly, but he has four adult sons working with him on the farm; their cash-crop acreage per adult male is only slightly over two acres,(2) and their only important cash-crop is cotton.

Thus virtually no marketing problem has arisen because few loans were made, and because they have not resulted in substantial increases in output or diversification of cash-crops.

(1) This loan is examined in detail on page 247.

(2) This is actually below the District average.

4. General Conclusions.

The operation of the Progressive Farmers' Loans Scheme in Masaka and Lango was unsuccessful in many respects.

(i) In Masaka the speed of granting loans prevented careful planning by staff of the appropriate calibre.

(ii) In both districts, a number of farmers were encouraged to buy unsuitable equipment.

(iii) In both areas also the mechanical inexperience of the farmers contributed to the misuse of and failure to use new equipment.

(iv) In both districts follow-up supervision was of low quality and generally infrequent. Where newly introduced equipment was purchased the Agricultural Assistants frequently did not know how to operate it. (This applies to tractors, hand-tractors and polyculteur outfits.)

(v) In Masaka, among the farmers interviewed a substantial proportion of credit provided for general farm improvement was not used for this purpose.

(vi) An excessive number of farmers were encouraged to take the risk of purchasing equipment for which costings obtained on peasant farms were not available.

(vii) In the case of the Landmasters, the available costings were ignored.

(viii) Borrowing farmers who used credit to adopt new enterprises or techniques probably accepted a greater degree of risk than they appreciated, due to the lack of data on the profitability of the operation of these enterprises and techniques in the context of peasant farming. Apart from the provision of subsidies on certain items of equipment the Government did not carry any part of the risk.

(ix) Repayment provisions were not geared to the kind of loan provided. For example, a farmer borrowing to build a produce store is engaging in long-term investment.

(x) The seasonal concentration of farm revenue was ignored when planning repayments in Lango.

(xi) Repayments have generally not been met from revenue accruing from the expenditure of the loan.

(xii) Credit that was diverted to consumption and resulted in the subsequent expenditure on farming, even if punctually repaid did not achieve the objective of the Scheme.

(xiii) Much of the credit that was needed for farming was used for uneconomic purposes e.g. mulching unpruned coffee, purchase of unsuitable machinery.

(xiv) There is no evidence that the provision of credit resulted in a substantial increase in production.

(xv) In Lango the provision of credit for the purchase of tractors had an important demonstration effect. On the other hand this did not occur with polyculteur outfits nor apparently with Landmasters. The fact that a demonstration effect can occur where conspicuous cash profits are earned means that it is important to ensure that these profits are sufficient to recover the cost of the investment.

Appendix IV. 1

Given below are the costings that were available at Masaka Divisional Agricultural Office on the use of a privately owned Landmaster in the Division:

Farmer reported to own 49 acres of mature coffee. Landmaster bought 11.10.61. Progress reviewed 8.6.62., i.e. after eight months. The machine had been used for 3½ months, during the rest of the period it was out of action, chiefly owing to the very wet weather, but also because in mid-May it had broken down and had not been repaired.

<u>Rough Costings:</u> Landmaster -

		Shs.
1.	Driver, working a 7 hour day @ 4/- per day over 3½ months	420/-
2.	Petrol: 1½ drums = 66 gallons @ 4/- per gallon	270/60
3.	Wear expense @ 5/- per day over 3½ months	525/-
		1,215/60

<u>cf. Hoe Labour</u> -

Owner stated the alternative in hand-labour = 18 porters per month @ 30/- each over 5 months	2,700/-
Difference	1,484/60

The conclusion that the Landmaster had resulted in a saving of Shs.1,484/- is suspect because

(i) the driver would have been retained when the machine was not operating

(ii) no allowance was made for depreciation when the machine was not operating

(iii) the fuel costs are peculiarly low. (In the 1961 survey it was found that the Landmaster took slightly over 2 gallons of fuel per acre. With the figures given this would not have permitted the owner to cultivate the whole shamba once.)

Appendix IV. 2

Extract from Foye "Draft Report on Ox-Cultivation in Uganda", Serere Research Station, 1966:

COSTS OF OX-CULTIVATION.

A. Oxen

One would normally not expect working oxen to 'depreciate' as the purchase price in most cases would be the same as the selling price. The cost, therefore, of working oxen is the cost of management and this cost is very variable depending upon the type of management.

Throughout most of Uganda, the management is extremely simple. A herdsman looks after the oxen during the day and they are put in a krall at night. The grazing is communal and therefore free. One herdsman is capable of herding up to 50 oxen and in most ox-units (on Group Farms, hire services, etc.) one herdsman would be sufficient as an ox-porter could do the herding in the eventof the herdsman being ill or having a day off, etc.

The cost of working oxen on this system is, therefore, negligible, but night kralling is not very satisfactory. Night paddocks are much better as these allow the oxen to continue grazing at night. The cost of night paddocking, however, could be almost as expensive in fencing, etc. as providing sufficient paddocks for grazing. For costing purposes, therefore, we will consider providing proper grazing and paddocking for the working oxen. The cost of this for 30 oxen could be as follows:

1. Pasture Establishment

Forty acres will be required for 30 oxen. This will cost (for cultivations, seeds, mixtures and topping on establishment Shs.3,200/-). This figure, however, will vary according to the number of operations necessary to prepare a seedbed. The figure given is for land that has already been cultivated and would only require discing. If first and second ploughing was required at 45 and 40 shillings per acre respectively, the cost could increase by Shs.3,400/- giving a total cost of Shs.6,600/-. This could be written off over three years.

Cost per year .. .. Shs. 2,200/-

2. Fencing

Four ten-acre paddocks would be required, giving 1.5 miles of fencing as a minimum. Fencing costs Shs. 2,400/- per mile.

Cost .. .. Shs. 3,600/-

This is costing the labour fairly high. In practice, cheaper labour could probably be used and this would balance out the cost of extra fencing if it was required. This cost would be written off over six years.

Cost per year .. .. Shs. 600/-

3. Miscellaneous equipment

Such as Cooper's Bucket Pump, water troughs, crush material, etc. would cost Shs. 860/-. This again could be written off over six years.

Cost per year .. .. Shs. 143/-

4. Drugs

Cost per year .. .. Shs. 183/50

<u>Total Cost</u> per year for 30 oxen .. .. Shs. 3,126/-

∴ Cost per ox per year .. .. Shs. 104/15

(Oxen will work 4 hours/day for 5 days/week for 40 weeks, say)

Total ox-hours per year per ox .. .. 200 hours

Cost per ox-hour .. .. Shs. 0.13

<u>Ox-Costs per acre for various operations</u>

Ploughing .. .. 12 ox-hours per acre

Cost .. .. 1.56 shillings/acre

<u>Discing and Planting</u>

4 Ox-hours/acre: Cost .. .. 0.52 shillings/acre

<u>Weeding</u>

3 Ox-hours/acre: Cost .. .. 0.39 shillings/acre

B. <u>Tropiculteur Costs</u>

Cost of Tropiculteur complete .. .. Shs. 8,200/-
Depreciate over four years.

Cost per year .. .. 2,050 shilling/year

Tropiculteur will work 1600 hours per year.

Cost per hour .. .. 1.28 shillings/year

C. <u>Labour Costs</u>

1 ox-porter costs Shs. 5/20 per day.

Cost per man/hour .. .. 0.65 shillings

D. <u>Operational Costs - Total</u>

Ploughing cost/acre.

Oxen .. .. 1.56 shillings

Tropiculteur	.. ..	7.68 shillings
(6 hours @ 1.20 shillings/hour)		
1 Porter	.. ..	3.90 shillings
(6 hours @ 0.65 per hour)		
Total cost per acre	.. ..	13.14 shillings

<u>Discing and Planting</u>

Oxen	.. ..	0.52 shillings/acre
Tropiculteur	.. ..	2.56 shillings
(2 hours @ 1.28 shillings/hour)		
Planting requires 2 porters	.. ..	2.60 shillings
(4 man/hours @ 0.65 shillings/hour)		
Total cost of planting/acre	.. ..	5.68 shillings
Discing requires only 1 porter	.. .. ..	1.3 shillings
(2 man/hours @ 0.65 shillings/hour)		
Total cost of discing	.. ..	4.38 shillings

<u>Weeding</u>

Oxen	.. ..	0.39 shillings/acre
Tropiculteur	.. ..	2.05 shillings
(1.6 hours @ 1.4 shillings/hour)		
Porters	.. ..	2.08 shillings
(3.2 man/hours @ 0.65 shillings/hour)		
Total cost	.. ..	4.52 shillings.

Appendix IV. 3

Expenditure on Spares, Repairs and Fuel and Total Revenue Earned: 16 Tractor Owners, Lango District.

Owner and Year	Year in which Tractor Purchased	Spares/ Repairs (1) Shs.	Fuel and Grease (1) Shs.	Gross Revenue Shs.	Total Acreage Ploughed
A. 1965	1963	2,141	2,880	14,950	340
A. 1966	1963	1,385	2,500	11,622	250
B. 1966	1966	2,000	3,500	15,000	350
C. 1965	1963	3,557	2,544	n.a.	n.a.
C. 1966		n.a.	450	2,145	45
D. 1966	1965	400	3,100	13,157	286
E. 1965	1964	1,188	2,000	9,365	218
E. 1966		4,468	2,211	13,950	300
F. 1966	1966	1,339	3,600	16,050	360
G. 1965	1964	1,565	2,700	13,785	323
G. 1966		2,700	2,225	13,135	273
H. 1966	1961	n.a.	1,200	4,140 (2)	96 (2)
I. 1965	1963	2,046	4,000	20,140	424
I. 1966		9,211	1,590	7,735	159
J. 1966	1966	n.a.	n.a.	n.a.	n.a.
K. 1965	1963	970	2,500	8,950	187
K. 1966		2,500	2,250	10,134	225
L. 1966	1966	n.a.	n.a.	n.a.	n.a.
M. 1965	1963	1,462	2,500	12,350	260
M. 1966		1,512	451	2,407	53.5
N. 1966	1965	1,238	1,761	n.a.	n.a.
O. 1966	1965	1,220	3,734	17,250	400
P. 1966	1964	10,016	1,095	5,603	97

(1) These costs are more likely to be underestimated than overestimated: they are based onfiles of receipts which were sometimes incomplete.

(2) Almost certainly an overestimate.

Chapter V

The Cooperative Credit Scheme

1. Introduction

1.1 General Background.

The organised provision of production credit is based on the assumption that most farmers could increase their output, either by opening more land, or through the use of additional inputs, if more cash were made available to them at the beginning of each crop season. This depends on the additional assumptions (i) that farmers have no further cash or labour resources that they are willing to employ for farming, (ii) that any additional production capital made available in the form of credit would be used for farming.

Before the Cooperative Credit Scheme was introduced in 1961/62 the only possible method of obtaining an institutional loan to meet current production costs was through the African Loans Fund or the I.C.A. Funds. However, these loans were few in number, were basically medium-term general "farm improvement" loans, and were not provided on a recurrent basis. It is therefore arguable that the Cooperative Credit Scheme through providing short-term credit annually is filling an important gap in the credit structure. The loans are almost entirely of the 'seedtime-to-harvest' variety, intended to be outstanding for 8-10 months; a few two-year loans for mulching coffee were granted in 1965/66 and 1966/67. It will be argued in this Chapter that the use of primary cooperative societies to provide large numbers of small short-term loans has filled an institutional gap in the credit structure. However, it will also be argued that until alternative uses for short-term credit other than the purchase of inputs for cotton and robusta coffee can be found, the value of expanding the provision of short-term credit through the cooperatives is highly questionable.

As with the study of the Progressive Farmers' Loans Scheme in the preceding chapter, this report of the operation of the Scheme is limited predominantly to two districts. Within the districts, the operations of only four cooperative societies were examined in detail, although this information was supplemented by data obtained from district records. Reference is also made to data obtained on the preliminary survey of 44 Credit Scheme societies in 1965.(1)

1.2. Expansion of the Scheme.

The national rate of expansion of the Cooperative Credit Scheme has been outlined in Chapter II.(2) The coverage of the Scheme in Masaka and Lango Districts has expanded from 6 and 8 societies respectively in 1962/63 to 45 and 39 societies in 1966/67, of which 25 societies in Masaka and 86 in Lango were authorised to make loans to members during 1966/67. The number of societies actually operating the Scheme in the two districts each year has been as shown in Table V. 1. This coincides with a 16.5% reduction in the total number of societies operating the Scheme in Uganda, due to the rise in default rates (see Table V. 16). The majority of societies excluding the Group

(1) See Chapter III, p. 145.

(2) See Chapter II. p. 118, Table II. 25.

Table V. 1

Expansion of the Cooperative Credit Scheme by number of Societies, Masaka and Lango Districts.

	Total Intake to Date		No. of Societies Authorised to make loans	
	Masaka	Lango	Masaka	Lango
1962/63	6	8	6	8
1963/64	20	18	20	16
1964/65	35	26	29	24
1965/66	43	37	26	34
1966/67	45	39	25	36

Note: Three societies have been expelled from the Scheme in Masaka, and two in Lango.

Farming societies, make loans of a total value of Shs. 15,000/- to Shs. 25,000/- per season. In the Northern and Eastern Regions the cotton marketing societies generally have a larger membership than in Buganda, and consequently one might expect them to make larger total loans to members.(1) However, in Lango in 1965/66 only seven societies out of thirty-one were given approval to make loans of Shs. 30,000/- or more and the average value was Shs. 21,000/-. In Masaka, the average value of loans made by an individual society in 1964/65 - the year in which the largest total amount was paid out - was Shs. 24,250/-. In 1966/67 the average value of loans made per society fell to Shs. 14,800/-, following

(1) In Lango the average recorded membership in 1964 was 340 per primary society as compared with 114 in Masaka.

an increase in default which was caused by an incidence of drought in two consecutive seasons and political disturbances in 1966.

Since credit on the Group Farms is required to pay for a series of mechanical operations for cotton and food crops (ploughing, discing, planting and spraying) performed on two or more acres per individual the total credit required is much higher and individual loans are more than twice the average in cotton growing areas. Group Farming societies have been authorised to borrow up to Shs. 132,000/- for a season. Most of the funds for these short-term loans have been obtained from the Uganda Commercial Bank, or its predecessor the Uganda Credit and Savings Bank, both acting as the agent for five Government funds.(1) The total amount paid out by the Bank has risen from Shs.0.7 million in 1962/63 to Shs. 5.6 million in 1966/67. Apart from the arabica coffee marketing societies in Bugisu District, and some societies in Ankole District and Masaka Division of Buganda, almost every society operating the scheme does so mainly with the aid of a loan from the Uganda Commercial Bank. In Masaka in 1966/67 31% of the total amount borrowed by farmers came from the primary societies' own funds; in Ankole, the proportion was approximately 50%.

While there has been some increase in both Districts in the value of individual loans, the main result of the expansion of the Scheme has been an increase in the number of borrowers, which has risen from 214 and 519 in 1962/63 to 1163 and 4490 in 1966/67, in Masaka and Lango respectively.

(1) See Chapter II.

The average value of individual loans has risen from Shs. 190/- to Shs. 320/- in Masaka, and from Shs. 125/- to Shs. 160/- in Lango. Loans granted in the cottongrowing areas where society membership is larger and there are more loan applicants, are smaller than in the coffee producing areas. In both areas these loans are very much smaller than the mimimum loan (Shs. 2,000/-) that would interest a commercial bank. They are also smaller than the minimum loan (Shs.500/-) that the Uganda Credit and Savings Bank agreed to administer to farmers obtaining credit under the Progressive Farmers' Loans Scheme.

1.3. Organisation and Administration.

The procedure for obtaining loans is as follows: assuming a society decides to borrow from the Uganda Commercial Bank to obtain funds for relending to members, it may submit an application for a new loan as soon as 75% of the previous season's bank loan has been repaid, whether from funds repaid by members to the society, or other sources.(1) The maximum value of the new loan for which the society may apply must be approved at a special general meeting of the society, and is then subject to the approval of the Commissioner for Cooperative Development, who may seek advice in this respect from the local District Cooperative Officer. A new loan may not be granted until the society has repaid the bank loan in full and the members have repaid to the society 75% of the total value of their individual loans. The first two of these

(1) New societies are admitted on the approval of the District Cooperative Officer and the Commissioner for Cooperative Development.

regulations, however, are not always rigidly applied. The application form which a society is required to complete and submit to the Uganda Commercial Bank is reproduced in Appendix 1 to this Chapter.

The loan is secured by (i) a letter authorising the Bank to debit any savings bank account in the name of the society with any sums of principal and/or interest due on the loan; (ii) a letter authorising the society's union to pay all amounts due to the society into the society's savings account, and (iii) the society's shares and deposits in its union.(1)

When the bank loan has been granted, members submit applications for individual loans. In completing an application form (cost Sh.1/-), an applicant must state his name and address, the amount required and the purposes for which it is requested. In addition he must state the value of his produce sold through the society in each of the three preceding years, and the value of the shares which he holds in the society. This information is required because a borrower may not legally receive a loan which exceeds either two-thirds the average value of his marketings over the preceding three years, or ten times the value of his share-holding, whichever is the less. It is the responsibility of the society manager to see that these items are completed accurately. The society committee should then meet to consider and approve, reduce or reject individual applications, on the basis of such criteria as general character, previous borrowing record, standard of farming, and the loyalty to the society. At this meeting the manager's position is an advisory one; he cannot

(1) See Appendix 2 to this Chapter.

overrule the committee.

Members whose applications are approved must complete a bond form which must also be signed by two sureties. They are then eligible to withdraw their loans.

The payment and repayment dates for loans made under the Cooperative Credit Scheme are intended to coincide with the beginning and end of the two main cash-crop seasons (for cotton and coffee).

Payment of the loans normally takes place on one, two or three specified dates. In cotton growing areas where loans may be intended partly for opening land and partly for weeding, payments are sometimes spaced at monthly intervals. In both districts loans are paid out predominantly in cash. This is also the case in Busoga, Bugisu, Bunyoro, W. Acholi and Teso Districts, and is reported to be the case throughout the rest of Uganda. In Masaka and Lango the only important exceptions to date are the provision of D.D.T. and spray pumps to borrowers in Lango. In Masaka two inputs sometimes provided in kind are coffee husks and artificial fertilisers.

Within the Department of Cooperative Development the hierarchical structure controlling the operation of the Cooperative Credit Scheme is as follows:

Commissioner for Cooperative Development (Kampala)

Principal Cooperative Officer, Credit (Kampala)

16 District Cooperative Officers (District Centres)

16 Cooperative Credit Scheme Specialists (District Centres)

Cooperative Assistants and Supervisors

Individual primary Cooperative Societies.

The establishment of approximately forty Credit Scheme societies in Masaka and Lango had not led to any significant increase in staff in Masaka. However, there had been an increase in junior staff in Lango. Each district has acquired one Cooperative Credit Scheme Specialist. With regard to Cooperative Assistants and Supervisors the actual establishment in 1961/62 and 1966/67 was as follows:

Table V. 2.
Cooperative Department Junior Staff Ratios in Masaka and Lango Districts.

		1961/62	1966/67
Masaka:	Cooperative Assistants	14	12
	" Supervisors	2	7
	Total No. of primary societies	173	209
	Ratio of junior field staff to primary societies	1:11	1:11
Lango:	Cooperative Assistants	7	8
	" Supervisors	3	12
	Total No. of primary societies	119	145
	Ratio of junior field staff to primary societies	1:12	1:7

The Cooperative Assistant in charge of an individual Credit Scheme society is expected to visit that society once a month. Although Assistants do not necessarily visit their societies thisoften, their potential influence is considerable (i) at society meetings at which the maximum liability for the society and for individual borrowers is decided and the society's accounts discussed and, (ii) at the period when application forms and other loan documents are being completed and the loans approved and paid out. The Assistant is required to check and initial all loan applications beofore loans are paid out.

At three of the societies visited, the Cooperative Assistantshad carried out their duties responsibly. The fourth society provided several examples of the way an irresponsible Assistant can adversely influence the conduct of a society's affairs. Firstly, at a Special General Meeting summoned in 1966 to consider the accounts of the society and to vote on the maximum liability for the coming year,(1) the Cooperative Assistant

(i) encouraged members to vote for a highly unrealistic level of maximum liability

(ii) recorded grossly inaccurate voting returns

(iii) encouraged the Manager, Chairman and Secretary to sign blank or partially blank new loan application forms without entering the figures for amounts repaid to the society and to the Bank as required. These figures were not available.

Secondly, although the Committee suspected that the society manager had misappropriated funds and were strongly urged to dismiss him by the Cooperative Assistant, their dislike and mistrust of the latter were such that they persistently refused to accept his advice.

The loans are for the most part unsupervised. With a range of approximately 30 to 250 loans being made per society neither the Department of Agriculture nor the Cooperative Department at present has adequate staff to supervise the use of individual loans.

(1) This meeting was attended by the writer.

No reform of this situation is possible except on the lines of the supervised short-term credit scheme outlined in Chapter VIII. Provision of intensive (and hence costly) supervision is only justified where credit is provided for the finance of undoubtedly profitable inputs or techniques. As will be shown later in the Chapter this is not at present the case.

The emphasis of the Scheme has, however, been on the provision of credit to increase the productivity of individual farms through financing the use of recommended inputs or techniques (e.g. mulching, the timely planting of cotton, the use of cotton spray) which are thought, but not proven, to be profitable. None the less the Department of Agriculture which, until 1965, was preoccupied with the Progressive Farmers' Loans Scheme has played no part in the operation of the Scheme. The Departments' field staff have made no attempt to use those societies which are operating the Credit Scheme as a medium for group extension work. In some societies this would be worthless, but in others, including two of the societies studied, the managers and committees are already attempting to exercise influence over the use of loans by giving simple technical advice. Here a potentially influential body of people who can give elementary but essential advice to farmers in their home areas are unsupported. Without devoting an excessive amount of time to these societies, Assistant Agricultural Officers and Agricultural Assistants might carry out group extension work by addressing society meetings, and might also concentrate individual extension visits on the society managers and committees and a few "progressive" borrowers. The managers and committees would thus be given official backing and a means would be instituted of encouraging them to both use and advocate correct techniques. The manager and Committee together have the opportunity to influence the actual use of loans by (i) endeavouring to ensure that loans are paid out at the technically optimum period and that inputs provided in kind are available at the society store; (ii) refusing new loans to any borrower known to have misspent the previous one; (iii) granting loans that within the legal limits result in good farmers receiving larger loans than those whose standards of operation are low; (iv) providing correct technical advice on the use of sprays and fertilizers; (v) inspecting borrowers' shambas; (vi) neglecting one or more of these points. No primary society which is not operating the Credit Scheme isrequired to employ a salaried manager, but those which do so must.

The roles of a society manager and Committee and of the local cooperative supervisor are crucial to the successful operation of the Scheme in a particular society. The manager is responsible for the quite complicated system of book-keeping upon which the correct operation of the Scheme depends. In addition to five different sets of Credit Scheme documents,(1) he also has to maintain records of society membership, the cash book and cash register and a produce ledger or produce cards.

(1) application forms, bonds, loan ledger, register of applications and loans made, members' record cards.

In the majority of Credit Scheme societies visited,[1] the records of produce sales were not up to date, and this immediately removed the means of verifying the legality of the value of individual loans. All the four societies studied had experienced previous difficulties: in each case there had been one change of society manager (due to the inefficiency of the initial officials) in four years.

Primary society managers have normally attended school up to a level ranging from Primary 4 to Junior Secondary 3. On their recruitment they attend a two-week course arranged annually for society managers by the District Cooperative Education Officers. Veteran managers may also attend these courses, but it appears that many do not do so, either because they are not notified in time, because they have other work, or because their leisure preference prevails.

"Chasing-up" defaulters is also the responsibility of the manager and committee. Legally, bad debtors should be sued before an arbitrator appointed by the Commissioner for Cooperative Societies. In practice in the few cases where bad debtors are prosecuted, the preference is for suing them in the local courts, and this is usually permitted.

The manager is often the only society official who has attended an extension course on the operation of the Scheme and he is largely responsible for ensuring firstly, that the committee members themselves understand the regulations and secondly, that these are observed - for instance, when assessing individual applications. Where, as was the case with one of the four societies studied, the committee were predominantly

(1) Forty-four societies were visited in 1965; four further societies were visited in 1966 for detailed study.

illiterate, the manager has considerable opportunity to neglect the maintenance of the society's records, to make illegal loans, etc. Thus, in 1966, this manager entered a claim for Shs. 400/- in excess of his salary. (The claim was subsequently retracted at a meeting attended by the writer).

The committee also may use the Scheme to abuse their privilage: at the same society, the committee incurred Shs. 3,600/- in expenses for travel and subsistence in 1965 (normally this should not exceed a sum in the region of Shs. 500/-) and ascribed this to journeys made to the main town (Lira) in connection with the operation of the Scheme.

Most societies approve well over 80% of all applications. The figures obtained for seven Masaka societies entering the Scheme in the first or second year show that the total number of applications and of loans approved over the first three years of the Scheme was as follows:

1962/63		1963/64		1964/65	
No. of Applications	No. of Approvals	No. of Applications	No. of Approvals	No. of Applications	No. of Approvals
307	267	281	245	338	324

The reasons given for the total rejection of applications were:

1. Applicant had not completed 3 years' membership (41% of rejected applications)
2. Applicant not considered credit worthy (21%)
3. Applicant disloyal to the society (17%)
4. Applicant already in debt to the society (11%)

5. Applicant had neglected shamba (6%)

6. Sureties not trusted (2%)

7. Loan application for payment of dowry. (2%)

Both the societies visited in Masaka had consistently minuted the committee's comments on individual loan applications. Both had been fairly scrupulous in the assessment of applications. For 69 out of the 71 applications submitted by the farmers interviewed over a period of four years, in which the amount granted was below the amount requested, the reasons given were as follows:

1.	Insufficient shareholdings	15
2.	Member disloyal to the society (i.e. sells produce through other channels)	11
3.	Size and condition of shamba and/or applicants' income did not warrant larger loan	11
4.	Applicant defaulted on previous loan	4
5.	Application exceeded maximum authorised liability for individual borrowers	4
6.	Two-thirds the average value of applicant's crop sales over preceding 3 years insufficient to justify value of application	2
7.	Application received late	2
8.	Insufficient loanable funds available to permit approval of full value of application (1)	21

Thus, for an application to gain approval at these societies four general criteria had to be satisfied:

(1) This reason was given 14 times in the first year when both managers were afraid that there would be insufficient funds to satisfy all applicants. They were in fact mistaken. Up to and including 1965/66 neither society ever used the full amount of funds available.

(i) sufficient funds had to be available

(ii) the applicant must be eligible to obtain a loan under the Cooperative Credit Scheme regulations

(iii) the society committee must consider the applicant creditworthy

(iv) the applicant must satisfy the crude economic criteria imposed by the society committee.

At other societies only the first criterion may be observed. Acan Akwo Growers' Cooperative Society Limited provided the following instances of irresponsible management of the Scheme:

1. The register of members was seven years out of date.
2. There was no complete record of members' crop sales over the preceding years.
3. Members from 4 other societies had been encouraged to join the society by granting them credit immediately on joining (three years before they were eligible), at the expense of older members who were refused credit.
4. The manager had no list of members who had repaid their loans fully, partly, or were in default.

The system on which the Scheme operates can be called into question on the following count: the Scheme depends on the assumption that since the borrowers cannot be expected to provide security, the loans must (i) be restricted to members with a good crop sales record and (ii) be limited in value to two-thirds the average annual value of an individual's crop sales over the preceding three years or ten times the value of his share-holding, whichever is the less. Of the 44 Credit Scheme societies visited in 1965 not more than 50% had adequate records to observe these regulations. Frequently there were no coherent records of individual members' sales.

In addition, at least one-third of the societies visited in 1965 had in some cases neglected the three-year membership rule. Reasons for doing so included (i) the provision of credit to persons of local influence, and (ii) the use of the Scheme as an attraction to recruit new members.

Failure to observe the Scheme's regulations has been particularly marked in some districts. In West Acholi, where the number of societies operating the Scheme was reduced from 15 in 1965/66 to 3 in 1966/67, the failure of the Scheme can be ascribed mainly to poor supervision by the Cooperative Department' field staff, combined with the disturbance of some societies by local politics.(1) In Bugisu the main factor has been the independance of the arabica coffee societies who do not need to borrow from the Uganda Commercial Bank, and who for historical reasons have a tradition of hostility to the Central Government, combined with the lack of interest in the Scheme shown by the District Cooperative Officer when it was introduced.

Over the period 1962 to 1967 the total number of borrowers under the scheme has risen from nil to 32,000. If the Scheme is really expected to expand from a total of 32,000 borrowers in 1967 to 150,000 in 1971, as stipulated in the current Five Year Plan,(2) it can only do

(1) Thirty-five members of one tobacco society in West Acholi were expelled in 1965, owing to their affiliation to the Democratic Party, which was not supported by the society committee.

(2) See "Work for Progress", p. 61.

so at the risk of gravely endangering the present very moderate standards of management.

1.4. Primary Society Revenue and Expenditure Resulting from the Operation of the Cooperative Credit Scheme.

The revenue which a society earns from operating the Scheme derives from the 5% per annum interest differential between the rate at which societies borrow from the Bank (7%) and the rate at which they lend to members (12%), plus interest received at a rate of 12% per annum on any of their own funds which they lend. Interest is usually earned over ten months. The level of revenue depends mainly on (i) the total value of loans made and (ii) the extent to which the society lends from its own funds or borrows from the Bank.

The value of loans made annually by the four societies studied is summarised in the following table. The table demonstrates the extent to which the societies were dependant on bank credit for the operation of the Scheme.

The main cost item incurred by societies operating the Credit Scheme is the payment of a monthly salary to the society manager. This is fixed at a legal minimum of Shs. 100/- per month. The Government assists with a 75% subsidy in the first year, 50% in the second year, and 25% in the third year. The other expenses attributable to the Scheme are the cost of stationery and of essential journeys to the

Table V. 3

Summary of Cooperative Credit Scheme Loans made by four Primary Marketing Societies in Masaka and Lango - Shillings.

A. Masaka						
	Kyanamukako G.C.S.L.			Kyanusoke G.C.S.L.		
Year	Total lent to members	Total borrowed from Bank	Total lent from Society's own funds	Total lent to members	Total borrowed from Bank	Total lent from Society's own funds
1962/63	3,670	3,000	670	9,990	5,470	4,520
1963/64	12,400	12,000	400	13,120	11,920	1,200
1964/65	16,135	14,000	2,135	19,950	13,950	6,000
1965/66	-	-	- (1)	19,115	11,115	8,000
1966/67	16,600	15,000	1,600	-	-	- (1)
B. Lango						
	Awelo G.C.S.L.			Akan Akwo G.C.S.L.		
1962/63	16,005	16,005	-	4,000	4,000	-
1963/64	16,096	16,096	-	8,160	8,160	-
1964/65	18,890	18,890	-	15,505	15,505	-
1965/66	24,385	24,385	-	20,000	20,000	-
1966/67	50,000	50,000	-	30,000	30,000	-

(1) No loan obtained owing to level of default on previous year's loan, see discussion above.

Source: Files of the individual cooperative societies.

nearest branch of the Uganda Commercial Bank. The combined expenditure on transport and stationery would normally amount to Shs. 250/- to Shs.400/-.

At Kyanamukaka Growers' Cooperative Society in Masaka the costs incurred and the revenue earned through the operation of the scheme in 1964/65 were as follows:(1)

Table V. 4

	Item	Shillings
1. Costs:		
	Transport	180
	Stationery	150
	Manager's salary	1,200
	Total	1,530
2. Revenue:	Interest received over 10 months on Shs. 14,000/-(1) at 5% p.a.	583
	Interest received over 10 months on Shs. 2,135/-(2) at 12% p.a.	214
	Total	797

(1) Bank loan.
(2) Society's own funds.

Source: Files of Kyanaumkaka Growers' Cooperative Society Limited.

At present most Credit Scheme societies do not cover the costs incurred as a result of operating the scheme solely through revenue earned on the loans. (Societies using only borrowed funds need to lend Shs. 40,000/- in order to do so). Since a society manager, once employed, is responsible for the administration of all his society's business, it is arguable that the cost of his salary should in any case

(1) In terms of efficiency of management Kyanamukaka appeared to the writer to be somewhat above the average of Credit Scheme societies. Kyamusoke and Awelo were exceptionally efficient and Akan Akwo was highly inefficient.

be met in part from the society's general funds. This is only reasonable where an increase in administrative efficiency results from the employment of the manager; and this point constitutes a further reason for caution in the expansion of the Scheme. Where, as at Acan Akwo in 1965/66, the manager permits Shs. 7,000/-, which should have been distributed to members in bonuses, to be consumed in unaccounted for expenses, the society is incurring a net loss through the employment of a manager. (It is notable that this society was permitted, despite extreme inefficiency in management, to increase its total loan in 1966/67: it had not been inspected by a senior representative of the Cooperative Department, e.g. the District Credit Scheme Specialist, since 1963, although the Specialist should visit all Credit Scheme societies annually. In several districts the writer encountered a dangerous tendency among district staff to neglect societies that were known to be operating badly.)

If the Uganda Commercial Bank as agent for the relevant Government Funds is making a profit from the administration of the Scheme, or if the Funds themselves are being operated at a profit in relation to the Scheme, it is arguable that either one or both of these sources might contribute to the expenses incurred by the primary societies: the cost of credit to the societies might be reduced or the present Government subsidy of society managers' salaries might be supplemented. Unfortunately no data are available on the profits earned either by the Bank or the Funds.

2. Loan Use.

2.1 Main uses of Credit at the societies studied.

Because loans are paid out in cash, no absolute proof is available of the use to which they are put. A farmer is not compelled to regard his loan expenditure as a separate cash flow, and the cash may simply be added to his available liquid resources, being spent as and when it is needed irrespective of purpose. The following Tables give (i) a national breakdown of the purposes for which loans made under the Cooperative Credit Scheme were granted in 1963/64 and 1965/66 (this demonstrates the extent of the increase in borrowing for expenditure on recommended techniques such as spraying, tractor-hire and mulching), and (ii) a breakdown of the purposes for which the farmers interviewed at the four societies studied claimed to have used their most recent loans (this table is based on the interviews held with 76 farmers in January - March 1966). The tables indicate that where credit is used for farming it is used almost entirely to finance expenditure on recurrent inputs, and particularly to finance the hire of labour. These loans do not make a direct addition to the capital stock of the borrower, although indirectly the use of mulch can increase the value of a coffee shamba if mulching is repeated at least every two years and the coffee trees are well pruned.

In order to supplement the data obtained on loan use, return visits were projected to all societies following the payment of 1966/67 loans. However, since Kyamusoke Cooperative Society failed to obtain credit in

Table V. 5

A. Purposes for which Loans Made, 1963/64.

Purpose of Loan	No. of Borrowers for this purpose	Total Borrowed (Shs.)	Smallest Loan (Shs.)	Largest Loan (Shs.)	Average Loan (Shs.)
1. Purchase of Tools and Equipment	1,509	4,271	3	600	27
2. Purchase of Live-stock	245	47,454	60	600	194
3. Purchase of Insecti-cides	2,074	122,823	15	600	54
4. Hire of Ploughs, etc.	2,387	148,009	5	400	62
5. Hire of tractors	1,794	242,506	34	2,625	135
6. Hire of tractors (Group F. Scheme)	-	-	-	-	-
7. Purchase of coffee husk for mulching and labour for mulching	2,014	445,058	30	1,000	221
8. Hire of labour for opening new land	11,259	1,302,284	10	1,200	116
9. Hire of labour for weeding, etc.	14,798	1,342,261	4	2,000	91
10. Others	602	33,447	6	120	56
11. Total	-	3,726,556	3	2,625	-
SOCIAL					
12. Social Fees	7	1,900	200	400	257
13. Other social purposes	38	2,130	50	150	56
14. Total	-	4,030	50	400	-
Grand Total	25,161	3,730,586	3	2,625	-

Source: Department of Cooperative Development, Annual Report 1964, p. 13.

Table V. 5

B. Purposes for which Loans Made, 1965/66

Purpose of Loan	No. of Borrowers for this purpose	Total Borrowed (Shs.)	Smallest Loan (Shs.)	Largest Loan (Shs.)	Average Loan (Shs.)
1. Purchase of Tools and Equipment	1,441	32,179	4	465	22
2. Purchase of Livestock	116	43,243	55	500	373
3. Purchase of Insecticides	4,303	212,315	5	78	49
4. Hire of ploughs,etc.	3,206	323,934	25	800	101
5. Hire of tractors	5,669	957,793	5	1,000	169
6. Purchase of coffee husks for mulching and labour for mulching	2,722	734,314	50	1,600	269
7. Hire of labour for opening new land, and for weeding	20,646	783,160	30	1,000	38
8. Others	1,181	111,108	32	1,000	94
9. Sub-total:	39,284	3,198,046	4	1,600	-
SOCIAL					
10. School Fees	11	3,880	160	1,000	353
Grand Total	39,295	3,201,926 (1)	4	1,600	-

Source: Department of Cooperative Development, Annual Report 1965/66 (not yet published).

(1) It will be seen that the total figure for loans paid out given in Table II. 25, page 118 exceeds the total given here by approximately Shs.3.8 million As of August 1967 the Cooperative Department was unable to provide a complete breakdown of all credit paid out during 1965/66. In the text the figures given here have been taken to equal the totals paid out for different purposes: in fact however these would be substantially larger.

Table V. 6

A. Stated Loan Use by 37 borrowers at Kyanamukaka G.C.S.L. and Kyamusoke G.C.S.L. (1)

Purpose	Kyanamukaka (19 borrowers)	Kyamusoke (18 borrowers)	Total
1. Labour to cut and spread elephant grass	13	6	19
2. Transport of coffee husks	8	12	20
3. Labour to weed	9	9	18
4. Purchase of artificial fertilizer	2	1	3
5. Purchase of F.Y.M.(2)	1	-	1
6. Labour to open land	1	1	2
7. Purchase of wheel-barrow	1	-	1
8. Labour to pick coffee	-	1	1
9. Payment of school fees	-	2	2

(1) Each borrower was asked to give an account of the use of the latest loan he had received.

(2) Farm-yard manure.

Table V. 6

B. Stated Loan use by 39 borrowers at Awelo and Acan Akwo Cooperative Societies, Lango District(1)

	Awelo	Acan Akwo	Total
Purchase of ox-plough or oxen	3	-	3
Purchase of insecticide	-	2	2
Purchase of spray-pump	1	1	2
Payment of labour to clear land	2	-	2
Payment of labour to open land	2	7	9
Payment of labour to weed	14	13	27
Payment of labour to pick and sort cotton	2	-	2
Purchase of fishing-nets	1	-	1
Personal expenditure	1	8	9

(1) Each borrower was asked to give an account of the use of the latest loan he had received.

1966/67 due to heavy default on the previous year's loan, the second survey of loan use in Masaka was confined to 40 of the 46 borrowers at Kyanamukaka.

The loans at Kyanamukaka were all paid out on Jaunary 11, 1967, and the borrowers were interviewed two months later, in mid-March. Each borrower was asked to state how his loan had been spent, and in 38 cases visual checks of these statements were made. The borrower was asked to indicate to the writer and two assistants the extent of all work done on his coffee and lusuku (bananas) since the beginning of the year, for which he had paid cash. The two assistants who helped the writer to assess the value of the work done were: (i) a Bukalasa student (school certificate holder) whose home was on a farm in the same county, and (ii) the Cooperative supervisor in charge of the society.

Loans worth Shs. 12,550/- were granted to the 40 borrowers (average loan value Shs. 312/-.[(1)] At the date of interview, the interviewees stated that they had spent 65% of the cash borrowed. This was broken down as: (i) Shs. 6,313/- (77% of the amount spent and 50% of the amount borrowed) used to meet current on-farm expenditure; (ii) Shs. 1,435/- (18% of the amount spent, and 11% of the amount borrowed) used to pay old debts to porters for work done in 1966; and (iii) Shs. 457/- (6% of the amount spent) used for non-agricultural purposes (payment of school fees and medical expenses) by five farmers. 89% of the amount spent on farming was said to have been used for weeding and mulching. Five farmers had spent a total of Shs. 400/- on the purchase of artificial fertilisers; two farmers had spent approximately Shs. 400/- on buying new plots; one farmer had spent Shs. 60/- on opening new land for food-crops, and one farmer had spent Shs. 25/- on the purchase of sprays.

The same farmers were also asked to enumerate their total expenditure

(1) The full value of the applications was Shs. 15,000/-.

on the maintenance of coffee and lusuku since January, 1, 1967. Their total estimated expenditure to meet current production costs on these crops amounted to Shs. 9,948/-, and their total estimated expenditure on paying old debts to porters for work done in 1966 amounted to Shs. 4,415/-. After the responses had been checked and modified on the shambas, it appeared that total expenditure on current costs and on paying overdue wages amounted to Shs, 9,550/- and Shs. 4,150/- respectively, then 66% and 34% respectively of these amounts were met from loans obtained under the Cooperative Credit Scheme.

In order to check (i) whether those farmers who obtained credit had spent more - in cash - on farming since the loans were paid out than other farm ers in the same area, and (ii) whether they used an improved technique more often than their neighbours, 39 members of the society who had not received credit were also interviewed. These farmers constituted 28% of all members of the society who had not received credit. They were selected according to two criteria: (i) that they should have shambas of approximately the same size as the farmers who received credit, and (ii) that they should, as nearly as possible, be the neighbours of the farmers who received credit. This group was not noticeably poorer than the farmers who obtained loans; half of its members wanted to apply for credit (some had done so) but they were not yet eligible under the three-year membership rule. Their estimated expenditure on maintenance of coffee and lusuku over the same period[(1)] amounted to Shs. 3,519/- (41% of the level incurred by the 40 farmers who obtained credit), and on payment of overdue wages, Shs. 2,360/- (57% of the level incurred by the 40 borrowers). These figures do appear to indicate that

(1) From January 1, 1967, to the date of interview (mid-March 1967).

the provision of short-term credit, provided mainly in cash form, is likely to induce a higher total level of cash expenditure on farming, of which one consequence will be a rise in the level of cash earnings by casual farm labourers. It was remarkable that none of these farmers had mulched their coffee.

At the two societies studied in Lango, credit was used predominantly to finance expenditure on the hire of labour for weeding. The total figure given for expenditure on weeding by 33 borrowers in 1967 was Shs. 3,850/-. This total is unreliable. At Akan Akwo much of the credit (Shs. 1,725/-) which farmers claimed to have spent on labour had obviously not been used since (i) the interviews took place 7 - 10 days after the loans were paid out and (ii) the loans had not been used to pay for work done previously. At Awelo Cooperative Society, the 19 borrowers claimed to have spent Shs. 212/- on weeding. This represents an average expenditure of Shs. 110/- per borrower, which is sufficient to weed one acre of cotton six times. Both the cotton acreages and the weeding standards of the borrowers were compared with those of 26 non-borrowers selected according to the same criteria as the Masaka control. There was no noticeable difference in weeding standards, nor could the need for credit be explained in terms of need to weed larger acreages: Table V. 7 below shows the cotton acreages grown in 1965/66 and 1966/67 by all the cooperative society members interviewed in Lango.

Table V. 7

1965/66 and 1966/67 Cotton Acreages of the Cooperative Society Members Interviewed in Lango

	- 2 acres	2 - 3.9 acres	4 - 5.9 acres	6 - 7.9 acres	8 - 9.9 acres
A.					
30 borrowers 1965/66	1	21	6	1	1
33 borrowers 1966/67	4	21	4	2	2
Total	5	42	10	3	3
B.					
9 farmers (1) 1965/66	1	4	2	1	1
26 farmers (1) 1966/67	5	16	3	1	1
Total	6	20	5	2	2

In these circumstances the writer concurs with the following statement made by the Department of Cooperative Development in 1964:

> "It continued, however, to be extremely difficult to determine the usefulness of credit as most of it continued to be given incash for hired labour. In some cases it was feared such credit might merely have replaced previously free family labour without producing any profit to the borrowers." (2)

At Awelo Growers' Cooperative Society 11 of the farmers interviewed in 1966/67 had borrowed Shs. 2,140/- for the hire of tractors and oxen.

(1) Non-borrowers.

(2) Department of Cooperative Development, Annual Report 1964, p. 10.

In order to raise the total incomes of the borrowers this credit might have been used either (i) to open land at the optimum time, (ii) to open more land, or (iii) to achieve both (i) and (ii) above.

Credit provided under the Scheme cannot facilitate the timely opening of land unless it is paid out sufficiently early. The recommended months for opening land for cotton in Lango are late February, March and early April. In 1966 neither of the societies visited paid out loans during these months. The date of payment of new loans depends almost entirely on the date of repayment of the previous loans. On occasions this latter date passes beyond the control of the Society, when the Lint Marketing Board and/or the ginneries delay the collection of and payments for cotton. Thus in March 1966, Shs. 6,230/- out of the 1965/66 loans was still not repaid by members at Awelo. These members had delivered their cotton to the society's store; the society, however, was unable to pay them for the cotton since this had not been collected by the ginnery.

At Awelo, where a substantial amount (Shs. 2,140/-) was spent on the hire of tractors or oxen in 1966/67 by 11 of those farmers interviewed who obtained loans the cotton plots of those who obtained credit were not opened any earlier than those of the farmers who did not obtain credit.

However, it also appears that cash paid out for the hire of tractors and oxen is used in substitution for labour that could have been obtained even if credit were not available. The farmers at Awelo who obtained credit in 1966/67 for the hire of tractors or oxen were asked how much land they had been accustomed to open for cotton in the past. This had

Table V. 8

Timing of Opening of Cotton Plots, Awelo G.C.S., 1966

	April	May	June	July	August	Total
19 recipients of credit	5	10	27	33	6	81
11 Farmers not receiving credit	4	5	13	15	5	42

fluctuated; thus one farmer who received a Shs. 400/- loan in 1966/67 of which he claimed to have spent Shs. 280/- on opening land for cotton in that year. The previous year he had received Shs. 200/- loan and opened 4 acres; in 1961, with no credit he had opened 10 acres in order, he said, to get 'more money'. As a group they did not appear to have increased their cotton acreages as a result of receiving credit.

The comparative data on expenditure on farming by borrowers and non-borrowers obtained in Lango do not merit detailed analysis. At Akan Akwo credit had only been paid out 10 days previously,(1) and the two groups had each spent equal amounts on farming. At Awelo, the sample of borrowers was biased towards the wealthier members of the society, and these were not matched by the non-borrowers.

It was notable that while the average level of income earned from 1965/66 cotton sales by the nineteen farmers at Awelo who obtained credit in 1966 was Shs. 1,190/-, the average receipts of the eleven who did not obtain loans was only Shs. 688/-. There was apparently a tendency on the part of the Manager and Committee to encourage the more successful cultivators of the society to apply for loans.

(1) five months late.

Moreover, several of those interviewed who had not obtained credit belonged to a different tribe - the Jonam - and spoke a different language from that of the Manager and Committee members. No attempt had been made to explain the Cooperative Credit Scheme to these people.

2. 2 The Use of Short-term Credit to Introduce Recommended Techniques.

Returns on loan use made in 1964 to the Department of Cooperative Development by all primary societies operating the Scheme (excluding the Group Farms) show that of a national total of Shs. 3,730,586/- lent to farmers, Shs. 445,058/- was withdrawn for the purpose of mulching coffee, Shs. 242,506/- was paid out for tractor hire and Shs. 122,823/- for the purchase of insecticide.(1) By 1965/66, the value of credit provided for mulching had risen by 65%, for the purchase of insecticide by 73%, and for tractor hire by almost 300%.(2) These increases took place over a two year period: in each instance they are high, and in the case of tractor hire extremely high. These figures and those obtained by the writer in Masaka,(3) indicate that the Cooperative Credit Scheme can have considerable influence in encouraging the use of new techniques. This being so, it is crucial that the inputs and techniques that are introduced should be known to be profitable. Thismeans that costings should have been obtained on peasant farms in different ecological areas indicating that the net

(1) Department of Cooperative Development Annual Report 1964, p. 13. See also Table V. 5A for expenditure in 1963.

(2) See Table V. 5B.

(3) See Table V. 6A.

return to the farmer after repayment of principal plus interest and after making a reasonable allowance for risk, will be positive. The strongest criticism that can be levied against the Cooperative Credit Scheme is that costings demonstrating the profitability of the inputs and techniques advocated are not available. It is in fact probable that a large proportion of borrowers cannot expect to obtain a positive return from the use of short-term credit for crops fetching as low a price as cotton and robusta coffee. The risk is increased by the fact that (i) the borrower may apply the advocated technique incorrectly, and (ii) factors beyond his control such as delay in the provision of tractor hire may prevent the optimum use of an input or technique, and (iii) exogenous factors such as drought or flooding, illness of the farmer or his family, or a fall in prices, may unavoidably reduce yields and/or returns per acre for a given borrower. A farmer who uses a loan to finance the purchase of an input or the use of a technique of a low level of profitability in normal conditions therefore carries a fairly high degree of risk: where the anticipated rate of return is not known, the risk is obviously higher.

(i) The use of credit for mulching:

In Masaka, in so far as loans are used for farming they are used predominantly to weed and mulch coffee and lusuku (bananas) plantations. At the initial interviews with the Masaka sample twenty-five of the thirty-seven farmers interviewed claimed to have used part of their credit for mulching. Of the forty borrowers interviewed in March 1967, twenty-three had recently applied mulch to part of their coffee shambas, while none of the 39 farmers who had not received credit had done so.

Given the present lack of farm records, it is impossible to estimate the impact that the expenditure of an additional Shs. 200/- on mulching might have on yields per acre of robusta coffee.

In Masaka, even the costs of mulching in different circumstances were not known exactly, although it was clear that the range is considerable, from the farmer who uses his own sorghum and maize stems, or swamp grass cut at the bottom of his shamba, to the farmer who lives some distance from a coffee factory, but buys husks, or who pays labourers to cut and transport elephant grass, possibly paying the owner of the grass as well. According to the visual estimates made by the writer, farmers do not normally succeed in mulching one acre for less than Shs. 200/-, unless the mulch is very thinly applied, or is obtainable very close to the farmer's shamba.

In addition to variations in costs, the impact of mulch on different farms varies, particularly in relation to standards of pruning. The cost limit above which it is not profitable to mulch therefore varies between farms. The general standards of pruning in the division are extremely low, indeed the Principal of the District Farm Institute advocated that in future no credit should be paid out for mulching until the borrower's coffee had been pruned. The average yield per acre of kiboko (dried robusta cherry) is four to five cwt. This fetches a return of Shs.400/- to Shs. 450/- at a price of 40 cents per pound, or Shs. 500/- to Shs. 560/- at 50 cents per pound. Even if one assumes that there is some reduction in weeding costs as a result of mulching[1] a 30-40% increase in yields is necessary in order to recover the expenditure of Shs. 200/- (plus Shs. 20/- interest charge) on mulching one acre of coffee. (It might be argued that the mulch will have some carryover effect, and therefore improve yields in more than one year; however, it is unlikely that the carryover effect will be noticeable unless mulching is sustained. In Masaka, where there is likely to be a very dry year at least one year in four, this is particularly true.) It is the writer's opinion (based on visual observation and discussion with extension staff and farmers) that an increase in output of this order is very rarely achieved.

(ii) The Use of Credit to Pay for Hiring a Tractor.

Credit provided to members of Credit Scheme societies for tractor hire is used almost entirely to open land for the cotton crop. (This does not apply to the Group Farms where tractors are also used for preparing land for food-crops, for planting, and for spraying cotton.[2] While a few private farmers provide tractor hire service, most of this work is done by the Government's mechanical cultivation unit - Special Development Section of the Department of Agriculture - at a charge of Shs. 45/- per acre for first ploughing and Shs. 40/- per acre for second ploughing.

Tractors may be hired to open additional land or to open land which the farmer would otherwise have opened with hand labour. Where tractors are hired in substitution for labour to open land that would

(1) A deep mulch will prevent weed-growth, but a thinly applied mulch will not do so. (Deep mulching is also more expensive.)

(2) See Chapter VII, section 5

have been opened anyway, their impact on output depends on the following factors:

(i) whether the tractors are used to open land at the optimum time,

(ii) the subsequent standard of a) maintenance of the cotton plot and b) picking,

(iii) the use to which the released labour is put. In the cotton-growing areas peak demand for labour occurs at certain periods of the year: opening land for cotton is an operation which competes for labour with weeding finger millet, and the release of labour at this point might enable the farmer to use more labour either for finger millet or some other crop. (Although the release of labour at this point still does not relieve the second point of peak demand when the finger millet harvest competes with cotton weeding, and indeed may intensify demand by increasing the finger millet harvest.)

Considerations of the type referred to in point (iii) above render the accurate calculation of the net effect of this use of tractor hire very difficult. No costings relating to the impact on yields and incomes of the use of tractors in substitution for labour on peasant farms are available.

However, it is possible to calculate the approximate returns that must be obtained in order to make the use of credit profitable where the latter is used to cultivate an additional acre of cotton. In the following example it is assumed that the farmer obtains a loan of Shs.200/-.

This is used to meet the greater part of the costs set out below:

Table V. 9

Costs of cultivating 1 acre of cotton.

Item		Shillings
Tractor Hire Service, 1st ploughing, @ 45/- per acre		45
Tractor Hire Service, 2nd ploughing, @ 40/- per acre		40
1 tin insecticide @ 13/- per tin		13
Labour for spraying		4
Labour for weeding (4 weedings at 18/- each) (1)		72
Labour for picking: 137 man-hours @ 45 cents per man-hour (2)		62
Labour for sorting: 80 man-hours @ 45 cents per man-hour (3)		36
		272
	Loan Interest	20
	Total Cost	292

Notes: (1) This is the rate for weeding that was most frequently quoted to the writer: labourers are paid 1/- for weeding 2 rows of roughly 140 yards long.

(2) Labour requirements computed from data obtained from a survey of labour requirements on Inomo Group Farm, 1965.

(3) Crude estimate.

The farmer would have to meet cash expenditure, or outlays in kind, to the approximate value of Shs. 72/-, from his own funds. Assuming a price of 40 cents/lb. for seed cotton, he must achieve a yield of 750 lbs. of seed cotton per acre in order to recover his disbursements. Beyond this, any additional yield may be computed as profit. A yield of 750 lbs. per acre exceeds the national average by at least 150 lbs.(1) but is obtainable if the insecticide is correctly applied. To obtain a net profit the farmer must therefore correctly operate a complementary technique (the application of insecticide) which, according to information obtained by M. Okai(2) in 1965 and the present writer in 1966, is in general performed incorrectly. Moreover, the 1965/66 returns on the purposes for which Credit Scheme loans were granted show that the number of loans granted for tractor hire were 32% greater than the number of loans granted for the purchase of insecticide.(3) It is probable that a large proportion of the farmers who hired tractors did not apply insecticide at all.

Two conclusions can be drawn from these examples: (i) that the wrong priorities have been adopted and that farmers should be required to prune their coffee and spray their cotton before receiving credit

(1) Estimates of national average yields per acre of cotton range from 400 lbs. to 600 lbs. The amended (higher) estimate is derived from the acreage returns obtained in the recent Uganda Government Census of Agriculture.

(2) See M. Okai "The Adequacy of the Technical Base for the Agricultural Extension Service in Uganda: A Case Study in Lango District", Makerere University College Faculty of Agriculture, Rural Development Research Project, paper no. 6, 1965, pp. 10-13.

(3) See Table V. 5B

for the purposes outlined above; (ii) or that credit should be provided in a "package" to finance all inputs necessary to achieve an increase in output (this is the present policy of the Department of Cooperative Development.)

A further point which arises in regard to the second example is that where labour is available it might be preferable to provide credit for opening land by hand labour or to encourage greater use of oxen. Okai has shown that in Lango 50 man-hours are needed for the initial digging of one acre, and 46 man-hours for the second digging. At an average cost of 0/65 per man-hour this gives a total cost of Shs.62/- as compared with Shs.85/- using tractors. Theoretically, it might be argued that there is a greater probability that land opened by tractor would be opened at the optimum time hence increasing yields. In practice an accumulation of administrative delays, breakdowns, and lack of spares mean that tractor hire service is very often provided after the optimum period for opening land. Data on the comparative effect on the soil of the two methods of opening land are indecisive.

In 1965/66 Special Development Section earned a total of £152,288 from the provision of tractor hire service, 32% of which was paid for under the Cooperative Credit Scheme.[1] The cost of operating the unit in the same year amounted to £470,882; thus a net loss of £326,594 was incurred. This constitutes a further argument in favour of limiting the provision of service to farmers which is of questionable profitability

(1) This excludes work done on the Group Farms.

to the user.

(iii) The Use of Credit for Cotton Spraying.

The 1966 Committee of Inquiry into the Cotton Industry published the following estimates of the net returns obtainable from the correct application of D.D.T. to cotton. The Committee assumed (i) a price to the grower of -/38 per lb. of seed cotton, (ii) the continuance of an 82% subsidy on each tin of D.D.T., and (iii) an average net return per acre of Shs. 142/- where D.D.T. is not applied.

Table V. 10

Returns to the Farmer from Spraying one Acre of Cotton with D.D.T.

Additional yield level (seed cotton)	200 lb. Sh.Cts.	250 lb. Sh.Cts.	300 lb. Sh.Cts.	350 lb. Sh.Cts.
Price to farmers	38	38	38	38
Gross return per acre	76.00	95.00	114.00	133.00
Cost of D.D.T.	5.00	5.00	5.00	5.00
Equivalent annual cost of pump	8.00	8.00	8.00	8.00
Net return per acre	63.00	82.00	101.00	120.00

Source: Report of the Committee of Inquiry into the Cotton Industry, Government Printer, Entebbe, 1966, p. 19.

If the subsidy on D.D.T. were removed (and the Committee advocated its removal in 1971) this would reduce the returns at the different yield levels by approximately 33%, 25%, 20% and 18% respectively. No account was taken of the additional labour needed for picking and sorting the increase in output, but if there is a positive opportunity for labour for either task this will further reduce the net returns.

If the farmer is to realise the maximum possible profit per acre from applying D.D.T. it is essential that the spray should be applied correctly. However, a recent study of the impact of the extension service in Lango District by M. Okai revealed that farmers who apply insecticide frequently use incorrect spraying techniques.(1) Okai cites instances of incorrect timing of spraying, incorrect mixing, and incorrect numbers of applications. At Acan Akwo Cooperative Society where no attempt was made to explain the correct method of application to those members who purchased dudumaki (insecticide) and where the 19 farmers interviewed in 1965 all claimed to have sprayed at least some of their cotton, none had by his own account done so correctly. Nine farmers had mixed the spray below strength, using saucepans instead of the spray tanks as containers, 13 had used the wrong timing, and 18 had failed to make the recommended four applications. At Awelo, where the manager and committee explain to purchasers of spray the correct method of application and give each member a copy of the sheet of instructions,(2) the 18 members who had used spray all gave a correct account of mixing, and in 13 cases a correct account of the timing of application; 12 of the 18, however, had sprayed less than the recommended four times.

(1) M. Okai, "The Adequacy of the Technical Base for the Agricultural Extension Service in Uganda: A Case Study in Lango District", R.D.R. 6, Makerere University College, Faculty of Agriculture 1966.

(2) Provided by the Ministry of Agriculture and Cooperatives.

In Lango, the non-availability of dudumaki in 1966 made it impossible to compare purchases of cotton-spray by borrowers and non-borrowers in that year.

2. 3 Use of Credit for Non-farming Purposes.

It proved impossible to assess accurately the extent to which loans are not used for farming. Few farmers acknowledged having used part of their loans for non-agricultural purposes, but on the basis of the current condition of their shambas and of estimates made by the interviewer of current level of income and expenditure, in which it appeared that demand for cash for non-farming transactions was high relative to the demand for cash for farming, and also relative to cash incomes, the writer made the very crude estimate after these[(1)] interviews that approximately 50% of the loans had actually been used for agriculture. This was supported by an independant estimate made by a senior official of the Department of Cooperative Development.

During the course of the initial interviews, the writer found that it was possible, with the aid of an interested and efficient interpreter and the assistance of two of the society managers, to make detailed estimates of the annual expenditure and income of some interviewees. These estimates were made only where full cooperation was given - for nine farmers in Masaka and eighteen farmers in Lango. While no claim is made for a high degree of accuracy, the responses are of interest in illustrating the range of income and expenditure of the respondents, and

(1) the first

the proportional relationship of expenditure on farming to expenditure on non-farming activities. It is this last point which is of interest in the present context. The Masaka farmers devoted 33% of their total expenditure to farming (payment of rent, payment of labourers, purchase of inputs and tools) while they derived 78% of their total income from this source (through the sale of crops, livestock and beer). In Lango, where it is still customary to pay farm labour in kind, 18 farmers at Awelo growers Cooperative Society estimated that they spent 16% of their cash incomes in 1965 on on-farm expenditure, while they derived over 75% of their incomes from farming.

It is likely that the amount of credit used for farming varies between societies. From the 1967 interviews with borrowers at Kyanamukaka Growers' Cooperative Society, it appeared that 61% of credit received had been spent on farming (including the payment of old debts to porters). It was also possible that a part of the remaining 35% that was still unspent would be used for agriculture, although only a few farmers stated that they were waiting for the arrival of the rains in order to use their remaining credit for mulching or purchase of artifical fertilisers. This did not account for more than Shs. 1,000/- and still left 25% of the value of the loans unaccounted for. (The fact that this represents a substantial reduction on the original estimate could be due to the fact that the borrowers were aware that a study (begun 12 months previously) was being made of their use of credit, and that this encouraged them to use the loans for farming.

2. 4 Alternative Uses for Short-term Credit.

Given the doubtful profitability of most of the purposes for which short-term credit is currently provided under the Cooperative Credit Scheme, it may be asked whether alternative outlets for short-term credit exist.

The prices paid for minor crops fluctuate so heavily between seasons (see Table V.11) that any calculation of the profitability of the use of credit for their production should really take account of varying storage possibilities, and hence possible marketing dates. It should also take account of the size of possible markets for these crops, but virtually no data of this nature is currently available.

Moreover, for most minor crops little data is available on production costs (i.e. man-hours of labour required for different operations and average rates of pay). The following calculations, based on costings obtained from a survey undertaken by the Farm Manager, Inomo Group Farm, illustrates that provided suitable outlets are available sorghum might sometimes be a more profitable direction for short-term credit than cotton production. The difficulty would be to find a market for more than a limited output.

Assuming that the average district yield of 1500 lbs. is achieved and that this fetches a price of 15 cents per lb., the farmer would achieve a gross return of Shs. 225/-, and a net profit of 63/50. If the same yield could be achieved with land prepared by hand or by oxen owned by the farmer instead of by tractor the net return to the grower would be higher.

Table V. 11 (1)

Price Variations recorded in or near Lira for Three Food-crops, 1964-65

	1964												1965											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
SIM SIM																								
Local Market Price	-	90	90	-	90	80	60	1/00	1/10	90	-	60	90	90	-	95	100	110	95	33	100	80	-	100
Duka Buying Price	55	-	-	-	-	-	-	70	-	65	-	-	-	50	-	55	50	65	60	50	-	-	-	50
Duka Selling Price	70	60	60	-	70	60	-	-	-	-	-	70	70	70	-	60	80	80	-	80	54	-	-	60
MILLET																								
Local Market PRICE	-	50	50	-	60	25	-	25	25	30	-	50	55	45	-	35	35	50	25	20	18	20	-	25
Duka Buying Price	-	-	-	-	-	-	-	20	22	21	-	-	25	20	-	-	35	30	40	32	-	22	-	25
Duka Selling Price	-	32	32	-	40	-	40	-	-	30	-	35	35	30	-	35	40	40	45	35	25	35	-	35
MIXED BEANS																								
LocalMarket Price	-	-	-	-	50	-	-	-	60	50	-	30	50	60	-	45	60	55	70	25	40	40	-	67
Duka Buying Price	-	-	-	-	-	-	-	-	40	18	-	-	18	18	-	25	35	25	40	25	-	20	-	20
Duka Selling Price	-	-	-	-	-	-	-	-	-	35	-	30	30	30	-	40	45	-	-	40	32	40	-	40

(1) Reproduced from D.F.Watt: "Programming and Special Aspects in the Productive Environment of Peasant Farm Decision Makers ",Rural Development Research Paper No. 24, Makerere University College, Faculty of Agriculture, August, 1966.

Table V. 12

Cost of Producing one Acre of Sorghum[1]

Item		Shillings
Tractor Hire Service, 1st ploughing		45.00
2 Discings @ 25/-		50.00
Planting		15.00
Weeding 17 man-hours	@ 45 cents per man-hour	32.90
Harvesting 56 man-hours		
Transport of sorghum from field		12.00
		154.90
Loan Interest for 6 months (credit for mechanised operations only)		6.60
		161.50

Note: (1) With fewer operations mechanised, production costs are likely to be lower (e.g. through elimination of discing).

While it is essential to find alternative cash-crops to cotton, little work has been done on costing the production of food-crops in cotton-growing areas. No such costings were available in Lango District in 1966. As already mentioned data on possible markets is also lacking; but with the establishment of a Minor Crops Marketing Board[1] farmers may find that they have a guaranteed market for their produce. Detailed discussion of the proper functions of the Board is beyond the scope of

(1) i.e. the Agricultural Produce Marketing Board, due to be established in 1967.

this thesis. Construction of eight produce storage units by the Uganda Government on behalf of the proposed Board should start in 1967/68.[1] Their erection will take the form of a general subsidy to the farming community. Whether this capital expenditure can be justified depends on the level of increases in prices paid to the grower which can be achieved by the Board,[2] and of any consequent increase in output.

(1) Financed with a U.S.A.I.D. loan, the units have had to be transported from America.

(2) It is assumed that the Board will be non-profit making and that it will partially replace the private produce dealers who currently buy from the farmers in the post-harvest period and sell crops back to them at higher prices in the pre-harvest period.

In Masaka District the outlook for farmers hoping to diversify by producing more minor crops is not good. The net profit obtained by the District Farm Institute(1) on minor crops over the past two years has frequently been negative. Possible package loans, of which the following is an example, prepared for minor crop production by the Assistant Agricultural Officer, Central Masaka, also revealed on paper either a net loss or very low profit.

Table V. 13

Package Loan for the Production of Maize (Masaka District)

Assumptions

(i) Using unimproved seed and no fertiliser farmers achieve an average yield of 1,550 lbs. per acre.

(ii) Using improved seed and fertiliser, farmers could achieve an average yield of 3,000 lbs. per acre.

(iii) Seed dressing is necessary in order to protect the seed from insect attack during the germination period.

(iv) A farm labourer is assumed to work a four-hour day for Shs.2/- per day.

(1) District Farm Institutes are owned by the central Government; they are used for short farmer-training courses and for research.

Table V. 13 (Cont'd.)

The Maize Package (one acre)				Shillings	Cents
Alternative Phasing months:					
2	8	Tractor hire cultivation		120	00
3	9	20 lbs. improved seed (White Star) @ -/10 per lb.		2	00
3	9	20 grammes seed dressing(Fernasand)		1	00
4	10	2 cwt. Sulphate of Ammonia		90	00
				213	00
Farmer's Cash Contribution					
		Clearing bush	20 man/days	40	00
		Planting	5 man/days	10	00
		Fertilizer application	2 man/days	4	00
		Weeding	10 man/days	20	00
		Harvesting	20 man/days	40	00
		Interest on loan		12	00
				126	00
		Total Cash Expenditure		304	00
		Total Revenue from 3,000 lbs. of maize @ -/10 per lb.		300	00
		Net Profit		-39	00

Source: Divisional Agricultural Office files.

In contrast to the absence of a clearly defined need for short-term credit in most parts of Uganda, opportunities for its provision do exist in the main arabica coffee producing areas of Bugisu and Sebei. In the two districts combined there are 15,000 acres of arabica coffee predominating. The average area of coffee per grower is 0.82 acres.

As opposed to the low price (-/40 to -/50 per lb.) paid to the grower for kiboko (dried) robusta coffee, arabica coffee fetches a price of approximately Shs. 1/50 per lb. parchment. Arabica coffee is more susceptible to disease; however, yield increases of up to 7 cwt. per acre of arabica coffee have been achieved on peasant plots through the combined application of insecticides, fertiliser and herbicides.

In 1967 the Department of Agriculture prepared a scheme for the provision of seasonal credit through primary cooperative societies to arabica coffee growers, for the purchase of the necessary chemicals. With increases in yields of from 3 - 7 cwts. per acre the per acre additional return to the grower after loan repayment but before deduction of labour costs will be as follows:

Increased yield level	3	4	5	6	7
Increased net returns/acre per year (Shs.)	308	528	748	968	1,118

Insufficient data are available for it to be possible to estimate with any precision the opportunity cost of the farmer's labour. However, given the level of additional returns per acre prior to the reduction of labour costs it is clear that the net return to the farmer will be positive and in most cases over Shs. 200/- per acre. A cost benefit analysis of the impact of the scheme on the economy as a whole performed by the Ministry of Planning and Economic Development gave a ratio of benefits to costs of 4:1 assuming that the average increase in yields was only 3 cwt. per acre.

An exceptional feature of this scheme is that the additional inputs, particularly the insecticies, have already been applied on farmers' trial plots over a period of several years. It is on the outcome of these trials as well as trials on research stations that the proposed scheme is based.

6. Characteristics of Borrowers.

The farmers who obtained loans under the Cooperative Credit Scheme showed no distinctive characteristics beyond the fact that at Kyanamukaka in Masaka and at Awelo in Lango, their on-farm cash expenditure over the time periods covered by the survey was greater than that of their neighbours. In Masaka, the standards of maintenance of shambas was marginally higher among borrowers, more than half having mulched part of their shambas and their shambas being more extensively weeded. In Lango the borrowers' cotton plots were not in noticeably better condition than those of their neighbours.

The seventy-six borrowers interviewed in the initial (1965) survey fell into the following age ranges:

Table V. 14

-29	30 - 39	40 - 49	50 +
3	25	18	30

It was notable that very few farmers under the age of 30 obtained credit.

The levels of education which they had attained were as follows:

Table V. 15

	No Education	P1 - P4	P5 - P8	Junior Secondary	Mission Agricultural Institute
Masaka	9	21	3	4	1
Lango	16	16	5	2	—
Total	25	37	8	6	1

The 37 Masaka borrowers estimated that their coffee acreages were as follows: (the District average is 2 acres)(1)

Table V. 16

- 2 acres	2 - 2.9 acres	3 - 3.9 acres	4 acres +	n.a.
15	11	5	5	1

The cotton acreages of the farmers in Lango who obtained credit in 1965/66 and/or 1966/67 are given on page 305 (the District average is 2.36 acres).(2)

4. <u>Default</u>.

The rate of default on Cooperative Credit Scheme loans has been rising to the extent that in 1966/67 it was necessary to reduce by 70 the number of societies permitted to operate the Scheme. In the first two years of operation default by societies to the Uganda Credit and Savings Bank did not exceed a national average of 2%. At mid-1966 (the fifth year of the Scheme's operation) the national average quoted by the Department of Cooperative Development was 7.5%. These figures, however, disguise a higher rate of default by individual borrowers to their primary societies, the latter being able to make repayments to the Bank out of the general funds of the society. Table V. 16 A shows the rise in default by members to their societies.

(1) Source: Report on Uganda Government Census of Agriculture, Vol.III, 1966.

(2) Source: Report on Uganda Government Census of Agriculture, Vol.III, 1966.

Table V. 17A

National Default Figures for the Cooperative Credit Scheme (The statistics in Table V.17A were compiled for the first time in 1967: Columns 3 - 6 in this table in each case relate to the number of borrowers and the amount in default at 30.9.66.)

Year	1 Total Lent to members (Shs.)	2 Total No. of Borrowers	3 Total Amount in Default (Shs.)	4 Total No. of Borrowers in Default	5 3 as % of 1	6 4 as % of 2
1962/63	830,917	6,859	10,640	168	1.3	2.5
1963/64	2,438,366	15,143	41,548	441	1.7	2.9
1964/65	3,701,965	23,382	195,291	1,635	5.2	7.0
1965/66	7,097,003	33,827	691,391	4,702	9.8	14.0

Source: Department of Cooperative Development.

Table V. 17B

Rate of Default by Primary Societies to the Bank, at June 30th each year.

Year	% in Default of Amount Borrowed
1962/63	-
1963/64	0.18
1964/65	4.00
1965/66	7.50

Source: Department of Cooperative Development.

In Masaka, no societies defaulted to the Bank in 1962/63. In 1964/65 the societies incurred a 63% default rate at due date, which waw reduced to 8% three months later. In 1965/66 the societies were in default for 69% of the amount borrowed from the Bank at due date, and for 16% three months later. So far as default by individual borrowers to their societies is concerned the following table gives the level of default each year for the two Masaka societies visited.

Table V. 18

Cooperative Credit Scheme: Annual Levels of Default, 2 Primary Societies in Masaka, as at Due Date

Shillings

Year	Society	Total Borrowed from Bank	Total lent to Members	Default to the Bank	Default by Members to their Society
1962/63	Kyanamukaka	3,000	3,670	60	730
	Kyamusoke	5,470	9,990	-	4,329
1963/64	Kyanamukaka	12,000	12,400	-	1,886
	Kyamusoke	11,920	13,120	-	180
1964/65	Kyanamukaka	14,000	16,135	14,000	15,630
	Kyamusoke	13,950	19,950	-*	1,380*
1965/66	Kyanamukaka	No loan	No loan		
	Kyamusoke	11,115	19,915	-	5,963

* Default level 2 months after due date.

There appear to be two major causes of default. A bad drought, such as that experienced in Masaka in 1965, undoubtedly has an adverse effect on repayments, and was largely responsible for the rise in default in the district in that year. In the following year, parts of the district again suffered from drought, in addition to which the 1966 political disturbances also had a detrimental effect on repayments. The other major cause of default is weak society management combined with poor supervision. This was undoubtedly responsible for the high rate of default, and the absence of any record of repayments, at Akan Akwo in 1966. Two other factors that have quite frequently deterred repayment of loans are (i) the influence of minor politicians, and (ii) other local rivalries (e.g. tribal or religious, within the society). Both these factors, combined with a poor quality of supervision by junior extension staff are reported to have been responsible for consistently high default rates in Acholi District.

5. Conclusion.

At none of the four societies studied in Masaka and Lango can it be said that the Cooperative Credit Scheme has had any evident impact on crop yields or the incomes of borrowers. This can be partly ascribed to the fact that credit is being used for the production of crops which are in any case of low profitability. It is also due to the failure to combine the use of complimentary techniques with the technique for which credit is provided, and to the diversion of some of the cash borrowed to non-agricultural uses. More than half of the original 76 farmers interviewed had in any case obtained credit in each successive year. This raised the level of their annual indebtedness without raising the possible net value of additional expenditure on farming directly financed by the Scheme beyond the level of the loan obtained in the first year (unless the later loans were of a higher value.)

At the beginning of this chapter it was stated that the writer would argue two points: (i) that the use of cooperative societies for the provision of short-term agricultural credit has filled an institutional gap in the agricultural credit structure, and (ii) that the filling of this gap was in part superfluous since the uses to which short-term credit is being put are often unlikely to yield a positive net return to the borrower. It is clear that there is no other institution in Uganda that could profitably make small short-term loans of the type described in this chapter. Primary Cooperative societies are the only form of organisation with a uniform structure throughout the country which derive their membership from a limited area. The second conclusion is more open to question given the limited data on which it is based.

There is an urgent need for research and evaluation designed to assess the relative profitability of different production techniques and different cash enterprises on peasant farms. Not until more precise data are available can analyses be undertaken to demonstrate the actual rates of return obtained and obtainable in different areas from the use of short-term credit. Given the level of returns that are necessary in order to recover expenditure on certain items such as mulching and tractor hire it is highly unlikely that a net profit is achieved by most of the borrowers who use credit for these purposes.

In the 1967 Follow-up Report on the Uganda Census of Agriculture, it is stated that in only two out of the eight main cotton-growing districts are cotton plots sprayed an average of once or more.(1) From the frequent failure of farmers to adopt the spraying techniques advocated by the Department of Agriculture, two alternative conclusions may be drawn, viz.: (i) that these recommendations, issued on a uniform basis for the whole country, are often wrong,(2) or (ii) that there is a need for increased supervision of cotton spraying. Given the uncertainty that prevails, and the fact that increases in yields of up to 400 lbs. per acre seed cotton have been achieved on Government Research Stations, there would appear to be a need for a pilot supervised spraying scheme, on which the impact of spray and the optimal techniques for the area(s) chosen are recorded.

An important exception to the writer's second conclusion is the opportunity for the provision of short-term credit to the 50,000 arabica coffee growers that exist in the Bugisu/Sebei area. However this scheme will be confined to a limited area of Uganda and to a small

(1) Department of Agriculture, op.cit., page 18.

(2) For example, the number of applications required may vary with the degree of insect infestation.

minority of the peasant farmers. When the Cooperative Credit Scheme was introduced, the Department of Cooperative Development presented the Scheme as a benefit that was only available to good societies. An impartial attempt should now be made to ascertain how many societies in fact want to continue to participate in the Scheme.

For four reasons a policy of expanding the general provision of short-term credit under the Cooperative Credit Scheme would not at present be justifiable. These are:

(i) the lack of data demonstrating profitable uses for credit,

(ii) the likelihood that some of the current uses of credit are unprofitable,

(iii) the rise in default,

(iv) the danger that standards of society management will be lowered at a cost to society members.[1]

(1) The Government's 1966 plans for the expansion of short-term credit are discussed in Chapter VIII.

Appendix V. 1

Application
Fee:- NIL

APPLICATION NO.......
LOAN NO. ....

CO-OPERATIVE CREDIT SCHEME

FORM OF APPLICATION TO THE UGANDA CREDIT AND SAVINGS BANK[1] FOR A LOAN BY A REGISTERED CO-OPERATIVE SOCIETY FOR RE-LENDING TO ITS MEMBERS FOR AGRICULTURAL PURPOSES

PART I. (To be completed by the Society)

1. NAME OF SOCIETY..
   ....
2. REGISTERED NO .... 3. DATE OF REGISTRATION ....
4. REGISTERED POSTAL ADDRESS ....
   ....
5. LOCATION OF OFFICE ....
6. AMOUNT OF LOAN REQUIRED (FIGURES) SHS. ....
   (WORDS) ....
7. PERIOD OF LOAN (a) NO. OF MONTHS ....
   (b) FROM APPROX. .../.../196...
   (c) TO " ../.../196....
8. APPROXIMATE TIMES WHEN WITHDRAWALS WILL BE MADE (WITH AMOUNTS):-

MONTH	AMOUNT	B/F		B/F	
January		May		September	
February		June		October	
March		July		November	
April		August		December	
C/F		C/F		TOTAL	

9. APPROVAL OF THE REGISTRAR OF CO-OPERATIVE SOCIETIES UNDER SECTION OF THE CO-OPERATIVE SOCIETIES ACT 1963.
   FORM V was submitted by the Society on ..../..../196 ..
10. APPROVED MANAGER. Mr. ....has been employed since ..../..../196.. as Manager/Manager-Secretary and he has satisfied the Co-operative Department as to his capabilities.
11. (a) THIS SOCIETY HAS / HAS NOT PREVIOUSLY RECEIVED A LOAN UNDER THIS SCHEME.
    (If the answer is "HAS" - then complete Part (b) of this para., but if the answer is "HAS NOT" - then complete Part (c) of this para.)

(1) Now the Uganda Commercial Bank.

(b) DATE OF COMMENCEMENT OF LAST LOAN .../.../196..

DETAILS OF THE LAST LOAN PROGRAMME:-

	LOAN FROM U.C.& S.B. SHS. CTS.	OWN FUNDS USED SHS. CTS.	TOTALS SHS. CTS.
TOTAL AMOUNT APPROVED			
TOTAL AMOUNT LENT TO MEMBERS			
TOTAL AMOUNT RECOVERED FROM MEMBERS			
TOTAL AMOUNT REPAID TO BANK			
TOTAL AMOUNT OUTSTANDING			

(Note: These figures do NOT include interest due or accrued, paid or collected.)

(c) (i) A LETTER OF SET-OFF DATED .../.../196.. IS ATTACHED.

(ii) A LETTER TO THE ....
CO-OPERATIVE UNION LTD., DATED .../.../196.. INSTRUCTING THE UNION TO PAY ALL COMMISSION BONUSES, ETC. TO THE UGANDA CREDIT AND SAVINGS BANK, IS ATTACHED.

(Note: Delete (b) or (c) whichever is not applicable)

12. THE SOCIETY PROPOSES TO USE SHS....................OF ITS OWN FUNDS FOR LENDING TO MEMBERS UNDER THIS SCHEME DURING 196../6.. AND THIS MONEY WILL BE UTILISED BEFORE WITHDRAWALS ON THIS LOAN ACCOUNT ARE COMMENCED.

13. THE SOCIETY UNDERTAKES TO ABIDE BY ALL REGULATIONS GOVERNING THIS SCHEME, IN ACCORDANCE WITH THE INSTRUCTIONS OF THE COMMISSIONER FOR CO-OPERATIVE DEVELOPMENT AND THE GENERAL MANAGER OF THE UGANDA CREDIT AND SAVINGS BANK.

.........................Chairman
.........................Treasurer
.........................Manager
for ....
Date ..../..../196.. ....Cooperative Society Ltd.

Appendix V. 2

A. LETTER OF SET-OFF

Ref. No. ....

....

....

The Manager, ...19.....

The Uganda Credit & Savings Bank,

....

....

We, the duly authorised officers of THE ....
..........GROWERS CO-OPERATIVE SOCIETY LIMITED (Reg. No. ....) hereby authorise the Uganda Credit and Savings Bank to debit any Savings Bank Account in the name of the Society with any sums of principal and/or interest which may become due and payable at any time in respect of the Society's Loan Account No.

It is hereby agreed that the Bank shall have absolute discretion to exercise the above mentioned mandate at any time and without prior notice being given to the Society.

It is further agreed that this authority shall remain irrevocable until such time as any debt due by the Society to the Bank shall have been repaid in full.

THE COMMON SEAL of the ....
.........................Growers
Co-operative Society Ltd., was
affixed hereto in the presence
of:-

.... Chairman

.... Treasurer

.... Manager

Appendix V. 2

B. LETTER TO UNION

Ref. ....

....

....

................19.....

The Manager,

................Co-operative Union Ltd.,

....

....

We, the duly authorised officers of the ....
.............GROWERS CO-OPERATIVE SOCIETY LTD., (Reg. No. ....), hereby request you to pay to the Uganda Credit and Savings Bank, ...Branch for the credit of this Society's Savings Bank account all bonus, commission and interest due to this Society.

This instruction shall also apply to all sums whatsoever payable to this Society by the Union should the Uganda Credit and Savings Bank so request you in writing.

This Society's Shares and Deposits in the Union are charged with the repayment of a loan from the Uganda Credit and Savings Bank and we instruct you to refuse to repay to this Society any or all of its shares or deposits, or to transfer all or any of the Shares subscribed by this Society to any other member of the Union or to the Share Transfer Fund of the Union without the consent of the Uganda Credit and Savings Bank.

These instructions are irrevocable and can only be cancelled with the written consent of the Uganda Credit and Savings Bank.

THE COMMON SEAL of the ....
............................Growers
Cooperative Society Ltd., was affixed
hereto in the presence of:-

....................Chairman

....................Treasurer

....................Manager.

Chapter VI

The Use of Credit Obtained from Non-Governmental Sources

1. Introduction.

This chapter contains a brief account of the more important sources of non-Governmental credit which are used by peasant farmers. Much of the material is drawn from the surveys conducted in Masaka and Lango, and therefore the chapter cannot be held to give a complete national picture where circumstances (such as land tenure) and lending practices vary between districts. For example, one form of credit which it will be shown varies considerably even between the two districts discussed is that provided by farm labourers.

Throughout Uganda, the greater part of agricultural development has taken place without the use of institutional credit. Two major factors affecting expansion of production have been firstly, a 60 year-old Government propaganda drive through local chiefs and the extension service, which has recently focussed on encouraging farmers to achieve the target outputs laid down in the Five Year Plans; and secondly, on the part of the farmers, a demand for cash to pay taxes and school fees and to satisfy the demand for an increasing number of consumer goods. In addition the natural growth of population has contributed to a rise in total output. There is also strong evidence to show that one of the main determinants of agricultural production in the monetised sector has been variations in acreages following marked changes in the level of crop prices.(1)

It is impossible to estimate the role which non-institutional credit may have played in facilitating increases in production through virtually passive expansion to satisfy an increasing demand for working capital.(2) The type of credit to which I refer in particular is that provided in various forms by farm labourers.(3) Labour is the most costly input used in the production of any crop, and it is possible that if local arrangements for the provision of credit for labour did not exist, the expansion of output might not have taken place so rapidly. Non-institutional credit obtained locally may also have been of crucial importance to individual farmers in helping them to overcome a bad season, or to establish their own farms as young men.

In addition to or in lieu of credit provided under Government auspices six other sources of credit are available in varying degrees to the ordinary farmer. Those six sources are the commercial banks, hire purchase companies, traders, village dukas, friends and relatives (who are normally farmers also), and the agricultural labour force. Each of these will be discussed in order.

2. The Commercial Banks.

The attitude of the commercial banks towards lending to the

(1) See Chapter I for a more detailed discussion of this point.

(2) This point is also discussed in Chapter II, Section 1.3

(3) See below for a description of the different forms which the provision of this type of credit takes in Masaka and Lango.

agricultural sector has already been discussed in Chapter II, section 2.1. This section elaborates upon some of the points raised there. Statistics on the number and value of loans made by the commercial banks to African farmers for agricultural purposes are not published. In the light of all the information she has been able to obtain the present writer would hazard the guess that less than 100 such loans are outstanding in Uganda.

While the commercial banks make few loans, if any, to the African agricultural sector in all districts of Uganda, the situation with regard to commercial bank lending differs between Masaka and Lango. In Lango, the degree of risk which a commercial bank would incur in lending to farmers would be higher than that incurred under a Government loans scheme owing to the complete lack of familiarity with potential borrowers by the branch managers concerned who are in any case stationed in another district. (The three commercial banks which operate in the main town, Lira, all run agencies which open for the receipt of deposits and the paying out of cash twice-weekly.) The degree of risk involved at the present time in the operation even of Government loans schemes in Lango has already been discussed in Chapter IV: credit obtained under a Government scheme, or from a commercial bank were this possible, might be used either for investment in capital equipment or to provide working capital of a short-term nature (e.g. for employment of labour or purchase of insecticide). However, no costings are available which can be used to show that the provision of credit for either of these purposes on a scale large enough to interest a commercial bank would be justified. (It is assumed that a commercial bank would not be interested in making individual loans worth less than Shs. 2,000/-.) Added to the lack of suitable directions for commercial bank credit is the lack of security for loans. Farmers in Lango do not have individual title to land, have no permanent cash crops (with the exception of small quantities of matoke and even smaller amounts of citrus fruit) and have very little capital equipment, of which most items are worth less than Shs. 500/-. While most of them own livestock, any bank manager could easily be deceived as to the number owned by a single farmer, and would therefore be unwilling to lend on such security.

Thus a commercial bank manager contemplating lending in Lango to an individual farmer is confronted with five problems:

(i) unfamiliarity with the farmer and the area,

(ii) a high level of risk due to the prevalence of low prices for most crops (particularly cotton, which is the main cash crop), and uncertainty concerning the economic viability of alternative production techniques,

(iii) the lack of any security,

(iv) to a significant degree his aim is to maximise profits,

(v) his lending operations, unlike the Government's, are not subsidised. The Government on the other hand should have different aims, in particular it may wish to stimulate development rather than maximise its profits.

There is one crop - flue-cured tobacco - which appears likely on the basis of returns achieved by intensively supervised farmers in West Nile

District,[1] to yield sufficiently high returns to interest a commercial bank in the prosivion of two-year loans for the construction of curing barns provided Governmental supervision of the borrowers is sufficiently intensive, and water-tight arrangements are made for repayments. At the time of writing the Lango flue-cured tobacco scheme is entering its first year and arrangements have been made for the provision of credit from specially allocated Government funds which will be administered by the Uganda Commercial Bank. It is too soon to predict (i) whether the criteria mentioned above will be satisfied and (ii) whether if they were it would prove possible for a commercial bank to participate in the credit scheme.

It should be pointed out that the entry of the Standard Bank into the Master Tobacco Growers Scheme in West Nile District in 1966/67 demonstrates the willingness of a commercial bank to make small medium-term (2-year) loans to farmers offering no security where the supervisory, marketing and repayment arrangements make these loans virtually risk free. The Bank has undertaken to provide low value (Shs. 1,800/-) loans to groups of farmers for a two year period for the construction of flue-curing barns and the purchase of fertilizers in the initial year of production. Since all payments for the crop are made by the factory direct to the borrowers' bank accounts the likelihood of default is minimal.[2] As stated in Chapter VII this scheme constitutes the most efficient instance in Uganda of the integration of credit with

(1) See Chapter VII.

(2) See Chapter VII for a more detailed account of this Scheme.

marketing - there being only one possible outlet for the flue-cured tobacco crop in West Nile.

In Masaka Division the position is somewhat different. Four commercial banks - three expatriate banks and the Uganda Commercial Bank - operate branches in the main town. Furthermore, there is legal, transferable title to land in the Division, although the title is transferable between Africans only. Nonetheless, there is still no competition between the banks for business in the agricultural sector. This is not surprising for two reasons:

(i) the prices fetched for mailo land in rural areas are generally low. They range from Shs. 30/- per acre in very remote areas to 450/- per acre fifteen miles outside Kampala, with most sales fetching from Shs. 100/- to Shs. 300/- per acre.[1]

(ii) When mailo property is seized and put up for sale there is still some hesitation among buyers who fear the local people will not cooperate with a new owner. This is particularly the case amongst buyers who only want part of an estate. A really wealthy individual may buy a whole estate and not worry about local cooperation. (He may also be less interested in developing the land.)

The Uganda Commercial Bank, the agent for Government credit schemes, had, at June 1 1966, less than 20 loans outstanding to farmers from its own funds. The position of the three expatriate banks at the same date was that one had no loans outstanding to farmers in the Division, one had four, and one had seventeen.

(1) Source: Mailo Land Office, Kampala. Figures obtained in August, 1967

Most of these twenty-one loans were made to borrowers who had guaranteed incomes from off-farm occupations which were being paid regularly into their current accounts. Even where mailo land was taken as security, it was this other source of income that was considered the most important security for the loan. Neither manager was anxious to engage upon the seizure and sale of land, which is known to be unpopular. (In two districts, Bugisu and West Nile, managers of the Uganda Credit and Savings Bank who attempted to seize African security in the late '50s had to be immediately transferred owing to local discontent.)

The following details concerning four borrowers provided by one of the two bank managers concerned illustrates the manner in which commercial banks find their borrowers amongst the wealthiest strata in the agricultural community - their credit being directed towards making "the rich richer". It is notable that three of the land titles offered as partial security for the loan are for very low acreages. The Bank Manager concerned stated that he did not consider the land titles were as important a part of the security offered as his knowledge of the borrowers and the level and regularity of their cash incomes derived mainly from off-farm sources. Furthermore the loans were in principle short-term, being granted in the form of an annually renewable overdraft.

Borrower 1: Ex-President of a Cooperative Union; owns a coffee processing factory and is expanding a herd of exotic cattle; has maintained a current account with the relevant bank over a prolonged period; has been granted an overdraft within the range of Shs. 10 - 20,000/- for the development of the dairy herd. The nominal security for the loan is the title-deed to 25 acres of mailo land.

Borrower 2: President and manager of a coffee processing factory; has maintained current account with relevant bank over prolonged period; granted overdraft of Shs. 30,000/- in 1961 (reduced to Shs. 19,000/- by mid-1966) for the development of an exotic dairy herd. Security for loan is coffee factory and title deed to 650 acres of mailo land.

Borrower 3: Committee member of a Cooperative Union, and Assistant Manager of a cotton ginnery; has maintained current account with relevant bank over a prolonged period; granted overdraft for development of dairy herd. Nominal security is title deed to five acres of mailo land.

Borrower 4: Senior civil servant; has maintained current account with relevant bank over prolonged period; overdraft granted for development of exotic dairy herd. Nominal security is title deed to 16.5 acres of mailo land.(1)

The second bank operated a broadly similar loans policy vis à vis the agricultural sector. All outstanding loans had been granted to individuals previously known to the bank who normally already had accounts with the bank. Generally security was taken in the form of mailo title deeds. This manager stated that he would not consider making a loan to

(1) It is impossible to generalise concerning the standard of farm-management of those individuals who have full-time off-farm occupations; their farming operations range from the highly efficient to the highly inefficient.

a new customer unless he had an exceptionally good introduction from an established client and it could be shown that the prospective borrower already had a regular source of income. As with the first bank interest rates ranged from 8 per cent to 9½ per cent with most borrowers paying the higher rate. Some loans were granted on a separate loan account. The manager emphasised his interest in short-term lending and stated that he would not grant a loan for more than a twelve-month period, which he was aware did not suit the majority of farmers - only being of use to a large-scale enterprise with a large working capital requirement. He was prepared to arrange the payment of the loan so that the repayment date coincided with the harvest of the borrower's main cash crop.

The general farm development loans granted by this bank were of an average value of Shs. 4,000/-. In all, 17 loans worth Shs.95,040/- were outstanding ostensibly for agricultural purposes, of which four (average value Shs. 10,760/-) were for the establishment of herds of exotic cattle, and the remainder for general farm improvements. No follow-up inspection of the use of the loans was made, but it was the manager's opinion that the greater part of the loans, particularly those in the latter category, had in fact been used for coffee buying. Several of the borrowers derived part of their cash incomes from this activity, and in some cases, they were operating coffee processing factories.

The level of default on these seventeen loans had risen from Shs. 15,000/- (15%) in 1965 to Shs. 35,580/- (37%) by mid-1966, following the drought which had also led to a substantial rise in default on the Government loans schemes.

Neither bank employed an inspector to assess plans for, or the use of, agricultural loans. No qualified follow-up inspection was made, and in seventeen cases no follow-up inspection was made at all. The other manager had himself inspected the farms of the four individuals to whom he made loans. An extreme example of the consequences that can arise from lack of skilled planning and advice on management was the death of 40 exotic cattle on one of the farms concerned due mainly to failure to provide adequate water facilities, plus poor management of spraying and feeding. While this was not solely the fault of the bank, a qualified inspector might have helped to prevent this.

Two extreme conclusions can be drawn from the failure of the commercial bankssto provide technically qualified inspection for the few agricultural loans which they make (i) that this is a failure on the part of the banks which they should remedy, or (ii) that a specialised institution with qualified staff should be established for the provision of agricultural loans. Insufficient opportunities for the use of medium-term credit currently exist to justify the immediate adoption of the second alternative although this situation may change. Equally, no branch of a commercial bank currently makes a sufficient number of loans to African farmers to justify in economic terms the employment of a well-qualified inspector. Present Government policy is to establish an operative Cooperative Bank in 1968 (one has existed on paper since 1962) and to provide all agricultural credit coming from the public sector through this Bank, plus crop finance. Initially the Bank will have no inspectorate.

Eventually it may be necessary to set up a separate institution for the provision of medium- and long-term credit for farm development. Too many unknowns concerning (i) government policy vis à vis the cooperatives (ii) the future development of existing institutions and (iii) the rate of development of opportunities for the use of this type of credit exist to make any discussion of what form such an institution should take useful at the present time.

There is a short-run solution to the problem. Branch managers who do make loans for farming will tend to concentrate on the one or two most profitable enterprises in their areas (e.g. dairy farming in Masaka). Either they or their senior assistants should make themselves familiar with the everyday technicalities of operating these enterprises and carry out regular on-farm inspection, thus helping to establish a contact with the farming community that is at present lacking. For more complex technical advice farmers will in the short-run remain dependant on the senior staff of the government extension services.

It is unlikely that the attitude of the commercial banks to agricultural lending in Masaka Division will alter in the short-run.(1) However, the long-term propsects for dairy-farming and beef production in the Division are good. As the standards of management of these enterprises rise and more farmers wish to expand their operations, the commercial banks may make credit available in these fields.

(1) E.g. over the next 5 years.

It is possible that in ten to fifteen years, when standards of stock management have risen and there is an increased market for exotic and improved stock the banks will show interest in accepting upgraded and exotic stock as security for medium-term loans. The major disincentive to accepting exotic cattle for security at present is their high mortality rate. So far as indigenous cattle are concerned the main disincentive is the impossibility for an outsider of establishing ownership where there is usually no fenced grazing and cattle belonging to several owners are herded together.

In Toro District (Western Region) there are already almost 700 African tea outgrowers producing a crop which will earn them a steady monthly income and which can be developed within five years into a capital asset worth at least Shs. 2-3,000/- per acre.(1) Nonetheless, the attitude of the commercial banks towards making loans to tea outgrowers is equally cautious. The Uganda Commercial Bank makes loans to outgrowers only in its capacity as the agent for Government funds. Of the two expatriate commercial banks which have branches in the District, one manager stated that he would not lend to an African outgrower except in very rare cases where the grower already maintained an account with the bank and received a substantial regular income from another source.

The other manager stated that he also would not normally lend to outgrowers. He cited as an exception to this rule the few instances in which a grower who holds a good job, for example as foreman at a tea

(1) This figure is based on prices per acre of Shs.2,300/- and Shs.3,600/- paid by 2 African outgrowers in 1963/64 for shambas of established tea.

factory, who in addition to earning a steady income normally is maintaining an account with the bank, is recommended by his employer for a small overdraft to develop his tea shamba. The overdraft (average size Shs.2,000/-) would be guaranteed by the employer. Collateral would also be required in the form of title to the land which would then be registered with the District Land Office. Such overdrafts are granted for a maximum of twelve months, but, since they are renewable annually, can be transformed into long-term loans. Borrowers are required to pay interest ranging from 8 per cent to 10 per cent per annum.

One justification for the caution shown by the commercial banks in making loans for tea production is that, unlike the flue-cured tobacco in West Nile, there is more than one outlet for this crop. There are seven tea processing factories in Toro District and theoretically each of these could buy a grower's tea. Under the government credit scheme for the tea outgrowers, each grower binds himself to sell to a particular factory. As the first loan instalments fall due in 1967 (the time of writing) it is too soon so say whether these agreements will be consistently observed.

One manager in Toro stated that the annual profit made on loans of Shs.2-3,000/- is very low. He cited the risk involved plus the low profits obtained from the loans as the main reasons for his bank's unwillingness to lend to African farmers. He stated that while branches that are earning regular annual profits may be willing to allocate small sums to making experimental loans in the African agricultural sector, branches that are running at a loss cannot be expected to do this.

In the latter instance the branches are involved in a vicious circle which might, where profitable new enterprises are being developed, be broken by an increased willingness to experiment. On the other hand, the fact that some branches are lending to farmers cannot be taken as proof that the managers concerned expect to break even on these loans so long as these are of an experimental nature. Only when the commercial banks are convinced that certain forms of agricultural lending are in fact profitable will there be any substantial expansion of commercial bank lending in this sector.

3. Hire Purchase.

A second source of credit which is of very limited availability at present, but which is likely to be developed in the future, is hire purchase. During the early '60s several firms offered hire purchase terms to Africans for the purchase of tractors and water pumps. However, only two major suppliers of farm machinery are currently prepared to offer hire purchase terms to African farmers. One stated that the level of hire purchase sales made to Africans over the last few years had been constant, or very slightly increasing. The second firm stated that business was increasing, but ascribed this to the departure of two other firms from the field, due in both cases to bad repayments. The second firm had in 1966 approached the Department of Agriculture with a suggestion that if the Department were prepared to guarantee hire purchase loans to farmers who could not meet the firms own terms then the firm's would readily expand its sales. This proposal was turned down. Large items of equipment such as tractors and water pumps can now be purchased on hire purchase terms only by the few individuals who can meet the finance companies increasingly stringent requirements. The following hire purchase terms are those currently required by the Uganda agents for Massey Ferguson tractors. The buyer is required to pay a 50% deposit and to repay the outstanding sum plus interest charged at 10% per annum on this amount in twelve monthly instalments. The firm has the right to reclaim the item concerned after one instalment has become overdue. Before the buyer is granted these terms, his bank account is checked and he is required to insure the tractor. The company previously allowed repayment over an 18 month period but has found that the risk of the tractor depreciating heavily in value within this period is too high to justify even this extension of repayment. The second company quoted exactly the same terms with the exception that the manager stated that in some cases he was prepared to accept a 40 per cent deposit.

The equipment sold by these companies under hire purchase agreement ranges in cost from approximately Shs. 6,000/- for a small water pump, to Shs. 30,000/- for the purchase of tractor plus plough, disc harrow and trailer. At present the two companies between them have only 17 loans worth an average of Shs.3,700/- outstanding to Africans for the purchase of tractors, plus approximately the same number of loans outstanding for the purchase of water pumps (average value not known).

It can be seen from the terms outlined above that these facilities are only available to a very small number of individuals, who frequently are only able to satisfy the stipulated conditions because they have a regular source of off-farm income. Five of the six persons interviewed in Masaka and Lango who had used hire purchase fell into this category.

4. Credit provided outside the Cooperative Credit Scheme for Tractor Hire Service.

One further source of credit that has been used by some farmers in Masaka is the provision of credit by primary societies for tractor hire service, for which the societies in turn borrow from the two coffee Unions (Masaka District Growers' Cooperative Union and Bwavu Mpologoma Cooperative Union). This situation is somewhat anomalous since normally credit for this purpose is obtained under the Cooperative Credit Scheme. However, the provision of credit by the Unions enables societies which are not members of the scheme to make loans to their members for this purpose.

In 1964, the Government's Tractor Hire Service unit in Masaka earned Shs.38,573/-, all of which was paid for by credit provided by the two Unions. In 1965 the Service earned Shs.43,945/- in Masaka, of which Shs.36,585/- was paid for by credit provided by the two Unions, and Shs.6,360/- by credit issued by a primary society operating the Cooperative Credit Scheme.(1) Over the whole of Uganda the Cooperative

(1) Source: Special Development Section, Masaka Office. 1965 was the latest year for which figures were available.

Credit Scheme provided Shs.242,506/- to pay for tractor hire service in 1963/64 (excluding work done on the Group Farms) and Shs.636,694/- in 1964/65 (again excluding work done on the Group Farms).[1] Thus while the Masaka Unions provide almost all the credit required to pay for tractor Hire Service in Masaka Division, they provided in 1964/65 only 6% of the total credit provided for this purpose throughout the country. Since Tractor Hire Service has been expanding very slowly in Masaka, it is probable that in 1965/66 the proportion would have fallen to 4% - 5%.

The Unions have been providing credit for Tractor Hire Services since 1961. It is notable that the Manager of the Masaka Unit stated that from 80%-100% of the income earned by the Unit each year is paid for with credit. The unions lend to the societies at a rate of 7.5% per annum, .5% higher than the rate payable to the Uganda Commercial Bank under the Cooperative Credit Scheme. The Unions did not provide data on default rates.

5. Credit Provided by Small Traders and Local Dukas.

While a few large firms offer regular hire purchase terms, a much larger number of small traders provide short-term credit to their customers on terms which vary between vendor and purchaser. Their restricted sphere of operations and greater familiarity with their customers enable these traders to extend a broader coverage of credit of lower value. Livestock farmers in Masaka can obtain animal feedstuffs

(1) Source: Department of Cooperative Development, Annual Reports, 1964 and 1965.

on credit from traders in the Masaka bazaar. Private lorry-owners in the same district occasionally accept postponed payment for deliveries of coffee husks for mulching. No information is available on the range of terms which traders offer, beyond the fact that some are known to charge no interest. The provision of interest-free credit where the farmer is not required to sell his produce to the lender may be a form of non-price competition. On the other hand, the livestock farmers claimed that they had to pay unduly high prices for feedstuffs, and they may have been paying concealed interest. In Toro it was found that one tea factory[1] provides credit to outgrowers who sell their green leaf to the factory for the purchase of fertilizers. No interest is charged. B.A.T. provide the same facility to tobacco growers in West Nile.

In the villages and small trading centres local duka owners also provide low value interest free credit. While this is not strictly 'agricultural' credit, but relates to recurrent purchases of consumer goods, such credit may occasionally release cash for farming. Of 115 farmers (55 in Masaka and 58 in Lango) who were asked whether they could obtain credit from their local dukas, 48 in Masaka and 32 in Lango replied in the affirmative. The credit offered is of short duration: while duka owners are often prepared to grant monthly credit to individuals who are earning monthly salaries (e.g. low level civil

(1) Munobwa Tea Factory.

servants),[1] it appears that to the majority of farmers they will only offer credit for one or two weeks. (This conclusion is based on the statements of those farmers who were using this source of credit. One farmer stated that he could obtain credit for a period of several months, on the understanding that he would repay following his next cash-crop harvest, but this was exceptional.) The largest amount of credit which any farmer stated he had obtained at one time was Shs.500/-, most farmers stated that the amount of debt which they might have outstanding at any time to a duka was less than Shs.100/-. One farmer stated he could obtain cash loans from a duka-owner who is also a friend.

6. Farmer-Farmer Lending.

In addition to employing local dukas as sources of low-level short-term credit farmers also provide loans to each other in cash and kind, lending to both relations and friends. Again, these loans are not necessarily obtained or used directly for agricultural purposes, but they might on occasions release cash for farming. The following tables summarise the amount of credit which 55 farmers in Masaka and 95 farmers in Lango reported as due to them in May and September 1966 respectively.

The fact that for each group the net balance is positive indicates that farmers may not have disclosed the full amount of their own indebtedness. When data of this nature are collected at a once-for-all interview,

(1) cf. D. Pudsey, 'Pilot Survey of Twelve Farms in Toro District', Department of Agriculture 1966, unpublished, p. 123: "Farmers who received regular monthly wages were given credit facilities at shops, but the ordinary farmer received very limited credit facilities."

there is an obvious danger of inaccuracy arising from both intentional and unintentional omission of certain items.

The statistics cover a total of 150 farmers. Apart from an unpublished survey of the financial position of twelve farmers in Toro District,(1) the writer is not aware of any comparable data collected from farmers in Uganda.

Table VI. 1

Farmer to Farmer Lending and Unpaid Tax and Labourers, Etc.
Masaka, May 1966, 37 Cooperative Society Members(2)

A. Credit Outstanding.		
	Purpose	Amount(Shillings)
	Purchase of kibanja	800
	" " car	400
	" " food	175
	Pay labourers	446
	Miscellaneous	2,155
	Total	3,976
B. Debts Owed.		
	Purchase of food	110
	Payment of labourers	550
	" " mechanic	50
	" " medical expenses	200
	" " school fees	60
	Unpaid Tax	673
	Miscellaneous	1,280
	Total	2,928
C. Net Balance: + Shs.1,048/-.		

(1) D. Pudsey, op.cit., Chapter 10.

(2) i.e. farmers earning the 'normal' level of agricultural income as opposed to the Progressive Farmers, who were in some cases earning more, generally because their farms were larger or because in Lango they were providing tractor hire service.

Table VI. 2

Farmer to Farmer Lending and Unpaid Tax and School Fees

Masaka, May 1966, 18 Progressive Farmers

A. Credit Outstanding.

Purpose	Amount(Shillings)
Payment of school fees	872
Purchase of lorry	800
To open new land	1,350
Purchase of food	504
" " cow	100
To pay tax	43
" " dowry	600
" " rent	1,140
To establish coffee trading company	4,000
Miscellaneous	250
Total	9,659

B. Debts Outstanding.

Purpose	Amount(Shillings)
Payment of labourers	500
Unpaid school fees	3,859
Unpaid tax	2,268
Duka	300
Muscellaneous	149
Total	7,076

C. Net Balance: + Shs. 2,583/-.

Table VI. 3

Farmer to Farmer Lending, Lango, September 1966

59 Cooperative Society Members(1)

A. Credit Outstanding.

Purpose	Amount(Shillings)
Transport	410
To pay tax	275
" " school fees	485
" repay debts	171
Purchase of food	981 (2)
To pay dowry	3,615 (3)
" " for ploughing	225
Purchase of cattle	415
Purchase or repair bicycle	151
To pay fines	300
To buy clothes	60
Miscellaneous	1,625
Total	8,713

(1) See Footnote (1), page 358..

(2) Of which credit worth Shs. 866/- was provided in kind.

(3) Of which credit worth at least Shs.870/- was provided in kind.

Table VI. 3 Continued

Farmer to Farmer Lending, Lango, September 1966

59 Cooperative Society Members(1)

B. Debts Outstanding.

Purpose	Amount(shillings)
Payment of dowry	3,554
Purchase of food	112
Payment of tax	50
" " school fees	640
Purchase of clothes	24
" " school uniform	110
" " hoe	6
Transport	170
Purchase of cattle	400
Miscellaneous	452
Total	3,554

C. Net Balance: +Shs. 5,159/-.

(1) See footnote to Table VI. 1

Table VI. 4

Farmer to Farmer Lending, Lango, September 1966

36 Progressive Farmers (including 14 tractor owners)

A. Credit Outstanding.

Purpose	Amount(Shillings)
Purchase of food	995 (1)
Payment of dowry	2,206
" " school fees	1,900
Purchase of school uniform	420
Payment of debts (including hire purchase instalment @ Shs1,100/-)	2,158
Transport	32
Payment of fine	260
Repairs to bicycle or car	535
Purchase of cattle	390
" " farm equipment	2,880
Tractor repairs	535
Ploughing	2,525 (2)
Weeding cotton	80 (2)
Purchase of bullock for ploughing	400
Miscellaneous	4,837
Total	20,651

(1) of which credit worth Shs. 580/- was provided in kind.

(2) All in kind.

Table VI. 4 Continued

Farmer to Farmer Lending, Lango, September 1966

36 Progressive Farmers (including 14 tractor owners)

B. Debts Outstanding.

Purpose	Amount(Shillings)
Payment of labourers	60
Tractor repairs	2,100
Ploughing contracted and paid for but not done	1,965
Payment of debts	377
Payment of fine	105
Payment of dowry	1,260 (1)
Purchase of clothes	340
" " food	164 (2)
Payment of school fees	414
Miscellaneous	70
Total	6,855

C. Net Balance: + Shs.13,796/-.

(1) All obtained in kind

(2) Of which credit worth Shs. 162/- received in kind

A particular form of credit which some farmers said they provided was the provision of seed to other farmers who did not have enough of their own. This would normally be repaid after the following harvest. Of 113 farmers interviewed in January and March 1966, 25 per cent said that they were accustomed to provide this form of credit. If the debtor's harvest failed, the farmers said that they would not expect to be repaid. If the debtor enjoyed a good harvest, farmers in both Lango and Masaka said it was customary to return more seed to the lender than had been borrowed. This was generally regarded as a gift to express thanks for the loan. However, no borrower was under a fixed obligation to do this.

One other particular form of farmer to farmer lending must be mentioned. Although it is impossible to estimate its value, there can be little doubt that the assistance given by relatives to young men who are establishing their own shambas and households is often of great importance. Assistance of this kind is not normally large enough to enable a young farmer to establish a capital intensive enterprise such as dairy farming or tea-outgrowing, or an enterprise yielding delayed returns, such as tea. However, older relatives frequently pay at least part of a young man's dowry, thus enabling him to double his family labour force. Fathers may also assist their sons by handing over to them part of their shambas, or by allowing them to live at home while they establish new ones. Debts of this kind are not usually repaid quickly and may not be repaid at all. However, they mostly carry the general obligation to provide reciprocal assistance to the assistor or the family should this be needed. Thus a young man who had received assistance of this kind might later provide help on his benefactor's farm, pay a younger relative's school fees, or help to meet other family expenditure.

7. Credit Provided by Farm Labourers.

In Masaka District, as in the rest of Buganda, the employment of permanent farm labourers (defined as those working for their employers on a regular basis, and receiving a monthly salary) is a common phenomenon. These labourers (frequently immigrants from Ruanda)(1) are often paid after a period of several months, usually bi annually or annually, working on a ticket system. Over the intervening period they work leja-leja for food,(2) while their cash wage (earned at a rate of Shs.25/- to Shs.30/- per month for a 2 - 3 hour working day, so that a labourer who regularly works twice as long earns twice as much)(3)

(1) "The biggest group of immigrants into Buganda are the men and women from the Belgian mandated territory of Ruanda-Urundi and the neighbouring district of Tanganyika ... who pour into this wealthy cotton and coffee producing country whether as temporary labourers or as settlers." 'Economic Development and Tribal Change', Ed. Audrey Richards, E.A.I.S.R. 1952, page 1.

(2) "An afternoon's work will apparently produce enough food for 2 days and porters regularly employed work in this way two or three times a week over and above their other tasks." Ibid. p. 121.

(3) "Other labourers are said to work by the month, which is to say that they work regularly for one employer ... Ganda farmers often say indignantly that the foreigners are becoming wealthy by accepting three or four "tickets" a month." Ibid. p. 121-122.

accumulates. Thus their employers annually receive credit in kind which can compensate for lack of working capital. This credit, which individual farmers (particularly the larger ones) often renew annually, takes the form of a recurrent debt from which many borrowers do not break free. Since the labourers do not charge any interest on the credit which they provide, there is little incentive for farmers to do this.

The labourers can claim payment at any time, but since they are usually target workers wanting to save cash either to take home or occasionally to use to establish their own plots in Buganda, the system of postponed payments is acceptable on both sides provided the employers meet their obligations.(1) Where payments are made on a six or twelve monthly basis they normally coincide with the main coffee harvest (June-August) and the ripening of the smaller "fly-crop" which is harvested in December-January.

Some of the smaller farmers interviewed employed labourers for a shorter period, usually from March to June. By May 1966, the 37 co-operative society members who were interviewed in that month had accumulated debts worth Shs. 2,465/- in wages postponed over the first four months of the year. This give an average of Shs.66/- per farmer, equivalent to one labourer's wage for 2-2½ months' work. The 18 progressive farmers interviewed had accumulated debts worth Shs.4,865/- in unpaid wages over the same period, giving an average of Shs.270/-

(1) Following the 1965 drought, when much less cash than usual was in circulation following a very poor harvest, a number of farmers were sued by their labourers in the local courts for overdue wages.

per farmer, equivalent to 9 - 11 months' work by one labourer.(1)

In Lango, a different form of credit is customarily provided for labour performed. The employment of labourers for cash on more than a casual, single task basis is rare. Most farm labour is carried out either by the farmer and his family or by the farmer and his wife/wives working in one of several alternative forms of traditional work groups. Of these, the two most important are "wang tic" and "alea". A "wang tic" consists of group, normally of 10-40 farmers or their wives, who agree to work for each other on a rotational basis. For example, during the months when land is being opened for cotton, the group works first on one member's farm, then on another's. Each group has an elected head. In some areas a strict rotational system of work is followed, with members drawing lots for their initial place in the rotation. In each instance the farmer whose land has been worked provides beer as payment in kind for the group members when the work has been completed.

"Alea" groups are formed by four farmers who enter into a reciprocal agreement to work for each other on an exchange basis, no payment being made. They are of varying importance in different parts of the district. At Akan Akwo Growers' Cooperative Society in Oyam County (West Lango), 15 out of 19 members interviewed in March 1966 said that they belonged to "alea" groups. At Awelo Growers' Cooperative Society in Kioga County (South Lango) only 2 out of 20 members interviewed said that they did so. It can be argued that these "alea" groups do

(1) i.e. 9 months at a wage rate of Shs. 30/- per month, or 11 months at a wage rate of Shs. 25/- per month.

provide credit in kind to individual farmers, a members' debt taking the form of his obligation to work at future dates on the farms of each of the other members in exchange for work performed by them on his farm. However, since the period of time during which an obligation is outstanding is usually short and since each member of the group is by virtue of the membership expected to do the same amount of work, the writer has not classified any of the obligations incurred through membership of an "alea" group as debts.

In addition to these permanent membership groups, groups summoned by a farmer may work for him for a day for kongo (beer), gweno (a chicken), some other form of food, or for tabacco (cigarettes), without being bound to work together for the season. In some cases a farmer who belongs to a "wang tic" may be absent or ill when his land is worked or may not have brewed beer. In this case he may postpone payment for work done under a system called "dira". When payment is postponed it is customary in some parts of the district to supplement what would have been the original payment with more beer or with some form of food. Thus interest is also paid in kind. Of 58 farmers interviewed in Lango in March 1966, 34 stated that they sometimes employed labour under this system. The normal period for postponing payment appeared to be 1 - 2 months. The longest instance quoted was one year. The payments made in kind for work done by a "wang tic" can be given a cash value. Where beer was used farmers claimed that the cash value of the beer consumed was up to 100% higher than the value of the work done had the labourers been paid cash. It is to be assumed that "wang tic" and "dira" beer parties fulfil a social as well as an economic function.

Payments made under "dira" have been classified as credit because the debtor cannot absolve himself from the debt by working on each of his creditors farms. This alternative might well not be possible given the size of some "wang tic" groups. In addition, it would be contrary to Lango social custom to turn the debtor away from all subsequent beer parties until he had fulfilled his obligations. The debtor owes a specific payment, and his debt is not self-liquidating by virtue of his membership of the "wang tic".

8. Rural Moneylenders.

Since in other countries (e.g. India) moneylenders are an important source of credit for the small farmer, an attempt was made to ascertain whether any lenders existed in Masaka or Lango. To operate legally in Uganda a moneylender must be licensed. In 1964 only two lenders applied for licences in Uganda.(1)

In both districts 114 of the 119 farmers interviewed in January and March 1966 were asked whether they knew of any money-lenders operating in their areas. Members of staff in the Departments of Cooperative Development and Agriculture who were assisting the survey were asked the same question, as also were other people who in their various capacities were well acquainted with either of the two districts. While no precise

(1) See John Loxley "The Development of theMonetary and Financial System of the East African Currency Area 1950-64", 1966, unpublished Ph.D. thesis.

information was obtained, very different general responses were given in the two areas. In Lango, every farmer interviewed stated that he did not know of any money-lenders. To the ordinary cooperative society members the suggestion that such a person might exist in their neighbourhood was apparently somewhat offensive - presumably to the Lango tradition of group help (cf. The communal work groups).[1] Several of the progressive farmers however, regarded themselves as the only important local source of cash loans. They all denied charging interest, and it is probable that strong social disapproval prevented them from doing so. (One farmer (also a cattle trader) said that he felt that he should be allowed to do so, but was prevented by local custom.)

On the other hand, in Masaka 14 farmers out of 56 who were asked this question stated that they knew or had known of a money-lender operating near their village. None of these people were said to earn an income solely through money-lending, being traders and/or farmers as well, butthe writer received nine accounts of Baganda lenders who charged interest ranging from 30% -240% per annum. (One farmer stated that a borrower might be asked to pay Shs.200/- interest on Shs.500/- borrowed for two months.)[2] In addition to charging high interest rates some of the lenders described also required security. The District Cooperative Credit Scheme Specialist described a farmer

(1) See also J. Driberg "The Lango, a Nilotic Tribe of Uganda", T. Fisher Unwin, London, 1923, p. 97.

(2) In some cases the farmers were passing on information that they had heard but not substantiated; others recounted their own borrowing experience.

known to him personally who had increased the size of his landholding by taking land-titles as security for loans and keeping them when the loan was not repaid. One farmer stated that when borrowing he had given as security one year's yield from his coffee shamba. Several informants said that the interest charges varied according to one or more of these factors: the lender, the borrower and the duration of the loan.

When the writer asked for what purposes such expensive loans were obtained, three examples were given: (i) to repay stolen money (ii) to pay a dowry (iii) to pay school fees. Thus it would seem that these loans are not used directly for agricultural purposes.

There appear to be three factors which could account for the acknowledged existence of a small number of money-lenders in Masaka as opposed to their complete absence in Lango. Firstly Masaka Division was, with Mengo and Busoga, one of the first areas to be developed following the establishment of the British Protectorate in 1900 and has had longer contact with a cash economy than Lango. Buddu County in Masaka, where the interviews took place, is probably one of the three wealthiest counties in Buganda Region.(1) The Lango economy is still less monetised than that of Masaka. Moreover, in Masaka but not in Lango there is legal title to land. Thirdly, whereas the Langi have a tradition of communal self-help the Baganda are reputed to be individualists.

(1) By these criteria, it would be interesting to know whether instances of money-lending are also to be found in Mengo, Busoga and Bugisu Districts.

9. Other Sources of Capital Used for Farm Development.

In an attempt to ascertain what sources of capital are used when credit is not available (either for investment or recurrent operations), 115 farmers who received short- or medium-term credit (57 in Masaka and 58 in Lango) were asked to summarise the extent to which they had developed their shambas and the sources of capital that they used. They were also asked to state for how long they had lived on their shambas, in order to obtain some idea of the length of time over which development had taken place.

In Masaka, 45 of the farmers had lived on their present shambas for over 10 years. 52 had expanded their main cash-crop (coffee) acreage, and 50 had expanded their food-crop acreage. The majority (41) of the farmers, however, had developed their shambas from uncultivated bush, and the average coffee acreage of the 37 cooperative society members, the extent of whose shambas was representative of the majority of farmers in the division, was under 2 acres.(1) Four farmers had taken over and improved coffee that had reverted to bush. Fifty farmers had erected houses, and two had put up fencing.

When these farmers were asked what sources of cash they had used to finance these developments, 34 stated they had used cash obtained from the sale of crops, and 33 stated they had used cash earned from off-farm employment. 48 of these farmers either had currently or had had in the

(1) See Chapter V, Table V. 17.

past some form of off-farm employment. Three had current full-time jobs;[1] 28 had current part-time off-farm work. (These people were mainly self-employed duka owners, cattle traders, carpenters, bark-cloth makers, etc.) Of the remainder 13 had had full-time jobs and 4 had had part-time work. Five progressive farmers also stated that they had bank savings accounts which they had been able to draw upon.

Table VI. 5

Sources of Cash Used by 57 Masaka Farmers to Develop their Farms.

1. No. of farmers living on their present shambas for over 10 years.	45
2. No. of farmers who had expanded the acreage of their main cash-crop.	52
3. No. of farmers who had expanded their food-crops acreage	50
4. No. of farmers who had in fact developed their shambas from uncultivated bush	41
5. No. of farmers who had erected houses.	50
6. No. of farmers who had erected fencing	2
7. No. of farmers who used cash obtained from crop sales to finance part of these developments.	34
8. No. of farmers who used cash obtained from off-farm employment to finance part of these developments.	33
9. No. of farmers who either had or had had some form of off-farm employment.	48

In Lango, farmers have traditionally practised shifting cultivation, but the current trend is in favour of permanent residence with rotational

(1) This sample does not include the exotic cattle owners. Of the 26 private exotic cattle owners in the division 25 currently have off-farm employment.

cultivation near the homestead. 29 out of 58 farmers stated they had lived in the same place for over 10 years.(1) In so far as the majority of farmers in Lango invest in the improvement of their farms, this takes the form of (i) bush-clearing (though with a three year resting period in the rotation the bush may at least partly regenerate); (ii) construction of a homestead; (iii) the purchase of traditional tools (hoes, axes, baskets, thumb-rings) plus a plough or ploughs, and possibly a spray-pump or ox-drawn cultivator; (iv) training and/or purchasing oxen for ploughing; (v) erection of fencing and cattle kraals;(2) (vi) erection of housing. A farmer may also undertake annually measures for the prevention of soil-erosion by ploughing on the contours and leaving wash-stops. He may also, either annually or less frequently, expand his crop acreages: a farmer in Lango may expand his crop acreage one year and contract it the next; 25 farmers, however, stated that they now cultivated a larger acreage than when they first occupied their shambas.

It appears that most of these developments are still paid for in kind, (e.g. most farmers had expended either no cash or less than Shs.100/- on building their houses). Nonetheless the farmers were asked what sources of cash they had used, if any, to supplement payment in kind for any permanent improvement to their farms: 28 cited crop sales, 15 off-farm employment and 15 cattle sales. Three of the interviewees had full-time off-farm employment and seventeen had part-time employment. Of the remainder 19 had had full-time employment at some time in the past

(1) 42 of these farmers were over forty years old.

(2) Fencing is rare. In most parts of Lango it is unpopular because it contravenes the traditional Lango system of communal land tenure.

and 8 had had part-time employment.

Table VI. 6

Sources of Cash Used by 58 farmers in Lango to Develop their Farms.

1.	No. of farmers living on their present shambas for over 10 years	29
2.	No. of farmers who had expanded the acreage of their main cash crop	25
3.	No. of farmers who had expanded their food crop acreage	25
4.	No. of farmers who used cash obtained from crop sales to finance a part of any permanent development of their shamba	28
5.	No. of farmers using cash obtained from off-farm employment to finance a part of any permanent development of their shamba	15
6.	No. of farmers using cash obtained from cattle sales to finance a part of any permanent development of their shamba	15

It seems probable that in both districts cash obtained from off-farm employment has been an important factor in enabling a farmer both to build or improve a house and to develop his shamba.

In order to establish what other sources of capital are used by larger farmers who cannot raise credit a "control" of 21 individuals in Lango owning approximately the same equipment as the 19 progressive farmers who received loans were asked to give an account of the sources of cash which they used to purchase their equipment. It was impossible to find 12 farmers owning exactly the same ox-drawn equipment as those who received credit since no farmers have purchased polyculteur outfits from their own funds. However, the 12 members of this section of the control owned between them the following items of capital equipment.

Table.VI. 7

Capital Equipment owned by 12 Progressive Farmers who did not receive Government Loans.

Item	Number Owned
Small Ploughs (Safim and V.S.8)	22
Large Ploughs (V.S.12)	2
Cultivators	5
Harrows	2
Plantector pumps	13
Boom Spray pumps	2
Cattle pumps	2
Bental seeders	4
A.H. seeder	1
Serere Frame	5
Ox-cart	1
Milking cans	2
Milking shed	1
Barbed wire fencing	2 farmers
Hen house	3
Chicken wire	3 farmers
Trained oxen	48

In order to buy this equipment the farmers stated that they had used the following sources of capital:

Salary from off-farm employment	7
Crop sales	6
Sale of cattle	3
Loans from relatives	2

The nine tractor owners who were interviewed and who did not receive loans under the Progressive Farmers'Loans Scheme, stated that they used the sources of capital given in Table VI. 8 below. These farmers were selected from the twenty-one private tractor owners in Lango District who owned tractors purchased without the use of credit obtained under the Progressive Farmers'Loans Scheme. For reasons of convenience they were those living nearest to the farmers who obtained loans.

Table VI. 8

Sources of Capital used for the Purchase of Tractors in Lango by Nine Individuals who did not Receive Credit under the Progressive Farmers' Loans Scheme.

1. (i) Shs.16,000/- drawn from savings account (built up from off-farm employment as senior civil servant).
   (ii) Shs.4,000/- subscribed by four brothers, who will participate in running the tractor and expect a share (proportion unspecified) in the returns.

2. Full purchase price drawn from savings account (built up from off-farm employment first as a civil servant and then in Lango Cooperative Union).

   Trailer purchased with income earned from provision of hire service.

Table VI. 8 (Cont'd)

3. (i) Shs.12,000/- loan obtained from African Loans Fund in 1961.

   (ii) income from tobacco sales

   (iii) sale of cattle

4. (i) Withdrawals from savings account built up from off-farm employment in the police force

   (ii) Shs.1,500/- subscribed by a brother.

5. Savings from off-farm employment: joint purchase by three brothers all owning dukas.

6. Tractor bought on hire purchase. Shs.9,500/- deposit met as follows:

   (i) Owner: Shs.3,000/- saved from off-farm employment

   (ii) Owner's father: Shs.3,500/- saved from off-farm employment in Forestry Department

   (iii) Owner's brother: Shs.3,000/- saved from off-farm employment in Income Tax Department.

7. (i) Shs.14,000/- drawn from savings account (built up from off-farm employment in Local Government)

   (ii) sale of cattle, Shs.4,000/-

   (iii) sale of cattle by friend claiming a share in the tractor, Shs.3,000/-

   (iv) trailer bought with income earned from provision of tractor hire service.

Table VI. 8 (Cont'd)

8. Tractor bought on hire purchase: Shs.8,000/- deposit met from savings from produce-trading.

9. Tractor bought on hire purchase and jointly owned by two cousins: Shs.14,000/- deposit met by younger cousin (in return for payment for his schooling) from savings from off-farm employment (duka owner).

In Masaka, a similar control was not interviewed. However, of the 29 exotic cattle owners in the district only one has no off-farm employment,(1) and it seems clear that the majority of owners have drawn on savings from off-farm employment in order to establish their dairy enterprises.

A recent survey of 110 large farmers (82 were cultivating 20 acres and over) conducted in Buddu County, Masaka, and three counties in Mengo Division (also South Buganda) revealed that only 22 of the farmers had undertaken farming as their initial occupation and only 18 stated that farming had been their only occupation, the remainder having had various forms of off-farm employment ranging from self-employed occupations such as shop-keeping and cattle trading to employment in large private enterprises or the civil service.(2)

These farmers are not necessarily more efficient than their smaller

(1) This farmer has received a Shs.20,000/- loan.

(2) The survey was conducted by A. Mafeje, social-anthropologist, member of the Cambridge Large Farm Survey Team, who was working in Buganda in 1966. The Team's report is not yet published.

counterparts.[1] Some of them, however, have used part of their savings accumulated from off-farm employment to invest in profitable enterprises such as dairy-farming and sugar production. The emergence of this group is an important phenomenon. While these farmers may have been partly influenced by a personal desire to return to the land, they have brought to their farms a combination of entrepreneurship and capital that is lacking amongst most of the agricultural community.

10. Conclusion.

Two main points emerge from this somewhat superficial survey of other sources of credit and capital used by farmers. The first is that it is inaccurate to say that no non-institutional sources of credit are available to farmers; however, most of the loans that are obtainable from these sources are small and of short duration. Secondly, it appears that a very important source of capital for investment in farming is savings earned from off-farm employment.

(1) See D. Hougham, "Half an Agricultural Revolution in Buganda", Makerere University College Faculty of Agriculture, Rural Development Research Paper No. 38, mimeo. 1966.

Chapter VII.

The Provision of Credit for Tea-Outgrowing, Flue-cured Tobacco Production, Ranching, Dairy Farming, and Group Farming

The two loans schemes designed to promote production of tea and flue-cured tobacco have already been referred to.(1) In this Chapter these schemes will be discussed in more detail, and the provision of credit for ranching and on the Group Farms will also be considered.

1. The Tea Outgrowers Scheme.

1. 1 Profitability of Tea Production Compared to Other Crops.

Tea production is one of the most profitable enterprises open to farmers in Uganda. In 1964 the Uganda Tea Commission made the following estimates of the profits that can be derived from different cash crops, in areas that have potential for tea production:

(i) In much of Buganda, robusta coffee can be expected to give yields of 4 - 5 cwt. clean coffee per acre, giving a gross return of Shs.500 - Shs.600/- per acre. "Since about two acres represents roughly the average family holding of coffee, the (gross) family income is in the region of Shs.1,000 - Shs.1,200/- per annum."(2)

(ii) In some parts of Buganda, e.g. Mityana, cotton is also important

(1) See Chapter II, pp. 104 - 111.

(2) "Uganda Tea Survey, 1964", Commonwealth Development Corporation, 1964, pp. 30 - 31.

as a cash crop, "With cotton yields of 500 - 600 lbs. seed cotton per acre, (gross) income from this source from an acre of cotton is about Shs.250 - 300/-, which, added to the coffee yield of about 4 cwt. per acre, represents an income of about Shs.800/- from two acres."(1)

(iii) "Ankole, Toro, N.W. Mubende and Bunyoro are short of suitable sources of cash incomes except for working on tea estates, family incomes deriving from selling surplus bananas and millet, and from growing limited areas of robusta or arabica coffee, cotton or fire-cured tobacco. These (gross) incomes are in the range of Shs.350 - 450/- per annum from farmers' smallholdings."(2)

(iv) Net incomes from tea, on the other hand, can be expected to average Shs. 1,045 - 1,500/- per acre, or Shs. 2,090 - 3,000/- for a two-acre holding.(3)

(1) "Uganda Tea Survey, 1964", Commonwealth Development Corporation, 1964, pages 30 and 31.
(Per acre costs and revenue pertaining to tea production are discussed in detail later in the Chapter.)
In Buganda the average area of coffee per holder is 1.75 acres (range 0.89 in Mubende to 1.96 in Masaka) and the average area of cotton grown per holder is 0.87 acres. See"Report on Uganda Census of Agriculture", Vol. III, Government Printer, Entebbe, 1966, pp. 61 and 70.

(2) "Uganda Tea Survey, 1964", pp. 30 - 31.

(3) Ibid. pp. 30 - 31.

1. 2 Limitating Factors to Increased Production.

One of the limiting factors to the expansion of tea production in Uganda is the limited availability of suitable ecological conditions. These are (i) well-distributed rainfall of 40" to 80" per annum,(1) (ii) a cool climate and (iii) deep well-drained soils with a pH of from 4.0 to 6.0. In Uganda the areas best suited to tea production are confined to the Western Region. Of the four districts of this Region:

> "Toro District has the greatest known area of land suited to tea growing in respect of the amount and distribution of rainfall at an altitude of around 5,000 ft. It has deep clay loams and acid soils in the pH range 4.5 to 5.4 over much of the area, but there are areas where the pH is high. This block of good tea land, containing such well-known estates as Kijura, Munobwa, Mwenge and Kiko, lying to the south of Lake Albert, covers about 800 square miles, with about 250 square miles available for development with outgrower tea." (2)

In this chapter particular reference will be made to the production of tea in Toro District.

Three further factors which have limited the expansion of tea production among peasant farmers are; (i) lack of sufficient capital for the initial investment, (ii) the relatively long waiting period before tea sales can begin (particularly under the older methods of pruning), (iii) the necessity that green leaf should be delivered to the factory on the same day that it is plucked: this restricts small-scale tea production to those areas where the large estates are operating their own factories.

(1) "A rainfall of 40"-60" is fully adequate if it is well distributed over the year and the dry seasons are not too prolonged and receive worthwhile showers." Uganda Tea Survey, page 20.

(2) "Uganda Tea Survey," page 21.

For coffee, the gestation period for investment is approximately the same length as for tea. In Buganda and Busoga however coffee growers had an annual cash-crop, cotton, on which many of them could depend while waiting for the coffee to come into bearing. Only in areas of heavy population pressure, which in the 1940s and '50s were relatively few, was dependance on an alternative cash-crop difficult. Furthermore tea requires far more skilled maintenance than coffee both before and after it comes into bearing, and before coming into bearing it has heavier labour requirements. The capital outlay on the purchase of stumps costing a far higher price than coffee seedlings,(1) and planted at a close spacing, plus the high labour requirement and the skills required, make it more difficult to introduce a tea enterprise on a peasant farm.

A farmer who does produce tea on a small-scale is called an "outgrower". This term refers to an individual who occupies a tea garden near to an existing plantation, and, by agreement with the estate owner or manager, sells his tea to the estate factory. The outgrowers are mostly distributed within a radius of 12 miles from the factories. The Department of Agriculture is responsible for the provision of planting material to them and, although there is, at any rate in Toro, an unestimated acreage of unlicensed tea, all outgrowers are officially required to hold licences.

In 1963 the total acreage of tea under estate production was estimated

(1) During the 1940s and early 1950s arabica coffee seedlings were sold at 2 cents each. Robusta coffee seedlings were distributed free until 1948 when a price of 2 cents per seedling was introduced - Annual Report of the Department of Agriculture, 1948, p.22. Tea stumps are sold at -/25 each.

at 22,494, while African outgrowers were cultivating 1,785 acres.[1] Seven of the largest estates are owned by Agricultural Enterprises Limited; the rest are owned by non-Africans.

1. 3 Planned Expansion and World Market Conditions.

"Tea production has grown every year since 1961, and has more than doubled in the five-year period 1961 to 1966. Between 1965 and 1966 production increased by 2,800 tons, which compares with an increase of only 700 tons between 1964 and 1965. -- It is estimated that production in 1967 will show a further increase of 1,500 tons to reach a total of 12,500 tons."[2]

Table VII. 1

Ugandan Tea Production 1961 - 1967

	'000 Tons
1961	5.0
1962	5.5
1963	6.1
1964	7.5
1965	8.2
1966	11.0
1967 (Estimate)	12.5

Source: Uganda Government, "Background to the Budget 1967-68", Government Printer, Entebbe, 1967, p. 12.

(1) Source: "Uganda Tea Survey", p. 3.

(2) Uganda Government, "Background to the Budget 1967-68", Government Printer, Entebbe, 1967, p. 12.

Tea is already Uganda's third most important export crop and fourth most important export. The contribution of tea to export earnings is, however, very small when compared to that of coffee and cotton.

Table VII. 2

Value of Uganda's Four Main Exports, 1965 and 1966

	1965		1966	
	£m.	% of total exports	£m.	% of total exports
Coffee	30.4	48.5	34.8	52.8
Cotton	16.8	26.7	15.3	23.3
Copper, Unwrought	8.0	12.7	5.8	8.7
Tea	2.4	3.8	3.2	4.8

Source: Uganda Government "Background to the Budget 1967-68", Government Printer, Entebbe, 1967, p. 25.

Following the introduction, since, 1960 of various credit schemes designed to assist tea outgrowers, the number of African outgrowers near to established factories has expanded rapidly. The planned rate of expansion over the five years 1966-70 is shown in Table VII. 3 below. It is not Government policy to develop estate production of tea; the area under estate cultivation was expected to expand to 28,383 acres in 1966, and to remain constant thereafter.

The Uganda Government's policy with regard to the development of tea production has to be seen in the light of world market conditions.

Table VII. 3

THE FIRST SCHEDULE

The Assessed Acreage Planted to Date and the Forecast Acreage to be Planted with Tea Year by Year under the Programme.

Region	District	Factory Area	1965 and before	1966	1967	1968	1969	1970	Subtotal 1966-70	Total
Western	Toro	Munobwa	610	70	80	90	90	90	420	1,030
Western	Toro	Kijura	400	140	130	160	160	160	750	1,150
Western	Toro	Kiko	580	150	200	200	200	200	950	1,530
Western	Toro	Mwenge	650	330	400	400	400	400	1,930	2,580
Western	Ankole	Buhwezhu	270	200	260	90	90	90	730	1,000
Western	Ankole	Ankole Tea Co.	460	200	230	250	250	250	1,180	1,640
Western	Kigezi	Kayonza	590	260	260	300	300	300	1,420	2,010
Western	Bunyoro	Bugambe	160	130	160	200	200	200	890	1,050
Buganda	Mityana	Namutambe	180	60	70	80	100	100	400	580
Buganda	Lugazi	Kasaku	30	30	60	60	70	70	290	320
Buganda	Masaka	Marumeru	70	30	50	70	70	70	290	360
Buganda	N.W.Mubende	Muzizi	-	50	100	100	100	100	450	450
		TOTAL	4,000	1,650	2,000	2,000	2,020	2,030	9,700	13,700

Source: Uganda Tea Growers' Corporation.

World Tea production is already in excess of annual consumption, with increased tea plantings, and a 10% per annum decline in world consumption of tea over the past 3 years (1964-1966),[1] there is a strong probability that within the next ten years an international agreement will establish quotas for all producing countries. Uganda, which at present produces a very small proportion of total world production, stands to gain by expanding her tea acreages at the present time in order to obtain a larger quota, should quotas eventually be allocated. Her present contribution to world production is shown in Table VII. 4 below. In expanding tea production the Uganda Government has to take account of two possibilities: (i) that prices will fall and (ii) that if an international agreement leads to the establishment of quotas, Uganda's quota may be less than her total production.[2] In this case it will be necessary to encourage the less efficient producers to go out of production: these may include some of the outgrowers who are currently being encouraged to plant tea.

The Uganda Government's plans for expanding production are based on the assumption that prices will not fall very far. "Payments to outgrowers under present arrangements vary between one factory and another and in the last year (1963/64) have been about 45 to 55 cents per lb. of green leaf." After "some allowance" for future reductions in market prices, the Uganda Tea Survey assumes that in future the gross payment to the grower will not fall below 40 cents per lb. of green leaf.[3] Contingency plans should Uganda

(1) For detailed figures see the International Tea Committee's Annual Bulletin of Statistics, December 1966.

(2) As is already the case with robusta coffee.

(3) "Uganda Tea Survey," page 31.

find herself overproducing tea have not been published and probably have not been prepared.

Table VII. 4

A. Total Land Under Tea, by Country, 1964.

Country	'000 hectares
U.S.S.R.	70
S. America	
Argentina	18
Brazil	4
Peru	3
Asia	
Ceylon	240
Taiwan	35
India	338
Indonesia	68
Japan	49
Malaysia	4
Pakistan	35
S. Vietnam	10
China	n.a.
Africa	
Congo (Kinshasha)	1
Kenya	25
Malawi	12
Mauritius	2
Mozambique	15
S. Rhodesia	2
Tanzania	9
Uganda	10

Source: F.A.O. Montnly Bulletin of Agricultural Economics and Statistics, November, 1966.

Table VII. 4 (Cont'd)

Breakdown of World Tea Production, by Continent, 1964

Continent	'000 metric tons
U.S.S.R.	44.6
S. America	15
Asia	830
China mainland	158.8
Africa	60
(Uganda)	(7.6)
Total	1115.4

Source: F.A.O. Monthly Bulletin of Agricultural Economics and Statistics, November 1966.

1. 4 The Approximate Cost of Establishing Tea.

Although tea is a crop which can yield a relatively high level of returns once it is in full-bearing, it is a costly crop to establish. At the recommended spacing of 5' x 2½',(1) approximately 3,500 stumps(2) are required per acre: at a price of -/25 per stump this comes to a total of Shs.875/- for stumps alone. Secondly, clearing land and preparing it for planting, ranges in cost from approximately Shs.65/-(3) to Shs.500/- or more, depending on the degree of bush. In addition, the grower has to maintain his tea for at least 18 months before he can expect to receive any return. (Under previously recommended cultivation techniques

(1) This applies to the Western Region of Uganda.

(2) The exact figure is 3,485.

(3) The cost of rotavating one acre (Tractor Hire Service charge).

he had to wait for as much as three years).

The method of bringing tea into bearing that is currently recommended by the Uganda Tea Growers' Corporation (which is responsible for all outgrower production), is that the tea plants should be bent at approximately 12 months after planting. No pruning takes place at this point, and the farmer can begin plucking green leaf six months later. Output of green leaf can then be expected to rise roughly as follows:-

Table VII. 5

Approximate Rise in Yields of Green Leaf (following bending at 12 months)

Year	Yield (lbs. green leaf)
1	-
2	900
3	1,800
4	3,200
5	4,500

Source: R. Tainsh, Officer-in-charge, Uganda Tea Growers' Corporation estate and extension station, Fort Portal, with one modification: Tainsh originally suggested a yield of 3,600 lbs. for year 3.

If a farmer chooses to prune rather than bend, he is now advised to prune at approximately 12 and 24 months from planting and thereafter to follow a three year pruning cycle. (This cycle is advocated to all farmers irrespective of the method used to bring tea into bearing).(1)

(1) These recommendations do not necessarily apply outside Uganda. Previously farmers were advised to prune at 12, 24 and 36 months from planting and therefore had to wait until the 4th year from planting before they could start plucking.

He will start plucking approximately 12 months later than the farmer who bends. The writer has been informed(1) that the earlier yields obtained from bending constitute a net gain to the producer. In the detailed costings given later in the chapter it will be assumed that this technique is used.

A detailed study of tea outgrowers in Toro District in 1965 produced the following estimates of costs and yields over the first four years.

Table VII. 6A

Costs

1st Year.	Man/days	Rate per day Shs.	Cost (Shs.)
Slashing & Uprooting st.	20	2	40
Digging: 1st digging	50	2	100
2nd digging	25	2	50
Lining & hole digging	30	2	60
Planting	28	2	56
Weeding (12 times)	144	2	288
Fertilizer application	4	2	8
Erosion control	7	2	14
Fertilizer $(NH_4)_2 SO_4$) ½ cwt. @ 27/- per cwt.			13.50
Stumps 3485 @ -/25			871.25
			1,390.75

of which 884/75 = stumps and fertilizer

506/- = labour

(1) By the Director of Rwebitaba Tea Research Institute, Fort Portal.

Table VII. 6A (Continued)

2nd Year	Man/days	Rate per day Shs.	Cost (Shs.)
Weeding	120	2	240
Pruning	20	2	40
Fertiliser application	4	2	8
15% infills = 522 stumps @ -/25			127
Infill labour	4	2	8
Cost of fertiliser: 1 cwt. @ 27/- per cwt.			27
			450
3rd Year	**Man/days**	**Rate per day Shs.**	**Cost (Shs.)**
Weeding	96	2	192
Pruning	20	2	40
Fertiliser Appl.	6	2	12
Fertiliser @ 2 cwt. per acre @ 27/- per cwt.			54
Plucking	60	2	120
			418

Since framing of the tea table continues up to the 4th year and the yield from the 3rd year's crop is estimated to be about 1,000 lbs. green leaf per acre, the cost of establishment has been worked out up to the end of the 4th year.(1)

(1) The outgrowers were not assumed to bend their tea.

Source: A. Manyindo "African Out-grower Tea Development in Toro Kingdom", Unpublished Special Project, Makerere University College 1965/66, p.21

Table VII. 6 (Continued)

4th Year	Man/days	Rate per day Shs.	Cost (Shs.)
Weeding	72	2	144
Pruning	20	2	40
Fertiliser application	8	2	16
Plucking	80	2	160
Fertiliser Cost 4 cwt. @ 27/-			108
			468

These costings may in some respects be underestimates,[1] but they are sufficient to show that a farmer cannot hope to establish a tea enterprise unless he already has capital of his own and/or has access to credit. It is fair to assume that the ordinary peasant farmer will not normally have capital of this value readily available. In actual fact 75% of tea outgrowers in Toro District have regular jobs (and therefore incomes) outside agriculture.[2] Nonetheless most of them have established their tea gardens with the aid of credit.

1. 5 The Provision of Credit to Outgrowers.

Three successive credit schemes have been designed to assist Uganda outgrowers. The first, which was the most limited in scope is described below:

"A scheme to assist established tea growers in Toro District

(1) See page 407.

(2) Manyindo op. cit. p. 5.

> was initiated during February (1962) at the request of the Department of Agriculture ... No financial assistance was (previously) available for land owners growing tea on a substantial scale. Although the number of growers concerned was small, the individual amounts required were large and in view of the time required for tea to mature, long moratoria on loan repayments were necessary. To facilitate the issue of loans to them, arrangements have been made for their applications to be scrutinized by the Agricultural Officer (Tea) who gives them technical advice, and whose support is required before a loan can be approved. Several considerable loans under this scheme have already been granted." (1)

The loans, which were made from the African Loans Fund and the I.C.A. Funds at an interest rate of 7½% per annum were paid out in cash. They were intended both for the purchase of stumps and the payment of labour. Large parts of these loans were misspent, the Department of Agriculture having no control over the use of the borrowed cash.

In 1963 a new scheme was introduced, designed to assist the smaller outgrowers. Loans were provided in kind only, and only for the purchase of tea stumps. They were granted from the same suurces as the preceding loans, for a ten year period, with a four-year moratorium. The interest rate was again 7½% per annum. Repayments under this scheme are only due to begin in 1967; it istherefore too soon to assess what the repayment record will be. The scheme continued to operate up to 1966. Loans were again only granted on the approval of the Agricultural Officer (Tea). The Agricultural Officer did not visit the majority of applicants for loans but relied on the recommendation of the Tea Assistants. Their assessments of the applications were based primarily on the general

(1) Annual Report of the African Loans Fund 1960/61, page 1.

standard of farming of the applicant.

An attempt to ensure loan repayments was made in the following manner: each borrower was required to sign an agreement under which he undertook to sell his tea to a particular factory; he authorised this factory to deduct 8 cents per lb. from the value of his green leaf sales and to pay this sum to the Uganda Credit and Savings Bank until such time as the loan plus interest should be fully repaid.(1) The factory also signed the agreement, undertaking to accept the grower's green leaf subject to certain quality requirements.(2)

During 1967/68 a third scheme is to be introduced. This scheme, which wasrecommended in broad outline by the Uganda Tea Commission,is designed to provide credit to outgrowers through cooperative societies which have still to be formed. The scheme centres on the cooperatives and The Uganda Tea Growers' Corporation which was established by statute in 1966.(3) A full list of the Corporation's objects and functions is given in Appendix VII. 2. While there is provision for the representation of tea growers on the Board of Directors, the latter are all appointees of the Minister of Agriculture, Cooperative Development and Forestry. Section 2 of The Act states that:

> "(i) The Governing body of the Corporation shall be a Board of Directors consisting of a chairman who shall be appointed by the Minister, and the following members, namely,
>
> a) the Commissioner for Agriculture ex-officio, or his representative;

(1) For a copyof the Agreement see Appendix 1 to this chapter.

(2) For the approximate value of loans made under the Scheme see Chapter II page 105.

(3) The Uganda Tea Growers' Corporation Act, February 1966.

b) the Commissioner for Co-operative Development, ex-officio, or his representative;

b) not less than three nor more than five members who shall represent tea growers and who shall be appointed by the Minister from lists of nominations not exceeding nine names submitted in that behalf by the tea growers or the co-operative societies of tea growers;

d) the general manager of the Agricultural Enterprises Limited, ex-officio, or his representative; and

e) two other directors who may be appointed by the Minister.

(ii) For the purposes of constituting the first Board the representative members of the Board under paragraph (c) of the preceding subsection shall be appointed by the Minister without nomination.

(iii) The members of the Board other than the ex-officio members shall hold office for a term of two years and shall be eligible for reappointment." (1)

In order to finance the loans to members the cooperative societies will, in turn, borrow from the Uganda Tea Growers' Corporation which hopes to obtain a loan to finance the Scheme from the World Bank. An application has been made to the Bank for a loan of £1.2million; approval is expected during 1967. The Government will borrow from the Bank at an interest rate of ¾% per annum, and the loan will be for a period of 50 years. £.35 million will be retained by the Uganda Government in order to pay the salaries and transport allowances of the tea extension staff who have now been seconded from the Department of Agriculture to the Uganda Tea Growers' Corporation. The retained funds will also be used to build staff housing.

The remaining £.85 million will be relent to the Uganda Tea Growers' Corporation for 20 years at an interest rate of 5% per annum. Part of this amount will be onlent to the cooperative societies for relending to members

(1) The Uganda Tea Growers' Corporation Act, February 1966, section 2, paragraphs 1, 2 and 3.

for the purchase of tea stumps and fertilisers. The interest rates for these two final stages have not yet been determined, but it appears probable that the grower will be required to pay a higher rate than the 7½% per annum previously required by the Uganda Commercial Bank. Probably he will be required to pay 12% per annum as under the Cooperative Credit Scheme. Both the Corporation and the societies are supposed to earn sufficient income to cover their costs. The main source of income for the societies will be the difference between the rates of interest at which they borrow and then relend.

Loan repayments will also be made through the cooperative societies, by means of a levy of 10 cents per lb. on all green leaf sold by the borrower up to the time that his loan plus interest is fully repaid.

In theory, the societies should be covered against the possibility of default by their ability to deduct the value of overdue instalments from the value of defaulters' tea sales in the succeeding year. Whether this will be possible in practice will depend on how difficult it is for an outgrower to find an alternative outlet for his tea, either (i) by joining more than one society, (ii) selling through the name of a friend or relative or (iii) selling direct to a factory. The prevention of the first two alternatives will depend on the standard of management in the societies and on cooperation between managers. The prevention of the third alternative depends on the readiness of the factories to agree that they will only buy outgrower green leaf from the primary marketing societies. The factories probably will agree to this since they will then have the advantage of only purchasing teadelivered in bulk.

Individual Outgrowers will be provided with credit worth up to 100% of the value of the stumps and fertilisers required for their first five acres of tea, and worth up to 50% of the cost of these items for the next five acres. No further credit will be provided. Nonetheless the cash-crop acreage that will thus be established will be five times as large as the average coffee and cotton acreages per farm in Uganda.[1] In addition, tea yields a substantially larger income per acre. When it is considered that 70% of tea outgrowers in Toro in any case have off-farm occupations,[2] it will be appreciated that this Scheme is likely to create a relatively high-income elite.

It is hoped that because the Corporation will be able to buy fertiliser in bulk, and to resell at a favourable price to the primary societies, the growers will receive their fertiliser at the lowest price possible. However, it may be questioned whether this service could not be provided to growers without the need for primary societies to act as intermediaries by a wholesaler operating in Fort Portal.

In order to help pay for the expenses of the apex organisation - the Uganda Tea Growers' Corporation - every outgrower will under the new scheme pay a capital levy of 7 cents per lb. of green leaf sold. The maximum price per lb. which he is likely to receive after he has completed

(1) See Chapter V. It should be pointed out that a number of loans granted under the first two schemes also facilitated the establishment of relatively large acreages.

(2) See A. Manyindo "African Out-grower Tea Development in Toro Kingdom", Makerere University College, Faculty of Agriculture, special project 1965/66, unpublished, page 2 : "of 220 outgrowers interviewed 70% were business and employed men, porters excluded."

his loan repayments (which will be deducted at the rate of an additional 10 cents per lb.) is -/33 per lb. The Corporation will provide extension services (to be paid for by the Government) and will buy fertilisers in bulk for distribution to the primary societies, (but similar arrangements could be made without the existence of the Corporation). In the opinion of the present writer, tea outgrowers under the new scheme will be worse off than under the 1963-66 scheme. They will pay higher interest rates and receive a lower price for their tea.

The primary societies and particularly the society managers will be faced with a number of functions of which they have no prior experience.

> "A new cooperative society starting in the 'new' subject of tea would be faced with handling numerous transactions in respect of tea stumps, fertilisers, agricultural credit, daily green leaf deliveries and accounts - all connected with a crop far more difficult to handle than coffee or cotton purely because of its perishable nature, the need to transport it from producer to factory quickly and its daily production throughout the year." (1)

A long chain of relending will be created, giving rise to unnecessary administrative expenses. The outgrowers, in addition to contributing to the costs of the Corporation will have to pay their own executives in the primary societies, where they must also bear the risk of mis-appropriation of funds by society officials. The tea will continue to be processed in the same factories as previously, so that any appearance of greater control of the industry by the African outgrowers is illusory. Even if the Corporation were to construct its own factory in one area, this would have no effect on the processing position in the

(1) "Uganda Tea Survey, 1964," page 54.

remaining tea-producing areas. One or even two factories could not serve more than a small minority of growers, owing to their dispersed location, in six different districts.(1)

A senior official of the Uganda Tea Growers' Corporation stated in June 1967 that it isintended that the growers should derive the following benefits from the Corporation's establishment.(2)

(i) the provision of transport facilities and collecting centres which will normally prevent the grower from carrying his plucked tea more than 2 miles.

(ii) maintenance of high quality a) through checking the leaf at the collecting centres and b) through transporting the leaf in specially designed lorries from the centres to the factories: this should prevent bruising.

(iii) the ultimate acquisition by the growers of factories to be establishd either by the U.T.G.C. alone or more probably by the U.T.G.C. in conjunction with A.E.L., which will be encouraged to expand its existing factories in partnership with the U.T.G.C.(3)

In the writer's opinion point (iii) is a highly long-term objective which does not justify the sacrifice of 17.5% of their income (i.e. -/07 per lb. of green leaf sold) by present outgrowers. Transfer of ownership if genuinely desired and likely to promote economic efficiency might be arranged at a much later date. With regard to points (i) and (ii) so far

(1) Toro, Bunyoro, Kigesi, Ankole, Masaka, Mubende.

(2) Personal communication to the writer. See also Appendix VII. 2, page 454

(3) The Corporation has applied to the Commonwealth Development Corporation for a loan to finance factory development.

as the writer is aware no investigations were undertaken to see whether transport facilities and collecting centres might be set up more economically, possibly with the participation of the existing factories.

1. 6 1967 Survey of Costs incurred by Tea Outgrowers in Toro District.

A survey of 40 outgrowers in Toro District was conducted by the writer in May 1967. The object of the survey was to obtain costings from which it would be possible to compute the approximate internal rate of return to investment in tea production, and the pay-off period for credit used to establish tea gardens.

Three similar studies of tea outgrowers had already been carried out (in Nyeri District, Kenya, Bukoba District, Tanzania and Toro District, Uganda) by students of the Faculty of Agriculture at Makerere. These studies all computed the present discounted value of the outgrowers' expected future revenue. The rates of interest used, which were designed to reflect the opportunity cost of capital, were in each case arbitrarily selected.(1) In Toro District there is no alternative enterprise which can rival the profitability of tea, although dairy-farming may eventually do so. Nor are there any costings from which it is possible to compute the rate of return to existing enterprises. There is therefore no means of determining the appropriate rate of discount with which to

(1) "It should be mentioned that when compounding for capital investment a 20% interest rate was used arbitrarily." J. Njukia op. cit., page 38.
"Because of the high opportunity cost of the outgrowers income, an interest rate of 10% was used", Manyindo, op.cit. p. 28.

compute the present value of investment in tea. None of the studies referred to computed the internal rate of return to investment in tea production, although the necessary data were in each case available. The justification for doing this is (i) it provides a measure of the profitability of investment in tea, (ii) as opposed to computing the present discounted value, it is not necessary to rely on an arbitrarily selected interest rate to represent the "opportunity cost" of capital.(1)

In May 1967 there were approximately 685 tea outgrowers in Toro District, of whom a large proportion did not have any mature tea. A decision was amde to confine the interviews to the four gombololas nearest to the main town - Fort Portal - in order to reduce the amount of time spent on travelling. A list of the 366 outgrowers in this area, together with their total tea acreages and acreages of mature tea (with dates of first planting) were supplied by the Regional Agricultural Officer. 204 of these farmers (57%) had first planted tea in 1964 or later, and

(1) In using the internal rate of return it is not assumed that this is a wholly adequate method of assessing investment projects. This calculation does not consider

(i) the "real planning goal" of the investor, nor

(ii) his time preference for cash flows.

See Turvey, R. "Present Value versus Internal Rate of Return - an Essay in the Theory of the Third Best." Economic Journal, March, 1963, pp. 93 - 99.

of these 170 were recorded as having no mature tea. It was therefore decided to confine the survey to a sample of the 162 farmers who had planted tea before 1964.

Originally it was intended to subdivide the sample by crop acreages. Three groups of farmers were selected at random with mature tea acreages of (i) less than 2 (small farms), (ii) 3 - 6 inclusive (medium farms), (iii) over 10 (large farms). These subdivisions were abandoned when (i) it was found that the actual acreages plucked by the farmers frequently did not coincide with the figures provided, and (ii) replacements for farmers in the sample who were unobtainable had to be selected on the basis of the accessibility of their farms.

In the final sample 31 of the 40 farmers interviewed were plucking 5 acres or less and the remainder were plucking 7 - 53 acres.

Thirty-eight of the farmers interviewed had received loans for the purchase of stumps: 11 had obtained credit for only one planting, but the remainder had obtained up to six successive loans. Nineteen farmers had obtained all their tea stumps on credit. The number of stumps thus purchased on credit ranged from 2,900 to 120,000 and the value of credit obtained ranged from Shs.725 to Shs.70,000/- (this loan was obtained under the first of the three credit schemes described above). The average number of stumps purchased on credit was sufficient to plant approximately 4 acres. The farmers interviewed were asked to provide information concerning (i) their tea acreages, (ii) the cost of establishing tea, (iii) the cost of maintaining it and (iv) credit received. Where possible, farmers were asked to give costs per acre; where they were unable to do this the costings were obtained in a form such that they could be transmuted into costs per acre. (For example, digging holes, planting, and pruning are all operationsfor which farmers often pay their labour force at a rate of so many cents or shillings for a given number of stumps.)

It washoped that it would be possible to compute annual yields per acre for individual farmers for the years 1965 and 1966 since all tea sales are recorded at the factory at which the tea is sold. The factories concerned provided the figures requested, but the calculations were abandoned when it was found (i) that individual growers were pluckingtea at different stages of maturity and (ii) that it was not possible to ascertain what the yields had been from the different blocks. From the responses given by the 40 farmers interviewed the following estimate has been made of the cost of establishing one acre of tea.(1) Not every farmer could provide an estimate of every cost item. The figures in parentheses refer to the number of responses on which the average figure obtained is based. From the date of planting up to the date plucking starts, and thereafter, tea has to be weeded and should

(1) The costings were checked with the District Agricultural Officer (Tea) and with the Officer-in-Charge of the Uganda Tea Growers' Corporation estate and extension station, Fort Portal.

also be fertilised.(1) In the following estimates, weeding and fertilising are computed as capital costs up to the date at which plucking starts, and as recurrent costs thereafter.

Notes to following table (Table VII. 7), see page 407.

1. Capital costs have been estimated up to the time at which plucking starts.
2. The cost of clearing varies considerably depending on the degree of bush. The range quoted was from nil to over Shs.1,000 /- per acre where the land is heavily forested.
3. Estimates of hand-labour costs for digging substantially exceeded those for tractor ploughing. (The latter ranged from Shs.65/- to Shs.120/- per acre.) However, hand-digging enables the removal of lumbugu (couch) grass, which tractor ploughing leaves virtually untouched.

Labour payment rates varied from Shs.45/- per month to Shs.90/- per month, but the majority of farmers paid a rate of Shs.50/- to Shs.60/- (i.e. from Shs.2/- to Shs.2/40 per man day).

(1) The application of fertiliser (nitrogen in the form of sulphate of ammonia) is recommended to outgrowers in Toro District. The price is approximately Shs.32/- per cwt., and the recommended rate of application is as follows:

Year	lbs. of sulphate of Ammonia
1	-
2	100
3	200
4 (and after)	400

29 of the farmers interviewed had applied fertilisers. In the following calculations annual applications at the rates given above will be assumed.

Table VII. 7

Capital Cost of Establishing One Acre of Tea[1]

Year	Item	Shs. Cts.
1	Clearing land (30)[2]	150.00
	Ploughing and/or digging by hand-labour (30)[3]	150.00
	Digging holes for stumps (13)	70.00
	Planting (39)	60.00
	Purchase of 3485 stumps @ -/25 each	875.00
	Purchase of 200 infils @ -/25 each	50.00
	12 weedings @ Shs.25/- per weeding (33)	300.00
	Total	1,655.00
	Interest on Shs.875/- @ 7½% per annum	66.00
		1,721.00
2	Bending	60.00
	5 weedings @ Shs.25/- per weeding	125.00
		195.00
	Interest on Shs.941/- @ 7½% per annum for 6 months	35.00
		230.00
	Total Expenditure over 18 months	1,951.00

As mentioned previously, tea can be brought into bearing most speedily by abandoning the first pruning and bending the bush instead. Using this method it has been estimated that the following yields outlined in Table

VII. 5 on page 391 can be obtained by the average farmer in Toro.(1) Once yields of 4,500 lbs. per acre have been attained, individual growers may still increase their output. The Uganda Tea Commission estimated that "A grower who tends his tea well ... might expect with the

> aid of fertilisers yields of 1,400 lbs. to 2,000 lbs. made tea (equivalent to 6,750 lbs. to 9,000 lbs. green leaf per acre ... Allowing for reasonable care, out-growers in Western Uganda should be able to produce an average of 1,000 lbs. made tea (4,500 lbs. green leaf) per acre."(2)

It is assumed that fertilisers will be regularly applied. In the following calculations green leaf yields from year 6 onwards are taken to average 4,800 lbs. per annum.

In the following table revenue is computed twice, using different assumptions. In both cases deductions for loan repayment at a rate of -/10 per lb. are assumed. In the first case it is also assumed that the grower pays a capital levy of -/07 per lb. to the Uganda Tea Growers' Corporation.

(1) Although the figures for individual green leaf sales did not bear detailed analysis (see page 405 above) an examination of those figures relating to farmers using only 1 or 2 planting dates showed that they approximated closely to those quoted in the table.

(2) "Uganda Tea Survey", page 30.

Table VII. 8

Recurrent Costs of Maintaining One Acre of Tea, and Revenue Earned at prices of -/23 per lb. and -/30 per lb.

1 Year	2 Item	3 Recurrent Cost	4 Net Revenue A @ -/23 per lb.	5 B @ -/30 per lb.	6 Accumulated Profit (3 - 4)	7 Accumulated Profit (3 - 5)
		Shs.	Shs.	Shs.	Shs.	Shs.
2.[1]	5 weedings @ 25/- per weeding (33)	125				
	Plucking 900 lbs. of green leaf @ -/06 per lb. [2] (34)	54				
	1 cwt. fertiliser @ Shs. 32/- per cwt.	32				
	Labour to apply fertiliser	8				
	Transport[3] of green leaf to factory (17)	18				
	Total Costs	237				
	Revenue from sale of 900 lbs. green leaf:		207	270	-30	+33
3.	8 weedings @ 25/- per weeding	200				
	Plucking 1800 lbs. of green leaf @ -/06 per lb.	108				
	2 cwt. fertiliser @ Shs. 32/- per cwt.	64				
	Labour to apply fertiliser	8				
	Pruning [4] (27)	60				
	Transport of green leaf to factory	36				
		476				
	Revenue from sale of 1800 lbs. of green leaf		414	540	-92	+97

Table VII. 8 Continued

1 Year	2 Item	3 Recurrent Cost	4 Net Revenue A @ -/23 per lb. Shs.	5 B @ -/30 per lb. Shs.	6 Accumu-lated Profit (3 - 4) Shs.	7 Accumu-lated Profit (3 - 5) Shs.
4.	6 weedings @ Shs. 20/- per weeding (5)	180				
	Plucking 3200 lbs. of green leaf @ -/06 per lb.	192				
	4 cwt. of fertiliser @ Shs. 32/- per cwt.	128				
	Labour to apply fertiliser	8				
	Transport of green leaf to factory	36				
	Total Cost	544				
	Revenue from sale of 3200 lbs. of green leaf		736	960	+102	+513
5.	4 weedings @ Shs. 16/- per weeding (5)	64				
	Plucking 4500 lbs. of green leaf @ -/06 per lb.	270				
	4 cwt. of fertiliser @ Shs. 32/- per cwt.	128				
	Labour to apply fertiliser	8				
	Transport of green leaf to factory	45				
	Total Cost	515				
	Revenue from sale of 4500 lbs. of green leaf		1035	1350	+622	+1348

Table VII. 8 Continued

1 Year	2 Item	3 Recurrent Cost	4 Net Revenue A @ -/23 per lb.	5 Net Revenue B @ -/30 per lb.	6 Accumulated Profit (3 - 4)	7 Accumulated Profit (3 - 5)
		Shs.	Shs.	Shs.	Shs.	Shs.
6.	4 weedings @ Shs.16/- per weeding	64				
	Plucking 4800 lbs. of green leaf @ 0/06 per lb.	288				
	4 cwt. of fertiliser @ Shs. 32/- per cwt.	128				
	Labour to apply fertiliser	8				
	Pruning (every 3rd year)	90				
	Transport of green leaf to factory	45				
	Total Costs	623				
	Revenue from sale of 4800 lbs. of green leaf		1104	1440	+1103	+2165

Notes:
1) Recurrent Costs are computed for the second half of year 2.
2) Figures in parentheses refer to the number of respondents providing costings for this item.
3) Figures for transport were computed on the basis of information furnished regarding
   i) time taken per journey
   ii) number of journeys made per month.
4) Many farmers paid surprisingly high rates for pruning to individuals employed specifically for this task. A rate frequently quoted (by farmers who were not bending) was:
   1st pruning 1 cent per stump = Shs. 35/-
   2nd pruning 2 cents per stump = Shs. 70/-
   3rd pruning 3 cents per stump = Shs. 105/-
5) Weeding rates are reduced for mature tea because the coverage afforded by the table reduces weed-growth and therefore the time taken to weed one acre.

From the middle of year 6 onwards the grower, having completed the loan repayments (see Table VII. 9 below) will be able to increase his income by 10 cents per lb. Thereafter he will receive Shs. 1,584/- if he sells at -/33 per lb., and Shs. 1,920/- if he sells at -/40 per lb. His costs, since pruning occurs only every 3rd year, will average Shs. 563/- per annum. The grower will continue to earn a net income of approximately Shs. 1,000/- to Shs. 1,500/- per acre per annum from year 6 to at least year 45. This should be compared with estimates of the incomes derived from coffee and cotton given at the beginning of the Chapter.

In the following table a loan repayment schedule has been computed, assuming a repayment deduction of -/10 per lb. of green leaf sold.

Table VII. 9

Loan Repayment Schedule

1 Year	2 End of Year Loan Pending	3 Interest (1) Charge on loan outstanding	4 Total due at end of year	5 Green leaf yield	6 Repayment @ -/10 per lb.	7 Total outstanding after repayment
	Shs.	Shs.	Shs.	Lbs.	Shs.	Shs.
0	875.00	-	-	-	-	-
1	875.00	65.62	940.62	-	-	940.62
2	940.62	70.54	1011.16	900	90	921.16
3	921.16	69.75	990.91	1800	180	810.91
4	810.91	60.83	871.74	3200	320	551.74
5	551.74	41.40	593.14	4500	450	143.40
6	143.40	8.23	151.37	4800	480	-

(1) Note to Table 9: Interest is charged at 7½% per annum.

Table VII. 9 is of particular interest because it demonstrates that loans for the establishment of tea can be paid off in 6 years and not the 10 years that was assumed necessary under the second (1963 - 66) credit scheme described above; nor is a four year moratorium on the loans required. (This conclusion depends on the assumption that tea is brought into bearing in the second year from planting.)

1. 7 Computation of the Pay-off Period and Internal Rate of Return to Investment in Tea.

In Table VII. 10 below, the pay-off period required to recoup the farmer's total investment is computed. This refers not only to the investment of Shs.875/- of borrowed capital but to cash invested from the farmer's own funds. It has been shown that the initial cost of investment in one acre of tea is approximately Shs.1850/- paid out over a period of 18 months. The tea then begins to yield and all subsequent costs may be regarded as recurrent costs. (An alternative view can, however, be taken: Manyindo, working with tea that was pruned, not bent, and which began yielding in the third year, defined the costs of establishment as all costs incurred up to the end of the fourth year (in which the tea yielded 1,000 lbs. per acre). Nonetheless, since it has been shown that with bending the recurrent costs incurred in the second half of year 2 can be recovered over the same period - even if a grower is only receiving -/33 per lb., the previous conclusion will be adhered to, see Table VII. 10). The pay-off period is approximately five and a half years. While this is a relatively long period of time, particularly in the context of peasant agriculture,

Table VII. 10

The Pay-off Period for Investment in a One-acre Tea Garden.

Year	Capital Expenditure Shs.	Loan Interest due at Year end Shs.	Recurrent Expenditure Shs.	Total Expenditure Shs.	Total Deficit to date before Deduction of Revenue Shs.	Green Leaf Yield Lbs.	Value of Yield @ -/33 per lb. Shs.	Cash Balance at Year End Shs.
1	1655	65.62	-	1720.62	1720.62	-	-	-
2	195	70.54	237	502.54	2223.16	900	297	-1926.16
3	-	69.75	476	545.75	2471.91	1800	594	-1877.91
4	-	60.83	544	604.83	2482.74	3200	1056	-1426.74
5	-	41.40	515	556.40	1983.14	4500	1485	- 498.14
6	-	8.23	623	631.23	1129.37	4800	1584	+ 454.63

it must be remembered (i) that the tea plants during this period are not giving the level of yields that can be anticipated subsequently and (ii) that the investment has a life eight to nine times as long as the pay-off period.[1]

In the following calculation of the internal rate of return to the investment, it is assumed that the tea remains in bearing for 45 years and that from year 6 onwards the average annual yield of green leaf is 4,800 lbs. Average annual revenue - recurrent costs from year 6 onwards is taken to be equal to Shs 1,021/- in Calculation A, where the grower is assumed to receive -/33 per lb. of green leaf, and Shs. 1,357/- in Calculation B, where he is assumed to receive -/40 per lb.; interest payments over the first 18 months have been added to the value of the capital expenditure. Thereafter they have been added to recurrent costs with the exception of year 6, where, for simplicity, the Shs. 8/- interest payment has been omitted from the calculations.

The calculations were made using the formula $C = R_o + DR_1 + D^2R_2 + \ldots + D^nR_n$.[2] The internal rates of return obtained were 24% in Calculation A and 30% in Calculation B. These would both be much higher (over 50%) if full income were earned from year 2. The actual level of the internal rate of return reflects the low level of income obtained from tea in the first four years.

(1) The Uganda Tea Survey Mission estimated the life of a tea garden to be from 40 to 60 years (Uganda Tea Survey, p. 33). In this analysis the average life of a garden is assumed to be 45 years.

(2) C = total capitalised present value and D represents the discount rate $\frac{1}{1+i}$

See W.J. Baumol, "Economic Theory and Operations Analysis", 2nd Edition, Prentice-Hall, 1965.

The following table shows the two net revenue patterns on which the calculation is based.

Table VII. 11

Year	A Shillings	B Shillings
1	-	-
2	25	98
3	48	174
4	451	675
5	929	1,244
6	1,013	1,349
45	1,013	1,349

However, the internal rate of return to investment in tea is at current prices nonetheless high, and the provision of credit for the establishment of tea gardens is by this criterion fully justified. Provided borrowers receive adequate supervision and provided credit goes to those farmers who need it, this is a highly suitable direction for credit. The government must, however, be aware that the credit policy for tea as it is currently designed will promote the emergence of a "high-income elite" in those districts where tea is grown due to (i) the relatively large tea acreages for which credit can be obtained and (ii) the fact that because the government has not found it possible to control the use of cash loans for labour, applicants for tea loans are predominantly individuals who have an additional source of income with which they can finance their labour requirements.

So long as the areas selected for tea production are carefully chosen, the risk of loss of income through climatic factors is probably not high.

A greater risk lies in the long-term possibility of (i) the fall in tea prices and (ii) the imposition of a quota that does not account for the full amount of production for the export market.

2. The Master Tobacco Growers' Scheme.

2. 1 Respects in which the Master Tobacco Growers' Scheme Differs from the Tea Outgrowers' Scheme.

Another highly localised credit scheme which began as a subsidiary of the Progressive Farmers' Loans Scheme but remained in existence after the latter was suspended is the Master Tobacco Growers' Scheme. Prior to 1967 this was confined to West Nile District in the extreme north-west of Uganda; it has recently been extended to Kigesi District.

The scheme differs in several respects from the Tea Outgrowers' Scheme: firstly, tobacco is an annual crop, and medium-term credit is required by the growers not for the establishment of the crop but for the construction of on-farm processing facilities. Secondly, the West Nile master growers are grouped into fours, and each group shares a flue-curing barn; loans are therefore issued to groups of four growers. Thirdly, the extension service which supervises the operation of the scheme is provided by a private commercial firm. Fourthly, the growers are each encouraged to confine their production to $\frac{1}{4}$ acre of tobacco per annum. One of the aims of the Scheme is to encourage high standards of cultivation on small plots rather than more extensive production which has been shown, in Acholi District, to lead to a lowering in the quality of leaf produced. Fifthly, from the beginning of the scheme farmers have also been provided with production credit in kind by the British American Tobacco Company for the purchase of fertilisers and seed-bed chemicals, the transport of wood-fuel and the fumigation of the curing-barn. This credit ranges in value from Shs. 240/- to Shs. 500/- depending on the needs of the individual farm. The company states that it does not charge interest, repayments of principal being deducted from the proceeds of sale of the tobacco.

2. 2 The Capital Cost of Producing Flue-cured Tobacco.

The history of the scheme and the system which governs the payment, supervision and repayment of the loans have been described in Chapter II.(1) This section is confined to a brief discussion of the costs incurred in investing in tobacco production, the pay-off period for the investment, and the internal rate of return to investment, using approximate costings furnished by the Leaf Manager of the British American Tobacco Company (Uganda) Ltd.(2)

The preparations for building a curing-barn and the capital costs incurred - shared between four farmers - were outlined as follows: the barn is built partly by family labour during the dry season, when the writer was informed there is no alternative employment for labour, and therefore no opportunity costs can be imputed to the family labour used. The farmers themselves dig the foundations for the barns and make the 15,000 bricks which are required with a borrowed mill provided by B.A.T. The bricks are sun-dried, stacked and built by the farmers into a kiln. At this point and thereafter the following costs are

(1) Pages 109 - 111.

(2) This is the firm which is responsible for the operation of the scheme; it is referred to hereafter as B.A.T.

incurred in the construction of each barn.

Table VII. 12

Cash Costs of Constructing a Flue-Curing Barn.

Item	Cost (Shillings)
1. Purchase of timber to bake bricks	78
2. Transport of stones (for foundations) bricks and poles	190
3. Purchase of bati[1] sheets for roofing	504
4. Purchase of roofing nails	12
5. Purchase of 8 lbs. wire nails	8
6. Purchase of 10 lbs. fencing wire	10
7. Purchase of 48 feet chicken wire	48
8. Purchase of 2 doors	38
9. Purchase of 4 ventilators	36
10. Purchase of flue-pipes	320
11. Mason to lay bricks and to install roof, doors and ventilators	240
12. Thermometer	12
13. 5 lbs. jute twine @ Sh. 2/- per lb.	10
14. 10 hessian slings on poles	15
Total	1,521

2. 3 The Need for Credit.

These costs are shared between four farmers who will each grow ¼ acre of tobacco a year. The capital cost incurred by each

(1) Corrugated iron.

farmer is therefore approximately Shs. 385/-.(1) With capital expenditure per farmer this low it may be questioned what proportion of farmers actually need credit. The question however is unanswerable, given the limited information that is available on per capita incomes in West Nile. Alternative sources of cash income in West Nile are apparently of low profitability: the most important cash crop is cotton, the average acreage grown per farmer being 1.62 acres. Assuming an average yield of 400 lbs. of seed cotton, this gives a gross return per acre of Shs. 256/-. Nonetheless, almost invariably there are some individuals in any area who have sufficient capital resources to meet an outlay amounting to Shs. 400/-.

It is possible, however, that the provision of credit without discrimination to all master growers may be justified in terms of the greater efficiency that can be achieved in administering the scheme where everyone is required to enter under the same conditions.(3)

The interest payment that was charged to each farmer by the Uganda Commercial Bank was approximately Shs. 42/-. (Interest was payable at a rate of 7½% per annum and the loans were repayable in two years.)

In future, the master growers will obtain credit from National and

(1) Some farmers are independantly enlarging their barns to take an additional ½ acre of tobacco. These extensions are not encouraged by B.A.T. who are anxious to control the total acreage grown.

(2) Source: "Report on Uganda Census of Agriculture", Vol.III, 1966, Government Printer, p. 61.

(3) This justification, of course, would not hold if the scheme were inefficiently operated.

Grindlays Bank instead of the Uganda Commercial Bank, which no longer has sufficient funds available. The loans will again be repayable in two years but National and Grindlays have demanded a higher rate of interest - 8½% per annum - on the loans - and in addition to this a registration fee of 30/- per loan. This will raise the cost of borrowing to approximately Shs. 57/- per farmer.(1)

It is of interest that in West Nile a commercial bank has agreed to take part in a credit scheme for peasant farmers. It should be noted however that in this scheme where there is no alternative outlet for the tobacco and where all payments for the crop are made by the processors direct to the bank the lending risk is minimal. At 31 March 1967, less than 0.5% of total credit outstanding to the growers was in default.(2)

2. 4 Recurrent Costs of Producing Flue-cured Tobacco.

Computation of the recurrent costs which must be borne annually by each farmer has been performed twice, once at a rate of Shs. 1/- per man day, and once at a rate of Shs. 1/50. Farmers in West Nile pay their labourers Shs. 30/- per month or Shs. 1/- per day.

(1) (The provision of credit to every farmer entails a further cost in that each master grower is required to maintain a joint bank account with the other members of his group. B.A.T. pay all the proceeds due to the group from the sale of tobacco direct to their bank account. The company now usually makes payments five times per annum, for each of which both banks charge a ledger-entry fee of Shs. 1/50.)

(2) Source: British American Tobacco Company, Kampala Head Office.

The writer has made the computation twice in order to guard against underestimation of labour costs; (in Buganda, where the monthly wage rate is also Shs. 25/- to Shs. 30/- per month, farmers who require their labourers to work more than the standard 2 - 3 hours normally have to pay them extra. The labourers may even work two 'tickets' in a day.[(1)]) All labour including family labour has been costed. A child's working day is assumed equivalent to $\frac{1}{3}$ of an adult working day.

In 1966, the average yield of tobacco per acre was 1,136 lbs., and the tobacco fetched an average price of Shs. 3/40 thus giving a gross return of Shs. 4,066/40 per acre, or Shs. 1,017/- per master grower. The average net return per acre (gross revenue - recurrent costs) was Shs.578/- when all labour was costed at Shs. 1/- per day, or Shs. 485/50 when labour was costed at Shs. 1/50. However, the cash return per family would be much higher, since all labour is family labour.

Even at the higher price assumed for labour, the farmer recovers the full value of his investment in the first year. The life of a curing barn is approximately 10 years. During this period the farmer will probably have to spend an additional Shs. 30/- on hessian slings and poles and an additional Shs. 100/- on replacing flue-pipes.[(2)] Assuming that he earned Shs. 1,017/- every year for 10 years, from the sale of tobacco, the internal rate of return to a master grower's investment is 89% when labour is costed at Shs. 1/50 per man/day and 107% when labour

(1) See Chapter VI, p. 365.

(2) i.e. replacements cost Shs. 520/- per barn.

Table VII. 12

The Recurrent Costs of Maintaining One Acre of Tobacco in West Nile.

Item	Man/ days	Cost @ 1/- per Man/ day (Shs.)	Cost @ 1/50 per Man/ day (Shs.)
1. Payment to Cooperative Society for Maintenance of seed bed	-	50	50
2. Insurance premium for the barn	-	20	20
3. Purchase and transport of wood fuel	-	80	80
4. Purchase of Granular N.P.K. Fertiliser	-	100	100
5. Purchase of 2 lbs. jute twine @ 2/- per lb.	-	4	4
6. Labour:			
(i) preparation of land	12	12	18
(ii) ridging	6	6	9
(iii) transport of seedlings and water for planting, and planting	24	24	36
(iv) application of fertiliser	2	2	3
(v) cultivation of plot	3	3	4.50
(vi) removal of flowers	2	2	3
(vii) harvesting	32	32	48.
(viii) untying cured leaf	32	32	48
(ix) supervision of barn	52	52	78
(x) grading and tying	12	12	18
(xi) transport of tobacco to buying centre	8	8	12
Total	185	439	531.50

Table VII.14
Annual Costs and Revenues Under
the B.A.T. - U.C.B. Credit Scheme for Master Tobacco Growers (1)

Shs.

Year	Costs Paid Out: Capital	Costs Paid Out: Interest	Ledger Fee	Recurrent (2) A	Recurrent (2) B	Total (2) A	Total (2) B	Revenue Received	Net Balance A	Net Balance B
1	385	28	2	439	531.50	854	946.50	1017/-	163	70.50
2	-	14	2	439	531.50	457	547.50	1017	560	469.50
3	-	-	2	439	531.50	441	533.50	1017	576	473.50
4	-	-	2	439	531.50	441	533.50	1017	576	473.50
5	130	-	2	439	531.50	571	663.50	1017	446	383.50
6	-	-	2	439	531.50	441	533.50	1017	576	473.50
7	-	-	2	439	531.50	441	533.50	1017	576	473.50
8	-	-	2	439	531.50	441	533.50	1017	576	473.50
9	-	-	2	439	531.50	441	533.50	1017	576	473.50
10	-	-	2	439	531.50	441	533.50	1017	576	473.50

(1) The data given refer to an "average" tobacco grower on one-quarter acre.

(2) Column A refers to the recurrent costs incurred when labour is costed at shs.1/- per man-day.
" B " " " " " " " " " " " " 1/50 " man-day.

is costed at Shs. 1/- per man/day. (These calculations were performed using the formula given on page 415. For simplicity, however, all capital expenditure was assumed to take place in year 1.)

Thus investment in the production of flue-cured tobacco is, at current tobacco prices, also highly profitable. The price at present paid for tobacco is an internal East African price, which is substantially higher than the world market price. The increased output expected from current plans for the expansion of flue-cured tobacco production in West Nile, Kigesi, Madi, Acholi and Lango is destined predominantly for the export market.(1) B.A.T., therefore, predict a fall in the average price paid to growers over the next 6 years to Shs. 2/50 per lb. At this price, the internal rate of return to the grower's investment would be 56% when labour is costed at Shs. 1/- per man/day and 38% when labour is costed at Shs. 1/50 per man/day.

3. The Ankole/Masaka Ranching Scheme.

The Ankole/Masaka Ranching Scheme is in a much earlier stage of implementation than the two schemes already discussed. It has no connection with the Progressive Farmers' Loans Scheme and as yet no credit has been granted to individual ranchers. The object of this section is to outline the scheme and the manner in which it is being financed, and to enumerate those purposes for which individual ranchers are likely to need credit. A survey of the Scheme was not made. What

(1) The expansion in West Nile and Kigesi will take place in association with B.A.T. In the other districts expansion will be organised by the Department of Agriculture and Cooperative Development and the output will be sold to Rothmans.

follows is not a critique of the scheme but a report of its present development and of possible needs for credit as described by officials of the Ministry of Animal Industry, Game and Fisheries.[1]

3. 1 The Aim of the Scheme, and the Sources of Finance.

The aim of the scheme is to establish 50 ranches in Ankole and Masaka by 1968. The scheme is being financed by a U.S.A.I.D. loan of $ 650,000 which was obtained by the Uganda Government in 1966, plus counterpart Uganda Government funds. The terms of the loan agreement include the following stipulations:

1. The loan can be used for the purchase of goods in the United States and to meet local costs in East Africa.[2]

2. Disbursements for costs payable in East African currency must not

(1) The background to the scheme has already been outlined in Chapter II, pages 111-114. The data in this section were obtained from interviews held with officials of the Ministry of Animal Industry and Veterinary Services in July 1966 and May and August 1967. While this constitutes the Uganda Government's major ranching scheme other government assisted schemes exist in the Buruli and Singo areas of Buganda.
As of December 1965 there were 27 occupied ranches in the Buruli area of Uganda carrying 15,000 head of stock of which nearly 3,000 were Borans. Additional ranches exist in the Singo area.
In addition, 25 ranchers in Bugerere County of Buganda have developed ranches which at the same date carried 7,000 head of cattle including 460 Borans. The development of these ranches has taken place without Government assistance except for the provision of a subsidy on some items of equipment.
Source: Ministry of Animal Industry and Veterinary Services, Annual Report 1965, p. 14.

(2) Goods shall be deemed to have their source in East Africa if they are (i) mined or grown in East Africa, (ii) procured in East Africa, and (iii) only contain components imported from countries which are approved in U.S.A.I.D. Geographic Code 899.

exceed $ 500,000; these will be met by letters of credit in U.S. dollars. This credit must be used for the procurement of goods in the United States.

3. At least 50% of goods transported by sea must be carried on private United States merchant vessels.

4. The loan is for a period of 40 years, interest payments to begin 6 months after the first disbursement of the loan. Interest is payable at 1% per annum on the outstanding principle and interest for the first 10 years and at 2½% per annum thereafter. The loan is to be repaid in 61 monthly instalments, the first repayment of principal to occur 9½ years after the first interest payment.

5. If the borrower falls into default U.S.A.I.D. has the right to stop all further disbursements and may demand repayment of all or any part of the outstanding principal and interest after 60 days.

6. Before disbursing the loan U.S.A.I.D must see a form and substance satisfactory to U.S.A.I.D. for the construction and installation services required for the project.

7. The system used for the selection of ranchers must be approved by U.S.A.I.D.

8. The loan may be used for the following purposes:-

(i) to clear trees and bush in order to protect the ranches from tsetse fly and to facilitate range development.

(ii) the establishment of a 160 square mile tsetse barrier south of the ranch area.

(iii) the survey and demarcation of ranches of roughly five square miles each.

(iv) the erection of perimeter fencing for each ranch.

(v) the excavation and complete development of at least one valley tank per ranch; (each tank to have a capacity of 850 U.S. gallons and to be provided with utilization facilities).

(vi) the construction of spray races or facilities for the utilization of spray pumps in order to assure tick borne disease control.

(vii) the construction of access roads, bridges and fire breaks to service the ranches.

(viii) the procurement of exotic cattle for resale to the ranchers.

9. The project shall include as part of the borrower's contribution the "construction of administrative facilities and cattle markets."

The U.S.A.I.D. loan is being dispensed in Uganda by the Ministry of Animal Industry, Game and Fisheries.

There is no clear definition of what proportion of the cost shall be met by the Uganda Government. Nor is there any plan for the recovery of the value of the capital expenditure. The writer was informed[1] that it is hoped that the scheme will eventually make a "general contribution" to the economy which will more than compensate for the initial capital outlay.

3. 2 The Present state of Development, and possible Credit Requirements for Ranchers.

In August 1967 there were 25 occupied ranches in the scheme. Each tenant has been provided with cleared land, perimeter

(1) By a senior official of the Ministry of Animal Industry, Game and Fisheries.

fencing (costing approximately £700 per ranch), and a valley tank (costing approximately £2,500 per ranch). He still has to meet from his own resources the capital cost of the following items which are not covered by the U.S.A.I.D. loan, (i) stocking the ranch, (ii) purchasing and spraying equipment, (iii) the installation of additional water facilities, (iv) internal paddocking, and (v) erecting a house and farm buildings. He also has to meet the recurrent costs of operating the ranch.

Each ranch is approximately 3,000 acres. For the first five years a tenant must pay rent at -/10 per acre to the Ankole Land Board.(1) Thereafter rent is payable at the rate of Shs. 1/- per acre per annum.

A rancher may not enter the scheme unless he already has 150 head of cattle. By the end of the two year probationary period, these must have increased to 200, of which at least 100 must be breeding stock. An entrant must also have either Shs. 10-20,000/- in cash, or an additional 30 to 40 bullocks, which will be needed for the purposes outlined in the preceding paragraph.

The entry requirements are such that the scheme is limited either to wealthy individuals or to cooperative societies. Three cooperatives have already occupied ranches (out of a total of 25 occupied ranches) and three more have been given approval to do so.

(1) Or to the Board with responsibility for land in Masaka.

From the fifth year of occupancy a fully stocked ranch equipped with a spray race or dip should yield a net income of Shs. 17,000/- per annum assuming (i) a 15% off-take, (ii) total costs (fixed plus variable) of Shs. 30/- - Shs. 40/- per cow per annum, and (iii) that the average price fetched per animal is equal to that achieved at the two sales that took place prior to May 1967.

Only a detailed survey of the occupied ranches could produce a precise estimate of the extent to which shortage of capital among ranchers is deterring development. However, from the information provided it would appear that an important loss of income and wastage of capital are both being incurred.

To varying degrees, the ranches are all understocked. At August 1967, the ranches were carrying an average of 240 head of cattle on 3,000 acres of cleared land. On the other hand they should be carrying 500 head of stock, rising to 600 in a few years. Those ranchers who entered the scheme earliest are building up their herds, and should have an average of 350 head of cattle after two years of occupancy. This rate of increase could, however, be accelerated by the purchase of additional breeding stock.

Under the terms of the lease agreement each rancher undertakes to eradicate tick borne disease. While this could be done using hand equipment, the long-term cost to the rancher would be higher[1] and spraying would be less efficient than if a spray-race or dip were installed. It is the hope of the Ministry that one or other of these

(1) Through employment of additional labour and wastage of spray.

will be established on each ranch. The installation of either costs up to £800.

The possibility of shared spraying facilities has been rejected for a number of reasons. These include (i) the general absence of water sites at the junctions between ranches, (ii) the possibility of severe track erosion if cattle were all trecking to one centre twice a week, (iii) the fact that if a foot and mouth epidemic broke out on one ranch, the cattle would have to be isolated.

With the exception of three ranches, of which one is cooperative-owned, none of the ranchers had, as of August 1967, either a spray race or dip. However, the delay in the establishment of these can be ascribed to several causes, including

(i) the attempt made by a local politician to persuade the ranchers that spraying facilities would be provided by Government

(ii) a general hold-back until a precedent was established. (Three more spray races will shortly be installed, and by January 1968 there are likely to be 10 races or dips.)

(iii) the fact that the first ranchers are now nearing the end of their two year probationary period.

It is, therefore, impossible to assess the extent to which lack of capital has restricted the installation of fixed spraying facilities.

It is the opinion of the Officer-in-Charge of the scheme that most ranchers could afford to purchase their own spray races or dips. It has already been mentioned that a rancher must have Shs. 10-20,000/- in realisable assets (cash or bullocks) in addition to 150 head of cattle in order to enter the scheme. Investment by the ranchers themselves in the improvement of the ranch at an early stage is felt to be advisable in order to ensure their full commitment.

A rancher having only the minimal assets required to enter the scheme, however, may need to raise a loan. It is questionable whether the commercial banks would be equally ready to lend to all the ranchers. These are very crudely divisible into two groups: those who have or have had salaried employment, all of whom plus the cooperatives presumably have bank accounts, and a smaller group of local people who have had no off-farm occupation, and who may not previously have had bank accounts. These people might find it harder to raise commercial bank credit.(1)

The absence of dips or spray races on most ranches means that even those ranchers who can raise the funds to do so will not receive authority to purchase Boran bulls or heiffers until the equipment is installed. Not only are the ranches understocked but progress towards upgrading has been delayed. Two ranchers have bought Boran bulls and one ranch (cooperatively owned) has raised a commercial bank loan for the purchase of Boran heiffers.

While unable to state how many ranchers needed credit for different purposes, the Officer-in-Charge of the scheme stated that lack of capital among ranchers was the main factor impeding the development of the scheme.

(1) This point was not raised by the Ministry.

He stated that the priority requirements for credit were:

(i) tick control equipment,

(ii) a) night paddocking if the game risk is reasonable

b) additional stock

(iii) water pump and piping to establish a second off-take point,

(iv) internal paddocking.

The Ministry of Animal Industry, Game and Fisheries has drawn up proposals for loans to beef ranchers which include the following items:

Table VII. 15

List of Items in Proposed Loans for Ranchers(1)

Item	Approximate Cost £
1. Purchase of 100 bullocks @ £10 each	1,000
2. Purchase of 100 breeding stock @ £20 each	2,000
3. Purchase of 100 Boran cattle @ £35 each	3,500
4. Installation of water-pump and piping	500
5. Erection of crushes, bomas and cattle yards	250
6. Erection of housing	500

Not all of these items would be required by one rancher or at the same time. For example, a rancher who purchases 100 Boran heiffers would not purchase 100 local breeding stock as well. Credit for the erection of housing would not be authorised for a minimum of two years, or before the ranch was fully stocked.

Loans provided for the different items would have different recovery

(1) Spraying equipment was not included in this list.

periods. It was suggested that it should be possible to repay a bullock loan in two years, credit for spraying equipment in five years, and for breeding cattle or for personal housing in ten.

For the majority of items, therefore, the lending agency must be prepared to engage in medium- to long-term lending. Credit cannot be provided on the security of the land, which belongs to the Uganda Land Commission, but on the security of the stock. The total value of two hundred head of cattle valued at an average of £15 per head is £3,000 which should provide adequate security for a loan of £1,000 - £1,500, provided the rancher is known to the lending agency or has a good recommendation. A key question, which has not been answered is whether the Uganda Government should allocate funds for loans to ranchers. For three years the Ministry of Animal Industry, Game and Fisheries included in its estimates a provision for loans for the scheme's participant ranchers, but this has never been granted and in 1967 the request itself was deleted. The fact that after two years the commercial bankshave not moved in to fill a need for credit which is claimed to exist would appear to imply that a Government allocation is necessary. Part of the delay may have been due to the fact that the commercial banks are more willing to provide credit for stock than for fixed capital which is less easily sold.(1) In these circumstances the Government might be justified in waiting a further year to see (i) whether any ranchers are in fact prevented from establishing spraying equipment by their inability to raise credit and, (ii) whether those who do establish such equipment experience difficulty in raising commercial bank loans for the purchase of additional stock, or night paddocking.

(1) This comment was not made by the Ministry but is the writer's personal opinion.

But since the provision of long-term credit for the purchase of fixed assets is not a normal activity of the commercial banks in the agricultural sector it seems certain that the establishment of a Government loans fund would ease the flow of credit.

It was stated that the extension service working on the ranches would be highly unwilling to have anything to do with the financial aspects of providing credit. (This is the same attitude as that adopted by the extension staff of the Department of Agricltutre when the Progressive Farmers Loans Scheme was introduced.) While this stipulation may be justified it may also raise the cost of providing credit, since any bank lending to the ranchers from its own funds as a Government agent must be prepared to undertake the inspection of applications and the collection of overdue instalments from ranchers who may live 50-60 miles from Masaka or Mbarara.

4. Loans for Dairy-farming.

Dairy-farming is referred to here briefly in order to clarify the present position with regard to the provision of credit to this enterprise. Uganda Government policy with regard to the development of dairy-farming was outlined in the 2nd Five Year Development Plan as follows:

(i) There is currently a shortfall in the supply of dairy produce which has to be met by imports fromKenya. The Government's long-term aim is to make Uganda self-sufficient in dairy products.

(ii) "To raise yields of milking cattle in Uganda it isplanned to import high quality exotic cattle, to cross-breed and upgrade local cattle and to introduce better animal husbandry and management techniques...

(iii) "It is proposed to establish a hundred new dairy farms per annum for ten years and, in addition to provide loans and credit for dairy co-operatives, calf-rearing stations and individual dairy farmers." (1)

(1) "Work for Progress", page 72.

The Department of Veterinary Services has drawn up possible loan plans for dairy farmers of which an example is given below:

Table VII. 16

Proposed Loan to meet the Capital Costs of Establishing a Dairy Farm

Item	Cost (£)
1. 10 exotic milking cows @ £80 each	800
2. 1 mile of fencing @ £140 per mile	140
3. Internal paddocking: 2,000 feet @ £100 per mile	100
4. One spray pump	15
5. One drinking trough	25
6. One pump and engine	250
7. 1,000 feet of 2-inch piping @ 3/- per foot	150
8. Dairy Equipment	80
9. Buildings	50
10. Miscellaneous	40
	1,700

Source: Ministry of Animal Industry, Game and Fisheries.

This loan is obviously designed to establish a fairly large farm at the outset. Smaller loans would be needed by farmers wanting to establish a small dairy enterprise of 2 - 4 milking cows, possibly using stall-feeding.

However, while a few loans for dairy farming are currently being made by the Uganda Commercial Bank on the recommendation of the Veterinary Department, which subsequently supervises the loans, no allocation of funds has been made for the provision of credit for this enterprise.

5. The Group Farming Scheme.

The provision of short-term credit under a modified form of the Cooperative Credit Scheme for the Group Farming Scheme is the last special credit scheme to be discussed. The rate of expansion of the provision of credit under this scheme, and the source of funds used, have already been decsribed in Chapter II.[1] In this section it will be argued that in this particular scheme, in which the Government is investing a very high level of capital, the successful provision of credit in terms both of impact on production and repayment, is inseparable from the successful operation of the whole scheme.

5. 1 The objectives of the Scheme.

The prime objective of the Group Farming programme as outlined in the Uganda Government 2nd Five year Development Plan is to introduce mechanical cultivation on consolidated blocks of land, with the land remaining under the control of groups ofpeasant farmers. The Plan states:

> "Although in many ways labour is relatively abundant there are certain critical tasks for which there is a scarcity

(1) pp. 119 - 121.

> of labour. This is because much of the crucial effort in agriculture must be concentrated into a relatively short part of the year. Therefore mechanisation of certain aspects of agriculture can provide very high returns. Mechanisation has an important role in accelerating the growth of agricultural output ... It is important that mechanical methods of cultivation be made available to as many farmers as possible so that they become involved in modern farming techniques."(1)

With regard specifically to the Group Farms, the Plan states:

> "Through the pooling of land it is possible to use tractors and other mechanical equipment economically. Group farms are, therefore, a most important means of carrying out the necessary structural changes in the agricultural sector." (2)

5. 2 Allocation of Development Funds to the Scheme.

Of the £19.64 million of Central Government development expenditure within the agricultural sector that is outlined in the Plan, £4.9 million is allocated to the Group Farms: of the 1,250 tractors that are to be bought by the Uganda Government during the Plan period (1966-71), 800 are destined for the Group Farms.(3) The Plan does not contain costings demonstrating the benefits of large-scale mechanical cultivation, which might justify expenditure on this scale. Indeed these are not available.

(1) "Work for Progress", page 59.

(2) Ibid. page 58.

(3) It has been calculated that 70% of all Government development expenditure during the first two years of the Plan period, including overseas loans, has been devoted to mechanisation. The beneficiaries have been 3,000 Group Farm members plus other individuals for whom 30 - 40,000 acres will be mechanically cultivated in each year.

Source: Ministry of Planning and Community Development.

Similarly no detailed published costings of the Group Farming programme are available, those that have been made for the Uganda Government being classified material. The need for costings is obvious: with so large a proportion of development expenditure in the agricultural sector being devoted to the farms, it is important to know how the rate of return to capital investment on the farms compares with other projects and whether they have a benefit:cost ratio of greater than one. On the basis of the calculations that have been made it appears very unlikely that the farms will achieve a benefit:cost ratio greater than one. Nonetheless, Government policy since the initiation of the scheme in 1963 has been that it should be expanded rapidly, the target rate of expansion being twenty new farms per annum.

The first two Group Farms were started in 1963; within two years, thirty more had been formed, and in 1966/67 thirty-seven centres of consolidated mechanical cultivation bearing the title of Group Farms were in operation.

5. 3 The Operation of the Scheme.

Experience on the farms to date has shown that the factors contributing to the level of output achieved on individual farms are highly complex, and that establishment of successful farms depends on the observation of all or most of the following criteria:

(i) siting on suitable terrain and soil, and in an area where there is adequate rainfall for a range of annual crops.

(ii) correct layout on the contour

(iii) siting in an area where there will be no land disputes,

(iv) cultivation of those crops which soil analyses have shown to be best suited to the area,

(v) selection of farm members who have no other jobs, who live on or near the farm and who through prior membership of a society which is successfully operating the Cooperative Credit Scheme have proved their own credit worthiness,

(vi) absence of opposition to the farm on political or other grounds either by the members or by persons of local influence.

(vii) the recruitment of a group farm manager who is able to overcome the language barrier(1) and to work in close cooperation with the Group Farm committee, which must itself be strong,

(viii) availability of adequate repair facilities for the tractors.

The seasonal provision of credit on the farms plays a crucial role in their operation. All mechanical cultivations performed on the plots of the individual members are paid for with credit provided to members by the group farm cooperative societies and repayable after the crops are harvested.

The methods of operation of the scheme have been established at the same time as the number of farms has been expanded. No pilot project was operated. There has been a tendency to introduce more stringent regulations as initial mistakes were noted. For example, the first farms were not laid out on the contour, and soil analyses have to date

(1) Most farm managers are young diplomates recruited in Britain or, in a few instances, Scandinavia.

been performed on only a small number of farms.

Since 1963, applications have been received annually by the Commissioners for Agriculture and Cooperative Development from those primary societies which wish to establish Group Farms. No society is supposed to submit an application until it has established that sufficient land is available for the operation of the farm. (It is intended that the farms should be of an average size of 2,500 acres. If both the Departments of Agriculture and Cooperative Development are satisfied that sufficient land is available, and that the society concerned is credit-worthy, then the soil should be tested and, if the tests are satisfactory, an aerial survey performed and the land laid out on the countour.[1] The bush is then cleared, access roads and a valley tank are constructed if they are needed, housing for the farm manager is provided, and a farm manager is recruited. All expenditure thus incurred is met by the Uganda Government.

Control of the operations of a group farm is in the hands of two committees: a Group Farm committee which is elected by the Group Farm members and advises the Manager (whose position is executive only)[2] of the decisions made by the Farm members concerning the day-to-day running of the Farm. The second committee, which makes the more important policy decisions, is composed of the District Agricultural

(1) Most if not all of the soil analyses conducted so far have in fact taken place after the selection of the site.

(2) A good farm manager should normally have strong powers of persuasion.

Officer, the District Cooperative Officer and the Farm Committee.[1]

The emphasis on the Farms is on the cultivation of annual crops. To date the main crop grown on the farms has been cotton, and although some attempt is now being made to diversify the crops grown, and to introduce cattle, the dominance of cotton is likely to continue for at least the next five years.[2] Mechanical cultivation is available to the members at the following rates:

Table VII. 17

Mechanical Cultivation: Rates Charged by Uganda Government.

Operation	Cost (Shs.)
1st ploughing	45
2nd ploughing	40
Discing	25
Rotavating	65
Harrowing	25
Planting	15
Spraying (four sprayings)	20
Transport	10 per hour

For cotton the mechanical operations performed on Inomo Group Farm in 1965 were as follows: first ploughing or rotavating, second ploughing, discing, planting, spraying and transportation of the harvested crop, total cost: Shs.164/- or Shs. 184/- per acre. For sorghum the operations were

(1) But the decisions of the D.A.O. and D.C.O. are in fact binding.

(2) This presupposes that the majority of farms remain in existence.

one ploughing, two discings, planting and transportation of the harvested crop, total cost: Shs. 122/-. Thus a farmer who cultivates on the farm two acres of cotton and one acre of food crops may have to meet mechanical cultivation expenses of at least Shs. 450/-, excluding loan interest and the purchase of insecticide. Loan interest charged for 10 months for cotton and 6 months for sorghum would amount to Shs. 44/-. The cost of two tins of cotton spray at current prices amounts to Shs. 10/-. This brings total costs of Shs. 504/-.

5. 4 The Provision of Credit.

It is to meet ~~these~~ costs that short-term credit is required. An outlay of the level outlined in the preceding paragraph can only be justified if a farmer obtains sufficiently high yields to recover his mechanical cultivation costs, plus the cost of hand-labour for weeding, harvesting, and, in the case of cotton, sorting. In order to recover his costs on an acre of cotton a farmer would have to harvest and sell a varying amount of cotton depending on the cost of hand-labour; the yields required are outlined in the following table, (Table VII. 18B.)

The high returns that are needed in order to make a profit on cotton, plus the difficulties of ensuring agreement between the farm committee and members and the farm manager as to which crops should be grown, the timing of operations, and the importance of maintaining a high standard of weeding and harvesting all raise the question of whether the Group Farms would not be better suited to beef cattle. Current policy is to introduce cattle on the farms but not to give up

Table VII. 18A

Cost of Producing One Acre of Cotton on Inomo Group Farm, 1964 Costings

1. Costs of Mechanical Cultivation and Insecticide.

Operation	Shillings	Cents
1st Ploughing	45	00
2nd Ploughing	40	00
Discing	25	00
Poanting	15	00
Spraying (4 applications)	20	00
Transport	18	60
Cost of Insecticide (1)	5	00
	168	60
Loan Interest for 10 months	17	00
Total Cost	185	60

2. Cost of Hand-labour

Operation	Man-hours required	Total Cost at an average of -/40 per hour Shs. Cts.	Total Cost at an average of -/50 per hour Shs. Cts.	Total Cost at an average of -/60 per hour Shs. Cts.
Thinning/Filling	18.20	7.28	9.10	10.92
Weeding	150.10	60.04	75.05	90.06
Picking	137.50	55.00	68.75	82.50
Sorting	65.00	26.00	32.50	39.00
Uprooting and Burning	15.70	6.28	7.85	8.42
Total	386.50	154.60	193.25	230.90
Grand Total		340.20	378.85	415.50

(1) The 1966/67 price has been taken since this is likely to remain constant up to 1970/71.

Table VII. 18B

Cotton. Gross Returns per Acre at Different Prices and Yield Level.

Price per lb.	Yield Level Per Acre							
	400lb.	500lb.	600lb.	700lb.	800lb.	900lb.	1000lb.	1100lb.
-/59:	236/-	295/-	354/-	413/-	472/-	531/-	590/-	649/-
-/55:	220/-	275/-	330/-	385/-	440/-	495/-	550/-	605/-
-/50:	200/-	250/-	300/-	350/-	400/-	450/-	500/-	550/-
-/40:	160/-	200/-	240/-	280/-	320/-	360/-	400/-	440/-

arable cropping.(1) However, of computations carried out by the Agricultural Economist in the Department of Agriculture in 1966 for four possible cattle schemes on Group Farms two had benefit:cost ratios of less than one and two of slightly greater than one (approximately 1.1 to 1)(2) These schemes presupposed that arable cropping was also continued on the farms. It would appear that reliance on beef cattle as a source of incoem should not be high, although obviously some farms may show a greater profit than others owing to superior stock, pasture or management.

Ideally, it is intended that each Group Farm should be based on a cooperative society that has already been operating the Cooperative Credit Scheme, and has used most of the credit so obtained to pay for tractor hire service.

(2) Source: Department of Agriculture.

If the Group Farms were in fact each composed of the members of one society already operating the Cooperative Credit, some of the problems that have arisen specifically in connection with credit might have been avoided. In fact, it has been necessary to waive many of the qualifications normally required for participation in the Scheme for the following reasons:

(i) The farms have in some cases been based on newly formed cooperative societies.

(ii) Some farms have drawn members from more than one society, plus some non-society members.

(iii) Even where the only society involved is one which is already operating the Cooperative Credit Scheme, Farm membership has not necessarily been restricted to those members who are eligible to receive credit.

(iv) Owing to the size of loans required it has frequently been impossible to apply the Credit Scheme rule which restricts individual loans to $\frac{2}{3}$ the average value of the borrower's marketings through the society over the preceding three years. (As pointed out above, the borrower may not even have marketed his crops through the society.)

It is not unusual for a Group Farming Society to employ an inexperienced manager, either because the society is newly formed or because the Group Farm members, having broken off from the full body of the society to which they previously belonged, require a separate manager. The society manager is nonetheless responsible for the administration of the loan which the society obtains annually from the Uganda Commercial Bank for relending to members. In 1966/67 Group Farming Societies obtained from the Uganda Commercial Bank loans ranging in value from Shs. 40,000/- to Shs. 120,000/-.

The societies borrow from the Bank at an interest rate of 7½% per annum and relend to members at a rate of 12% per annum.(1) As under the ordinary Cooperative Credit Scheme the short-term loans are repayable within a maximum of twelve months.

The borrowing record of the farms has been poor. At June 1966 20% of the 1965/66 loans, most of which fell due in March 1966, were still outstanding; this figure applies only to those Farms whose borrowing record was considered sufficiently good to allow them to retain their Group Farm status, and these constituted approximately 66.6% of all the Farms which had entered the Scheme up to this date.

The following quotation illustrates some of the factors contributing to the higher level of default.

> "In the group farming scheme, 28 societies, and nearly 3,300 of their farmer-members participated. The problem of defaults continued to be graver here than in the Credit Scheme. Of the £ 26,384 worth of tractor cultivation and other services rendered to the societies, only £15,092 was repaid, leaving a balance of £11,292 (or nearly 43% of loans) unpaid.
>
> Problems in the operation and development of this scheme continue as is only to be expected from the effects that its ambitious and radical nature must have on a cautious and conservative peasant farming community, particularly when a few lazy and irresponsible persons in the areas concerned played on the emotions of the majority when speaking against the scheme and misinterpreting the good intentions of Government.

(1) For an account of the source of funds used by the Bank for these loans, and the rate of expansion of the latter, see Chapter II, p. 117 and 120.

"Some of these problems arise from physical difficulties as, for example, with those participants living some distance from the Group Farm who do not find it easy to travel to and from and still put in a lot of enthusiastic work on the farm. These tend to pay more attention to their plots near their homesteads to the detriment of the plots allocated to them on the Farm. A further difficulty arises at harvest time when the much higher yields of cotton on the Group Farm cause a real labour bottle-neck and sorting-over and selling competes for the labour of the farmer and his family with the picking of the next batch of open bolls in the field ....

One thing has become very obvious and that is that Group Farming is for full time farmers and not for part time farmers who are otherwise in full paid employment. It is distressing to see that these people form a high proportion of the defaulters (both in work and in loan repayment) and that they include several Chiefs even County Chiefs.

Another cause of default was downright dishonesty. The problem was in turn partly the result of the fact that although group farm policy now requires both the societies and their participating members to be creditworthy before they can enter the scheme, in practice it is often impossible to insist on all-round creditworthiness - because the best societies do not always happen to be in the most suitable areas for group farming."(1)

Repayment of credit given the limited amount of funds which the Uganda Government has available, is crucial to the continued operation of the scheme. The histories of individual farms, however, show that poor repayment cannot be ascribed solely to the standard of society management, nor to the waiving of normal credit scheme regulations. Some of the highest levels of default have been incurred by Group Farms on which members have not merely defaulted on their loans, but have refused to weed and/or harvest their cotton. The reasonsfor this can be found in failure to observe one or more of the criteria listed on pages 439 and 440. Three of the most important are the siting of farms in areas

(1) Source: Department of Cooperative Development, Annual Report for 1965, page 11.

where they are not wanted,[1] the inclusion among Farm members of individuals who have full-time off-farm occupations and therefore cannot maintain their plots, and the inclusion of members who live off the farms (this is normally the case) and who divide their time between their home shambas and the Farms. As the former are usually nearer home, the members may frequently neglect their Farm plots in favour of the home shamba.

Appendix VII. 1

GREEN TEA LEAF AGREEMENT - CATEGORY I OUTGROWERS.

This Agreement is made the ___ day of ___ between ____ (hereinafter called the Grower) on the one part and ___ (hereinafter called the Manufacturer) on the second part.

(1) The Agreement will be operative from ___ for an unspecified period and only terminable with agreement of the Uganda Credit and Savings Bank after the Grower's indebtedness to the Uganda Credit and Savings Bank has been liquidated and then on twelve months notice in writing given by either party to the other.

(2) The Manufacturer will accept green leaf delivered at the Factory door at a general standard of two leaves and a bud and the Manufacturer's Factory Manager will have full authority to reject tea leaf which is not up to the general standard required.

(3) Green leaf from the Grower will be accepted by the Manufacturer at the factory door from Monday to Friday each week between the hours of 9.00 a.m. and 3.00 p.m. In exceptional circumstances where delivery outside these periods is desirable special arrangement may be made between the Grower and the Manufacturer; during heavy flushing seasons leaf may be accepted on Saturdays and Sundays by special arrangement only.

(4) The Grower shall deliver all his tea leaf production to the Manufacturer.

(5) An account will be kept of the Grower's leaf deliveries and each month a preliminary pay-out to the Grower will be made by the Manufacturer at a rate related to current tea sale realisations less estimated manufacturing costs and service charges. Subsequently at half-yearly intervals

the Manufacturer will pay the Grower any balance due after deducting preliminary payments from the actual sum due as calculated half-yearly and yearly by the Manufacturer and confirmed yearly by the Manufacturer's Auditors. The half-yearly and yearly calculations of the actual sum due will be made as follows:-

(i) The gross realisation value of tea sold for the six or twelve months period is adjusted for stocks and tea in transit at the beginning and end of the period, the valuation of stocks and tea in transit being on the basis approved by the Company's Auditors.

(ii) From the figure arrived at in (i) above are deducted the following costs for the same period:

(a) Distribution Costs

(b) Factory and packing costs.

The allocation of expenses to these two cost headings will be on a basis approved by the Company's Auditors and will include all direct costs of distribution, manufacture and packing also inter alia production and selling commissions, factory depreciation and an allocation of overhead expenses but excluding any interest charges on money loaned.

(iii) The figure arrived at in (ii) above is then divided by the total green leaf processed at the factory during the relative period giving a value per lb. of green leaf.

(iv) From the value per lb. of green leaf is deducted a charge of 10% to include the cost of crop financing, giving a net value per lb. of green leaf which is applied to the quantity of green leaf purchased by the Manufacturer from the Grower during the relative period, giving the gross amount due to the Grower.

(6) From this gross amount is deducted all preliminary payments made to the Grower. Should the half-yearly or yearly calculations show that the Grower is indebted to the Manufacturer the indebtedness will be recovered by the Manufacturer with-holding all payments to the Grower until such indebtedness is liquidated. The Manufacturer will nevertheless in these circumstances be liable to pay to Uganda Credit and Savings Bank the sum specified in Clause 7 below.

(7) Whilst the Grower has any loan outstanding from the Uganda Credit and Savings Bank a deduction of 8 cents per lb. on green leaf delivery will be made and will be paid to the Uganda Credit and Savings Bank on behalf of the Grower.

(8) In order to assist the Manufacturer's Factory organisation, the Grower will provide on request an estimate of the crop expected from his small-holding at the commencement of each quarter.

(9) During the term of this Agreement the Manufacturer agrees to process the Grower's leaf in such a manner and in such grades as is best suited to the Market.

(10) The Manufacturer accepts no responsibility for any loss suffered by the Grower as a result of the manufacturer being unable to process the Grower's leaf due to plant breakdown, power failure, fire, riots, earthquake, strikes, Acts of God or any other event causing damage to the Manufacturer's factory. In such circumstances the Manufacturer will temporarily release the Grower from his obligations under paragraph (4) and will endeavour to make alternative arrangements for the process of

the Grower's Leaf.

(11) The terms of this Agreement shall not prevent any Grower from liquidating his debt to the Uganda Credit and Savings Bank at any time.

I CERTIFY THAT THE ABOVE AGREEMENT HAS BEEN READ TO ME IN THE VERNACULAR AND I AGREE TO THE TERMS THEREOF WHICH I UNDERSTAND FULLY.

Signed by the Outgrower in the presence of ______

The Outgrower.

Date ___196___ ______ Witness

Signed by the Manufacturer in the presence of______

for Manufacturer.

Date ___196___ ______ Witness.

Appendix VII. 2

The Objects and Functions of the Uganda Tea Growers' Corporation

"3. (1) The objects for which the Corporation is established shall be,

(a) to encourage the formation of associations of tea growers into co-operative societies with the object ultimately of such societies acquiring tea processing factories;

(b) to prepare overall plans for the development of the tea industry including the preparation of estimates which shall be subject to the approval of the Minister;

(c) to negotiate green leaf agreements on behalf of tea growers or a co-operative society of tea growers;

(d) to organise the inspection ofgreen leaf and the establishment and inspection of collection centres for, and the transportation and storage of, green leaf;

(e) to organise the transportation, sale and marketing of processed tea;

(f) to negotiate for the finacing and the construction of factories and to make arrangements for the management of such factories;

(g) to set up and maintain training centres and experimental tea stations;

(h) to negotiate with the Government or any other authority local or otherwise for the construction or improvement and maintenance of roads and other transport facilities for the collection of green leaf and the distribution of processed tea;

(i) to exercise such powers of control of the processing of green leaf produced by tea growers as may be conferred upon it by Regulations made under section 21 of this Act; and

(j) to do all such other things as are incidental or conducive to the attainment of the above objects or any of them or the performance of its functions under this Act.

(2.) It shall be the duty of the Corporation,

(a) to secure good seed supplies, establish and maintain nurseries or place contract for the supply ofplanting materials to tea growers and to organise the provision of tea stumps and fertilizers for tea growers;

(b) to provide or procure credit facilities for tea growers for the purchase of stumps, fertilizers and equipment;

(c) to set up an inspectorate for the inspection of green leaf.

(3.) The Corporation may, either by itself or in agreement with any other person, establish, acquire or operate tea processing factories and may promote a company for any such purpose or subscribe for shares in any company incorporated in Uganda for the purposes of processing or marketing tea."(1)

(1) Uganda Tea Grower Corporation Act, 1966, Section 3.

Appendix VII. 3

GROUP FARMING AGREEMENT 'A'

We, the ... Co-operative Society Ltd (Registered No. ...) of ... on behalf of that Society hereby agree that the Society will operate a Group Farming Scheme in (Mutalla) ... (Muluka) ... (Gombolola) ... (Saza) ... of ... (Kingdom/Territory/District and that the Society binds itself to comply fully and at all times with the terms of the following agreement made with the Director of Agriculture this ... day of ... 19 ..

Bye-Laws 1. The general meeting of the Society was held on ... 19... and duly accepted the Scheme and adopted the additions to its Bye-laws set out in the attached Schedule/ the Model Bye-laws for a Cooperative Group Farming Society and these amendments/Bye-laws were duly registered by the Registrar of Cooperative Societies on ... 19 ... The contents of these Bye-laws have been read over to every member of the Society.

Survey of Land and Land Usage Plans. 2. The whole area of the Scheme shall be surveyed by a surveyor appointed by the District Agricultural Officer and the District Agricultural Officer shall prepare a land usage plan or plans for the Scheme area. This plan shall be agreed with the Committee of the Society and once agreed shall be binding upon the Society.

3. This survey and plan shall have no other status in law and shall not be used in any way to affect existing rights over land except with the approval of the General Meeting of the Society when not less than 75% of the members are in agreement with its use in this manner.

4. The plan or plans prepared under Section 2 above shall show existing land rights, bibanja boundaries, etc. and permanent marks shall be left on the ground so that those boundaries etc. can be identified at any time.

5. No perennial crops or land on which perennial crops are continuing to be cultivated shall be cultivated under this Scheme.

6. Any land not planted to perennial crops or which will continue to be occupied by buildings, may be marked out in strips by the District Agricultural Officer for tractor cultivation and may be shaped according to the needs of tractor cultivation irrespective of the ownership for existing land rights over the land.

Crops and Rotation 7. The District Agricultural Officer shall in consultation with the Committee of the Society, decide what crops shall be grown and the rotation in which they shall be grown on the strips marked out for tractor cultivation, and the decision of the District Agricultural Officer shall be binding on the Society and the members thereof.

Clearing and Cultivation. 8. The District Agricultural Officer shall arrange for the clearing of the land allocated as above for tractor cultivation. The Society agrees that its members will carry out as much as is possible or practical or necessary to do by hand of this clearing. This hand work will be organised by the Committee of the Society in consultation with the District Agricultural Officer and no payment will be made to the members of this Society for any such work. The Director of Agriculture agrees that any clearing work required to be carried out by mechanical means will be carried out by the Department of Agriculture or on behalf of the Department of Agriculture and no charge or charges for this work will be payable by the Society or its member.

9. The District Agricultural Officer will carry out or arrange to be carried out as many subsequent cultivation operations as possible. The extent of these operations shall be agreed in writing beforehand with the Committee of the Society, as far as possible both as regard total acreage and nature of the operation or operations but allowing for exigencies. The Director of Agriculture undertakes to provide and maintain in working order an adequate number of tractors and equipment to carry out all those operations over a period or periods which are reasonable for that operation or those operations.

10. All farming operations other than those provided in paragraph 9 will be carried out by those members of the Society to whom plots have been or are allocated within the Scheme and each shall be entirely responsible for carrying out satisfactorily those operations on the plot or plots which he has been allocated and for any other operations which it has been agreed shall be carried out by hand labour. Provided that, if for any reason any member fails within a given time, specified by the Committee with the advice of the District of Agricultural Officer, to carry out any necessary operation on his plot(s), the Committee may arrange for that operation to be carried out at the expense of the defaulting member.

<u>Payment for Tractor Cultivation</u>. 11. The Society shall be responsible for paying the Department of Agriculture for all tractor hire charges for operations carried out under para. 9, for allocating these charges among the members concerned in accordance with its Bye-Laws governing loans and advances to members and for recovering those sums

from those members during the next following harvest period or periods.

12. All such payments to the Department of Agriculture shall be made within 7 days of the completion of each operation involved or on a weekly basis, and shall be made via the Uganda Credit and Savings Bank Branch at ... in accordance with the procedure laid down in Appendix .... to this agreement. Payment shall be made at the rates laid down in Appendix .... to this agreement.

Responsibility of Government for Damage etc. 13. Neither the Department of Agriculture nor the Government of Uganda shall be responsible for any crop failure occuring during the duration of this agreement nor for any damage to crops sustained through any act or action of any person or persons employed by them in connection with the operation of this Scheme, nor through any failure to act or to arrange for any act by the said person or persons.

14. Neither the Department of Agriculture nor the Government of Uganda shall be responsible for any damage to property or injury to any person or persons caused through the operation of this Scheme by whatever means such damage or injury may be caused.

15. The Society may/will undertake to insure itself through the Uganda Central Co-operative Union Ltd. and its members against any damage or injury as described in Section 14.

General Meetings. 16. Before each and every cultivation season the Society shall call a Special General Meeting of all its members at which the District Agricultural Officer or his representative and the District Co-operative Officer or his representative shall be present together with the Committee of the Society jointly to explain to members and to discuss with them the operations planned for that cultivation season.

17. The District Agricultural Officer or his representative and the District Co-operative Officer or his representative shall attend a Special General Meeting of the Society once in every year and at that General Meeting the major policy of the Group Farming Scheme for the ensuing 12-24 months shall be decided. Thi District Agricultural Officer and the District Co-operative Officer (or their representatives) shall have full power to speak at such meetings for such period or periods as they may consider necessary to advise the Society on agricultural and co-operative principles and practice involved in or related to this Scheme. This policy directive shall be binding on the Committee of the Society.

Committee. 18. The Committee of the Society shall meet at least once per month or more frequently if so decided by themselves or requested by the District Agricultural Officer or District Co-operative Officer. The District Agricultural Officer and District Co-operative Officer or their representatives shall be entitled to attend all Committee Meetings where any matter concerning or affecting this Group Farming Scheme is discussed, and they shall be entitled to speak on all such matters.

Duration of Agreement. 19. This agreement shall be binding on the Society and on the Department of Agriculture for the period of .... months from the date on which it is signed and may be renewed for further yearly periods by mutual consent. No amendment shall be made except at the time or time of renewal.

20. Failure by the Society to comply with all reasonable requests by the District Agricultural Officer in matters affecting good agricultural

practices will result in the withdrawal of all assistance, advice and mechanical cultivation equipment from this Scheme.

Disputes and Arbitration. 21. If any dispute should arise between the Society and the District Agricultural Officer in connection with or in relation to the operation of this Scheme or to the terms of this agreement, the matter shall be referred to the Minister of Agriculture and Co-operatives of the Government of Uganda, who shall either decide the dispute himself or cause a senior officer of his Ministry to arbitrate in the dispute. The decision of the Minister or of an arbitrator appointed by him shall be final.

Any dispute arising between the Society and any of its members shall be dealt with in accordance with the Co-operative Societies' Ordinance and Rules.

Signed ....for Director of Agriculture.

Witnessed by:

....

....

Signed .... for the .....

....

.... Co-operative Society Limited.

Appendix VII. 4

GROUP FARMING AGREEMENT 'B'

I, ... being member no ..... of the ..... Co-operative Society Ltd., agree to participate in the Group Farming Scheme being operated by that Society for a period of at least one full crop year and I agree to be bound by the rules of that Scheme as set out below.

1. The general policy for the Scheme will be decided by the General Meeting of the Society on the advice of the District Agricultural Officer and the District Co-operative Officer. The details of that policy will be decided by the Committee of the Society in full consultation with the District Agricultural Officer and the District Co-operative Officer, and the advice of the District Agricultural Officer shall prevail for the duration of this Scheme in all agricultural matters.

2. The Committee of the Society shall agree with the District Agricultural Officer the boundaries of the land to be cultivated under this Scheme: such land shall not include perennial crops or sites which will continue to be occupied by buildings.

3. The land allocated for this Scheme shall be surveyed by a person or persons appointed by the District Agricultural Officer and the District Agricultural Officer shall prepare or have prepared a plan of the whole area or areas.

4. This plan shall show the boundaries of any existing land ownership or occupancy or usage rights and permanent marks shall be left on the ground so that those boundaries can be identified at any time.

5. This plan shall <u>not</u> be used in any way to affect existing land

over the land involved and shall have no legal status whatever.

6. The land set aside under para. 2 shall be marked out in strips by the District Agricultural Officer for tractor cultivation and these may be shaped in any way decided by the District Agricultural Officer as being necessary for economic cultivation by tractors and for proper land or of any prior occupancy or cultivation rights over it.

7. The District Agricultural Officer, in consultation with the committee of the Society shall decide what crops are to be grown and the rotation on which they are to be grown on the strips marked out for tractor cultivation and any decision so taken is binding on me.

8. I must apply each year to the Committee of the Society to be allocated a plot or plots on or across the strips in this Scheme and the decision of the Committee shall be final for that year.

9. On any of my land which is not included in this Scheme I may grow whatever crops I wish.

10. I will sell through Society only all crops grown on the plot or plots allocated to me in the area covered by this Scheme.

11. I agree that if I am called upon by the Committee to work on clearing any of the land to be cultivated under this Scheme or on making any roads or bridges or any other work required for the operation of this Scheme that I will do that work for the good of myself and my fellow members without any payment.

12. I agree that upon being allocated a plot or plots within this Scheme I will sign a Loan Agreement with the Society to cover the full cost of the tractor cultivation of that plot or of those plots, in accordance with the Bye-laws of the Society covering loans to members and that I will repay

that loan within 12 months from the proceeds of the crops grown on that plot or those plots in accordance with the arrangements made by the Committee of the Society to market those crops and to recover loans.

13. I agree to undertake on the plot or plots allocated to me all cultivation operations which are not carried out by mechanical means and to follow the instructions of the Committee in this respect. This particularly means that I will weed in the rows where necessary and harvest the crops as quickly as possible.

14. I agree to be bound by the terms of this Scheme for a minimum period of one year from the date of signing this agreement, and that this agreement may be renewed annually for periods of one year by mutual consent with the Committee.

15. I agree that if I fail to observe the terms of this agreement for the period of 12 months from signing it I shall be liable to pay such damages and costs which may be suffered by other member participants, by the Society or by Government as a result of my failure or withdrawal from the Scheme, all of which damages shall be assessed by the District Agricultural Officer in consultation with the Committee of the Society.

16. I understand that the Government of Uganda is not responsible for:-

(a) any failure of the crops grown under this Scheme;

(b) any damage to those crops;

(c) " " " my buildings;

(d) " injury to myself or to any member of my family or to any of my livestock.

(I also understand that the Society has insured itself and myself as a member of the Society against damage or injury under (c) and (d) above.)

17. (a) I understand and accept that any dispute between myself and the Society will be dealt with under the law of Uganda Governing Co-operative Societies.

(b) I understand and accept that any dispute between the District Agricultural Officer and the Society will be referred to the Minister of Agriculture and Co-operatives whose decision will be final, whether he decides it himself or whether he appoints a senior officer in his Ministry to arbitrate on his behalf.

Signed ....

Member No. ....

Witnessed by:

....

....

Date ....19 ..

Chapter VIII

A Critique of the 1966 Plans for the Expansion of Agricultural Credit through the Co-operative Movement, with Particular Reference to Short-term Credit

1. The Second Five Year Development Plan: the Agricultural Sector.

Reference to the importance of the agricultural sector in the Second Five Year Plan has already been made in Chapter I. The plans for the development of the sector are discussed here in order to clarify the subsequent discussion of the 1966 plans for the expansion of agricultural credit.

The Plan aims to diversify the agricultural base, and at the same time to achieve a 5.1% per annum increase in the gross monetary product of the sector. The diversification programme is of direct relevance to this Chapter. The Plan states that:

> "The diversification programme will be concerned with increasing rapidly the output of other crops and animal products, increasing the output of cotton and improving the quality of coffee produced." (1)

The Plan also states that the most important part of the diversification programme is the development of the livestock industry. Beef production is to be raised through improved disease control and through the establishment of a series of ranches including the establishment of 25 privately owned ranches per annum on the Ankole/Masaka ranching

(1) "Work for Progress", page 55.

scheme.[1] In addition it is planned to raise milk production by 25% over the Plan period (1966-1971).

> "It is proposed to establish a hundred new dairy farms per annum for ten years and, in addition, to provide loans and credit for dairy co-operatives, calf rearing stations and individual dairy farmers." (2)

The output of poultry products and pork is also to be increased. The crops which are to receive additional emphasis are sugar, tea, groundnuts, tobacco, cocoa, citrus fruits, rubber,[3] sisal,[3] and various food-crops. Robusta coffee growers will be encouraged to grow alternative crops in order to reduce the acreage under robusta.

> "A credit fund for the production of alternative crops will be tied to the uprooting of an equivalent acreage of robusta." (4)

Credit will also be provided to tea growers for the purchase of stumps, fertilisers and insecticides.

In addition to promoting the production of these crops, the Government aims (i) to continue to endeavour to increase the total output of cotton, placing considerable emphasis on expanding the use

(1) This target does not coincide exactly with that currently held by the Ministry of Animal Industry, Game and Fisheries. The Ministry's target is the establishment of fifty ranches, after which plans for further expansion will be considered.

(2) "Work for Progress", page 72.

(3) Rubber and sisal are to be grown mainly on plantations to be established by the Uganda Development Corporation, and not by small-holders.

(4) "Work for Progress", page 65.

of D.D.T. to increase yields per acre, (ii) to improve the quality of robusta coffee produced and (iii) to substitute arabica for robusta coffee, planting 10,000 acres or arabica a year in the Western Region as replacement for uprooted arabica. Credit will be provided to arabica coffee growers for the purchase of pesticides and fertilisers. No regional plans were prepared for the agricultural sector, and with the exception of arabica coffee, ranching and citrus[1] reference is not made in the Plan to the areas in which specific developments are designed to take place.

2. The Proposed Credit Structure.

Owing to the apparent success of the Co-operative Credit Scheme (as judged by its repayment record and not its impact on production[2]) in providing a suitable structure for lending to peasant farmers, plans for the expansion of agricultural credit in Uganda centre on the development of this scheme. In 1966 the Uganda Government submitted an application to the World Bank for a loan with which it intended to establish a revolving loans fund for the provision of agricultural credit. The application was made in order to enable the Government to achieve the credit targets outlined in the following paragraph. The manner in which it was intended that the fund should be used is discussed below.

In its most recent Five Year Development Plan the Uganda Government states that by 1971 its intention is that 150,000 farmers should be in

(1) The expansion of citrus production is designed to take place primarily in Busoga District.

(2) On which no precise data are available; see Chapter V., page 297.

receipt of short-term loans of a duration of less than one year and worth Shs. 200/- to Shs. 300/- each, provided under the Co-operative Credit Scheme; that 5,000 farmers should be in receipt of medium-term two-year loans worth up to Shs.2,000/-, and that 4,500 farmers should be in receipt of larger medium-term loans worth up to Shs.5,000/- and granted for a period of "several" years.(1) Plans for the provision of long-term credit are not included.

The two-year loans require an outline farm plan, and the larger medium-term loans a detailed farm plan; for the short-term loans no plan is required. For the two-year loans the plan would consist of a "package" loan which might be modified by the local Agricultural Assistant. The larger loans would be planned by local staff assisted by a Farm Planning Team of fully qualified agricultural economists to be established by the Department of Agriculture.

All of this credit is to be provided either directly through primary co-operative societies or in close connection with them. The short-term and two-year loans will be made only through credit-worthy co-operative societies. The larger loans will be made direct by the Uganda Commercial Bank to the borrower, but will normally require a guarantee from the borrower's primary marketing society.

A proposal has been drawn up for the provision of agricultural loans which lays rigid specifications as to who shall be eligible for

(1) See "Work for Progress", page 61; Government Printer, Entebbe, 1966. A more recent statement by the Department of Agriculture suggested that the larger farmers loans might range from Shs.5,000/- to Shs. 20,000/-. They might be granted for periods up to 5 years.

credit - and on what terms and as to the channels through which credit will be provided. Loans are to go only to members of selected credit-worthy primary marketing societies, and only to those members who have over the past three years sold their crops through their society. At the end of 1966, 327 societies, or 17.5% of all primary marketing societies, were participating in the Cooperative Credit Scheme. 37,000 farmers, including Group Farm members, obtained loans during that year; they represented 2.5% of the estimated 1.5 million[(1)] farmers in Uganda. There is no reason to suppose that farmers who are members of credit-worthy cooperative societies, and who are themselves eligible for credit, will necessarily turn out to be the farmers who need credit most. These farmers (i) may not need credit at all, (ii) may not be able to use it as effectively as other potential borrowers because only uses for credit of very low profitability are open to them, (iii) may be bad borrowers. A large number of "progressive" farmers, particularly outside the cotton-growing areas, do not belong to cooperative societies at all.

The stipulation that no loan should exceed Shs.5,000/- (if it is accurate: see footnote (1) to page 469) bears no relation to the likely credit requirements of farmers establishing ranches (e.g. under the Ankole Masaka Ranching Scheme), or comparatively large dairy farms.

(1) Estimate used by the Department of Cooperative Development.

For example, for a borrower who finances all clearing and fencing of pasture for a 25 acre dairy farm from his own resources a Shs.5,000/- loan would be insufficient to cover the cost of stocking the farm, let alone the purchase of a water pump or other equipment. Even a Shs.20,000/- loan would be insufficient to meet the credit needs of a rancher.(1)

In this context it should be mentioned that dairy cooperatives are only formed after the establishment of dairy farms, and that new members would only join existing cooperatives after their farms have become operational. Credit cannot, therefore, be provided to these farmers either through a dairy cooperative or on the guarantee of such a cooperative.

A similar problem is likely to arise whenever credit is needed to promote a new enterprise. Thus under the new flue-cured tobacco scheme initiated in Madi, Acholi and Lango in 1966 it was necessary to formulate completely new tobacco growers' cooperative societies. Credit was then immediately issued through the societies before either they or their members had proved their credit-worthiness, this being the best alternative that could be adopted if the scheme was to get under way. Where such situations are likely to arise, it is of little value to maintain that credit can only be provided under the regulations laid down in the Cooperative Credit Scheme. The writer would further suggest that so far as the larger medium-term

(1) See Chapter VII, Section 3. 2.

loans are concerned the primary societies have no useful part to play as channels for credit. Credit of this nature could be provided at a lower cost to the farmer if the latter borrowed direct from the Uganda Commercial Bank either in its capacity as agent for Uganda Government fund or as lender of its own funds. In addition, this would remove the risk of mismanagement of the loans at the society level. In most cases it would also be unreasonable to ask the primary societies to guarantee these loans, since even if the borrowers belong to a primary society they will often be using credit to finance an enterprise, e.g. dairy-farming, ranching, which is not the concern of a society whose business is the marketing of coffee or cotton.

Despite the statements of intent contained in the Plan, little attempt if any has been made to relate agricultural lending to the proposed diversification of the agricultural sector beyond the establishment of plans to continue the provision of credit for the production of tea and flue-cured tobacco. With regard to short-term loans the contrary policy is adopted. The Plan itself specifically states that the projected short-term loans are "designed primarily to help cotton growers".(1) No plans have been established for the provision of credit to finance dairy farmers or the replacement of robusta coffee. At the time of writing (August, 1967) it seems probable that plans for the provision of credit to ranchers will be approved by the end of the year.

The proposed Plan is highly ambitious. The selection of a target of 150,000 short-term loans to be outstanding in 1971, implies

(1) "Work for Progress", page 61.

a 400% increase in the rate of expansion achieved by the Cooperative Credit Scheme since its inception in 1962. The target of 9,500 medium-term loans is equivalent to three times the number of loans paid out under the Progressive Farmers' Loans Scheme in its three years of operation.

Package Loans.

One suggestion, for which provisional plans have been made, is that many of the short-term and two-year loans should be provided in packages. This experiment was first made for short-term loans in Bukedi and Ankole Districts in 1962[(1)] No follow-up study was made of their impact on the farms concerned. The "packages" constitute loans for specified sums and stipulated purposes, which include the purchase of equipment and of specified amounts of recurrent inputs. This presupposes a uniformity in borrowing requirements which could easily be turned into a rigid loan formula if implemented by extension staff with insufficient time or technical skill to examine the needs of individual farms. One of the disadvantages of distributing examples of stereotype package loans such as those reproduced below is that they presuppose the same opportunity cost for labour on all farms and throughout the crop year. In fact, some farms will have more idle labour than others, and the labour will be available at different times of the year on different farms. In order to obtain an accurate relationship to costs and returns the packages need to

(1) For an example of the package loans designed for Ankole District see Appendix 1.

be adapted to each borrower.

An attempt made by the Department of Cooperative Development to spread this system of lending outside Bukedi and Ankole in 1962 and 1963 did not succeed. In fact the system of lending did not succeed in Bukedi, where little interest was shown in it either by the staff of the Agricultural Department or the farmers themselves. In Ankole the adoption of package loans in 1962/63 has been stated by the Cooperative Department to have been due to the synonymous presence of exceptionally good District Agricultural and Cooperative Officers both of whom supported the package loan scheme. On the basis of this statement it would appear unreasonable to rely on the adoption of package loans in other areas since staff of above average quality are needed to ensure their use.

New "package loans" were prepared by the Department of Agriculture in 1966. Since the emphasis of the short-term credit scheme is on the expansion of cotton production three "cotton packages" are discussed below (Table VIII. 1). These were issued to District Agricultural and Cooperative Officers as examples of the way in which short-term credit should be used.

As they stand the first two examples given presume very high returns to investment. Thus the rate of return to the cash outlay in the Loan 1 is 77%, in Loan 2 is 264% and in Loan 3 is 18%. However, there is reason to question the validity of these costings for three reasons:

(i) the price assumed is 25% higher than the current price per pound

Table VIII. 1

Examples of Packages

Cotton Package No. 1: 2 acres Northern and Eastern Regions.

Phasing month	Input/Output	Shs.
	(a) input	
4	4 cwt. single superphosphate	68
6	4 cwt. sulphate of ammonia	120
6	1 cotton spray pump (Plantector)	24
6	2 tins D.D.T. spray	10
10	4 cotton picking aprons	20
10	Picking 30 man-days	60
	Total Loan	302
	(b) Farmer's cash contribution	
4 - 6	* Fertilizer application 8 man/days	16
6 - 8	* Spray application 8 man/days	16
10 -12	Pick and sort 20 man/days	40
12	Interest on loan	20
	Total	92
	(c) Output	
Pre-project = 500 lbs per acre @ -/50 per lb.		500
Post-project = 1,200 lbs. per acre @ -/50 per lb.		1,200
	Increased gross value	700
	Farmer's cash cost	394
	Farmer's cash income	306

*Where cotton team spraying and fertilizer application is organized, the cost may form part of the package loan.

Table VIII. 1 (Cont'd.)

Cotton Package No. 2: 2 acres Buganda and Western Region.

Phasing month	Input/Output	Shs.
	(a) Input	
6	1 cotton spray pump (Plantector)	24
6	2 tins D.D.T. spray	10
10	4 cotton picking aprons	20
10	Picking 10 man/days	20
	Total Loan	74
	(b) Farmer's cash contribution	
6 - 8	Spray application 8 man/days	16
10 -12	Pick and sort 8 man/days	16
	Interest on loan	4
	Total	36
	(c) Output	
Pre-project	= 500 lbs. per acre @ -/50 per lb.	500
Post-project	= 900 lbs. per acre @ -/50 per lb.	900
	Increased gross value	400
	Farmer's cash cost	110
	Farmer's cash income	290

Table VIII. 1 (Cont'd.)

Cotton Package No. 3: 2 acres Northern and Eastern Region.

Phasing Month	Input/Output	Shs.
	(a) Input	
3	Labour to clear stumps 50 man/days	100
4	Tractor hire: (a) 2 ploughings	170
	(b) 1 harrowing	50
	(c) 1 planting	30
4	4 cwt. single superphosphate	68
6 - 7	Tractor weeding	80
6	1 spray pump	24
6	2 tins D.D.T. spray	10
6 - 7	Spraying labour	16
6	4 cwt. sulphate of ammonia	120
10 -12	Picking and sorting 82 man/days	164
10	Hessian squares	20
	Total Loan	852
	(b) Farmer's cash contribution	
4 - 6	Fertilizer application 8 man/days	16
6	Weeding 10 man-days	20
10 -12	Picking and sorting 54 man/days	108
	Interest on loan	62
	Total	206
	(c) Output	
	Pre-project: Bush	nil
	Post-project: 1,250 lbs/acre @ -/50 lb.	1,250
	Farmer's cash cost	1,058
	Farmer's cash income	192

Source: Department of Agriculture.

of seed cotton which is directly determined by the world market price.

(ii) the application of spray is assumed to result consistently in the highest increase in output (400 lbs. per acre) ever achieved on a research station from the use of spray. This is more than twice the average increase in output achieved (174 lbs. per acre).(1)

(iii) the fertilizer applications are assumed to lead to yield increases of 350 lbs. per acre whereas the use of fertilizer on cotton has been found to yield only very slight increases in output.(2)

After adjusting for price (assuming the current price of -/40 per pound of seed cotton), the returns are as follows:- Loan 1, 42%; Loan 2 100%; Loan 3, 5%. After making a further adjustment for the impact of spray (and assuming an average increase in output of 200 lbs. per acre), the returns become: Loan 1, 2%; Loan 2, 45%; Loan 3, -21%.

It is not only the proposed cotton packages that are likely to yield very low returns to growers. An unprofitable maize package was reproduced in Chapter V, page 324. The following package loan for sorghum, which was drawn up for Central Masaka, also shows a low return to the farmer once the pre-project yield has been adjusted to the correct district average of 900 lbs. per acre.(3)

On the other hand, it seems reasonably certain that the provision of short-term credit for arabica coffee will yield a return of 66%. (see p.326)

(1) See "Work for Progress", page 64.

(2) See D. Stephens, "Fertilizer Trialson Cotton and Other Annual Crops on Small Farms in Uganda", to be published in Experimental Agriculture 1967 or 1968. Stephens states that of 290 cotton plots subjected to ammonium sulphate fertilizer trials in 1963 and 1964, 27% in 1963, and 42% in 1964 did not show a net profit. The cotton price was then 43% higher than the price in 1967. Stephens also states that the effect of fertilizer varied with the sites chosen thus indicating that standard recommendations may often be erroneous.

(3) See "Report on the Uganda Census of Agriculture", Vol.IV, Government Printer, Entebbe 1966, page 21.

Table VIII. 2

Sorghum Package: 1 acre

Phasing month		Input	Shs.
3	8	15 lbs. hybrid seed	8
3	8	15 grammes fernasand seed dressing	1
4	9	2 cwts. Sulphate of Ammonia	70
			79
		Farmer's Cash Contribution	
		Fertilizer application 24 man/days	4
		Extra labour for harvesting 10 man/days	20
		Interest on loan	5
			29
		Output	
Pre-project Sorghum		700 lbs. @ 10 cents	70
Post-project		2,000 lbs. @ 10 cents	200
		Increased gross value	130
		Farmer's Cash Cost	108
		Farmer's Cash Income	22

Source: Department of Agriculture, Masaka Division.

In addition there may be possibilities for the provision of short-term credit for some minor crops. The following package loan for groundnuts yields a return to the grower of 75% despite the fact that in this instance the assumed pre-project yield is 200 lbs. above the correct district average.(1)

(1) Uganda Census of Agriculture, page 29.

Table VIII. 3

Groundnut Package: 1 acre

Phasing	month	Input	Shs. Cts.
3	8	90 lbs. improved seed @ 60 cents	54 00
3	8	90 grammes fernasand seed dressing	4. 50
3	8	3 oz. Aphex '70' seed dressing	9. 00
3	8	2 cwts. single Superphosphate	37. 00
			104. 50
		Farmer's Cash Contribution	
		Fertilizer application 2 man/days	4. 00
		Harvesting extra crop 15 man/days	30. 00
		Interest on loan	5. 00
			39. 00
Pre-project 800 lbs. groundnuts (unshelled) @ 25 cts/lb.			200. 00
Post-project 1,500 lbs. groundnuts " " 30 Cts/lb.			450. 00
		Increased gross value	250. 00
		Farmer's cash cost	143. 50
		Farmer's Cash Income	106. 50

Source: Department of Agriculture, Masaka Division.

It is important to allow for the fact that with an increase in the number of people receiving credit there is likely to be a decrease in the average yields obtained, as less efficient farmers and less efficient supervisors are drawn into the scheme. The low returns obtainable on cotton and on a number of minor crops, combined with the inaccuracy of the assumptions made in the package loans, demonstrate the need to reconsider the whole short-term credit scheme. The overall scheme should be severely contracted. If there are one or two identifiable enterprises where the use of short-term credit can be shown to yield high returns, then smaller schemes may be established for these enterprises.

3. The Costs and Benefits of the Scheme.

There are three different sets of costs and returns which should be taken into account when the introduction of a scheme of this nature is under consideration: those accruing to the farmer, to the agents responsible for the operation of the scheme and to the economy as a whole.

3. 1 The Farmer.

It has already beenshown that some of the package loans designed for the proposed short-term credit scheme make unrealistic assumptions concerning probable increases in yields, and that the cotton packages also assume an unrealisticly high price for seed cotton. In addition, some of the proposed packages show a negative return to the farmer. It is not proposed to discuss these points further.

There are three crops on which the use of recurrent inputs (pesticides and fertilizers) have been shown to yield sufficient returns to justify their use: these are tea, flue-cured tobacco and arabica coffee;[1] in addition in certain areas there may be profitable opportunities for the use of short-term credit for the production of minor crops. Of the three crops listed only arabica coffee has been considered as part of the present scheme, separate credit schemes having been established for the first two enterprises.

In these circumstances, the proposed short-term credit scheme would be of very doubtful benefit to the majority of farmers.

3. 2 The Agencies Administering the Scheme.

3. 2. 1 The Channel of Lending.

The funds employed in the proposed scheme were to be borrowed from the World Bank.

The proposed repayment terms for the World Bank loan were that

(i) the rate of interest payable on the loan should be between .75% and 1.5%

(ii) payment of interest should start six months after the first disbursement of the loan

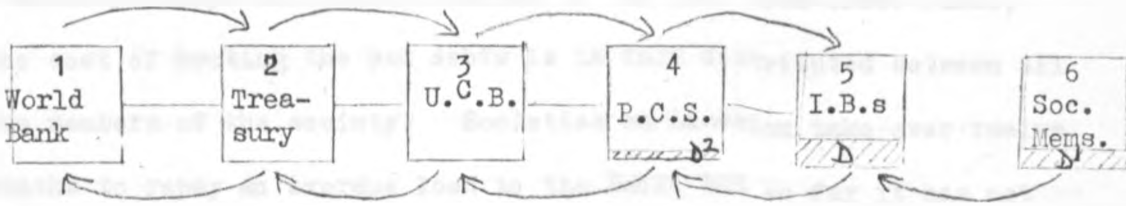
(iii) the principal should be repaid in equal 6-monthly instalments starting ten years after the disbursement of the loan and continuing over a period of 40 years.

In order to reach the borrowing farmers the loanable funds provided by the World Bank would have to pass through three intermediaries: the UgandaGovernment Treasury, the Uganda Commercial Bank and the primary cooperative societies.

(1) See Chapter V for a discussion of the proposal for the provision of short-term credit to arabica coffee growers.

The chain of lending and repayments may be illustrated diagrammatically as follows:

Funds Paid Out



Funds Recovered

U.C.B. - Uganda Commercial Bank
P.C.S. - Primary Cooperative Societies
I.B.s - Individual Borrowers
Soc.Mems.- Society Members

The diagram is self-explanatory with the exception of the shaded areas in squares 4, 5 and 6 which relate to the level of bad debts. Before this part of the diagram is explained, the following paragraph discusses the manner in which bad debts have to date been recovered under the Cooperative Credit Scheme.

One would normally expect an important cost item in the operation of a credit scheme of this nature to be attributable to[1] bad debts. However, The Cooperative Credit Scheme has over the first five years of its operation accumulated virtually no officially recognised bad debts: these have never equalled .1% of the total credit outstanding. The reason for this is that primary societies who default to the Bank are compelled to repay the amount in default either (i) from overdue debts collected from individual borrowers or (ii) from the general funds of the society concerned. Where it is not possible to recover a loan from a defaulter, had debts are repaid to the Bank out of general funds. (A society's general funds consist predominantly of bonuses and interest on shareholdings paid to the society by its union, plus any trading surplus it may have accumulated.) Where a society repays the amount overdue to the Bank from these funds, the cost of meeting the bad debts is in fact distributed between all the members of the society. Societies on occasion take over twelve months to repay an overdue loan to the Bank, but so far it has not proved necessary to write-off cash owed by any society to the Bank as a bad debt.

No figures are available to demonstrate the total value of bad debts recovered from the general funds of the primary societies, nor the total level of bad debts outstanding.

The shaded area 'D' in square 5 represents the level of bad debts, It is equal to the shaded area 'D^1' in square 6 (which represents the extent to which these bad debts are met by all the members of the primary societies concerned) plus the shaded area 'D^2' in square 4 (which represents the extent to which primary societies fail to recover these bad debts from the general funds of the society. It also represents the level of the primary societies' bad debts to the Uganda Commercial Bank. It is assumed that the Bank since it is acting only as agent for the funds passes on the primary societies bad debts to the Treasury which has to meet these from general funds before repaying the loan in full to the World Bank.

Under the present Cooperative Credit Scheme loans are made by the primary secieties to the borrowing farmers at an interest rate of 12% per annum. The societies retain 5% of the interest charge to cover their own costs and pay a 7% interest charge to the Bank. It is understood that if the proposed scheme were put into effect these charges would remain; the Bank would retain 2% of the interest received from the societies to cover its own costs and pay 5% to the Uganda Government Treasury, out of which the latter would in turn pay interest to the World Bank at a rate in the region of 1.25% per annum on the principal and interest outstanding,retaining the remaining 3.75% as revenue.

3. 2.2 Outline of Costs Incurred by the Central Government.

It has been proposed that the new credit scheme should be closely tied to an expansion in the numbers of extension staff. No clear-cut projection of staff requirements and no projection of staff availability was made as a basis for the plan, but the plan includes the stipulations that for every 300 short-term borrowers there shall be one agricultural Assistant (A.A.) to supervise the loans, and that there shall be one Assistant Agricultural Officer (A.A.O.) in charge of every four or five Agricultural Assistants:

This will necessitate training selected A.A.s and A.A.O.s to assess loan applications, draw up loan plans, and supervise their implementation. If the scheme were implemented the employment of additional staff would constitute the biggest single cost factor. The cost of establishing a staff ratio of one per 300 borrowers as proposed, plus the cost of providing well qualified farm planners for the larger loans, will be very high, as shown below. Moreover in some cases it would not be possible to operate with this ratio, given the scattered nature of Cooperative Credit Scheme Societies. However, assuming that on average the ratio is maintained, and that the 1971 target number of short-term loans is achieved, then 500 new Agricultural Assistants and 100 Assistant Agricultural Officers will be needed to supervise these loans alone. If the suggestion were put into effect that a parallel supervisory structure for the administrative aspects of providing credit should be provided by the Cooperative Department this could be expected to increase staff salaries by a further 40%.

It should first of all be stated that a large proportion of the additional staff requirement is not available. At the time of writing (1967) no Agricultural Assistants at all are being trained.(1) While plans exist to start a new training programme for A.A.s in 1968, none will be qualified until 1969/70 - almost the end of the plan period.

The following discussion of the cost of operating the short-term credit scheme is, however, based on the assumption that all the necessary staff are available.

It is not possible to make a completely accurate estimate of the additional cost that would be incurred, because no detailed projections are available of the likely qualifications of the new staff intake. Assuming, however, that all new junior staff received the current minimum pay for an A.A., then the salaries for these 500 alone would

(1) No students have been accepted for training as Agricultural Assistants since 1963.

amount to £116,400 per annum.(1) The salaries of 100 Assistant Agricultural Officers, plus the allocation of 50% of the salary of the Senior Agricultural Officer (credit) would add another £70,000 per annum, giving a total annual expenditure on Agricultural Department staff salaries for the supervision of short-term credit of £186,400 (excluding transport allowances). To this must be added £74,560 per annum as the cost of Cooperative Department staff salaries. In addition, assuming an average of 150 loans are made by each primary society (1964/65 average = 112 loans) the Government would for three years have to subsidise the salaries of 800 new society managers. An average contribution of 50% to the salaries of 600(2) society managers in 1971 would involve the expenditure of a further £18,000. (The subsequent level of this sum would depend on the planned rate of further expansion of the scheme.)

The Government would also incur further costs in staff training. In the calculations given below it is assumed that an A.A.O. receives three years' training costing £200 per annum, and that an A.A. receives one year's training costing £150. Total training costs amount to £135,000. It is also assumed (optimistically) that staff remain in service for an average of 20 years, and the cost of training is written off at 5% per annum.

(1) The minimum annual salary for an Agricultural Assistant is £232. 16. 0, rising to £418. 0. 0; for an Assistant Agricultural Officer the minimum is £687. 0. 0, rising to £1,017. 0. 0 over 9 years; for an Agricultural Officer it is £799. 0. 0, rising to £1,440. 0. 0 over 13 years.

(2) It is assumed that by 1971 200 of the new societies would be meeting the full cost of their managers' salaries.

Finally, interest paid by Government at 1.25% per annum[1] on the Shs.30,000/- lent out to farmers (which it would in turn have to borrow) would amount to £18,750. Total costs to the Government can be set out as follows.

3. 2.3 Summary of Costs Incurred in Administering the Scheme.

An attempt is made below to summarise the annual costs that would be incurred in the administration of the proposed scheme. The costs incurred by the Uganda Commercial Bank have been excluded from the calculations since it is assumed the interest retained by the Bank is sufficient to cover these.[2] It will be seen that most of the costs summarised below accrue to the Central Government.

In the following calculations it is assumed:

(i) that the Government subsidy scheme for society managers' salaries continues to operate (the subsidy meets 75% of the minimum legal salary in the first year of entry into the credit scheme, 50% in year 2, and 25% in year 3.)

(ii) that the primary societies cover all other costs of administering the scheme excluding the cost of bad debts

(iii) that bad debts annually amount to 6% of the total amount lent (for reasons mentioned above no actual figures are at present available on which to base this percentage)

(1) The rates of interest proposed by the World Bank to whom the Uganda Government applied for a loan to finance the Scheme were from ¾% to 1.5%, p.a.

(2) This 2% interest payment is also excluded from the subsequent calculations of revenue earned.

(iv) that the interest retained by the Uganda Commercial Bank is sufficient to cover its costs as agent for the scheme,

(v) that all interest payments made by the Government to the World Bank are made punctually,

(vi) that the staff requirements outlined above are met,

(vii) that supervisory staff remain in service for an average of twenty years,

(viii) that the average monthly transport allowance payable to the Assistant Agricultural and Cooperative Officers employed on the Scheme is for 800 miles[1] at Shs.1/25 per mile,

(ix) that 50% of the average monthly transport allowance payable to the Senior Agricultural Officer (credit) is for 1,200 miles at Shs.1/25 per mile,

(x) that the average loan is worth Shs.200/- and that from 1971 onwards the total paid out annually in short-term credit is Shs.30,000,000/-.

The direct costs of operating the scheme may then be set out as in the following Table.

These costs have been computed for the year 1971 when it is assumed that the target of 150,000 short-term loans will have been met. Following this year, the absolute level of the cost items 1, 2, 3, 6 and 7 will depend on whether or not the scheme is expanded further. If it is not expanded, then item 3 would be phased out completely over the following

(1) A low mileage has been selected on the assumption that these officials will live near to the areas in which they work, and that in some instances they will use push-bicycles.

two years. If it were expanded then items 1, 2, 6 and 7 would rise and item 3 would rise if the rate of expansion were higher than 200 cooperative societies per annum.

Table VIII. 4

Annual Cost of Operating Projected

Short-term Credit Scheme

Item	Cost (£)
1. Staff Salaries (Agricultural Department)	186,400
2, " " (Cooperative Department)	74,560
3. Subsidy to Primary Society Managers' Salaries	18,000
4. Transport Allowance for 100 A.A.O.s and 40 A.C.O.s plus 50% of the Transport Allowance payable to the Senior Agricultural Officer (Credit)	84,900
5. Interest on Foreign Aid Loan @ 1.25% per annum	18,750
6. 5% of Cost of Staff Training	6,750
7. Bad Debts (6% of Shs.30 million)	90,000
Total	479,360

With the exception of the major part of the cost of bad debts which is met by the members of the cooperative societies in which the debts arise, these costs would have to be met by the Central Government. It is assumed that the Government has to meet 15% of the annual cost of bad debts (i.e. £13,500). Central Government therefore would have to meet annual costs arising from the operation of the scheme of £402,860.

It has been suggested that in projecting staff requirements for the proposed scheme the Government departments concerned did not distinguish between man-units and actual personnel. If this is correct it could be argued that the 500 A.A.s and 100 A.A.O.s represent the number of individuals required to operate the scheme but not the number of man-units, which are less. In this case the employment of this number of individuals should not be fully costed to the scheme. The argument is based on the assumption that these staff would, once having visited a farm, spend part of their time advising the farmer on the operation of enterprises that are not directly financed with credit.

On this assumption, the costs incurred by government are lower. Thus if only 66% of the working time of these individuals is devoted to the credit scheme, the cost of administration accruing to Government would fall to £235,063, and total Government costs would fall to £285,323.

3. 2.4 Government Revenue Arising from the Operation of the Scheme.

The writer on several occasions encountered in the two Government Departments concerned (Agriculture and Development) the assumption that by the time the World Bank loan is repaid, sufficient funds would have been built up from the operation of the scheme to enable it to continue to operate without the need to obtain a further overseas loan.

In an attempt to complete a crude fiscal analysis of the cost and revenue deriving from the operation of the Scheme a crude estimate is made below of the revenue that would be likely to accrue to the Government as a result of the Scheme's operation. This revenue will then be compared to the expenditure outlined above. No discounting is used in the analysis to take account of the timing of expenditure and the receipt of revenue, and no consideration is given to the opportunity cost of devoting scarce resources to this particular project. The analysis is made with respect to direct increases in Government expenditure and revenue only.

(This limited fiscal analysis should not be confused with cost - benefit analysis. The latter would involve the consideration of the increase in farmers incomes and the consequent effect on employment, output and incomes in the economy as a whole, and in foreign exchange earnings minus the increase in demand for imported goods that would arise from the institution of a new credit scheme. Such an analysis has not been undertaken because it is felt that too many unknown variables are involved.(1))

Government costs might be met either (i) from general funds, or (ii) from revenue accruing to the government as a direct result of the operation of the scheme. The extent to which the costs would be met from category (ii) above is outlined below. Although this analysis is imprecise it is important firstly in order to test the assumption outlined above, and secondly because with the consistent increase in Government indebtedness to international creditors and a possible reduction in the rate of growth of the economy,(2) it may be

(1) For a discussion of the scope of cost-benefit analysis see "Prest and Turvey 'Cost-Benefit Analysis: A Survey.'". Economic Journal, Dec. 1965, p. 683 et sec.

(2) See "Background to the Budget 1967-68", Government Printer, Entebbe 1967, page 9.

becoming increasingly difficult for the Treasury to draw on general funds to meet all due loan instalments.

Unfortunately, only very limited data are available from which the probable direct increase in Government revenue can be computed. Crude calculations can be made for the short-term loans, but they are dependant on a number of arbitrary assumptions, since plans for the distribution of the loans have not been made available beyond the statement that the majority will be devoted to cotton production. Taking into account the fact that in the past a substantial proportion of short-term loans have gone to coffee-growers, and that no plans for reducing the proportion of loans going to coffee growers have been prepared, it is assumed that 50% of the loans are devoted to cotton, 25% to robusta coffee (of which one-tenth of the increased output is wet processed), 5% to arabica coffee and 20% to minor crops. After paying interest at 1.25% per annum to the World Bank, the Treasury would retain a 3.75% interest payment. Assuming that loans worth Shs.30,000,000/- are paid out this would amount to £56,250.

In addition it would receive export duty payable on the additional output of cotton, and corporation tax payable on profits accruing to the ginneries as a result of the increase in turnover.

It has been assumed that in so far as credit is used to promote the production of robusta coffee no revenue accrues to the Government since it would probably not be possible to export any increase in output. The increase would therefore be added to the surplus coffee held by the Uganda Coffee Marketing Board, and would be stored at a net cost to the

Board. In so far as credit is used to increase the output of arabica coffee, the latter being exported to quota markets in substitution for robusta coffee, there would be little change if any in the export duty paid to the Uganda Government. No export duty or excise charge is payable on minor crops.

The actual level of revenue deriving from export duty and corporation tax will depend on the extent to which the target increases in output laid down in the package loans for cotton are achieved. In Table VIII.5 below various assumptions are made as to the level of output achieved. However, in the light of the comments on probable yield increases made in section 2 above it would be unrealistic to assume that actual yield increases exceed 40% of the targets. (Anticipated increase in cotton output = 550 lbs. per Shs. 100/- borrowed.)

The Government would earn approximately £1,750 per annum in income tax paid by the additional supervisory staff. Any further increase in Government revenue resulting from the introduction of the scheme would result indirectly from any increase in general economic activity that might arise if the farmers concerned did in fact achieve a net increase in income. Since the latter point is in itself dubious no attempt has been made to estimate the indirect increase in Government revenue. The approximate direct increase in Government revenue would be as follows. (See Table VIII. 5)

Thus even assuming 60% of the target output is achieved the increase in Government revenue would fall short of the cost of operating an expanded and intensively supervised short-term credit scheme.

Table VIII. 5

Direct Increases in Annual Government Revenue Resulting from the Introduction of the Projected Short-term Credit Scheme £.

Item	(i) Assume 80% of target output achieved	(ii) Assume 60% of target output achieved	(iii) Assume 40% of target output achieved	(iv) Assume 20% of target output achieved
1. Export duty on additional output of lint cotton(1)	263,174	197,380	131,587	65,793
2. Corporation tax on profits accruing from increased cotton turnover (Assuming a pre-tax profit of Shs.30/- per bale.) (2)	23,686	17,757	11,838	5,919
3. Income tax paid by additional Government employees	1,750	1,750	1,750	1,750
4. Interest payments retained by Government	56,250	56,250	56,250	56,250
Total:	344,860	273,137	201,425	129,712
Government Costs:				
Staff Assumption (i)	402,860	402,860	402,860	402,860
Staff Assumption(ii)	285,323	285,323	285,323	285,323
Net Revenue (i)	- 58,000	-129,723	-201,435	-373,148
" " (ii)	+ 59,357	- 12,186	- 83,898	-155,611

(1.) This table is based on export duty rates operative in February 1967

(2) These assumptions are based on the profit rates achieved by the Cooperative Unions in 1963/64.

After twenty years the Government would not have built up a surplus to enable the scheme to continue to operate on the same scale. While (i) decreasing interest payments, (ii) the removal by 1974 of the need to subsidise the salaries of society managers (assuming no new societies enter the scheme), and (iii) rising tax payments by administrative staff would make the position more favourable, this would be more than off-set by the cost of increments in staff salaries.

Given the limited nature of existing data it is probably impossible to make similar estimates for medium-term lending. But the exercise performed here illustrates the serious need for a calculation of the costs involved before introducing a major expansion of agricultural credit. As a result of this analysis it can be seen that the direct increase in Government revenue plus revenue accruing to the credit providing institution resulting from an injection of credit into the peasant farm sector cannot be expected to both cover the cost of providing that credit and build up a capital surplus to be used for future lending. If credit schemes are to be operated they might be allocated a guaranteed source of supplementary revenue. In Tunisia and Morocco, for example, the Caisses Populaires which were lending to the small farm sector at least up to the early '60s received as annual revenue the tax on maize.(1)

3. 3 Costs and Benefits Accruing to the Economy as a Whole.

The main costs incurred in the production of any increase in output resulting from the operation of the scheme would be

(1) See E. Jucker-Fleetwood, "Money and Finance in Africa", Praeger, New York 1964, p. 158.

(i) the production costs incurred by the farmers themselves, (ii) the costs incurred in the marketing, transport and processing of any increase in output and (iii) the administrative costs outlined in Table VIII. 2.

The benefits that might be expected to occur as a result of the introduction of the scheme are (i) an increase in output and cash incomes on the part of the borrowing farmers, (ii) increased activity in the transport, marketing and processing sectors, (iii) an increase in employment of administrative personnel, (iv) general stimulation in economic activity (the multiplier effect).

In addition, if output is raised, foreign exchange earnings will rise to the extent that the increase in output is exported. The extent of the rise will be determined by the volume of exports and the price obtained. Against this, however, should be set a possible increase in demand for imported goods.

The costs incurred by the marketing, transport and processing sectors will be in direct relation to the increase in output. In so far as the increased output is cotton, the firms concerned should at least cover their costs and earn normal profits unless they are highly inefficient. This is because the price paid for cotton is fixed by the Lint Marketing Board at a level that will enable them to do this.

It is the costs and revenue accruing firstly to the farmers and secondly to the administrators of credit which will determine the success of the scheme and whether or not it can continue.

Let us assume that in 1971 farmers in Uganda spend an additional £1.5 million on production, all of which is borrowed. In the same year the Uganda Government and the primary cooperative societies between them spend an additional £479,360 on the administration and supervision of the credit scheme. Irrespective of whether there were an increase in output this expenditure would raise the level of employment and income. Assuming that there is a positive multiplier effect national income will be raised by more than £1,979,360. However, national income cannot be maintained at this higher level unless there is in fact a sufficient increase in farmers' incomes and in revenue accruing to the Government for both to consider it worthwhile to maintain the same level of expenditure in subsequent years. If this does not occur, national income will fall again.

However, the combined expenditure by the farmers and by the Government and the Cooperative societies could lead to an increase in output which would (i) raise farmers' incomes, (ii) raise governmental revenue, (iii) raise the profits of the various intermediaries who deal with the increase in output, and (iv) stimulate further economic activity.

If farmers earned a sufficient increase in income they might be prepared to maintain their on-farm expenditure at a higher level, maintaining output at a higher level as well. If (i) they continue to borrow an additional Shs.30,000,000 per annum for farming purposes and, in addition, spend part of their newly earned profits on farming, and (ii) the Government remains able to meet the costs of administering credit, then if output continues to rise, national income will rise both in real and monetary terms. Because these two alternatives exist it is crucial to ensure that any new supervised credit scheme is directed to those enterprises that are likely to yield the highest returns to the borrowers. This is more important than the selection of enterprises that yield the highest direct revenue to the Government since the higher the returns achieved by the farmers, the greater the revenue which will accrue to Government indirectly in the form of higher taxation paid by firms and individuals.

Apart from the provision of short-term credit to producers of arabica coffee, flue-cured tobacco and tea there do not appear to be any enterprises where the provision of short-term credit to a large number of farmers can be justified by the average returns obtained.(1)

4. Credit Risks

Two further points have not received consideration. The first is the possibility of making specific provision for the carrying by Government of part of the risk of a loan that is used to invest in a new enterprise or technique. This is of greatest importance with regard to medium-term credit, where the amounts borrowed are on average much larger than the short-term loans. While the Progressive Farmers' Loans Scheme was in operation, the Uganda Government did carry some of the risk involved in the purchase of a limited number of items of

(1) Exceptional farms may exist; these do not justify the establishment of a massive credit scheme.

equipment by subsidising their purchase price. However, this scheme was not designed as a risk-carrying operation but "to make available to as many progressive Farmers as possible the implements and equipment they need to adopt the advice of the Agricultural Department at a price they can afford."[1]

A subsidy scheme has two possible objectives: (i) to relieve the purchasers of insufficiently tested equipment or inputs of part of the risk of innovation. By virtue of the fact that the innovations are still in an experimental stage, this should be necessary only on a small scale in selected areas. Or (ii) to overcome the prejudices of farmers by initially making available new but tested equipment or inputs at a price which is below the normal purchase price for these items. In this case it is hoped that the use of the newly introduced items will have a positive demonstration effect. If it were to transpire that several items had been insufficiently tested there would be a danger of a negative demonstration effect in that farmers might become prejudiced against future innovations, and also against the general extension advice of the Department of Agriculture.

One might expect the provision of a subsidy designed to enable the Government to carry part of the risk of introducing a new item of equipment to be restricted to relatively few purchasers. In Uganda, the second objective was adopted and it was Government policy to expand the sale of subsidised items as fast as possible, despite the fact that (i) some items

(1) Department of Agriculture, Annual Report 1962, page 22.

of equipment (e.g. the Bentall Seeder) had received insufficient testing and (ii) it was not known whether farmers would agree to use some of the other items (e.g. coffee-drying trays). Thus in Lango District alone, 63 Bentall Seeders were sold on subsidy in 1964,(1) most of which are no longer in use; and in the whole of Uganda 2,000 coffee trays were sold on subsidy in 1962/63,(2) of which a large proportion are also not in use.

Twelve items of equipment were subsidised, ranging from a 50% (Shs.125/-) subsidy on coffee drying trays to a 20% (Shs.4,000/-) subsidy on a full-size tractor and plough. Two items - Bentall seeders and boom spray pumps - were subsidised at a rate of 80%. The list of subsidised items did not cover the complete list of items bought with credit. Ox-drawn harrows, ridgers and groundnut lifters for example were not included despite the fact that these itemshad not been costed on individual farms and in practice proved technically unsatisfactory to those farmers who bought them in Lango District. A limited allocation of funds was made available for the subsidy scheme and once a district had exceeded its allocation a farmer had to pay the full retail price on all equipment.

The manner in which the Government might assist farmers by carrying part of the risk of introducing new equipment has received little attention. Three possible kinds of assistance are outlined below:

(i) All recommended items of equipment are initially subsidised for

(1) Source: Lango District Agricultural Office, Annual Report 1965, p.4.

(2) Source: Department of Agriculture, Annual Report 1963, page 16.

a preliminary period (e.g. five years) until they have been tested on the farms of the initial purchasers. After this period, either the subsidy is withdrawn, or the equipment is withdrawn from sale or modified. The degree of subsidy is, in so far as estimates are possible, related to the degree of risk involved.

(ii) In order to save payment of subsidies on items that in fact prove profitable at full cost, a scheme might be devised in which the Government would make payments to farmers after the lapse of a given period following the purchase of the equipment and only on those farms and for those items where the annual returns to the use of the equipment bought are insufficient to cover the costs (fixed plus variable) of operation. In these cases the equipment would then be recovered from the farmers. The scheme, however, presupposes a high standard of record-keeping on the farms concerned, and a high standard of honesty on the part of farmers who would have an obvious incentive to alter the records if, for any reason, they were not interested in keeping the equipment. (For example, a farmer might not be able to meet his loan instalments, or might decide to concentrate on off-farm work.) Unless sufficiently well qualified and intensive supervision were made available, this alternative would prove impracticable. If the scheme could be implemented it would prove of considerable long-run benefit to the farmer who, equipped with such records, would be in a much stronger position to make further decisions concerning the development and operation of his farm. However, a further difficulty lies in the fact that the scheme really requires the keeping of farm records over a period of one or two years prior to the introduction of the equipment.

(iii) The suggestion has recently been made that it might be possible to devise an insurance scheme designed to encourage innovation in the small farm sector by insuring farmers against crop failure to the extent of the value of the innovation.(1) The proposed scheme would become operative after a crop failure, even though the failure might not be traceable to the innovation. It is argued that the limited liability of the scheme (the limit being the cost of the innovation) would hold costs to a manageable level. However, it is acknowledged that such a scheme would be unlikely to be self-financing, and would probably require a subsidy: even with high-return innovations, it might be impossible to achieve an actuarial basis in which the premiums would cover the claims plus the costs of administration.(2)

5. Credit Evaluation.

In addition to omitting consideration of the problem of risk-carrying of innovations introduced under a Government credit scheme, the proposed credit plan also omits any provision for the periodic assessment of the impact of credit. This would in turn necessitate that

(1) S.A. Marglin, 'Insurance for Innovators' in "Policies for promoting Agricultural Development", Massachusetts Institute of Technology 1965.

(2) For a discussion of the problems involved in providing insurance to present farmers see also H. Belshaw, "Agricultural Credit in Economically Underdeveloped Countries", F.A.O., Rome 1959, pages 102-106.

at least some borrowers should be required to keep farm records. This omission is the more remarkable in that since the Uganda Government first committed itself to the provision of credit to peasant farmers in 1950, no arrangements for the systematic assessment of the various credit schemes tried has ever been made.

6. Conclusion.

In conclusion, the plan for the expansion of agricultural credit outlined in this chapter is subject to the following major criticisms:

(i) A large proportion of the staff on which the scheme depends is not available.

(ii) The plan for the expansion of short-term credit presupposes that it is possible to raise the average annual rate of expansion of short-term loans achieved over the past five years by 400%.

(iii) Little provision was made for the direction of credit to those enterprises which farmers are likely to find most profitable.

(iv) Many of the available examples of package loans are based on unjustified assumptions concerning likely yield increases.

(v) In the case of cotton the packages also assume a price to the grower which is 25% too high.

(vi) The likely returns from the provision of short-term credit in most instances do not justify the cost of providing the loans.

(vii) No policy has been established by the Department of Agriculture regarding the use of credit to encourage innovations, and no provision has been made for the Government to carry part of the risk of innovations where these have had inadequate testing on peasant farms.

(viii) Too much emphasis has been placed on the use of cooperatives and the Cooperative Credit Scheme regulations as the means of making all forms of credit available to farmers.

(ix) No provision has been made for the evaluation of the scheme.

Appendix VIII. 1

Package Loans Prepared for Use in Ankole District in 1962/63

Amount of Loans Shs.100/-   Maintenance Loan   Size of coffee plot ½ acre(130-170 trees

Time of Year	Operation	Details of use of loan for each stated operation	Maximum cost	Proposed Method of Payment
During rains	1) Purchase of equipment	Purchase of one Lumbugu Fork (@ 12/-)	12.00	Purchase by society debited to members' a/c s.
- do -	2) Weeding	Employment of one porter for 8 - 9 days, with task of weeding 10 x 30 yds. per day @ 35/- - 40/- p.m.	15.00	Cash
One month before end of rains	3) Mulching	EITHER Transport, organised by the society through transporter carrying the coffee to Bushenyi or Ibanda, on 1½ tons husk or pulp @ 1 ct. per lb.	35.00	Bulk transport to society store paid by society to account of Member
		OR a) Porters to cut and carry 2 bundles grass per tree @ -/10 per bundle		
		b) Employment of porter to spread husk ¾ inch found each tree, or laying grass bundles 1 - 2 days	3.00	Cash
One month before picking	4) Drying	Purchase of one coffee tray @ 20/- from Bushenyi	20.00	Purchase by society and debited to members' a/c s.
		Transport for above	5.00	Cash
After main harvest is finished	5) Pruning	Purchase of 1 pruning saw @ 5/-	5.00	Purchase by society and debited to members' a/c s.
		Shs.	95.00	

Appendix VIII. 1 Continued

Amount of Loan Shs.200/-

Maintenance Loan

Size of coffee plot ½ acre (300-340)

Time of Year	Operation	Details of use of loan for each stated operation	Maximum Cost	Method of Payment
During rains	1) Purchase of equipment	Two Lumbugu Forks @ 12/- each	24.00	Purchase by society with debit to members' accoun
	2) Weeding	Employment of 2 porters for 8½ days with a task of weeding 10 x 30 yds. each per day @ 35/- to 40/- per month	30.00	Cash
		<u>OR</u> Employment of 1 porter for 17 days, with a task of weeding 10 x 30 yds per day @ 35/- to 40/- per month		
One month before end of rains	3) Mulching	a) <u>EITHER</u> (Shema, Igara, & Mitoma societies) Transport of 3 tons of husk or pulp from Bushenyi or Ibanda @ 1 ct. per lb.	70.00	Cash
		<u>OR</u> Porters to carry 2 bundles of grass per tree @ -/10 per bundle		
		b) 1 porter for 3 days for spreading husk 4 inch round each tree, or laying grass bundles	5.00	Cash
One month before picking	4) Drying	Purchase of two coffee trays @ 20/- from Bushenyi	40.00	Purchase by society debited to members' accounts
		Transport for above	10.00	Cash
After rain harvest is finished	5) Pruning	Purchase of two pruning saws @ 5/-	10.00	Purchase by society
		" " 1 pair secateurs @ 10/-	10.00	- do -
		Shs.	199.00	

Chapter IX.

Conclusion.

1. The Role of Government.

In Chapter II it was shown that for peasant farmers the major source of institutional credit in Uganda is the Government. The Government is responsible not only for the provision of credit but for the conduct of agricultural research, the provision of extension advice and the investigation of markets.

The commercial banks are not interested in lending to individual farmers because the level of risk is felt to be too high. This factor (which was discussed in the same chapter, pp. 39 - 47) is the main inhibitor of an increase in the supply of agricultural credit from private sources. The risks surrounding peasant agriculture are more severe than those affecting agriculture in more developed areas. They must be reduced if the commercial banks are to be attracted into this type of lending. The security that peasant farmers in Uganda can offer for credit is generally insignificant. Security for medium-term loans in the form of land titles is only available in Buganda. Even here the majority of agriculturalists are tenant farmers.

It is impossible to estimate the importance of non-institutional credit, but from the data provided in Chapter VI it appears that this also plays an important role in the agricultural sector, particularly through (i) the provision of small loans on flexible terms which may help to relieve temporary difficulties, and (ii) the provision of credit for labour hire.

Private loans are small and are not usually innovational. It has fallen to the Uganda Government to establish funds and credit schemes for the provision of larger loans and the use of credit to encourage innovation and the adoption of improved techniques.

The main recipients of agricultural credit in Uganda apart from the large sums paid out for crop finance have over the period 1961/62 - 1966/67 been:

(i) approximately 4,100 selected progressive farmers.[1]

(ii) members of selected credit-worthy cooperative societies, 27,800 of whom received individual loans in 1966/67.

(iii) members of Group Farms, 4,200 of whom received loans in 1966/67.

(iv) subsidiary companies of Agricultural Enterprises Limited.

(v) a few private estates, on which no data are available.

(vi) members of the general farming community who obtain non-institutional credit particularly from friends and relatives and from the agricultural labour force.

2. Summary of Surveys Carried Out.

Three credit schemes have been studied by means of an examination of the available records at the centre and in the districts combined with planned interviews with samples of farmers who received

(1) This includes farmers who received credit for the production of tea and flue-cured tobacco subsequent to the suspension of the Progressive Farmers' Loans Scheme. The figure represents the number of loans made. The total number of beneficiaries would be greater by approximately 4,000 since loans for the production of flue-cured tobacco are shared, see Chapter II, p. 110.

credit. The total number of farmers interviewed is summarised in the following table.

Table IX. 1

Total Number of Farmers Interviewed During Survey.

A. Farmers Who Received Credit.

Scheme		No. of farmers Interviewed
Progressive Farmers' Loans Scheme		46
Cooperative Credit Scheme		76
Tea Outgrowers' Scheme		40
	Total	162

B. Farmers Who Did Not Receive Credit.

Progressive farmers in Lango		21
Masaka dairy farmers		13
Cooperative society members		59
	Total	93

C. Subdivisions of the Progressive Farmers' Loans Scheme sample:

1. Farmers receiving general farm improvement loans in Masaka.	- 12
2. Farmers receiving credit for the purchase of Landmasters in Masaka. (1)	- 9
3. Farmers receiving credit for the purchase of livestock in Masaka. (1)	- 8
4. Farmers receiving credit for the purchase of ox-drawn equipment and miscellaneous items in Lango.	- 12
5. Farmers receiving credit for the purchase of tractors in Lango.	- 7

(1) Two farmers received credit for the purchase of Landmasters and livestock.

The type of planning and supervision provided for short-term and medium-term loans might be expected to differ owing to the difference in the number and value of the loans granted. In Uganda in 1966/67 twelve times as many individuals received short-term loans as the total number of farmers who obtained medium-term credit over the two year period 1962-1964. A difference in the planning and supervision of loans under the Progressive Farmers' Loans Scheme and the Cooperative Credit Scheme was in fact apparent. Under the former scheme agricultural extension staff were directly involved in these activities, and the Scheme's regulations recognised the need for loan plans to be drawn up by senior extension staff, although in practice this frequently did not occur. On the other hand, the attitude taken to the Cooperative Credit Scheme by the Department of Agriculture was that there could be no question of individual loan planning and supervision. When the total number of borrowers (37,000 in 1966/67) is considered in relation to the current scarcity of extension staff this conslusion is not surprising. While at the centre it was acknowledged that agricultural extension staff should advise cooperative society members on the use of short-term credit this generally has not taken place.

It might be argued that the supervision of credit was most essential for the loans granted under the Progressive Farmers' Loans Scheme, since the loans were larger and both the potential increase in individual output and the risk of individual loss were therefore greater. This argument would not hold if short-term credit were restricted to potentially profitable enterprises or techniques, where these are new to the borrower (e.g. the fertilising and spraying of arabica coffee), although it may be true that the qualifications of the supervisory staff and the necessary frequency of visiting might both be lower for short-term loans.

Supervision was certainly necessary for the medium-term loans. While it has apparently been adequate for tea and tobacco production, for the general farm improvement loans it was generally inadequate. The main responsibility for the supervision of loans was in practice placed in the hands of junior extension staff with limited training, and with no training in the operation of the more complex mechanical equipment purchased. Senior extension staff were few in numbers and hence limited in their ability to supervise the use of credit. The efficient use of their time particularly in Masaka was further hampered by the inadequacy of the reports made by junior staff. (It should also be stated that in this district two of the senior staff responsible for credit seem to have taken little practical interest in the Scheme's implementation; it was these officials who permitted the withdrawal of large sums in cash and authorised without prior investigation the withdrawal of cash for purposes that did not coincide with those for which the loans were originally granted.)

Reports concerning borrowers made by junior extension staff responsible for their supervision were both infrequent and inadequate. Visiting frequencies were also generally low. The junior extension staff responsible for the farmers interviewed in Masaka had often made little attempt if any to ensure that credit was correctly spent.

The repayment provisions for general farm improvement loans provided under the Progressive Farmers' Loans Scheme have not always been geared to the individual loans. Repayment of equal instalments of principle plus interest charged on the amount outstanding was required at regular six-monthly intervals beginning six months after the receipt of the loan. In Lango producers of a single main cash-crop (cotton) found difficulty in meeting the October instalment when the cotton crop had not yet been harvested. In Masaka and in Lango repayment on items which could only be expected to yield a return over a long period (assuming they did so at all) e.g. produce stores, water tanks, and coffee drying trays were expected to follow the same pattern as credit provided for the hire of tractors to plough land for a crop that would only be in the ground six months.

While there is a limit to the degree of flexibility in repayment terms that can be offered to farmers, it is arguable that no attempt was made to design repayment terms suited to different projects. This does not apply to tea production, for which a four year moratorium was granted: under the production methods that are now recommended this is in fact unnecessarily long.(1)

Under the Cooperative Credit Scheme, which is geared to the provision of seasonal loans, the pattern of payment and repayment leaves at most a two month margin for delays where credit is used for operations that must be performed during optimum periods (e.g. opening land, mulching).

The selection of the purposes for which credit is granted, has an important effect on the impact of credit. The consideration of which enterprises and techniques if any are sufficiently profitable to justify the

(1) See Chapter VII, p. 413.

encouragement of their adoption through the provision of credit should take place before any credit scheme is either devised or put into operation.

In this respect the Tea Outgrowers' Scheme and the Master Tobacco Growers' Scheme stand out in marked contrast to the general farm improvement loans granted under the Progressive Farmers' Loans Scheme and to the Cooperative Credit Scheme. In most areas of Uganda there is a serious lack of costings to demonstrate the profitability of different enterprises and techniques for which farmers are encouraged to use credit. Under the Progressive Farmers' Loans Scheme and the Cooperative Credit Scheme loans have been paid out for a variety of purposes that were unlikely to yield a positive net return to the borrower. In Masaka there are no data to show the level of returns that can be expected from mulching given different standards of pruning and also different levels of expenditure on the mulch. In Lango no costings obtained on peasant farms are available to show what returns can be expected from the introduction of various items of ox-drawn equipment. In Masaka, existing Landmaster costings were ignored, and the same happened to the only available tractor costings in Lango. Some of the equipment purchased was not only costly but also technically unsuitable.

Under the Cooperative Credit Scheme the individual losses resulting from the use of credit for unprofitable purposes are lower than with medium-term credit, since the loans are small. The total wastage of funds, however, may be as great. As shown in Chapter V, an increasing amount of credit is being paid out for the financing of techniques such as mulching and tractor cultivation which, particularly in the context of current general standards of cultivation, are of questionable profitability.

Where credit is paid out predominantly in kind, as under the current Tea Outgrowers' Scheme and the Master Tobacco Growers' Scheme, and where intensive supervision is available (e.g. the Master Tobacco Growers' Scheme), there is little doubt that credit is being used almost entirely for the purposes for which it is granted. Where, as was the case in Masaka, and also under the first Tea Outgrowers' Scheme in Toro, large sums of money are paid out to borrowers in cash, and their expenditure is not supervised, it is difficult to obtain a precise indication of how the cash was spent. In general data on loan use could only be obtained by checking the extent to which the purposes for which credit was paid out were achieved. In the case of mulching precise information could not be obtained. Nonetheless it appears that credit was used partly for non-farm expenditure under the Progressive Farmers' Loans Scheme, and under the Cooperative Credit Scheme. Some borrowers in Masaka and Lango acknowledged having used credit granted for the construction of produce stores for the construction of houses. Some borrowers in Masaka in Lango also acknowledged having used credit to finance general consumption expenditure. The number who actually did so was almost certainly greater than the number who admitted to doing so.

Part of the credit that has been used for consumption expenditure has undoubtedly been repaid. This, however, does not mean that the objective of providing agricultural credit has been achieved, unless cash was released for farming at a later date. So far as the medium-term loans were concerned, this did not appear to have taken place.

It is quite often suggested that the costs of using mechanical equipment in underdeveloped countries are generally higher than in developed areas owing to the lower levels of mechanical experience or aptitude of the users. In those instances where farmers were interviewed who had purchased mechanised equipment this inexperience was very apparent and clearly affected the use of the equipment purchased. This is a problem which might be overcome if technically qualified staff were available to provide intensive supervision of the use of the equipment, particularly during the first season of ownership. (This presupposes that the introduction of the equipment is justified on grounds of technical suitability and cost.)

In most cases the provision of credit had not had any apparent demonstration effect. The one exception to this was the provision of credit for the purchase of tractors, where the returns obtainable from hiring out the tractors in the first years of ownership are conspiciously higher than the average level of income obtainable from agriculture in Lango District.

Credit provided to tea outgrowers and producers of flue-cured tobacco has undoubtedly had a positive impact on production. Of the farmers studied in Lango, however, it was in no case possible to state that credit had a positive impact on production nor that it had resulted in a reduction in total farm expenditure. The same applies in Masaka, with the exception of a few loans for dairy farming. Nonetheless the returns obtained on the dairy farms were low owing to (i) poor planning and (ii) low standards of management.

3. The Most Suitable Organisation for the Provision of Credit.

Ideally credit should be (i) provided for a single enterprise, (ii) paid out predominantly in kind, (iii) receive specialised supervision, (iv) be repaid to the lending agent not by the farmer but the firm which processes his main cash product (the latter having a buyer's monopoly of that product in the area). These conditions are most nearly fulfilled by the Master Tobacco Growers' Scheme in West Nile. They are also partially fulfilled by the Tea Outgrowers' Scheme. They were not fulfilled by the general farm improvement loans granted under the Progressive Farmers' Loans Scheme, nor by the Cooperative Credit Scheme. In coffee-growing areas in particular large numbers of progressive farmers do not belong to Cooperative societies. Moreoever, whereas in theory a farmer is compelled to sell his main cash crop through his society, in practice it is possible to evade doing so either by belonging to two or more societies, selling through a friend or relative, or selling to a private buyer.

There may, nonetheless, be potentially profitable enterprises where credit could assist development but where not all of the four conditions listed above can be fulfilled. Thus it is probably impossible to establish a monopoly outlet for milk where, as in Masaka district, farmers can obtain through local sales in the villages prices that are

50% - 100% higher than those paid by Masaka Livestock Union.(1) Given the profits that can be obtained from dairy-farming it would be inadvisable to reject the provision of credit for that enterprise on this score. On the other hand, it would be inadvisable to expand the provision of credit for dairy-farming - an enterprise in which farmers have no previous experience - if adequate extension staff are not available.(2)

To expand credit with much less if any supervision on the grounds that this is risk capital and that provided say 60% of the projects finally succeed in making a profit, it does not matter if the rest fail, (nor that the default rate is high in the shortrun), is an unsatisfactory solution at least in Uganda. This is because the chances of an unsupervised or poorly supervised project starting successfully are low, due to (i) unfamiliarity with new equipment and techniques and (ii) the temptation (which may sometimes be economically justified), to spend the borrowed funds in another way, e.g. on domestic consumption, acquisition of domestic capital or the operation of a more profitable non-agricultural enterprise. Several part-time farmers interviewed had used agricultural credit to stock dukas. This may not be damaging to the economy as a whole, but it does not directly assist agricultural development.

The only feasible alternative, in countries such as Uganda, to the

(1) The Union officially buys at -/40 per pint, but where milk is lost because some of that which is purchased from farmers is bad, the loss is distributed between all sellers who then may receive an actual price of only -/30 - -/35 per pint. Prices paid for milk in the villages range from -/50 to -/70 per pint.

(2) According to a statement made by a senior official of the Ministry of Animal Industry, Game and Fisheries increased numbers of senior veterinary extension personnel will be available as from 1968.

provision of supervised credit is direct government participation in the form of ownership of all or part of the equity capital, and the use of the accruing rights to ensure the employment of skilled management. This is viable only on farms that are sufficiently capitalised, few of which currently exist in Uganda. It is an alternative that might be useful in the future.

There are in Uganda a limited number of opportunities for the use of agricultural credit which appear likely to yield sufficiently high returns to justify its provision. These include tea production, flue-cured tobacco production, dairy-farming, ranching, arabica coffee production, and possibly the production of poultry (table-birds), pork, cocoa and citrus fruit - although particularly in the case of pork and citrus fruit so little data is available that one can do little more than guess at the profitability of these enterprises.

In planning credit programmes it is necessary to examine not only the current profitability of particular enterprises or techniques, but also (i) the size of the market and (ii) probable future price trends both for the product to be produced, and for the cost of inputs. The calculation of the rate of return to investment in flue-cured tobacco production performed in Chapter VII shows that if the fall in the price to growers which is predicted by the British American Tobacco Company takes place, the rate of return will be substantially reduced (although at the assumed new price-level investment would still be justified). The same point is also demonstrated in the calculation of the internal rate of return to investment in tea, assuming different price levels.

In the Second Five Year Development Plan, the importance of the use of credit to encourage diversification in the agricultural sector is acknowledged. However, the Government credit programme as it existed in 1966(1) was unrealistic in a number of respects. There was a marked failure to single out those enterprises and techniques which were known to be sufficiently profitable to justify the provision of credit. In addition the programme depended on the existence of supervisory staff who were not available.

Since 1950 the Uganda Government has attempted to provide agricultural credit to peasant farmers on terms that would not satisfy the traditional lending requirements of the commercial banks. It has shown itself willing to experiment with various types of lending and has provided short- and medium-term loans for limited security at reasonable interest rates.

The rates which farmers have had to pay on government loans obtained during the '50s and '60s have ranged from $7\frac{1}{2}\%$ - 12%. These are relatively favourable when compared with risk-carrying personal loans granted in some developed countries.(2) They also appear favourable when compared with

(1) See Chapter VIII.

(2) "In the United States, the legal maximum and actual rate charged on personal loans by finance corporations is $2\frac{1}{2}$ per cent per month or 30 per cent per annum in many states....In France, rates for installment credit are 18.55 per cent for 4 H.P. Renault cars, 30.80 per cent for radios, and as high as 40 or 50 per cent on some installment credit sales." U. Tun Wai, "Interest Rates Outside the Organised Money Markets of Underdeveloped Countries", Staff Papers of the International Monetary Fund, Vol. V, 1957-58, p. 123.

the rates charged recently for bank advances in Britain where the normal rate charged to customers is 1% over Bank Rate, with a minimum of 5%. Thus when Bank Rate rises to 6% - 7% customers pay charges on advances of 7% - 8%.

However, interest rates of the level charged in Uganda may still be high in relation to what borrowers can afford. For medium-term loans the total cost of borrowing where interest is paid over a period of several years is high. Where either short- or medium-term credit is granted for purposes of low profitability the interest charge may be the deciding factor in whether a farmer makes a profit or a loss. This however does not constitute an argument for the provision of a further subsidy to the recipients of credit through a reduction in interest rates, but rather for more careful selection of the purposes for which credit is granted.

While the Uganda Government is to be commended for its willingness to experiment, and for its attempt to adapt the provision of credit to the needs of the peasant agricultural community, a truly efficient system of lending has still not been established. Above all, there is a need for the restriction of credit to genuinely profitable enterprises and techniques, and for the imposition of a limit to lending in direct relation to the numbers of well-qualified supervisory staff that are available.

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E.A.I.S.R.(C.P.)	East African Institute of Social Research Conference Paper.
E.D.R.P.	Economic Development Research Project.
F.A.O.	Food and Agricultural Organisation (United Nations)
H.M.S.O.	Her Majesty's Stationery Office.
I.B.R.D.	International Bank for Reconstruction and Development.
M.R.D.	Memoirs of the Research Division (Uganda Government)
R.D.R.	Rural Development Research.
U.N.E.C.A.	United Nations Economic Commission for Africa.
U.P.	Uganda Protectorate.

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