<u>MARKETING AND DISTRIBUTION OF AGRICULTURAL CHEMICALS</u>

<u>AND FARM TOOLS IN UGANDA</u>
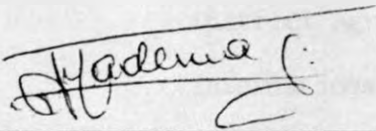
By

IYADEMA-SEZI JOHN BOSCO

A thesis sumbitted in partial fulfilment for

the requirements of the degree

of Master of Science in

Agricultural Economics

in the University of Nairobi
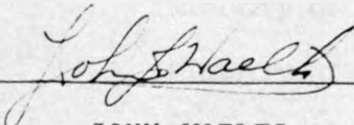
NAIROBI

May, 1988

Declaration

This thesis is my original work and has not been presented for a degree in any other University.

_____

IYADEMA SEZI J.B.

This thesis has been submitted for examination with our approval as University supervisors

(a)   First Supervisor

_____

Professor JOHN WAELTI.

(b)   Second Supervisor

_____

Dr. O.L.E. Mbatia

List of Abbreviations

Abbreviations	Meaning
C.I.F.	Cost, Insurance and Freight
F.O.B.	Free on Board
GDP	Gross Domestic Product
US $	United States Dollar
DVO	District Veterinary Officer
DAO	District Agricultural Officer
IFAD	International Fund for Agricultural Development
USAID	United States Agency for International Development
IDA	International Development Agencies
EEC	European Economic Community
U.Shs.	Uganda Shillings (1 $ = U.Shs. 1408)
FAO	Food and Agricultural Organisations of the United Nations
ADP	Agricultural Development Programme
ARP	Agricultural Rehabilitation Programme
EACCF	East African Community Compensation Fund
FSS	Farm Supply Shops
UCCU	Uganda Central Cooperative Union
MAF	Ministry of Agriculture and Forestry
MAIF	Ministry of Animal Industry and Fisheries
MOR	Ministry of Rehabilitation
UNHCR	United Nations High Commission for Refugees
S.G.S.	Societe Generale de Surveillance

CONTENTS

LIST OF TABLES.

LIST OF TABLES (CONT.)

LIST OF CHARTS

LIST OF APPENDICES

LIST OF APPENDICES (CONT.)

ACKNOWLEDGEMENTS

I wish to express my sincere thanks to the various persons and organizations whose assistance enabled me to complete this thesis.

First and foremost, I am very grateful to Professor J.Waelti and Dr. O.L.E. Mbatia of the University of Nairobi and Dr. A.M. Muthee of Agricultural secretariat, Bank of Uganda, for their guidance and encouragement throughout this study.

Secondly, I am very grateful to the German Academic Exchange Service (DAAD) for awarding me a scholarship to undertake higher studies in the University of Nairobi.

Thirdly, I thank all members of agricultural secretariat (Bank of Uganda), W. Kalende of UCCU, and the staff of the Ministry of Agriculture and Forestry whose assistance enabled me to come up with the required data for this study.

Last but not least, my sincere appreciations go to my wife, Fortunate Iyadema for her constant encouragement throughout the study period. All assistance from friends and relatives is also acknowledged.

ABSTRACT

In this study an attempt is made to investigate the marketing systems for agricultural chemicals and farm tools in Uganda, for the years 1984 to 1986.

The study focuses its attention mainly on two aspects of the trade. First, it attempts to analyze the structure of the agro-chemicals and farm tools marketing systems. Second, the conduct of the market is investigated in an endeavour to reveal the patterns of the market behaviour.

The study is based on primary data obtained by interviewing firms, institutions and farm supply shops involved in either procurement or in-country distribution of the inputs. The study covers parts of eastern, central and western regions of the country. The survey was carried out during the months of February 1987 to April 1987.

Questionnaires were used to obtain data. Secondary data have been used whenever they have been available and found to be relevant. Analysis of data has been done by cross-tabulation.

The results show, first, that the public sector has assumed a greater and growing role in the procurement of agricultural chemicals than both the private and cooperative sectors. The percentage value of agro-chemicals handled by the public sector was 25, 48 and 71 for 1984, 1985 and 1986

respectively. The corresponding figures for the private sector were 57,15 and 14 while the figures for the cooperative sector were 18, 37 and 15 for the three years respectively. On the other hand, the private sector's role in the procurement of farm tools has been growing while that of the cooperative and public sectors has been declining. The results show the private sector to have grown by 169 percent over the three years while the public sector fell by 27 percent and the cooperative sector by 28 percent. Second, the procurement systems are characterised by a high degree of concentration and inequality, indicating lack of competitiveness in the trade. Despite this, no firms or institutions have consistently monopolised the procurement of both categories of inputs, over the three years under study. Third, there is no uniform pricing system for the inputs and actual pricing is based on speculation emenating from the scarcity of these inputs. Fourth, the study reveals lack of credit facilities, poor transport infrastructure, haphazard procedures of foreign exchange allocation, negative real interest rates, limited working capital and poor market information network as the main constraints in the procurement and in-country distribution of agricultural chemicals and farm tools.

Re-organisation of the marketing systems through establishment of a national agricultural inputs coordination unit may help to improve the efficiency of the marketing and distribution systems. The average margin (appendix 11) earned by licenced farm supply shops is 37 per cent, while that for the open market is 82 per cent. Thus establishment of the inputs cordination unit may reduce the prominence of middlemen and the growing role of the open market in this trade , thereby reducing prices paid by farmers for these inputs and creating incentives for adoption of modern farming practices. It is suggested that the government adopt a foreign exchange allocation policy which reflects the sectoral-contributions to both gross domestic product (GDP) and foreign exchange earnings of the country. In addition, the government should consider adopting a system of direct and regular allocation of foreign exchange for critical agro-industrial inputs producers. This may alleviate the existing inputs scarcity as well as reducing the high prices farmers have to pay for these inputs.

CHAPTER ONE

INTRODUCTION, THE PROBLEM AND OBJECTIVES OF THE STUDY.

1.1 INTRODUCTION

1.1.1 AGRICULTURE IN UGANDA'S ECONOMY

Agriculture plays a dominant role in Uganda's economy. This is in terms of its contribution to gross domestic product (GDP), employment, government revenue, and in provision of raw materials for the country's agro-based industries.

Inspite of a 30 percent fall in agricultural output between 1970 and 1985 (Uganda Rehabilitation and Development Plan 1987/88 - 1990/91), the sector's contribution to total GDP averaged 49.4 percent over the same period (appendix 1). The data in appendix 1 indicate that on average the monetary subsector contributed 21.2 percent while the subsistence subsector contributed the remaining 28.2 percent. While the monetary subsector decreased over the years, the subsistence subsector was expanding. The explanation to this trend is contained in Kuiklijk Institut Voor de Tropen's (KIT) report of 1984 where it is asserted that most of the agricultural activity takes place in the small holder subsector comprising of over 80 percent of the population. These tend to be more of peasant than commercial farmers.Other factors that may have led to the decline of the monetary sector include Uganda's war with Tanzania

(1979), the expulsion of Asians who had controlled a large portion of the monetary subsector and the continuing war against insurgents.

It is revealed in appendix 1 that over 90 percent of the country's population is based in rural areas. In addition, KIT (1984) reports that agricultural sector provides an income to as many as 93 percent of Uganda's population. These two provide evidence to the fact that agricultural sector's contribution towards provision of employment is very high. Muthee (1986) goes further to support this when he asserts that most of the production of cash and food crops is under taken by small scale farmers who operate less than 2 hectares per household. In 1983, the traditional export crops (like coffee, tea, tobacco and cotton) accounted for 20 percent of the total cultivated land while the food crops covered the remaining 80 percent (Report of the task force on crop finance, hereafter referred to as T.F.C.F. report). These were mainly grown on small scale family farms as only less than one percent of the total cultivated land was large scale estates. The cash crops have for a long time formed a base for the country's foreign exchange earnings. For example, coffee currently contributes over 95 percent of Uganda's foreign exchange earnings (Uganda Rehabilitation and Development plan (1987/88-1990/91).

The   actual   contributions   from   agricultural   sector   to   total

of exports from 1978 to 1985 are presented in table 1.   The

suggests that the sector is the single foreign exchange earner

he country as it, on average, contributed 97 percent

1.   COMPOSITION OF EXPORTS (F.O.B) 1978-85   IN 1966 PRICES

(MILLIONS)

	1978	1979	1980	1981	1982	1983	1984	1985
LTURAL S	342.60	434.60	343.60	244.10	345.70	364.70	386.20	375.00
	10.60	5.10	2.20	2.50	0.70	2.10	6.60	2.30
AGRIC- AL S	97	99	99	99	100	99	98	99

E: Compiled from Background to the budget 1986/87.

Percentage figures are to the nearest whole numbers.

to total value of exports from 1978 to 1985. Given the current shortage and strong need of foreign exchange to rehabilitate the country's economy, and the need for food self sufficiency, it appears that increasing the country's agricultural production is the appropriate solution.

The need to increase agricultural productivity is further supported by the T.F.C.F. (1984) report which states that the sector contributed significantly to the growth of the economy during the recovery period of 1980-84, accounting for 75 percent of incremental growth in GDP. From the same report 42 percent of government revenue in 1983 orignated from the agricultural sector. This together with the fact that, in 1984, twenty seven per cent of the government's tax revenue was through agricultural export taxes (KIT, 1984) reveal the importance of this sector in generating government revenue. The government's ten point recovery programme stresses the need to develop an integrated and self-sustaining economy. This implies creating strong forward and backward linkages between the various sectors of the economy, and especially between the agricultural and industrial sectors.

Currently, industrial activities are largely agrobased; for example; coffee processing, cotton ginning, tea-processing, cigarettes manufacture,

textile industries, edible oil, leather products
manufacturing, sugar refining and grain milling.
The structure of these industries implicitly
emphasizes the importance of the agricultural sector
in providing the necessary raw materials to them. If
the agricultural sector is to mantain its role as the
basic supplier of raw materials to industries, as the
major foreign exchange earner for the country, as a
major source of revenue and employment to the
majority of the population, and as the major
contributor to realisation of increased GDP, it has
to be modernized. This in turn requires increased
use of modern farm inputs.

1.1.2. ROLE OF FARM INPUTS IN INCREASING AGRICULTURAL
PRODUCTION:

Economic theory, on regard to agricultural
production, suggests that a farmer's performance,
measured in terms of output per unit of land, will
depend on the quality and quantity of agricultural
inputs utilized (ceteris paribus) within the feasible
region. In addition, a number of empirical studies
have been carried out, in many countries, on the
importance of agricultural inputs in both crops and
animal products production. Doude et al (1972)
stress the importance of fertilizers, in
combination with other inputs, in realising

increased agricultural productivity. In Uganda, KIT (1984) and Michael Norsworthy et al (1980) stressed the unavailability of farm inputs as the major cause of the drop in agricultural production. Tumbo-oeli et al (1983) give continuous farming as the major cause of soil fertility depletion and growth of pests. Thus, as scarcity of land continues, the need to use fertilizers and pesticides grows. Muthee (1985) found out that in some parts of Uganda it is no longer possible to carry out shifting cultivation due to land scarcity. Muthee (1975) suggests solutions to such situations and goes further to support his views by citing W.A Lewis and the international labour organisation (1972) report.

Generally the need to increase use cf agricultural inputs to be able to realise high yields has been stressed. The forementioned studies suggest that growth of crop production will come from more productive use of existing resources, including modern farm inputs like fertilizers, improved seeds, agricultural chemicals, farm tools, extension services and agricultural machinery. Similar feelings are expressed by Kayondo (1975) and Paterson (1980). The Uganda Government Rehabilitation and Development Plan (1987/88-1990/91) underscores the importance of agricultural inputs use as a means of achieving the country's economic recovery. The

achieving the country's economic recovery. The extent to which these inputs can be utilized at the farm level depend, among other things, on the existing marketing system that links the agricultural sector with the wider economy.

1.1.3. ROLE OF A MARKETING SYSTEM IN AGRICULTURAL DEVELOPMENT WITH EMPHASIS ON THE CHANNEL FOR AGRICULTURAL INPUTS.

Marketing is defined as the performance of all business activities involved in the flow of goods and services from the point of initial production until they are in the hands of ultimate consumers (Kohls et al, 1972). Hence a marketing system is the organisation in which marketing functions are performed. It helps to link a farmer with the rest of the economy as it enables him / her to sell off his/her surplus produce while obtaining inputs required for his production process, as well as final goods he does not produce but requires for his consumption. Thus to provide enough incentives to a farmer with intent to making him more productive and integrated in the whole economy, three basic marketing channels that he requires must be harmoniously and simultaneously developed. These are:-

(i) channel for his produce.

(ii) channel for consumer goods and services

that he requires but does not produce.

(iii) channel for farm inputs.

The channel for agricultural inputs is of critical importance to a farmer since it is through it that he acquires farm inputs so as to realise surplus production which he may dispose of and obtain the deficit consumer goods and services. The more farm inputs become accessible to farmers, the more the farmers can be said to be enlarging or enriching their production resources. This change in the quality and or quantity of existing productive resources constitute progressiveness in agriculture. Such progressiveness is realised through the adoption of modern farming techniques, which in turn imply that farmers become increasingly dependent on agricultural input supplies. All this is achievable only when farmers have at their disposal an efficient economics supply system that meets their growing demand for farm inputs.

The existence of an efficient and flexible agricultural marketing system makes it more readily possible to achieve a smooth transformation of the agricultural sector in line with national development strategies of any developing country (Orwa, 1979). In addition, Mosher (1966) had earlier identified what he called five essential requirements that constitute 'a wheel for agricultural development'. These are: markets for farm products,

new farm technology, local availability of farm supplies and equipment, adequate incentives for farmers, and transportation facilities. Of these, local availability of farm supplies combined with adequate transportation facilities are essential pre-requisites of a well developed marketing channel for agricultural inputs. The importance of this channel in Uganda, is reflected in the current rehabilitation and development plan (1987/88-1990/91) which attributes the decline in agricultural output to lack of proper marketing channels and shortage of both imported and local inputs, among other reasons.

The benefits of technical innovations in agriculture, both at the national level and at the farm or household level are summarized by Gorfield (1979). These are in line with Uganda Government policy of improving the welfare of households as well as diversifying and increasing agricultural exports. To realise these goals, it is however necessary that there exist an efficient agricultural input marketing system. Such a system should possess the following characteristics.

    (a)   It should provide farmers with access to a wide range of agricultural inputs, appropriate to the level of technology used in their crops/livestock enterprises.

(b) It should make inputs available to the
farmer at or near the site of his or her
crop/livestock enterprise.

(c) It should make the inputs available on a
timely, if not continous basis, commensurate
with the seasonal nature of the farming.

(d) It should be composed of a sufficient
number of suppliers so as to provide a
competitive environment for serving the
farmer's needs at input prices which
reflect the real financial costs to the
supplier of commodity in terms of
procurement or manufacture, transport,
storage and sales.

In summary, improving the agricultural inputs
marketing system in Uganda, is very essential to
provide incentives to farmers to enable them adopt
modern technology in farming and thereby realise
increased crop production. This in turn necessitates
carring out a study to establish the nature of the
existing inputs marketing system.

1.2   THE PROBLEM

Uganda's agriculture is characterized by a low
level of input-output technology (T.F.C.F. report,
1984). Despite this lack of modern farming systems,
government policy is to realise high and

increasing agricultural production which may then
alleviate the current foreign exchange shortages and
create food self-sufficiency. According to the
Agricultural Rehabilitation Report (ARP) of 1985,
production of the main food crops declined by 50
percent in the period 1976-1980 due to lack of basic
agricultural inputs, among other reasons. An
agricultural rehabilitation programme was therefore
launched with the objective of increasing food
production through procurement of basic agricultural
inputs and then encouraging farmers to use them. The
objective of increasing agricultural productivity is
closely linked to the need for an efficient
agricultural input marketing system (see section
1.1.3).

Based on a preliminary survey carried out in
January/February 1987 and the existing literature on
marketing and distribution of agricultural inputs in
Uganda, the following were identified to be the major
problems facing the marketing and distribution
system:

First, there is lack of reliable statistical
information on the marketing and distribution of
agricultural inputs.

Second, there are serious shortages of
agricultural inputs at the farm level. The little
that may be availble is at times supplied out of

season and at continually escalating prices.

Third, there is the absence of a well organized

input marketing system, reflected in lack of a

suitable network of distribution channels with retail

points as near as possible to the farmer.

Fourth and finally, credit is not easily

available at every stage of the marketing system.

Thus importers may lack local cover while local

distributors and farmers may lack funds to purchase

enough of the inputs.

In an attempt to overcome some of these

problems, it is therefore necessary to undertake

research in order to highlight the nature and scope

of these problems and thereafter offer suggestions as

to how the efficiency of the marketing system may be

improved. This study focusses on specific

agricultural chemicals and farm tools.

1.3 OBJECTIVES OF THE STUDY

The major objective of the study is to analyse

some aspects of agricultural chemicals and farm tools

marketing so as to reveal any existing major

imperfections and malfunctions within the marketing

system. This may be further stated in two broad

objectives as follows:

(a) To ascertain the structure of the market

for both agricultural chemicals and farm tools in

terms   of market concentration,   market   transparency
and   market   entry.   Within the   framework   of   this
objective the study also focusses on :-

    (i)   Identifying   market functionaries   within
        the marketing system.

    (ii) Indicating   procurement and   distribution
        channels   as   well   as   revealing   both
        procurement and distribution constraints.

    (iii) Indicating sources of supplies,   purchase
        arrangements, sources of funds and   terms
        of sales.

    (b) To   evaluate   the market conduct   of   the
        identified marketing functionaries.   This
        involves examining the buying and selling
        behaviour   of   various   marketing
        functionaries.   This   objective   may   be
        further sub-divided as follows:-

    (i) To   examine the pricing system for   these
        inputs.   Accordingly, factors   affecting
        the   uniformity   of   pricing   by   the
        different marketing functionaries and the
        pricing formulae adopted by each category
        of   the   marketing   functionaries   are
        identified and discussed.

    (ii) To identify factors leading to choices of
        sources of input supplies and those   that
        determine   the type of inputs stocked   by
        farm supply shops (FSS).

(iii)   To indicate sales promotion efforts taken
        to attract customers.

(iv)   To   examine   the   foreign   exchange
       allocation   policy   and indicate   how   it
       influences   the availability   and   prices
       paid by farmers for   these   inputs.

CHAPTER TWO

LITERATURE REVIEW

A number of empirical studies have been carried out, in many countries, on agricultural marketing. Examples of such studies include:- Hays (1975), Kohls and Downey (1972), Ackello-Ogutu (1976), Orwa (1979), Schmidt (1979). In all cases the framework of analysis adopted some or all the four elements identified by Pritchard (1969) as necessary for formulating a research framework for analysing agricultural marketing systems in developing countries. These elements are:-

(i)   Market structure,

(ii) A set of economic theories relevant
      to marketing,

(iii) The theory of effective competition, and

(iv) The general theory of economic growth.

These are further discussed in chapter 3. The forementioned studies have stressed the importance of agricultural inputs and the need to make them accessible to farmers. Despite this wide coverage of agricultural marketing, very few studies have been carried out on marketing and distribution of agricultural inputs in Uganda. These include Jaykay

Agencies (1971), Mukasa (1984) and Muthee
(1985, 1986). All these are publications which do
not provide the methodologies used in their data
analysis.

Jaykay agencies (1971) and Muthee(1986) reveal
that Uganda used a considerable amount of
agricultural inputs and had a well developed inputs
distributions system, during the period ending in
1972. Accordingly fertilizer consumption was
estimated at 26,665 metric tonnes in 1969 and its use
had declined heavily during the period 1975-78. Both
studies disclose that distribution of agricultural
inputs was entirely in the hands of private traders
and cooperatives before the declaration of economic
war in 1972. In this same period, most agricultural
inputs were produced in the country. Examples
include hoes at Chillington and UGMA and fertilizers
at Tororo. The declaration of economic war in 1972
dismissed the original owners of most of the firms
that were either involved in local production or
procurement and in country distribution of the
inputs. According to Mukasa (1984) and Muthee (1986)
this culminated into a situation of low input supply
as most firms ceased operation. They give the
closure of Chillington and UGMA and 'the subsequent

clusure of Tororo single superphosphates factories as
supporting evidence. Appendices 3,4 and 5 indicate
that the demand for agricultural chemicals and farm
tools exceeded their supply. For example an average
of 159.40, 260, and 1120 tonnes of fungicides,
herbicides and insecticides respectively demanded
were not satisfied for the years 1971 to 1975. This
reflects the scarcity of these inputs characteristic
of the period 1972-1979.

Muthee (1986) further reveals that the post 1980
period in Uganda was characterized by heavy inputs
imports by the government, donor agencies, private
traders, and the cooperatives represented by Uganda
Central Cooperative Union (UCCU). Table 2 indicates
that the government got heavily involved in inputs
procurement and distribution which disrupted the
pre-1971 channels of distribution.

Table 2:Percentage Values of Agricultural inputs Handled by
Government Ministries, Cooperative Unions
and Private Firms (1981-1983 Returns)

SECTOR	1981	1982	1983
GOVERNMENT	20.7	39.1	55.0
COOPERATIVE	5.0	21.5	15.4
PRIVATE	74.3	39.4	29.6
TOTAL	100.0	100.0	100.0

SOURCE: COMPILED FROM APPENDIX 23.

The table demonstrates that government involvement in marketing of agricultural inputs was significant contrary to the pre- 1971 period when the marketing was entirely in the hands of the private and cooperative sectors. This increased involvement by the gorverment sector reduced the participation by the private sector.

Reports by Muthee (1985, 1986) and Mukasa (1984) go further to indicate that the nearest supply source of inputs to farmers is at district major towns which are situated very far from the majority of the farmers. The reports give three major channels of distribution during the post 1980 period. These are:

(i)   inputs procured by government ministries were distributed through government and project offices.

(ii)   Those procured by UCCU were distributed through district Cooperative Unions and primary societies.

(iii) Inputs handled by private traders were distributed through their agents, FSS and sometimes directly to farmers.

Muthee's (1986) report, in particular, indicates that farm tools and agricultural chemicals formed the largest percentage of agricultural inputs handled during the period 1981-1983.

Table 3:<u>PERCENTAGE VALUE AND COMPOSITION OF AGRICULTURAL INPUTS</u>

<u>(1981-1983)</u>

CATEGORY OF INPUTS	1981(%)	1982(%)	1983(%)
TRACTORS AND EQUIPMENT/ PROCESSING EQUIPMENT	18	13	20
OX-PLOUGHS	4	2	6
TOOLS AND OTHER EQUIPMENTS	34	25	39
CHEMICALS AND DRUGS	43	57	34
SEED	0.8	2	0.5
IMPROVED LIVESTOCK	-	0.5	0.02
FEEDS	0.15	-	-
TOTAL*	99.95	99.50	99.52

SOURCE: Muthee, December 1986: Strategies FOR

Improving Availability And Distribution OF

Agricultural Inputs In South Western

Uganda.
*The Figures do not add up to 100% due to

Rounding

Muthee's reports also recommended that
government should discontinue physical handling of
inputs and use their expertise and experience in
distribution to strengthen the existing cooperative
and private sector supply system. He points out that
kenya's agricultural inputs marketing system is
comperatively better streamlined than Uganda's.

This, in his argument. is attributed to the fact that procurement and distribution of agricultural inputs in Kenya is in the hands of cooperatives and the private sector, while the government's role has been that of strenghthening the cooperative movement and providing adequate incentives to private traders. All these studies carried out in Uganda have revealed that all agricultural inputs imported to Uganda come from Kenya or overseas. The imports by government ministries were tendered to local firms or their principals overseas. These included grants, loans and limited imports for their normal institutional activities. In additional to these tenders, however, private firms organised limited importation of some of the popular input items using their own equity or commercial bank loans and overdrafts.

The imported inputs were sold to farmers on a cash basis, except for National Tobacco Corporation [Now BAT.1984 (U) LTD] which provided inputs to registered growers on credit. This lack of credit facilities to farmers is also expressed by Muthee (1985). He emphasises that credit is not availed to farmers despite the fact that there used to be various types of credit schemes for farmers. He gives as examples the progessive farmers scheme in Lango, Masaka group farming loans, tea and tobacco loans, ranching loans, package loans for maize,

sorghum, groundnuts, and the cooperative credit scheme for farmers. He states:- "prior to 1971 default rates never exceeded 2 percent per annum but after 1971 it rose to over 10 percent per annum.

This performance is commendable considering the situation prevailing in the post 1971 period and demonstrates that farmers can handled credit if the administration mechanisms are well organised". Onchere (1976) reveals that in Kenya loan/credit facilities are available in very small amounts and to a few farmers. This situation is however recommendable compared to the one in Uganda.

The role of credit in modern farming has been emphasized by a number of studies. Pischke (1974), Kayondo (1975) and Muthee (1975) have stressed credit as an essential ingredient in making the impact of agricultural inputs on production to be better realised. Indeed availability of credit to farmers provides more inputs and hence higher yields while credit to marketing agencies improves their efficiency both in procurement and distribution. The issue of availability of credit to market intermediaries in Uganda has never been tackled, although it may be one of the major constraints that obtain in the market for agricultural chemicals and farm tools.

In their report, Tumbo oeri et al(1983) discuss

the operations of fertilizer market and identify
current importers and distributors of both fertilizer
and pesticides in Kenya. They point out constraints
that obtain in the market for agro-chemicals in Kenya
and in particular noted that price control on

fertilizers was rather severe. Some recommendations
are made in the face of price controls that are
geared towards provision of effective incentives for
rural distribution. The report reveals how margins
are shared between importers, main distributors and
stockists. The licensing procedure for fertilizers
and pesticides are outlined. In the case of
fertilizers the licensing of imports tends to favour
those with distribution network in rural areas which
are geared to meeting the needs of small scale
farmers. For pesticides, an advisory committee
exists with its secretariat in the Ministry of
Agriculture. The committee scrutinizes the
applications and unlike the case of fertilizers, the
report states: " licences may be refused and
applications rejected if the cost of a product is
considered too high and where cheaper alternatives
are available".

It is revealed in the same report that an
operating agreement exists between the world's
largest chemical manufacturers or their subsidiaries
in Kenya and the distributing firms in the country.

Accordingly, the distributing firms agree not to import on their own account while the importing firms undertake not to by pass the distributors by making direct sales to farmers. The implications on the channels of distribution are outlined together with the different margins the distributors charge at different stages of their distribution process.

In summary, studies conducted on marketing and distribution of agricultural inputs in Uganda have tried to reveal major constraints pertaining to farm inputs marketing from the points of view of the farmer. It is only Mukasa (1984) who investigated the available facilities for handling the inputs, main sources of supplies and delivery time. He administered his questionnaires to 9 firms with one failing to submit it's returns. A recent survey by the author identified 29 firms and institutions procuring these inputs. This implies that Mukasa's coverage was too small to provide a proper insight into the existing operational constraints in the market. Although Muthee (1985 and 1986) gives the concentration of the market after categorizing the firms and institutions into government, cooperative and private sectors, he does not reveal the degree of market competition (between the firms and institutions), integration, transparency and market entry.

The forementioned studies have given very little attention to market conduct in terms of pricing, factors determining sources of inputs supplies to stockists, promotional efforts taken by stockists, foreign exchange rates and allocation policy and its impact on the inputs market behaviour. This study attempts to cover the gaps left by the previous studies,in addition to reviewing some of the major issues put forward by both Muthee and Mukasa. Unlike most of the previous studies, this one focusses on the various marketing intermediaries as the major sources of the information that is utilized to fill the forementioned gaps. This is achieved by use of tools discussed in chapter three.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 CONCEPTUAL FRAMEWORK

It has been stated in Chapter two that most of the recently conducted studies on agricultural marketing have adopted what Pritchard (1969) referred to as "four elements necessary for formulating a research framework for analysis of agricultural marketing systems in less developed countries". These are:-

i) Market structure analysis. This provides a model that may be used to asses the performance of the agricultural marketing chain. The key elements of this theoretical model are those of market structure, market conduct and performance.

Market structure refers to those 'characterisctics of organization of a market which influence strategically the nature of competition and pricing within the market' (Bain, 1967). The characteristics that are most emphasised in this study are:- degree of seller concentration described by the number and size distribution and by the volume of inputs handled; two, market transparency described by the extent to which information on prices and markets exist; three, the condition of entry which reveals the barriers that may hinder entrance by new

firms into the market; four and lastly, the element
of market integration which is taken to mean the
existence of any systematic coordination between the
procurement and marketing (locally) of farm inputs
and also within the different local marketing levels
so as to sustain a smooth flow of the inputs to the
farmers.

The second element, market conduct, refers to
"patterns of behaviour which firms follow in adopting
or adjusting to the markets in which they buy or
sell" (Bain, 1967). Important dimension of conduct
include the methods employed by each firm in
determining prices and quantity of inputs procured,
and the sales promotion policy including the presence
or absence of coersive tactics directed against
either established rivals or potential entrants.

The third element, market performance, concerns
the economic results that flow from the industry and
how well it performs in terms of efficiency and
progressiveness given its technical environment
(Bain, 1967). The first two elements form the core
of the analytical framework for this study, while the
third element is omitted due to limitations of data
availability.

ii) A set of economic theories relevant to
marketing. "Foremost among these theories are those
of consumer demand, production and resource use,

pricing and behaviour of the firm" (Hays. 1975). The economics of input marketing to which these theories apply are the farmers' demand for agricultural inputs, the price system that reflects these demands back to producers or procurers and distributors, and the methods or practices used in exchanging title and getting the physical product from the seller to the buyer in the form and the time and place desired. This study utilizes these theories of general economics by computing mark-ups received by the various marketing agents, including the open market. Computation of margins which would have provided a more realistic picture of the renumerations accruing to the various marketing agents has been made impossible by failure to generate data on handling costs, transport costs and storage costs. The study therefore utilizes mark-ups to make inferences on the efficiency with which the various marketing functions are performed.

iii) The theory of effective competition. The basic atributes of the competitive market, according to Hays (1975), implies that all buyers and sellers have perfect knowledge of demand, supply and prices and act rationally upon this knowledge. The implications are that if all the buying and the selling is carried out at a particular point in space and at a single instant of time, then a uniform

price will prevail in the market. To be more
realistic this concept of a market must be expanded
to consider the fact that marketing is carried out in
space and over time. Such an expansion necessitates
an analysis of transportation and handling costs
between buyers and sellers at different levels and
locations, and storage costs for carrying the
commodity from one period to another. Due to
limitations of data on transport, handling and
storage costs, this study utilizes Ngumi's (1976)
model for assessing pricing efficiency. the model
has four basic characteristics. These are:-

    (a) a system of prices that changes with the
        market forces of supply and demand;

    (b) a net work of prices among geographically
        separated markets whose differences are
        equal to transfer costs:

    (c) Price differences which overtime are
        exactly equal to costs of transfering the
        commodity from one period of time to
        another;

    (d) price differences among forms of commodity
        from such form of grade or class to
        another.

    iv) The general theory of economic growth. An
effective agricultural inputs or products marketing
system facilitates an optimum allocation of

resources in agricultural production and is a direct
contributor to total product as it increases place,
time and form utility of agricultural products (Hays,
1975). By implication a progressive and
technologically receptive marketing system can help
promote economic growth. Although this element of
Pritchard's (1969) analytical framework is not
utilized in this study, for analytical purposes, it
has been emphasized in chapter one (section 1.1.2).
The basic information and specific tools used in
analysing data for this study are outlined in the
section below.

MATERIALS AND TOOLS USED IN THE ANALYSIS

The following aspects comprise the analytical
framework of this study:-

First, to meet the requirements of the first
objective [1.3 (a)] the following aspects were investigated.

1. Quantities and values of the inputs that
   were handled by each of the major marketing
   functionaries for the years 1984-1986.
   Major marketing functionaries are
   restricted to cover only those firms or
   institutions that directly or indirectly
   import the inputs in addition to purchasing
   from local manufacturers.

2. Major obstacles in both entering and
   remaining competitive in the business.

3. Knowledge of each cooperative or private farm supply shop of existence of other farm supply shops and prices being charged by them.

4. The main sources of supplies, purchase arrangements, sources of funds and terms of sales for each firm or institution handling the inputs.

Using the above information and others, the structure of the market is analysed. As an index to determine the existing market structure both concentration and inequality at procurement level for agricultural chemicals and farm tools are considered. "Concentration" refers to the percentage of the total transactions accounted for by the first four, eight, twenty five and fifty largest firms and institutions. "Inequality" in this context refers to the extent to which a small percentage of firms and institutions control a large percentage of the total transactions. "Transaction" is taken to mean the annual volume (in value terms) of agricultural chemicals or farm tools handled by an individual firm or institution. High seller concentration and inequality reveal lack of competitiveness (hence oligopolistic or monopolistic tendencies) while a low concentration may imply tendencies towards competitiveness, provided there are lower barriers to

entry (Ackello-Ogutu, 1976 and Bain 1967). Normally
market structure determines market conduct (Bain,
1967) and it is through this relationship that the
degree of market concentration may be positively
correlated to the forces at work in any given market
sector for a given product (Miller, 1955). These
market forces involve the number of sellers,
quantities of products (inputs) handled by each
seller and price levels which prevail in the market.
Lorenz Concentration Curves for agricultural
chemicals and farm tools are therefore constructed
and Gini coefficients estimated to indicate the
levels of concentration and inequality that exist.

Levels of integration in the market are taken as
indicators of market structure. It is within this
context that an attempt is made to examine the
relations of sellers in the market to each other, of
the sellers to the buyers, and of the sellers
established in the market to potential or actual new
entrants in the market. The information on these
issues is Cross-tabulated and the discussion is then
based on percentages of responses indicating a given
behavior.

Second, to fulfill objective 1.3 (b) the
following issues are investigated:

1 - Prices charged by importers and Farm Supply
    Shops (FSS).

2 - Promotion efforts taken to attract customer.

3 - Factors influencing choices of sources of input supplies for cooperative and private FSS, as well as those influencing types of inputs stocked.

4 - Foreign exchange allocation policy and procedures.

The information is then utilized to assess market conduct. Using this information, mark-ups are computed for all marketing agents.

3.3   THE SURVEY

3.3.1   DATA BASE:

The study utilizes both secondary and primary data.   Secondary data was collected from Ministry of Agriculture and Forestry (MAF) and Bank of Uganda reports.   Discussions were also held with district agricultural and cooperative officers.

An extensive list of organisations that are directly or indirectly involved in importation of agricultural inputs was made with the help of Dr. A.M.   Muthee (Agricultural secretariat, Bank of Uganda) and Mr. W. Kalende (Marketing coordinator of UCCU).   A list of cooperative and private FSS was obtained using the report on business transactions by marketing representatives during 1985/86 financial year, for UCCU.   This was followed by a visit to ten randomly selected FSS in Kampala for the purpose of

updating the list.

Using a designed questionnaire (appendix 8) primary data were collected from a random sample of thirty one farm supply shops. A complete enumeration of those organisations involved in importation of agricultural chemicals and Farm tools was undertaken, using a designed questionnaire (Appendix 7). This was despite the fact that there may have been some individuals or firms which import these inputs but could not be identified. These were, however, assumed to be insignificant. The selection method for the samples are discussed here-below.

3.3.2   SAMPLING

All major marketing functionaries that could be identified were taken to be representative of firms and institutions that directly or indirectly import agricultural chemicals and farm tools. these totalled to 23. For the case of farm supply shops the study area (see appendix 6) was stratified into three strata namely:- Eastern, Western and Central Region. Kampala district was taken on its own and did not belong to any of the three stata. In addition, Northern Region was omitted due to insecurity.

With exception of Central region where only one district was omitted (Luwero district), the other regions or strata were further stratified into north

and south. The north of each Stratum was then removed from the study area. This substratification was due to limitations caused by lack of funds and limited time.

Using sampling without replacement 9,6,6 farm supply shops were randomly selected from Central, Eastern and Western regions. The size of the sample taken from each stratum (under study) was half of the stratum's population (Farm Supply Shops that have been operational for at least two years). In addition 10 farm supply shops were randomly selected from 15 farm supply shops in Kampala. This brought the total number of FSS under study to 31. The results of this survey are discussed in chapters four and five.

CHAPTER FOUR

STRUCTURE OF THE AGRO-CHEMICALS AND FARM TOOLS MARKETING SYSTEM

In this chapter results that are deemed useful in describing the market structure for the above specific inputs are discussed. The first section (4.1) identifies the various firms and institutions that are directly or indirectly involved in procurement, primary distribution and production of the inputs in the country. Marketing channel structures are identified in section 4.2. Section 4.2 also reveals procurement and distribution constraints together with possible suggestions to their remedies. Section 4.3 focusses on market structure by analysing the major variables discussed under section 3.2.

4.1. MARKET FUNCTIONARIES AND THEIR CHARACTERISTICS.

For the purpose of this study, "market functionaries" is used to refer to individuals, institutions and firms involved in the marketing of agricultural inputs. The study has identified the following categories of market functionaries that are involved in agro-chemicals and farm tools in Uganda.

These include:

(a) Government ministries. These import or locally purchase inputs for use in their various projects and for distribution to farmers.

(b) Donor aided projects under government ministries. These projects are directly funded by international donor agencies likeEuropean Economic Community(EEC), United States Agency for International Development(USAID), and International Development Agencies (IDA) but fall under specified ministries.

(c) Bilateral and unilateral agreements on inputs supply.

(d) Commercial firms and institutions, both Ugandan and subsidiaries of multinational firms.

(e) Parastatals and large scale farming enterprises.

(f) Non-governmental organisations.

(g) Uganda Commercial Bank - Agricultural Rehabilitation Programme (ARP).

(h) Cooperatives.

In addition to handling agro-chemicals and farm tools, each of the above categories also handles a wide range of other agricultural inputs.

Direct government involvement is by the Ministry of Agriculture and Forestry (MAF) and the Ministry of Animal Industry and Fisheries (MAIF). Both

ministries deal in agricultural chemicals and farm tools, although MAIF is restricted in the varieties of agro-chemicals it handles. The Ministry of Rehabilitation (MOR) is also involved in procurement and distribution of farm tools, mainly for returnees in the former disturbed areas. These include both those who may have been rendered refugees to other countries or those that may have been internally displaced by wars. The government also receives inputs from donor agencies like European Economic Community (EEC), International Fund for Agricultural Development (IFAD) and United States Agency for International Development (USAID). In addition there are bilateral agreements between government of Uganda and other governments on supply of agricultural chemicals and farm tools. These include Finland, Italy, United Kingdom, East African Community Compensation Fund etc. Some of these inputs, and especially those for specific donor aided projects, are received through issueing tenders to private commercial firms.

Major commercial firms engaged in marketing of agro-chemicals and farm tools include subsidiaries of multinational companies and locally registered Ugandan firms. The ones identified are: CIBA-GEIGY, Prizer (U) Ltd, Mayer and Baker, Farm Inputs (U) Ltd, Agromed (U) Ltd. Armstrad Shell (U) Ltd. Twiga

Chemical Industries, Uganda Hardwares, Associated Chemicals, Nile Chemicals and Industrial and Agricultural Chemicals Ltd. Most of these firms have regional offices in Nairobi. Ciba-Geigy and Pfizer have offices for purposes of promotion. Neither Company is involved in commercial activities such as importation or wholesale but issue proforma invoices to importing firms or individuals on behalf of their parent companies. They therefore receive commissions on these proforma invoices from their mother companies.

Government parastatals and large scale farming enterprises play a very limited role in input procurement and distribution. These include Uganda Tea Growers, agricultural enterprises, Uganda tea corporation, Dairy corporation, B.A.T., Madvani Sugar Ltd, Sugar cooperation of Uganda, National sugar works Ltd., Coffee marketing Board (CMB), Lint Marketing Board (LMB), Produce Marketing Board (PMB), Kibimba Rice Company and Cocoa rehabilitation project. The parastatals, like CMB, PMB and LMB, distribute no inputs to farmers since this limited task is assumed by their respective crop growers cooperatives. Questionnaires to Uganda Tea growers corporation (UTGC) and Agricultural enterprises Ltd. indicate insignificant provision of the inputs through the organisations. Most of the other large

scale farming enterprises receive their inputs through tenders to private traders and cooperatives.

Non-governmental organisations covered by this study are Uganda Red Cross and UNHCR. The two organisations procure inputs for the purpose of resettling refugees or returnees. Uganda Commercial Bank handles funds from the World Bank for financing Agricultural rehabilitation programme (ARP). The role of procuring inputs, under this fund, is done by Crown Agents for various institutions like cooperatives and agricultural enterprises which qualify under the project. Cooperatives are represented by Uganda Central Cooperative Union (UCCU), which is the trading arm of the Cooperative movement. At lower levels this is represented by District Cooperative Unions and Primary Societies. According to the marketing coordinator of UCCU, there are 33 cooperative unions in the country with about 5,000 affiliated primary societies.

Local production of agro-chemicals and farm tools is very low. As a consequence of the 1972 economic war and the subsequent civil strifes, there is not even a single local source of agricultural chemical inputs in the country. As for farm tools there is Uganda Hoes Ltd., UGMA(U), and Uganda Bags and Hessian Mills Ltd. Of the farm tools covered by this study, the three supply Hoes, axes, slashers and

gunny bags and are still not able to meet actual demand. This is reflected in the large volume of hoes, axes, slashers and gunny bags currently being imported into the country. Appendix 4 further supports this by revealing the deficits of these inputs during the period 1971-1975.

The forementioned eight categories of marketing functionaries can be further grouped into five major categories, that are directly or indirectly involved in inportation of agricultural chemicals and farm tools. These are;-

   i) Government ministries

  ii) Donor agencies and bilateral agrements on input supplies.

iii) Non-governmental organisations

iv) Private commercial traders

 v) Cooperatives

From the survey results (appendix 2), the above categories of marketing functionaries are characterised by employment of highly qualified personnel. Most government employees handling the inputs are graduates and diploma holders in agriculture or veterinary medicine. These were initially employed for the purposes of promoting extension services and collecting information on use and demand of agricultural inputs, among others. Inputs from donor agencies and bilateral agreements

are handled by both project experts and government employees, who happen to be graduates or diplomates. A similar situation is revealed for non-government organisations. Private commercial firms interviewed employ at least one graduate at their head offices and 66% of them have field representatives who are mainly school dropouts. Non-proffessional employees of the cooperative sector have benefited from past training on both input use and office management. This makes the sector to be better placed in handling agricultural inputs than the private sector.

A second major characteristic of the marketing functionaries is lack of much potential for holding large stocks of inputs. Appendix 14 reveals that only 32 percent of the interviewed major marketing functionaries have at least one bonded store. Of these, 71 percent own the store(s) and 29 percent rent them. Ninety seven percent of those with bonded store(s) have only one store with an average capacity of 200 metric tonnes. In addition to bonded stores, 73 percent of these firms and institutions utilize at least one unbonded store. Among these, 47 percent own the stores with 53 percent renting them. Besides the stores being of small capacity, they are used at below capacity for most of the time. When asked about storage problems they face, 27 percent complained of insecurity, 14 percent gave lack of

enough stores, 9 percent indicated that their stores are attacked by pests and insects and this escalates storage expenses, fourteen percent indicate lack of incentives in form of continuous flow of inputs and availability of foreign exchange as the major reason why they don't store. Although cooperatives claim to have many stores, these are to be of very limited use (in storing inputs) when they get diverted to their original purpose of storing agricultural produce from farmers.

4.2. MARKETING CHANNEL STRUCTURES.

4.2.1. PROCUREMENT AND DISTRIBUTION CHANNELS.

Except for manure, all fertilizers and agricultural chemicals used in Uganda are imported. These include herbicides, dewormers, disinfectants, acaricides, fungicides, insecticides, and the various types of fertilizers. Farm tools are both imported and locally produced. Chart 1 shows an outline of the marketing channel structures for these inputs. Private importers or traders of these inputs fall into three categories. These are;

(a)   Large scale importers, who are subsidiaries or affiliates of multinational firms. Examples of these include Ciba-Geigy, Pfizer, Mayer and Baker, Shell, Wellcome, Twiga Chemical Industries, etc.

EXTERNAL SOURCE

LOCAL PRODUCERS

LARGE PRIVATE COMMERCIAL FIRMS

SMALL PRIVATE FIRM/TRADERS

U C C U

DONOR AIDED PROJECTS

GOVERMENT MINISTRIES

SPECIAL PROJECTS

REGIONAL REPRESNETATIVE

COOP. F.S.S. or DISTRIC COOP. UNIONS

PRIVATE F.S.S.

DISTRICT GOVT. AGENTS

LARGE SCALE FARMS/PARASTATATLS

NONSPECIALISED PRIV. TRADERS

PRIMARY-SOC.

SUB-COUNTY GOVT. AGENTS

SPECIALISED AGENTS

PARISH GOVT. AGENTS

PETTY TRADERS

O P E N   M A R K E T

F A R M E R S

KEY

- - → FROM DIRECT TO

i.e. JUMPMIDDLE BOXES

Source: OWN COMPILATION.

-43-
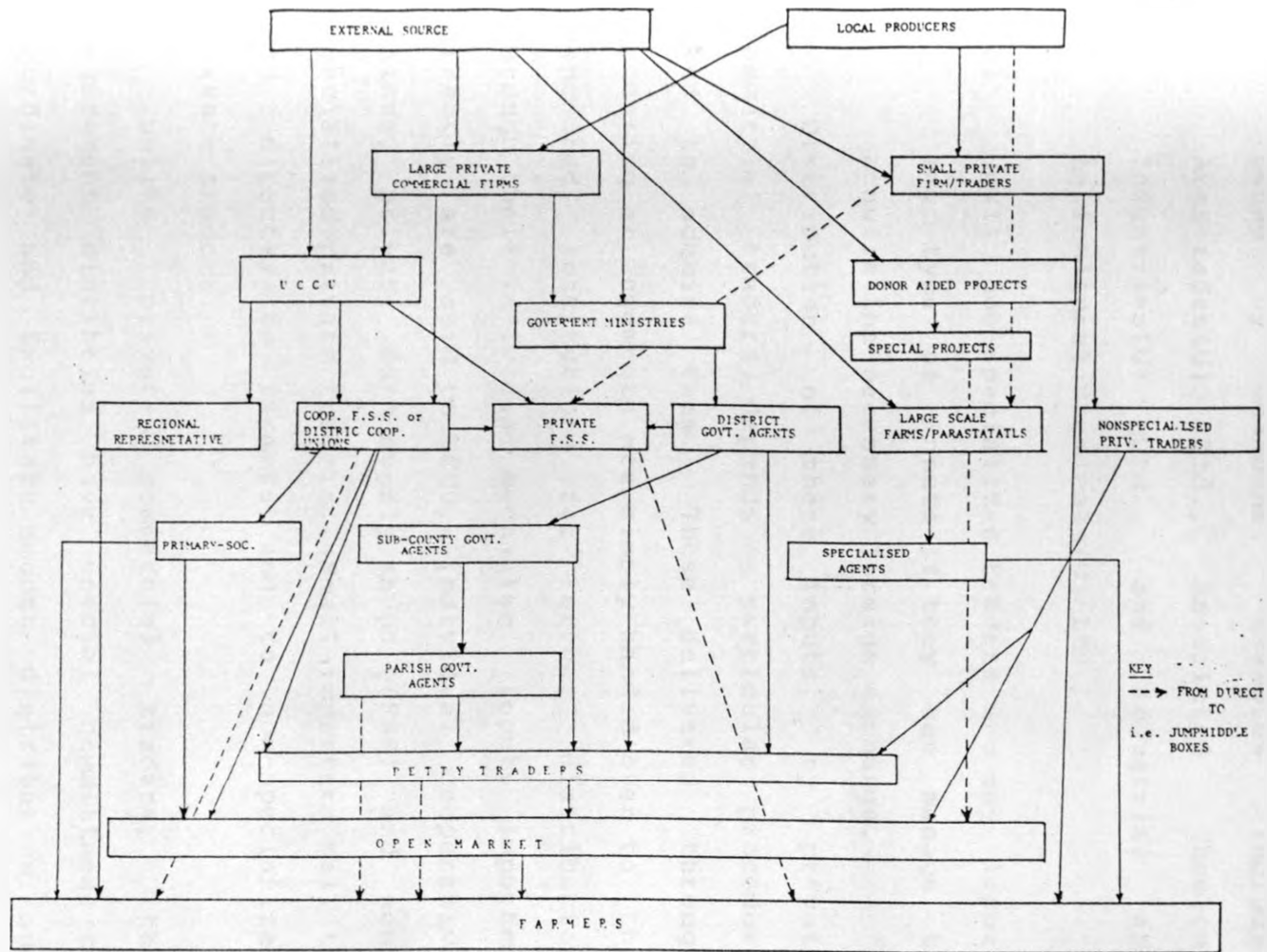
(b)   Large   Ugandan companies   which   are   local
        representatives   for international   companies.
        Unlike   those   in (a) above, they   are   wholly
        owned   by   Ugandans.   Examples   include:
        Armstrades(U)   Ltd.,   Associated   Chemical
        Industries(U)   Ltd.,   and   Industrial   and
        Agricultural Chemicals(U) Ltd.

(c)   Small   non-specialized traders who may   import
        any   type   of   inputs if they   can   manage   to
        acquire the necessary foreign exchange.

        Distribution   of   these   inputs,   by   private
commercial   traders, depends on particular   procedure
used   to   acquire   them.   Those   delivered   through
tendering arrangements are simply handed over to   the
concerned   institutions   for   further   distribution
through their individual mechanism.   Inputs   imported
directly   are   sold to UCCU,   individual   cooperative
unions,   private   farm supply shops   (FSS)   and   non-
specialized private traders.   Small importers sell to
FSS, directly to farmers and   to non-specialized
private traders.

        Unlike   private   commercial   traders,   the
government   ministries   have   special   committees   to
coordinate   and   facilitate smooth   distribution   and
sales of the inputs.   The MAF has two such committees
viz: the headquarters inputs allocation committee and
the   district committee.   The headquarters   committee

is charged, among other duties with receiving, storing, allocating and dispatching the inputs to the district committees. The Ministry of Transport normally delivers the inputs from MAF central stores. There are also committees at the county, sub-county and parish levels in each district. Thus from ministry headquarters the inputs are distributed to the district headquarters, then to sub-county and finally to parish committees where they are then sold off to farmers as cash basis. The county committee does the liassing, cordination and allocation but does not get involved in actual handling of the inputs. Accordingly, inputs are allocated on basis of:

i) population per region and the available means to transport them.

ii) Actual demand for and relative availability of the inputs in the area.

Like MAF, MAIF makes an annual assessment and budget for inputs for the entire sector. The inputs are then imported in collaboration with local suppliers, and subject to availability of foreign exchange applied for to Bank of Uganda. According to the marketing manager of Dairy Development Corporation, MAIF handles 81.1 percent of all non-private sector livestock inputs while the Diary

Development Committee handles the remaining 18.9 percent. Inputs received by MAIF are sold to UCCU and FSS, except for those which require specialised skills. These are distributed to District Veterinary officers who then pass them over to their qualified personnel at sub-county and parish levels. The Diary Development Committee distributes its inputs through the district veterinary officers (DVO) and milk collection centres. These have been refered to as specialised agents in chart 1. From the district office, the inputs may take two or more weeks before they reach farmers (Personal communication), depending on transport availability and the existing road network. The process is rather long, considering the other lengthy procedures involved before the ministries and the Diary Development Committee receive the inputs.

Inputs from donor agencies are handed to the respective ministries for normal distribution. However, the IFAD/ARP funded inputs are distributed through cooperative unions. In particular, inputs under ARP are delivered direct to the Zonal warehouses at Tororo, Soroti and Lira and then distributed to cooperative stores in the 174 sub-counties under the programme. Sales from the stores are then held on predetermined days under the supervision of the county level staff of the

ministries of agriculture (MAF) and Animal industry (MAIF). Unlike the MAF and MAIF, the ministry of Rehabilitation (MOR) receives inputs and distributes them free to farmers in the war-ravaged areas. These inputs are distributed through the local resistance committees and the ministry field staff. Inputs received through unilateral and bilateral agreements between foreign governments and Uganda government are distributed by the relevant ministry through its laid down distribution channels.

Most non-government organisations have head offices outside Uganda. They receive their input requirements directly without having to undertake the lengthy procedures of obtaining foreign exchange from Bank of Uganda. Their inputs are distributed direct to the intended users (farmers), free of charge. The exercise is done through their field representatives.

The cooperative movement is yet another strong channel of input distribution in the country. This is represented at the highest level by Uganda central cooperative union (UCCU) which was formed in 1961 as the movement's trading arm. From the time of its formation up to about 1975, UCCU provided its members with the following benefits;

(a) Member discounts were provided to district unions and primary societies

(b)   Members received interest on their membership
       shares.

(c)   Members were given priority over non-members in
       access to scarce commodities.

       Such benefits have been discontinued perhaps due
to the deteriorating state of the economy from 1975
to present.   UCCU has its four regional
representatives whose duties include assessing the
demand for agricultural inputs, providing technical
services to farmers and distributing inputs to
district unions, primary societies and farmers
depending on who has pressed for an order. UCCU has
two options in procurement of agricultural inputs.
Under the first system tenders are offered to
suitable suppliers by a UCCU purchasing committee
based at its head office. The Societe Generale de
Surveillance(S.G.S.) representatives in Kampala make
recommendations to the committee as to who should be
given the tender on basis of price quotations,
packaging and product quality. Under this option the
time for procurement of ordered inputs range from
less than one week to three months depending on the
source.

       A second option for UCCU is to alert donor
agencies to her input needs so that funding may be
provided for specific commodities on the listing.
Procurement methods for these items vary with the
donor agency and the UCCU must therefore have

knowledge of the several different procurement systems to be able to obtain the inputs. whatever option has been taken, inputs received by UCCU are distributed either through the district cooperative unions or regional representatives. UCCU also operates a farm supply shop in Kampala and other major towns from where other private farm supply shops (F.S.S.), private non-specialised traders and to a less extent, non-professional petty traders receive their supplies. It is from these F.S.S. that farmers are then able to purchase their required inputs.

Locally produced inputs are distributed through appointed agents, retaillers, UCCU, Cooperative Unions, and government institutions. Once the items are received by either channel, the distribution to the end-user is then similar to the case of imported inputs (chart 1).

4.2.2. <u>SOURCES OF FUNDS AND TERMS OF SALES.</u>

Most of the large importers derive their receipts from filling tenders for government requirements, donor funded projects' requirements and those of large scale farming enterprises. In particular the survey revealed that UCCU may use government controlled foreign exchange or solicit funds, from aid donors, for input purchases.

Appendix 15 reveals sources of funds, for major marketing functionaries, for both importation and distribution/operation costs. As for importation the results reveal that 30 percent receive short term commercial loans, 26 percent receive commercial Bank overdrafts, 48 percent solicit funds from donor agencies (like EEC, IFAD, ARP, etc), 9 percent receive credit from suppliers (consignment stock), 39 percent use own savings for local cover to purchase government controlled foreign exchange, and 4 percent get long term loan from financing houses (Banks). These results indicate that the largest percentage of inputs coming into the country is through donor agencies, followed by those through private firms and cooperatives' own savings. Given that both commercial private firms and cooperatives utilise funds from donor agencies and government controlled foreign exchange, the results underscores the importance of the two sectors in procurement of agricultural inputs.

Regarding distribution/operation costs, appendix 15 reveals that the government ministries (code nos. 16-23) use their votes in the treasury. Donor aided projects under the ministries, however, have in addition funds from donor agencies. Of the interviewed firms and institutions (appendix 15), 4 percent rely on institutions whose tenders they take,

48 percent utilise funds generated from own business, 13 percent utilise funds borrowed from private Commercial Banks, 22 percent use donor agency funds, 4 percent receive bank overdrafts and another 4 percent are sponsored by other companies. The implications of these results is that most of the distribution/operation costs are met through own generated funds.

The results (appendix 16) show that the terms of sales have been cash only, cash and credit, or credit only. A larger percentage (48 percent) of these firms and institutions sell on cash only; 39 percent sell on cash and credit and 13 percent sell on credit only. Those inputs offered by non-governmental organisations (codes 13 and 14) and the ministry of rehabilitation (code no. 20) are free. These organisations form 13 percent of the total number of firms and institutions interviewed. Those firms and institutions that indicated having sold on cash and/or credit emphasized that credit is limited to a few well established customers. The implication of such results is that farmers with low incomes. which may be irregular, have less accesibility to agricultural inputs. This further explains the low level of farming technology practiced in the country.

4.2.3. MAJOR PROBLEMS ENCOUNTERED IN FINANCING IMPORTATION AND DISTRIBUTION

Problems encountered in the above areas have significant impact on implementation and efficiency of the channels mentioned under section 4.2.1. Those experienced in importation may make it difficult to procure enough inputs at the right time (season). As a consequence, shortages are likely to be experienced and this is likely to escalate prices. The following are likely consequences of serious problems in both financing importation and distribution of the inputs:-

i) Once financing importation takes very long inputs will be likely to be available out of season.

ii) Limited finances may lead to scarcity of inputs and may reduce the intensity of competition by being available to few suppliers.

iii) Scarcity of inputs (arising out of (i) and/or (ii)) will escalate input prices and thereby making them unreflective of the real financial costs to the supplier of the inputs interms of procurement, transport, etc.

A situation where (i) - (iii) prevail may reflect an inefficient marketing system.

4.2.3.1. <u>IMPORTATION PROBLEMS</u>

These are based on the survey results and the percentage figures given in subsections (a) to (d) have been computed from appendix 17.

(a) <u>FOREIGN EXCHANGE</u>

Timely allocation of foreign exchange is vital to procurement, as some items have considerable lead times between ordering and receipt (section 4.2.3.2.). The amount of foreign exchange has always been inadequate, and importation of needed inputs is always at less than optimal levels. Accordingly, 70 percent of the major marketing functionaries indicate that foreign exchange processing procedures are unnecessarily too long while 61 percent indicate foreign exchange shortage as the major problem. Both figures are indeed very high, suggesting a review of foreign exchange allocation policies. (see section 5.5.).

(b) <u>INTEREST ON BANK LOANS</u>

Currently, the official interest rate on bank loans for business stands at 42 percent per annum. Sixty six percent of private firms covered under this study have given this rate as being too high to offer any incentives to borrow. Coupled with lack of enough working capital for local cover the firms are incapable of importing enough inputs to match the

existing demand. Government ministries complained of delays in obtaining funds from the treasury for local cover equivalent and when obtained they are insufficient (see also section 5.1).

(c) PROCESSING IMPORTATION DOCUMENTS

The time taken between obtaining an import permit and opening of a letter of credit is viewed by 39.1 percent of major marketing functionaries as being too long. On average it may take over one month to have a final approval to import. Sometimes invoices expire necessitating revalidation which may involve price increases. Charts 2, 3 and 4 show procurement periods and procedures involved under International Development Agencies (IDA). It is evident from the charts that donor agencies importing under World Bank procedures take unnecessarily long time to have the inputs procured. The general concensus among these importers is that import documentation procedures take very long due to:-

i) Infrequent meetings of committees in Uganda Advisory Board of trade (UABT)/Ministry of Commerce and Bank of Uganda.

ii) Lengthy local cover clearance procedures in importers' own Banks.

CHART 2

PRUDENT SHOPPING UNDER ARF-ID CREDIT FOP OPDERS OF LESS THAN US$ 10,000

```
┌────────────────────┐        ┌──────────────┐      ┌──────────────┐
│ Uganda Commerical  │        │              │      │ Suppliers    │        ┌──────────────┐
│ Bank opens L/C's   │        │ IDA issues   │      │ Arranges     │        │ Shipment and │
│ and signs contracts│───────▶│ AR's         │─────▶│ Delivery     │───────▶│ customs      │
│ and applies to IDA │        │              │      └──────────────┘        │ clearance up │
│ for AR             │        │              │      ┌──────────────┐        │ to Destination│
│                    │        │              │─────▶│ CA arranges  │───────▶│              │
│                    │        │              │      │ Insurance and│        └──────────────┘
└────────────────────┘        └──────────────┘      │ Inspection   │
                                                     └──────────────┘
```

1½ months   1½ - 3 months   1 - 2½ months
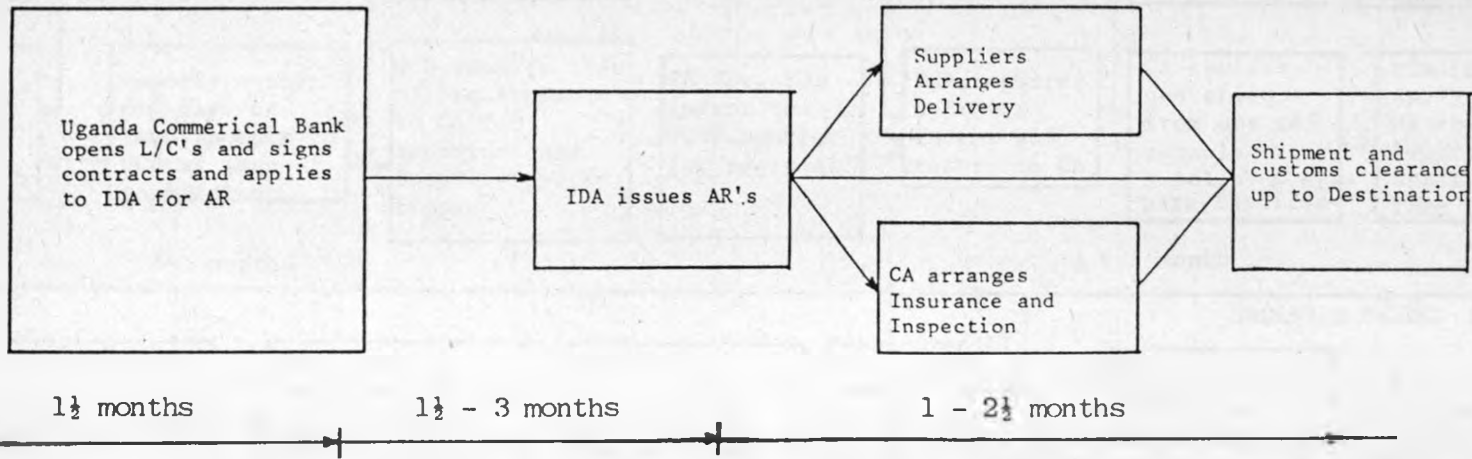
KEY: IDA = International Development Agency

AR = Agreement to Reimburse

CA = Crown Agents

SOURCE: SECRETARIAT BANK OF UGANDA

Top row boxes:
- Assessed needs sent to IDA for comments and approval
- National Assessment of Needs
- UCB undertakes normal loan appraisal procedures
- UCB approves loan
- CA invites quotes from at least 3 suppliers
- Receipt evaluation and award of tenders

Second row boxes:
- UCA promotes projects to importers
- Importers submit list or requirements to UCB as loan application
- UCB submits list of requirements to CA for appraisal and indent preparations
- CA forwards indent to UCB/importer for approval
- UCB/importer approve indent and return to CA
- CA invites quotation from one reputable supplier & prepare invoices
- UCB importer apply to Min., of commerce for import licence and B.O.U. for form E

2-3 months   ½ - 1 month

(URGENTLY NEEDED INPUT)

Third row boxes:
- CA prepares contracts and invoices and forward to UCB
- UCB/importer apply to MOC for import licence and to BOU for form E
- UCB opens L/C's/signs contract and apply to IDA for AR
- Procedure III
- IDA issues AR
- Supplier arranges delivery
- CA arranges insurance and inspection
- shipment and customs clearance up to destination

1 month   1 month   1½ months   1½ - 3 months   1 - 1½ months

Key UCB = Uganda Commerical Bank   IDA = International Development Agencey
    CA = Crown Agents   BOU = Bank of Uganda
    AR = Agreement to Reimburse   MOC = Ministry of Commerce

SOURCE: AGRICULTURAL SECRETARIAT - BANK OF UGANDA

-56-

CHART 4: IDA CREDIT PROCUREMENT PROCEDURES FOR ORDERS OVER US$ 200,000

A.R.P. I.D.A. CREDIT NO. 1328 UG - PART B - RECURRENT IMPORTS - FLOW DIAGRAM
OVER $200,000


```
                                    ┌─────────────────────────────┐
                                    │ National Assessment to      │
                                    │ IDA for Comments/Approval   │
                                    └─────────────────────────────┘
┌─────────────────────────┐         ┌─────────────────────────────┐
│ UCB Promote Project     │         │ National Assessment of Needs│
│ to Importers            │         └─────────────────────────────┘
└─────────────────────────┘
              ┌──────────────────────────────────────────┐
              │ Importer submit list of requirements to  │
              │ UCB as loan application                  │
              └──────────────────────────────────────────┘
┌─────────────────────────┐         ┌─────────────────────────────┐
│ UCB undertakes normal   │         │ UCB forward list or re-     │
│ loan appraisal procedures│        │ quirements to CA for apprai-│
└─────────────────────────┘         │ sal and indent prep.        │
                                    └─────────────────────────────┘
┌─────────────────────────┐         ┌─────────────────────────────┐
│ UCB approves loan       │         │ CA forward indent to UCB    │
└─────────────────────────┘         │ + importer for approval     │
                                    └─────────────────────────────┘
              ┌──────────────────────────────────────────┐
              │ UCB and importer approve indent and      │
              │        return to CA                      │
              └──────────────────────────────────────────┘
              ┌──────────────────────────────────────────┐
              │ CA forward draft ICB tender notice + DOCS│
              │ to DA - UCB for approval                 │
              └──────────────────────────────────────────┘
              ┌──────────────────────────────────────────┐
              │ Advise + issue of tenders to responsive  │
              │        suppliers                         │
              └──────────────────────────────────────────┘
              ┌──────────────────────────────────────────┐
              │ Receipt, evaluation and award of         │
              │        tenders                           │
              └──────────────────────────────────────────┘
              ┌──────────────────────────────────────────┐
              │ CA Prepares invoices + contracts and     │
              │        forwarded to UCB                  │
              └──────────────────────────────────────────┘
              ┌──────────────────────────────────────────┐
              │ UCB/importers apply to M.O Commerce and  │
              │ B.O.U. for necessary import papers       │
              └──────────────────────────────────────────┘
              ┌──────────────────────────────────────────┐
              │ UCB opens L/CS/ signs contract           │
              │ Also apply to IDA for agreement reimburse│
              └──────────────────────────────────────────┘
              ┌──────────────────────────────────────────┐
              │ IDA issues agreement reimburse           │
              └──────────────────────────────────────────┘
┌─────────────────────────┐         ┌─────────────────────────────┐
│ Supplier arranges       │         │ CA arranges insurance +     │
│ delivery                │         │ inspection where necessary  │
└─────────────────────────┘         └─────────────────────────────┘
              ┌──────────────────────────────────────────┐
              │ Shipment and custom clearances           │
              │ up to destination                        │
              └──────────────────────────────────────────┘
```

SOURCE: AGRICULTURAL SECRETARIAT - BANK OF UGANDA.

In the case of donor-funded projects (charts 3-
the process is complicated even further by
aditional banking procedures, and the World Bank
sistence on international competitive bidding.
us, there is need to have regular sittings by local
stitutions involved in import documentation and
re flexibility on the part of donors.

i) OTHERS

A number of other problems were aired by the
espondents but did not measure as the above (a) to
c). These include: fluctuations in exchange rates
is-avis the need to finance extended credit
acilities. This was indicated by 9 percent of the
mporters. A second problem is the refusal by the
inistry of Commerce to use consignment stock. This
problem was cited by 4 percent of the
firms.and institutions interviewed.

4.2.3.2: SEASONALITY OF DEMAND AND IMPORTATION
PROCEDURES

Effective demand of most inputs is influenced by
cropping patterns in each of the three regions under
study. In most areas surrounding Lake Victoria and
some parts of Eastern and Western Uganda, there is a
bi-modal rainfall regime, which makes it possible to
have two planting seasons. In the period between
January and March most farmers are preparing their

land for the first crop season. Between March and May, planting is completed and between April and June weeding takes place. Harvesting takes place between June and August. The second crop season starts with land preparation in July to September with planting from September to November and weeding from October to November. Harvesting takes place from November to January.

In the unimodal rainfall system, covering some parts of Eastern region (and most of Northern region), there is only one season with land preparation from January to April and planting from April to June. Weeding starts from April to July and harvesting from July to December.

An analysis of annual sales of some farm supply shops (FSS) in Kampala, Rakai, Mbale and Mbarara shows this seasonality in demand, as illustrated in appendices 20-22. In Kampala and Rakai, peak sales for most items occur in March to May and September to November. In the other months sales are usually low. In Eastern Uganda (Mbale) there is a less but even pronounced bimodal system and most of the sales are in March to May. In the second season, the sales are not as high, except for items used throughout the year. In western Uganda (Mbarara), sales are similar to those of central region (Kampala and Rakai). Sales between seasons are negligible, unlike Kampala

where sales continue throughout the year, as purchases are made for other regions as well.

The forementioned seasonality in sales has implications for the importation and distribution of the inputs. Inputs have to be made available at least two to four weeks before each planting season. This means that they have to be available in January and February, and July and August. As per charts 2-5, lead times in Uganda for inputs are usually up to six months. This implies that the importation procedures for inputs to be used in the first season of each year have to start in June or July of the previous year; while those for the second season should start in January or February of the current year.

4.2.3.3.: DISTRIBUTION PROBLEMS

It is evident from appendix 17 that most firms and institutions do not experience any serious problems in financing distribution of agricultural chemicals and farm tools. This is demonstrated by the following problems highlighted and the percentage of major marketing functionaries indicating them.

(a) High motor running expenses - 30 percent

(b) Heavy hotel, food, etc bills - 39 percent

(c) Inadequate capital coupled with limited bank

overdrafts and bank loans - 48 percent

(d) On the part of government ministries, the major

constraint was insufficient funds from the treasury.

Table 4 gives problems that FSS face in selling the

inputs to the farmers.

Table 4:   Problems Faced by Farm Supply Shops in the Sale of
            Inputs in the Study Area

PROBLEM	PERCENTAGE OF F.S.S.*
Shortage of inputs/irregular supplies	61
High input prices	51
Poor location of business premises	3
High premise rents	6
Poor product knowledge	22
Lack of advertisement facilities	3
Inadequate capital	19
Availability of inputs out of season	16
High competition	9
Lack of storage facilities	9
Lack of courses for farmers on input use	9
Limited sources of supplies	6
Low turn-over of seasonal required inputs	6
Poor transport facilities	45
Fluctuationsin the value of the shilling	12

SOURCE: COMPILED FROM SURVEY RESULTS

         *percentages do not add to 100 because many

          FSS have more than one probem.

From the table, the major problem facing FSS is shortage of inputs and irregular supplies. This shortage is .likely to be the source of the high prices they charge farmers which then limits the number of customers. Among other problems poor product knowledge on the part of farmers, poor transport facilities, and inadequate capital for FSS owners stand to be very limiting problems. These are reflected again in table 5 below:-

Table 5: <u>SUGGESTIONS ON HOW GOVERNMENT COULD ASSIST FSS TO OVERCOME THEIR PROBLEMS</u>

PROBLEM	PERCENTAGE OF FSS*
Seek credit facilities for them	77
Improve on transport infrastructure	61
Avail more foreign exchange for importers	32
Organize continuous course for FSS and farmers	48
Sustain continuity of imports	29
Get more involved in input procurement	16
Allow FSS to import directly	16
Subsidise and control input prices	12
Control premise rents	6
Ease import documentation procedures	3

<u>SOURCE</u>: COMPILED FROM QUESTIONAIRE RESPONSES.

*Percentages do not add to 100 because many FSS have more than one suggestion.

The suggestions given in table five are aimed at achieving four major objectives. These are:-

(a) Making capital accessible through provision of credit facilities.

(b) Easing transportation of the inputs by improving transport facilities. This is by way of repairing roads and providing vehicles to cooperatives and private FSS on credit basis, thus enabling them to have greater access to both farmers and major marketing functionaries.

(c) Providing product knowledge both to farmers and enterprises in the business, by way of organising regular seminars on product use and benefits that would accrue from their use. This is particularly important for agricultural chemicals which may prove disastrous if misused.

(d) Availing more inputs by making available enough foreign exchange to this sector as well as trying to sustain regular supplies.

4.2.4.: <u>MAJOR SOURCES AND DELIVERY TIME FOR IMPORTED INPUTS</u>

The major sources of agricultural chemicals and farm tools, through private importers, include Kenya, Europe, India, Japan, China and Australia. Inputs

CHART 5   INPUTS DELIVERY TIME IN WEEKS
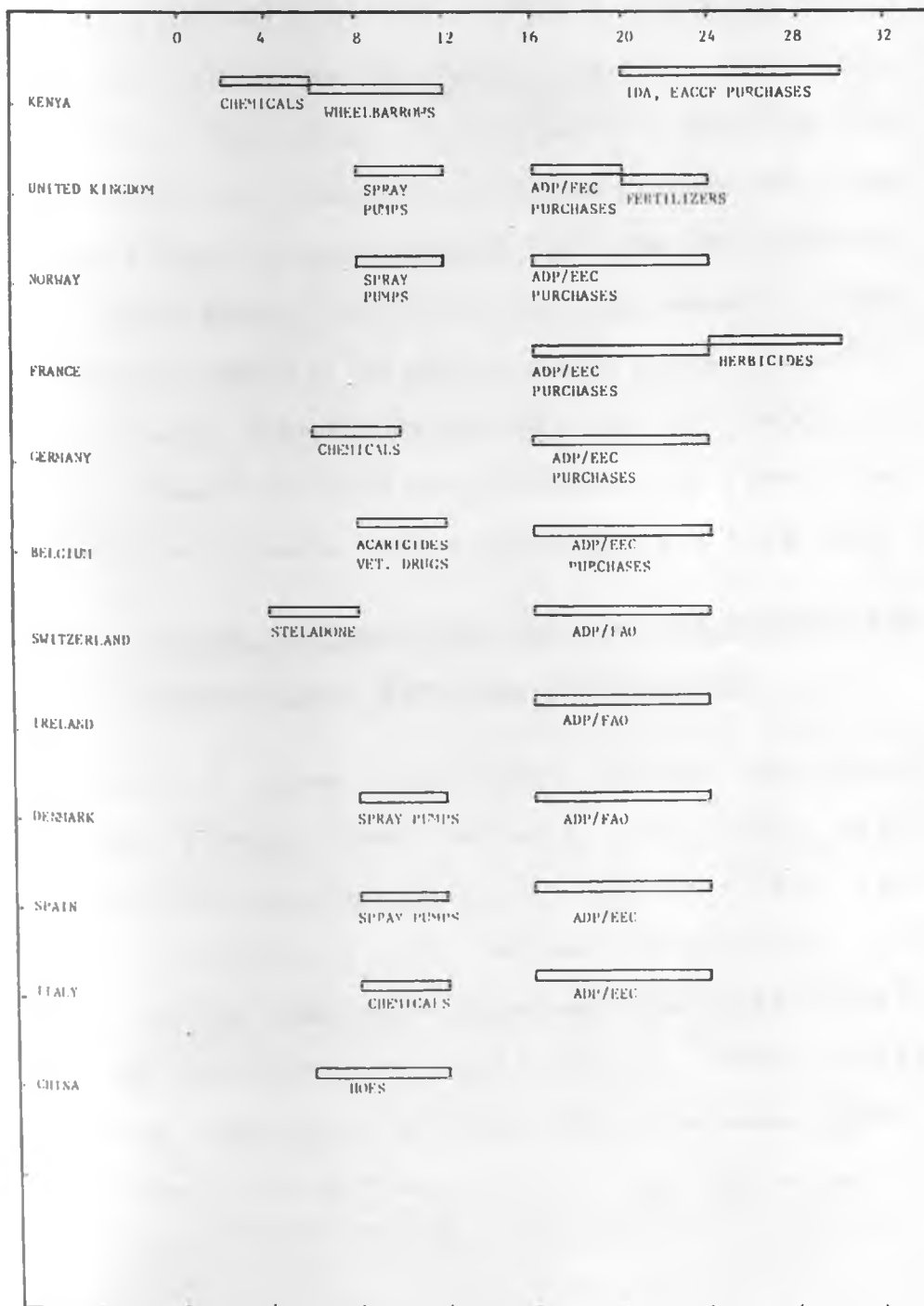
imported by the government and non-governmental organisations were mainly from Europe and Kenya under the East African Community compensation fund. This study could not unveil how much of the inputs came from each country due to data limitations.

Delivery time, for the inputs, ranges from three (3) to thirty two (32) weeks after a letter of credit has been opened for the local firm or institution (chart 5). Deliveries from Kenya take three to six weeks except for those items financed under the East African Community compensation fund and IDA credits, which take twenty (20) to thirty (30) weeks. Items from Europe take six to twelve weeks while those from India, Japan and Australia take up to thirty-two weeks. Chart 5 thus demonstrates the fact that importation of these inputs takes quite a long time.

4.2.5.: SOURCES OF SUPPLIES, PURCHASE ARRANGEMENT AND DISTRIBUTION FOR FARM SUPPLY SHOPS

Table 6 gives the major sources of input supplies to FSS. From the table, UCCU is the major supplier of both agricultural chemicals and farm tools. It supplies to 93 per cent ot the FSS. This is followed by Associated Chemical Industries (35%), Wellcome (U) Ltd (32%), Shell (U) Ltd (32%), Twiga chemicals (29%) and the inter-FSS purchases (29%). The other sources indicated include: open market

purchases (22%), Local producers (16%), MAF (9%), CIBA-GEIGY (9%), USAID/ARP loan schemes (6%), Magric(U) Ltd (6%) and Industrial and agricultural chemicals (3%), in that order.

Each FSS has more than one source of its supplies. All the private commercial firms taken together cover more supply shops (FSS), followed by UCCU, the inter-farm supply shop purchases, local producers of farm tools, MAF and donors, in that order.

Table 6: <u>Major Sources of Supplies of FSS in the Study Area</u>

SOURCE	PERCENTAGE OF FSS THAT RECEIVE AT LEAST A PORTION OF THEIR SUPPLIES FROM RESPECTIVE SOURCES **
UCCU	93
Associated Chemical Industries	35
Wellcome(U) Ltd	32
Shell(U) Ltd.	32
Twiga Chemicals	29
Farm Supply Shops (Kampala)	29
Open Market	22
Local Producers	16
MAF	9
CIBA-GEIGY	9
USAID/ADB/ARP Loan Schemes	6
Magric(U) Ltd	6
Industrial and Agricultural Chemic	3

SOURCE: COMPILED FROM QUESTIONNAIRE RESPONSES.
      **Percentages do not add to 100 because most FSS have more than one source of its inputs.

According to the survey results, most farmers buy their inputs on cash. Two cooperative FSS indicated that they sell some inputs on both cash and credit to members while the rest 93 percent of the FSS sell their inputs on cash only. One would expect

the FSS to get most of their supplies of agricultural chemicals from the Commercial Chemical firms. The prevalent situation is however different due to lack of an efficient distribution network. For example, UCCU may purchase from the chemical firms and then sell to FSS or individuals may be better informed of the time the chemicals arrive in the various firms and then purchase them to resell to FSS through the open market.

In summary, the results reveal lack of integration between those who import the inputs/local producers and the retailers. Presence of market integration is in form of such arrangements as credit facilities, established sources of supplies and any other form of agreements between the buyers and sellers that streamline marketing procedures. These are lacking in agricultural chemicals and farm tools market in Uganda.

4.3.1. DEGREE OF MARKET CONCENTRATION

The annual volumes of agricultural chemicals and farm tools, for each firm or institution, (earlier referred to as major marketing functionaries) were computed for the years 1984, 1985 and 1986. The composition of these bodies was such that 12 were private commercial firms, 2 were non-governmental organisations, 8 were government departments/donor

agencies, and one (1) was a representative of the cooperatives (UCCU). The firms and institutions were given serial numbers (Appendix 19) from 1 to 23. In all the years, it was observed that few of the firms and institutions handled the inputs (appendix 9). For each year, however, there were more firms and institutions involved in procurement of agricultural chemicals than farm tools.

The four firm/institution concentration ratio for agricultural chemcials and farm tools are computed from appendix 9 and presented in table 7, below:-

Table 7: Four firm/institution concentration ratios for Agricultural Chemicals and farm tools

Year	Agricultural Chemicals (%)	Farm tools (%)	The four firm/institutions as a % of total number of firms and insitutions interviewed	
			Agricultural Chemicals(%)	Farm tools(%)
1984	92.5	99.3	36	50.0
1985	88.8	98.4	31	44.4
1986	79.8	87.7	29	31.0

SOURCE: Computed from survey results, Appendix 9.

From the table (7), the four largest firms and institutions accounted for 92.5 percent, 88.8 percent, and 79.8 percent of the total value of agricultural chemicals handled in the market for the years 1984, 1985, 1986 respectively and for the sample districts. The four largest firms and institutions formed 36 percent, 31 percent and 29

percent of the total number of firms and institutions interviewed, for the three years respectively. The corresponding figures for the case of farm tools are 93.3 percent, 98.4 percent and 87.7 percent with the four firms and institutions forming 50 percent, 44.4 percent and 31 percent of the total number of firms interviewed, for the three years respectively. The results (table 7) suggest that, for both agricultural chemicals and farm tools, a small percentage of the total number of firms and institutions controlled a larger percentage of total transactions. This in effect implies inequality in the distribution of trade among the major marketing functionaries.

When Lorenz concentration curves are used, absolute equality in the distribution is expected if and only if 50 percent of the traders control 50 percent of the transactions, 10 percent of the transactions are in the hands of 10 percent of the traders.

Using this concept charts 6, 7 and 8 are constructed using the results in appendix 9. It is seen there from that approximately 50 percent of the total volume of agricultyural chemicals was in the hands of 6.5 percent, 11.3 percent and 12.1 percent of total number of firms and institutions for the years 1984, 1985 and 1986 respectively. The corresponding percentages for farm tools are 14

CHART 6

THE LORENZ CONCENTRATION CURVE
For Agric. Chem., Markt. System 1984

Cum. % of Total annual Agric. Chem.

Cum. % of No. of Firms

SOURCE : Appendix 9

THE LORENZ CONCENTRATION CURVE
For Farm Tools, Mrkt. System 1984

Cum. % of Total annual FARM TOOLS HANDLED
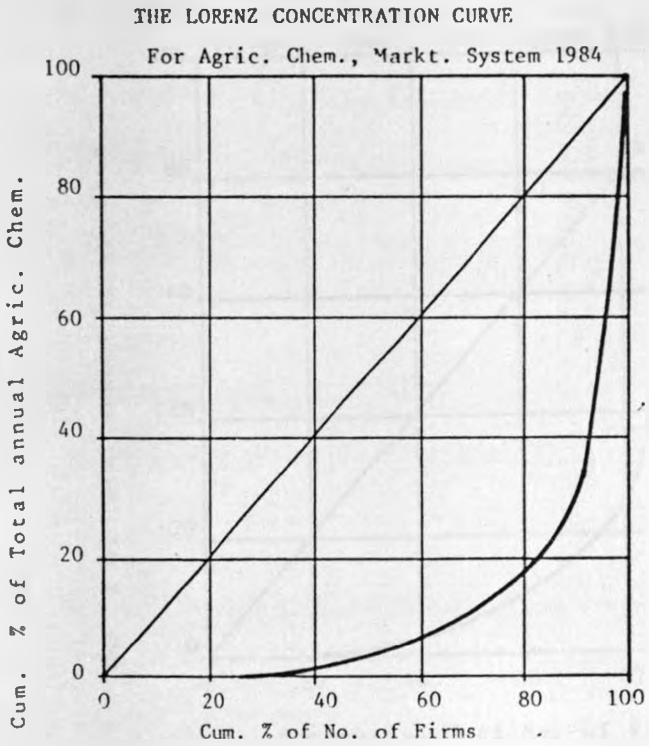
Cumulative % of No. of Firms
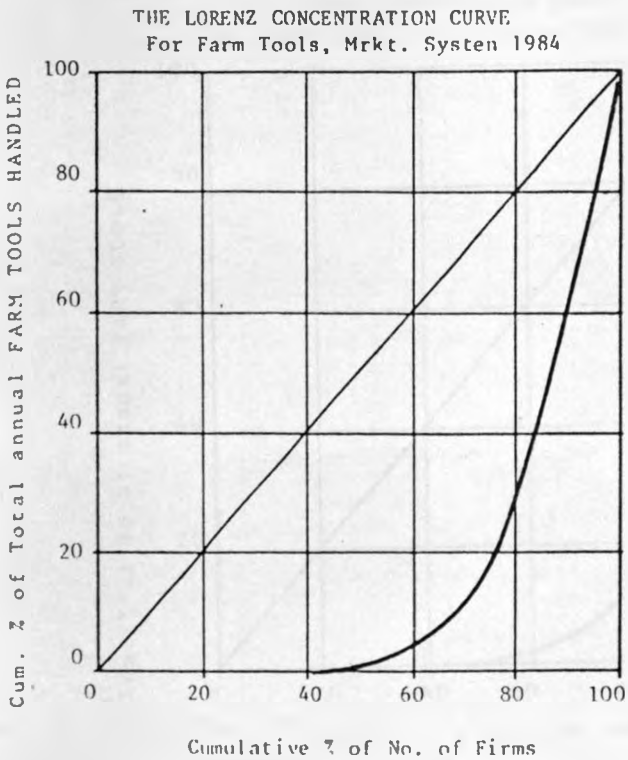
SOURCE· Appendix 9

CHART 7

THE LORENZ CONCENTRATION CURVE
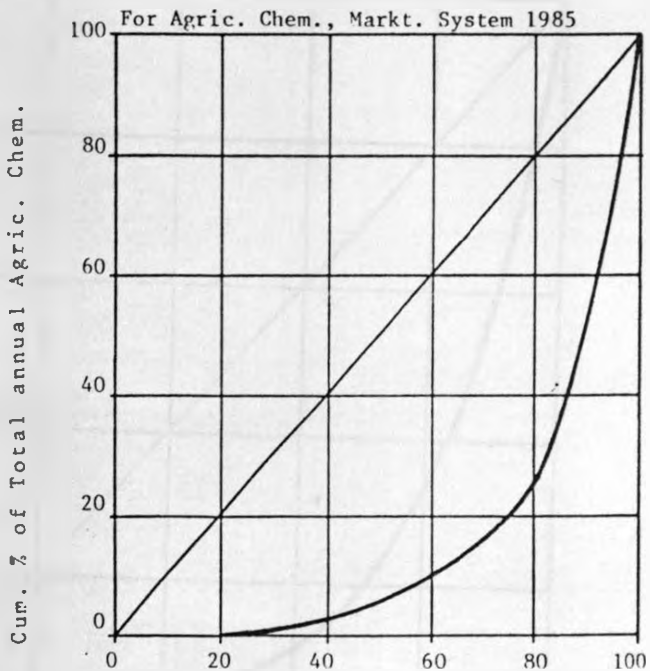
For Agric. Chem., Markt. System 1985

Cumulative % of No. of Firms

SOURCE: Appendix 9

THE LORENZ CONCENTRATION CURVE

For Farm Tools, Mrkt. System 1985
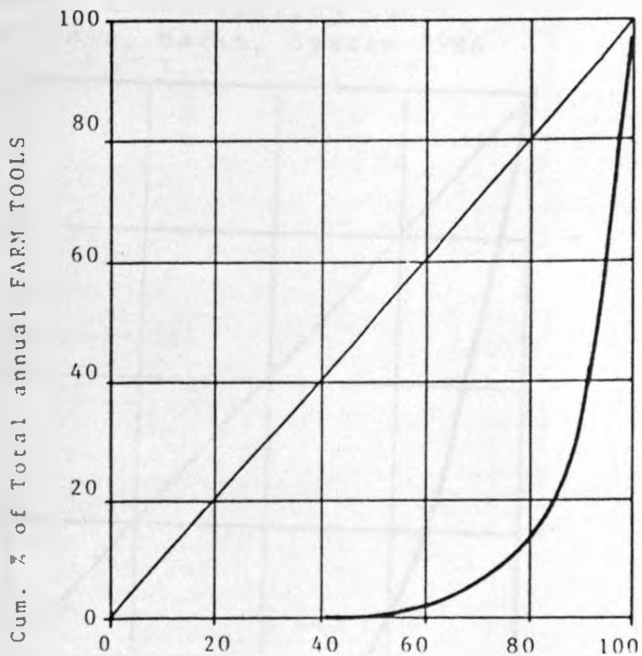
Cumulative % of No. of Firms

SOURCE: Appendix 9

CHART 8: THE LORENZ CONCENTRATION CURVE

For Agric. Chem., Markt, System 1986
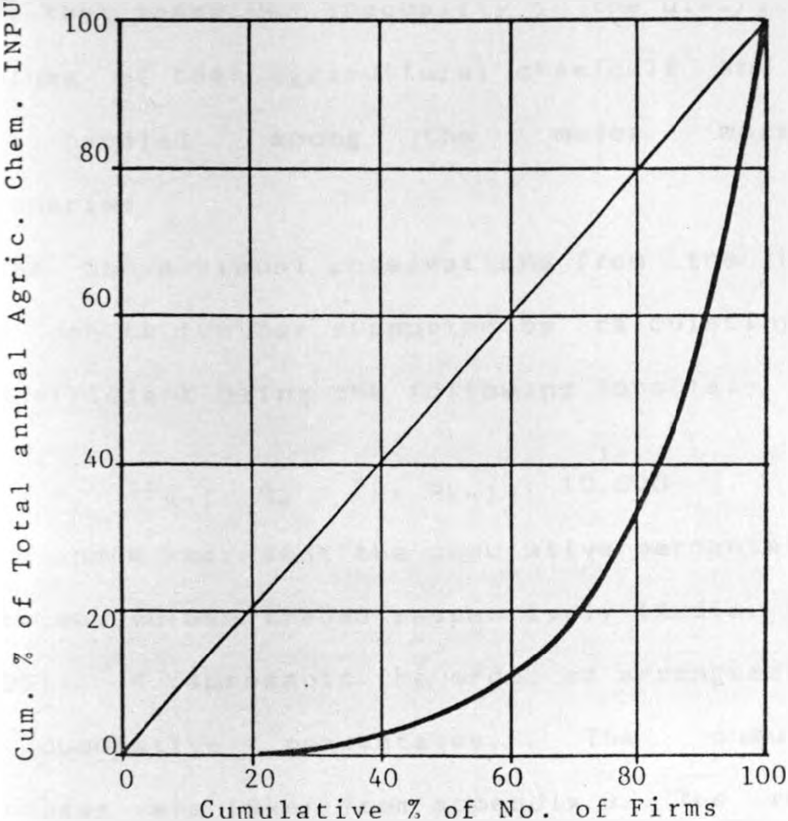
Cum. % of Total annual Agric. Chem. INPUTS HANDLED

Cumulative % of No. of Firms

SOURCE: Appendix 9

THE LORENZ CONCENTRATION CURVE

For Farm Tools, Markt, System 1986

Cum. % of Total annual FARM TOOLS HANDLED
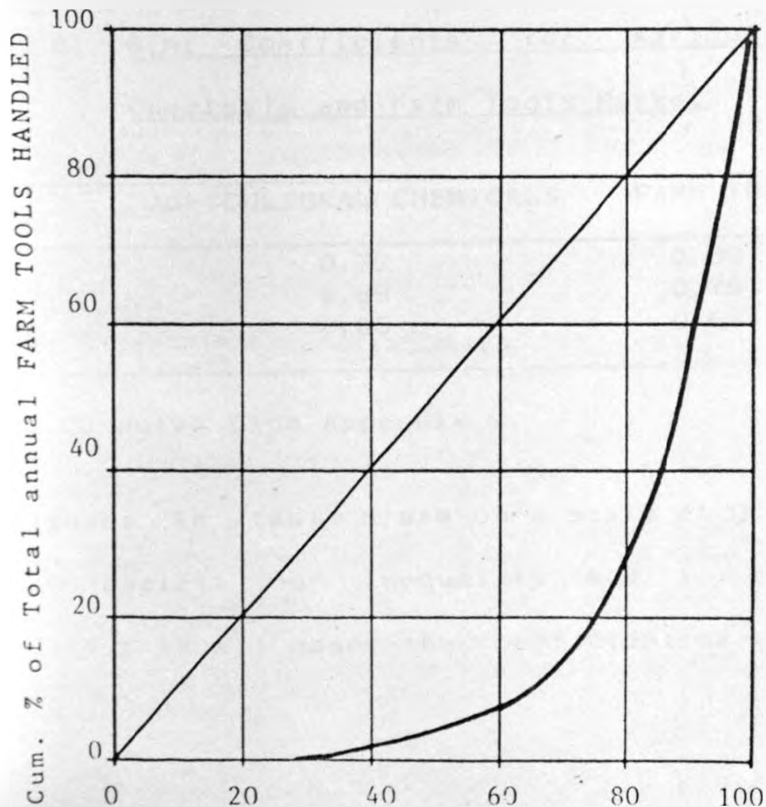
Cumulative % of No. of Firms

percent, 8.1 percent and 12.1 percent. These figures suggest that there was inequality in the distribution of volume of both agricultural chemicals and farm tools handled among the major marketing functionaries.

The above visual observations from the Lorenz curves can be further supported by calculating the Gini coefficient using the following formula:-

$$R = (P_{k-1}\cdot q_k - P_k\cdot q_{k-1})\cdot \frac{1}{10,000}$$

Where P and q represent the cumulative percentages of traders and volume traded respectively (Audic. s. et al, 1961). K represents the order of arrangement of the cumulative percentages. The cumulative percentages are taken from appendix 9. The results are presented in table 8 below:-

Table 8: Gini Coefficients for Agricultural Chemicals and Farm Tools Market

YEAR	AGRICULTURAL CHEMICALS	FARM TOOLS
1984	0.72	0.69
1985	0.69	0.79
1986	0.65	0.67

SOURCE: Computed from Appendix 9.

Figures in table 8 are on a scale of 0 to 1, where 0 depicts no inequality and 1 complete inequality. In all cases the coefficients are close

to 1. This suggests that the markets, for both types of inputs, exhibit oligopolistic tendencies (or lack of competitiveness). The survey results indicate that a few firms/institutions control a large proportion of the market share.

To analyse the degree of market concentration further, the firms and institutions were grouped into the private commercial sector, cooperatives, non-government organisations and government ministries. The percentage value of agricultural chemicals and farm tools for each group or sector were then computed as shown in table 9:

From the table below, it is shown that the approximate percentage values of agricultural chemicals handled by private commercial firms were 57, 15 and 14 for 1984, 1985 and 1986 respectively. The average percentage value for the three years was 28.7. This indicates that the role of these firms has continuously been declining. The corresponding approximate figures for government ministries were 25, 48 and 71 for the three years respectively. The average percentage value for the three years was 48.

Table 9: <u>Agricultural chemicals and farm tools handled by the various</u>

<u>sectors (1984 - 1986) in US $).</u>

YEAR	sector / Inputs	Private firms	NGO	Gov't Ministry	Coops. (UCCU)	Total	% of Total by priv.	% By NGO	% By Gov't	% By Coops
1984	Agro-chem.	2,788,733.5	-	1,199,968.7	896,875	4,885,577.2	57.08	-	24.56	18.36
	Farm tools	1,671,750.0	-	5,092,785.6	5,841,250	12,605,785.6	13.26	-	40.40	46.34
1985	Agro-chem.	1,548,061.4	-	5,107,950.0	3,902,625	10,558,636.4	14.66	-	48.38	36.96
	Farm tools	1,710,500.0	-	1,182,524.5	8,731,875	11,624,899.5	14.00	-	10.00	76.00
1986	Agro-chem.	1,326,140.4	-	6,647,905	1,399,962.8	9,373,738.2	14.00	-	71.00	15.00
	Farm tools	2,995,704.3	332,002.7	2,496,943.8	2,702,500.0	8,527,186.8	35.00	3.00	29.00	33.00

SOURCE: Computed from survey results.

   - No inputs were handled.

Key: NGO   - Non-governmental organizations.

    Gov't - Government

    Coops - cooperatives.

    Priv. - Private firms.

    Agro-chem - Agricultural chemicals

The trend suggests that the public sector has assumed growing and significant role in agricultural chemical inputs procurement and distribution. The approximate percentage values handled by the cooperatives were 18, 37, and 15 for the three years respectively. The average percentage over the years was 23.3. Although the data could not establish whether the role of the cooperatives has been increasing or decreasing, they indicate that the sector has been handling less than the public sector. The actual role of the cooperative sector has been as small as that of the private commercial sector.

The average figures suggest that over the three years the public sector has handled more inputs followed by the private sector and then the cooperatives. Similar observations were made by Muthee (1986) when he considered the procurement and distribution of agricultural inputs in Uganda.

With regard to farm tools, the private commercial sector approximately handled 13 percent, 14 percent, and 35 percent; the public sector handled about 40 percent, 10 percent and 29 percent; the cooperative sector handled 46 percent, 76 percent and 33 percent for the three years respectively. The averages over the three years for each sector were 20.7 percent, 26.3 percent, and 51.7 percent respectively. Thus, on average, the private sector

handled less than the public sector which also
handled less than the cooperative sector. The data
shows the private sector to have grown by 169 percent
over the three years while the public sector fell by
27 percent and the cooperative sector by 28 percent.
This, therefore, implies that the private commercial
sector is gaining an upper hand in the procurement
and distribution of farm tools. This may be because
these inputs are regarded as most essential by
farmers, their demand is relatively inelastic, they
require less capital outlay, and at least some are
locally manufactured. Thus the private sector finds
it more profitable and easier to undertake trade in
these inputs than in agricultural chemicals. Non-
governmental organisations handled 3 percent of total
value of farm tools in 1986 which were meant for
returnees in the war ravaged areas. An analysis of
the composition of total agricultural chemicals
handled by all firms and institutions interviewed is
made in table 10. This helps to reveal which type of
agricultural chemical is dealt in more than others.

From table 10 below, herbicides (42%),
insecticides (22%), and acaricides (20%) were the
agro-chemicals most imported in 1984. The
corresponding agricultural chemicals for 1985 were
insecticides (36%), herbicides (24%), acaricides
(16%) and fungicides (15%). The trend was reversed

Table 10: <u>Composition of agricultural chemicals imported by all interviewed firms and institutions (1984-1986)</u>.

Agro-chemicals	1984	1985	1986
Herbicides	42	24	19
Insecticides	22	36	21
Fungicides	5	15	15
Acaricides	20	16	37
Dewormers	1	1	0
Disinfectants	0(0.04)	0(0.38)	0
Fertilizers	7	5	4
Total	97	97	96

SOURCE: Compiled from questionnaire responses.
NOTE: Figures do not add up to 100 because of rounding-up to the nearest whole numbers.

in 1986 with acaricides (37%) forming the highest percentage followed by insecticides (21%), herbicides (19%), and fungicides (15%). Assuming that the composition of agricultural chemicals imported by any firm or institution is determined by its previous year' experience on what is demanded most, it can be concluded that herbicides, insecticides, acaricides

and to a less extent fungicides are the agro-chemicals most demanded by Ugandan farmers. Importation of fertilizers has been declining over the years in addition to being very small by volume. The importation of dewormers and disinfectants has been insignificant over the years.

Appendix 10 indicates that on average the volume of agricultural chemicals imported, by category, by the private sector has been declining. The trend is opposite for the public sector, except for the case of fertilizers. The cooperative sector depicts sharp fluctuations, falling over the years 1984-1985 and increasing in 1986. This situation may be attributed to:-

i) Lack of funds and shortage of capital for the private sector.

ii) Increasing donor-aided projects and bilateral and unilateral agreements on supply of inputs, which were handled by government ministries (MAF and MAIF).

iii) The UCCU which is the sole importer of inputs for cooperatives had a problem in raising foreign exchange to import inputs due to lack of local cover. However, the union increased its role in handling inputs under donor agencies and bilateral agreements from late 1985 through 1986.

To analyse the importance farmers attach to the various types of agricultural chemicals further, FSS were asked to indicate those items for which they experience quick and slow sales. "quick sales" was used to cover those items that are sold off within 3 weeks of acquisition while "slow sales" covered those taking more than 3 weeks. The results are summarized in table 11 below. It could be hypothesised that the rate of turn-over is directly proportional to the importance farmers attach to the use of the inputs, especially as turnover depends on the frequency of purchases made by the farmer.

Table 11: Relative turn-over rates for selected inputs

INPUT	% OF FSS INDICATING QUICK SALES	% OF FSS INDICATING SLOW SALES
Farm tools*	61	39
Insecticides	57	43
Fungicides	90	10
Herbicides	59	41
Acaricides	52	48
Fertilizers	52	48

SOURCE: Compiled from survey results.

*Although included, they ae not a type of agricultural chemicals.

Table 11 goes further to demonstrate that farmers attach a lot of importance to fungicides, herbicides, insecticides, acaricides and fertilizers. Except for fertilizers, the other categories of agricultural chemicals had been shown to be highly

demanded by farmers relative to dewormers and disinfectants. The existence of very poor storage facilities and the poor marketing of farm produce in Uganda require greater use of fungicides and insecticides. Similarly farmers require farm tools like hoes, axes, pangas, and simple crop sprayers to be able to realise high output through increased acreage. This need is further strengthened by lack of such farm implements like tractors and the nature of farming systems, where most farmers operate small scale farms. The very high relative turn-over rates for this farm tools indicates the extent to which these inputs are in short supply. Shortage and high costs of labour have necessitated increased use of herbicides. There is thus need to increase the flow of these inputs into the country.

4.3.2. MARKET TRANSPARENCY

Market transparency which is synonymous to market information, affects the intensity of competition. If buyers or sellers do not have proper knowledge about market conditions, the intensity of competition is low despite a sufficient number of market participants to ensure competition. Information on prices and markets for agricultural inputs is very vital, especially for those marketing functionaries that have to import the input.

The private commercial firms have no problems regarding information on the quality and prices of

inputs that they deal in. Some of them are subsidiaries of multinational companies (74%) while others are local representatives of European based firms (26%) that produce the inputs. Thus they get their price quotations from their mother companies. The subsidiaries of multinational companies sell the outputs of their mother and sister companies while the local representatives of European-based firms take orders for the firms they represent and then earn a commission.

Apart from having knowledge of quality and prices of the inputs from sources, 82 percent of these firms carry out continous market survey to find out what prices their competitors charge, prices in the open market and FSS before they fix their prices. Eighteen percent, however, indicated that there is no serious need for such surveys since farmers will purchase their inputs at whatever prices. To these, prices are strictly based on prevailing economic circumstances, not forgetting their fixed mark-ups on these inputs.

The cooperatives, represented by the UCCU, and the government ministries do prudent shopping. The UCCU gets information on prices and qualities of

these inputs through the SGS local representatives in Uganda. These are very knowledgeable on market conditions overseas. Government ministries go through the Central Tender Board (CTB) which advertises tenders requiring price quotations and sources of the inputs. Through this method the choice is made from a wide range of suppliers. None of these institutions is bound by existing input prices when they are setting their selling prices (see section 5.2). This in effect reduces their knowledge of prices charged by other firms or institutions for the same items.

Inputs from donors are either distributed by government ministries or UCCU (see section 4.2.1). The donor agencies purchase inputs through international competitive bidding (ICB) and could, therefore, be regarded to be quite knowledgeable about market conditions at input sources. Their knowledge of prices in the domestic market is limited by the fact that they are not involved in actual distribution.

A close look at FSS purchase and sales prices indicate that they have very little information on prices in the market. Results in appendix 11, for example, indicate that the purchase price of dudubitoke in Kampala ranges from UShs. 27,000 to UShs. 34,000; Gramaxone (a litre) ranges from UShs.

11,000 to UShs. 17,500; and fenitrothion (a litre) ranges from UShs. 6,500 to UShs. 9,000. The selling prices for the same items in Kampala range from UShs. 35,000 to UShs. 39,000; UShs. 18,000 to UShs. 20,000; and Ushs. 11,000 to UShs. 12,000 for the three commodities respectively. This trend is also observed for the other commodities and for any of the other regions covered by the study. The ranges in supply prices suggest that FSS are not knowledgeable on the cheapest sources of their supplies. Similarly, the fact that FSS in the same locality charge different prices and they all manage to self-sustain in business implies lack of adequate knowledge, on the part of their customers (who are mainly farmers), on these price differences. Assuming the farmers to be rational in their purchase decisions, they would be expected to purchase from the cheapest source which would consequently even-out the selling prices. The situation, however, maintains a status quo as the pricing of the inputs is based on speculation and scarcity of the items (see section 5.3).

4.3.3. Market entry

Barriers to market entry reduce the threat of potential competition and therefore hinder marketing efficiency. Schmidt (1979) gives sources of barriers to entry as: limited knowhow, capital requirements,

institutional restrictions, and non-competitive actions of established traders. Uganda's situation, however, requires addition of "foreign exchange availability" to the forementioned sources. Market entry is then analysed on the basis of the given source of barriers to entry.

Agricultural chemicals are dangerous products once misused. Thus a minimum knowhow would be expected in this business. Trade, at low levels of this business, is by FSS which have relatively large scale of operation or by non-specialized traders whose scale of operation is likely to increase as their actual participation in the business increases or the petty traders in the open market. All these are directly involved in advising farmers on the use of these inputs and hence would require some basic knowledge on their use.

The actual situation, however, reveals limited knowhow on the part of the traders. Responses from FSS indicate (figures computed from appendix 18) that 23 percent of them employ graduates in agriculture (one graduate for each FSS), 29 percent employ diplomates of agriculture (on average one diplomate per FSS); 39 percent have high school drop-outs with 17 percent of these employing four to five of them and the rest employing one each; 32 percent of the FSS have one to two employees who have attended

ourses at district farm institutes (DFI) and 16 ercent of FSS employ one diplomate in cooperative usiness management, each.

The above results demonstrate that FSS have imited knowledge in input use and business management. Despite this limited knowhow, local trade in agricultural chemicals and farm tools seems to be mushrooming, perhaps due to the high margins accruing to the business (see section 5.2.6). This tends to indicate that contrary to what is expected, entry into the business (at local level) is not restricted by lack of know-how. Furthermore, when FSS were asked to indicate who advises farmers (their customers) on input use (appendix 18) 32 percent gave MAF and MAIF extension staff while 71 percent gave their sales staff. This further demonstrates that farmers are not getting proper information on input use and helps to explain the low level of input-output technology characteristic of the country's agriculture (T.F.C Report 1984).

A second consideration in explaining market entry is capital which appears not to be a major impediment to market entry. Most of the multinational firms producing agricultural chemicals are already represented on the domestic market. None of the local representatives is willing to accept a competitor, representing the same firm. Importation of these inputs also requires substantial capital and

most would be willing entrants into the business are likely to be impeded by local cover which is already a major problem for the existing firms and institutions (see 4.2.3.1.). Thus, while capital is an important constraint as far as importation of farm tools is concerned, the non-competitive actions of existing firms totally restricts entry in the importation of agricultural chemicals. In regard to the domestic component of the marketing system, capital is not a major impediment to entry as exhibited by the high number of market participants. In addition existing FSS have relied more on their own savings for their business than credit. The survey results show that 53 percent of cooperative FSS ever received credit, with 30 percent of them receiving short term (6 months) credit from banks and 70 percent receiving credit in terms of inputs from UCCU. Twenty seven (27%) percent of private FSS received credit from friendly businessmen and non from banking institutions. This, further demonstrates that capital can not really prevent a trader from entering the domestic component of the market.

Among major problems facing importers of agricultural inputs are shortage of foreign exchange, the time taken to process the little foreign exchange there may be, and institutional restrictions in the

form of processing import licences (see sections
4.2.3.1 and 5.5). Since all agricultural chemicals
and a large proportion of farm tools are imported
(see section 4.2.1), the ease with which the existing
importers have access to foreign exchange will
determine the extent to which other traders would opt
to enter the agricultural inputs market. Due to
limited availability of foreign exchange, however, it
has proved difficult for the existing firms and
institutions to import as much as they would
otherwise wish. Consequently, this has tended to
limit entry for new firms into this business.

In addition, the ever rising level of inflation
(see section 5.1) combined with the unnecessary long
time taken to process foreign exchange will tend to
lower the real value of the local currency equivalent
which the importers have to deposit in their
commercial banks as they apply for the foreign
exchange. As a result, investors may tend to invest
in those businesses where the returns are realised
much faster. The implication, therefore, is that
there are likely to be few investors who will be
willing to invest in the marketing of the
agricultural inputs. Similar observations and
implications arise for the case of issuing of import
licences. The two tend to tie up money which,
besides losing its real value as inflation rises,

would otherwise have earned a profit. Consequently, they remain major impediments to entry into the agricultural inputs market. However, since FSS do not import, the two factors of lengthy procedures of processing import licences and foreign exchange will not limit entry into the domestic component of the market.

4.3.4.: <u>SUMMARY AND CONCLUSION</u>

In this chapter, the following conclusions and observations are arrived at:

First, there are five major categories of market functionaries that are directly or indirectly involved in importation of agricultural chemicals and farm tools. These are: Government ministries, donor agencies and bilateral agreements on input supply, non-governmental organisations, private commercial traders, and cooperatives. These categories are characterised by employment of highly qualified personnel and lack of much potential for holding large stocks of inputs. The various channels through which these marketing functionaries distribute the inputs are outlined in chart 1.

Second, it is revealed that these firms and institutions derive funds for importation of the inputs from donor agencies (48%), own savings (39%), short term commercial loans (30%), commercial bank

overdrafts (26%), and long term loans from financial houses (4%). Thus the biggest percentage of inputs coming into the country are through donor agencies, and private firms and cooperatives own savings. Given that both private firms and cooperatives can solicit funds from donor agencies, the results stress their importance in the procurement of the inputs. The funds to meet both distribution and operational costs are generated from: own business (48%), donor agencies (22%), loans from commercial banks (13%), institutions whose tenders they take (4%), bank overdrafts (4%), and sponsors from other companies (4%). The costs are, therefore, mainly met through own generated funds. It is as a result of this that a large percentage of these firms and institutions (48%) sell the inputs on cash, with credit being limited to only a few well established customers. This suggests that farmers with low and irregular incomes have less access to the inputs and explains the low level of farming technology practiced in the country.

Third, the major importation constraints facing these firms and institutions include:- inadequate foreign exchange and lengthy procedures of processing the little there is, high nominal and negative real interest rates that discourage borrowing and lending, and the lengthy procedures of processing import

documents. Their distribution constrains include: high motor running expenses, heavy hotel and food bills, inadequate capital coupled with limited bank loans and overdrafts, and inadequate vote given to government ministries for handling agricultural inputs. These suggest the need to increase foreign exchange allocation to importation of the inputs, ease the institutional restrictions on issuance of import licences and foreign exchange and avail credit facilities with reasonable terms.

Fourth, analysis of seasonality of demand and importation procedures suggest that the importation procedures for the inputs to be used in the first season of each year have to start in June or July of the previous year while those for the second season should start in January or February of the current year. This considers the fact that the inputs are imported from Kenya and overseas. In addition, delivery time for these inputs range from 3 weeks to 32 weeks after opening a letter of credit. The major suppliers of inputs to FSS, inorder of size, are given in table 6. The results reveal lack of integration between those who import the inputs, local producers and the retailers.

Fifth, the survey reveals that a small percentage of the total number of firms and institutions control a large percentage of total

transactions. However, no few firms consistently (over the years under study) controlled this large percentage of total trade. This suggests inequality in the distribution of trade among the major marketing functionaries and lack of competitiveness. When the firms and institutions are grouped into government, private and cooperative sectors, the government sector assumed a greater and growing role in procurement of the inputs (table 9).

Sixth and lastly, there exists a poor market information network. This is mainly in tems of input prices and sources of the inputs on the local market. In addition, the following were identified as the major obstacles to free entry into the market:- institutional restrictions in the form of procedures and time involved in issuance of import licences and foreign exchange, inadequate foreign exchange and to a less extent, inadequate capital combined with limited credit facilities.

C H A P T E R   F I V E

CONDUCT OF THE AGRICULTURAL CHEMICALS AND FARM TOOLS MARKET

The Chapter tries to correlate the data obtained with the two major components of patterns of market behaviour stipulated by Bain (1967). These are:-

i) The price policies of the enterprises, whether acting individually or collectively.

ii) The process or mechanism of interaction, cross adaptation and coordination of the policies of competing sellers in any market. The word "input" where used will be restricted to agricultural chemicals and farm tools.

In an attempt to achieve the above, the first section of this chapter identifies factors affecting the uniformity of the general pricing system. The second part gives a brief analysis of the pricing formula practiced by various institutions in the market. These include Government ministries, donor projects, UCCU and Cooperative Unions, Uganda Hardwares Ltd. (UHL), Associated Chemical Industries, FSS and the open market. Implications of the pricing system are also included. Under this section, the efficiency of the pricing system is briefly considered, basing the arguments on theoretical factors necessary for an efficient pricing system. The chapter includes analysis of factors determining

the sources of supplies and input stocks for FSS and the sales promotion efforts taken by these shops to attract customers. The last section considers the foreign exchange allocation policy and its implications on the input market.

5.1 FACTORS AFFECTING THE UNIFORMITY OF THE GENERAL PRICING SYSTEM

Based on the survey carried out (March - April, 1987), the following factors were identified as being the major sources of lack of a uniform pricing system for inputs in Uganda.

a) Most of the inputs are imported and the foreign exchange rate is therefore an important determinant in pricing. During the years between 1981 and 1985, the Uganda shilling was floating with two exchange rates in force, a lower one for priority items and a higher one for luxury items. The clasification of items and other related issues are clearly spelt out in exchange control circular no. 40 A (1982). At the time of this study a fixed exchange rate (US$ 1 = UG. Shs. 1408) with a parallel market rate (US$ 1 = UG. Shs. 16,000), ten times higher existed. This implies an implicit subsidy on inputs since theoretically they are supposed to be purchased at the official

exchange rate. The large difference in the exchange rates implies a serious shortage of foreign exchange to meet the input supply requirements. Such a shortage is then reflected in the scarcity of these inputs that also causes their prices to continuously escalate. Thus attempts to subsidize the inputs through overvaluing the foreign exchange rates are self-defeating.

b) Most of the inputs are brought in under donor projects and bilateral arrangements and their pricing is done without any serious economic criteria (see section 5.2.2.).

c) Some inputs, especially farm tools, have been distributed free by government and non-government agencies (see section 4.2.1). The same inputs have found their way to the open market which affects any rational pricing mechanism.

(d) The existing high nominal interest rates (42%) have a dramatic effect on prices as many enterpreneurs either borrow or would borrow from banks for establishment, working capital or local cover. However, lenders consider not only nominal rate of interest but also the real rate of interest. These are related by the

following formula (Peter Timmer, et al, 1984):

$$\text{Real rate of interest} = \frac{1 + \text{annual nominal rate of interest)}}{1 + \text{annual rate of inflation}} - 1$$

The annual rate of infation in Uganda has been
in the range of 150% - 300%. This implies that
real interest rates have been negative, and
accordingly this favours borrowers while
discouraging savers and dwindling lending
capacity. A likely consequence of this is the
rationing of credit implying that traders will
seek for other means of financing their
business. This diversity in sources of
finances constrains any attempt to have a
uniform pricing mechanism. In addition, while
some traders consider nominal interest rates
when deciding to borrow, others focus on the
real interest rate. The first category is thus
automatically discouraged from adding to their
working capital, through borrowing, by the high
nominal interest rate. The second category is
limited in the amount of credit they can get by
the dwindled lending capacity of financial
institutions resulting from negative real
interest rate. The overall implication is that
there will be scarcity of the items traded-in

(in this case - agricultural inputs) which then limits attempts to have any uniform rational pricing mechanism. In Uganda, for example, savers have been hedging their money on fixed assets like land, buildings, vehicles, etc, which is contrary to the situation in Kenya where the real interest rate is positive (about 2%) and many private business communities borrow from financial institutions for their business expenses. Thus the high nominal interest rates and negative real interest rates in Uganda have contributed to the existing input scarcities and tended to put input prices too high for ordinary farmers.

e) The irregularity and inadequacy in inputs supplies have resulted in some speculative elements being introduced in the pricing formulae. These formulae are further highlighted in the next section.

5.2   PRICING FORMULAE CURRENTLY PRACTICED BY THE
       MARKETING FUNCTIONARIES

There are many categories of marketing functionaries in the studied market (see section 4.1). This section attempts to analyse the pricing formulae practiced by the major ones, separately. Only one private commercial firm (Associated Chemical

Industries) has been included, since the remaining have a common formula of adding 15% - 20% handling charges to their c.i.f. (cost, insurance and freight) Kampala price. The formulae are given under subsections 5.2.1 to 5.2.6.

5.2.1. GOVERNMENT MINISTRIES

With the exception of Ministry of Rehabilitation which gives inputs freely, the other ministries apply the formula below:-

Farmers' price = c.i.f. Kampala price + Handling Charges. The Ministry of Agriculture and Forestry (MAF) charges 15 percent while that of Animal Industry and Fisheries charges 20 percent as handling charges.

5.2.2. DONOR AIDED PROJECTS

The Coffee Rehabilitation Project (CRP) was started in 1983 to supply inputs to coffee farmers. The inputs were collected by UCCU from Kampala and distributed to Cooperative Unions. The price formula used was to charge 20 percent on the Kampala c.i.f. price. The agricultural reconstruction project - International Development Agency Credit 1328 - UG (ARP-IDA) is part of IDA credit for the rehabilitation of agricultural sector. The eligible enterprises include Government Ministries, cooperative unions and private firms in the

agricultural sector. The cost centres considered in the pricing schedule are:-

   (i)   c.i.f Kampala price of item, say x. ...Px^1

   (ii) Add   procurement fee 5% - 7.5%   :

  (iii) Add, payment for import licences   :

  (iv)   Add, clearing agents fee,1% of c.i.f
                                     values   :

   (v)   Add, custom Charges/taxes   :

  (vi)   Add, storage charges/costs   :

 (vii)   Add, handling and local transport costs :
                                     ‾‾‾‾‾
              COST OF GOOD X in Kampala ...... Px^2

 (viii)   Add, profit margins for distributing

          enterprises to come up with total

          cost at selling point...................Px^3 .

          Farmers' price per unit = $\dfrac{Px^3}{\text{Quantity of Good x.}}$

    The above formula has two advantages relative to the other distributors. First, it considers many cost centres (separately) to come up with a realistic depot price of the inputs in Kampala. Secondly, the profit margin allowed to the various up-country distributors is flexible and reflects the differences in costs of distribution incurred by the different agents. There is, however, no follow-up mechanism to ensure that the inputs are sold to the farmers at the agreed prices. Unlike the other donor agencies, the agricultural development project (ADP) uses a similar

Note: Px^1, Px^2, and Px^3 are prices of item x at the corresponding stages of the pricing.

formula to that of MAF (see section 5.2.1).

5.2.3 UGANDA HARDWARES LTD. (UHL)

UHL has adopted a different pricing formula from other distributors which differentiates districts into three market categories based on distance from Kampala. Category I covers areas 100 km from Kampala, category II is for those areas 101 to 300 kms and category III is any area above 300 kms from Kampala. UHL has been distributing hoes which they imported from China at a unit price of US $1.90 (UG.SHS.2,675.20). This was relatively a lower price compared to MAF hoes that were imported at US $2.10 per hoe (UG.SHS 2,956.80). The computation of farmer's price of a hoe (table 12 on next page) is used to illustrate their formula.

The table shows that the landed cost calculated by UHL is UG. Shs. 3,485.60. This cost is already at c.i.f Kampala price plus 30 percent handling charges and is equivalent to farmer's price for MAF distributed hoes. The parastatal sets its gross margins at 45 percent, 30 percent and 5 percent for categories I to III respectively. This is to ensure that those agents who distribute inputs to areas very far from Kampala pay less for these inputs to UHL. The difference in these percentages covers part of the transport costs as the other part is taken care of by the difference in the percentage of agents'

TABLE 12. <u>COSTING OF CORK BRAND HOES BY UHL</u>.

COST CENTRES	CATERGORY I	CATEGORY II	CATEGORY III
c.i.f. Kampala price (US $ 1.90)	2,675.20	2,675.20	2,675.20
Licence Commission, 0.5%	13.40	13.40	13.40
Bank Commitment fee, 1%	26.80	26.80	26.80
Other Bank charges, 1%	26.80	26.80	26.80
Finance charges, 40% for 6 months	535.10	535.10	535.10
Clearing charges	128.00	128.00	128.00
Incidental expenses i.e. costs of extra storages, 3%	80.30	80.30	80.30
	-------	--------	-------
	3,485.60	3,485.60	3,485.60
Gross Margins, 45%, 30%, 5%	1,568.50	1,045.70	174.30
	--------	--------	--------
	5,054.10	4,531.30	3,659.90
Recommended selling price (UHL)	<u>5,100.00</u>	<u>4,550.00</u>	<u>3,700.00</u>
	--------	--------	--------
Agent's margins, 30%, 45%, 70%, of UHL landed cost.	1,046.00	1,569.00	2,440.00
Recommended agents' price	<u>6,100.00</u>	<u>6,100.00</u>	<u>6,100.00</u>
	--------	--------	--------
Retailer's margins, 17% of UHL landed cost	592.50	592.50	592.50
Recommended Retailer's Price	<u>6,700.00</u>	<u>6,700.00</u>	<u>6,700.00</u>

SOURCE: UGANDA HARDWARES LTD.

margins (next page). The UHL depot price thus ranges from UG.Shs 3,700 (US $ 2.62) to UG. Shs 5,100 (US $ 3.62). Therefore, a hoe imported at US $ 1.90 has already increased by 37 percent to 89 percent before leaving the depot. The tempation in this case is for UHL to sell more hoes under category I and II to maximise gross margins. Traders on the other hand may pretend to be buying hoes which they will retail in areas covered by category III and then sell them from areas around Kampala, which are under category I. This way, they will have bought at the lowest price and sell at the highest price, thus making maximum profits and depriving farmers (in far away places) of the inputs.

The agents' margins are set at 30%, 45%, and 70% for categories I-III respectively. This is based on the assumption that those who sell off in far away districts need more incentives to cover their transport costs and have a reasonable margin. the agents' resale price is set at UG.Shs 6,100 (US $ 4.33) or 128% above the Kampala c.i.f. price. This encourages the agents to keep most of the hoes in category I and II as they can then maximise profits. Retaillers sell at UG.Shs 6,700, allowing them a margin of 17% of UHL landed cost regardless of distances travelled from farming communities to the agents' shops which are in major towns. the farmer's

recommended price is 150% above the Kampala c.i.f. price.

5.2.4 UCCU AND COOPERATIVE UNIONS

UCCU uses three pricing formulae depending on whether the inputs are imported, donor inputs or local purchases, as indicated in appendix 12. It is the only organisation which considers the source to be vital in determining the price to be offered by a farmer. Donor inputs are costed and distributed through UCCU's established channels. Local purchases are from other importers and local producers of the inputs.

Many unions purchase inputs from UCCU and are allowed 10% margin, but in most cases margins range form 10%-25% and in extreme cases may be as high as 90% above UCCU price (appendix 11). Inputs imported by cooperative unions using the ARP-IDA credit scheme (supervised by Uganda Commercial bank - UCB) are priced using the formula developed by UCB. In such a case, the farmer's price = ex-UCB price + (20% - 25%) union mark-up; where the ex-UCB price is the price of the item at the union's premises, and hence the cost of the item to the unions at their selling points. The ex-UCB price includes transport cost, storage and handling costs and the 20% - 25% mark-up is a pure profit to the union.

5.2.5 ASSOCIATED CHEMICAL INDUSTRIES.

Associated chemical industries is a Ugandan company specialising in importation of chemicals and knapsack sprayers. They represent various overseas companies and have a list of general distributors who purchase from the company. Their cost formula is indicated in appendix 13. It is noted that they have built into their pricing formula elements likely to affect prices, e.g. bidding charges, insurance costs, SGS charges, and advertising charges. Some of these cost centres considered make the formula unique or different from those other formulae forementioned.

5.2.6 PRICES AT FARM LEVEL.

It has been shown that the pricing formulae analysed in the chapter assume that the farmer gets his inputs at Kampala landed cost plus (10% - 25%) handling charges. The analysis on some major inputs show that the farmers pay more than what is otherwise recommended (appendix 11).

From the survey results (appendix 11) the price of a hoe in FSS ranges from UG.Shs 6,500 in Kampala, UG.Shs 10,000 in Tororo to UG.Shs 16,500 in western Uganda. Open market prices range from UG.Shs 9,000 to UG.Shs 16,500. Gramaxone prices range from UG.Shs 12,500 in Rakai to UG.Shs 23,000 in Kampala. Open market prices range from UG.Shs 18,000 to UG.Shs 31,500. Dithane M-45 prices in FSS range from UG.Shs

8,500 to UG.Shs 15,000, while in the open market it ranges from UG.Shs 10,000 to UG.Shs 15,000. The trend is similar for all items analysed in appendix 11. The mark-up for FSS ranges from 3% to 100% over the supplier's price but in some cases it may go higher than this; e.g. Ambush and C.P. 15 spray pumps sold in Rakai district fetches 118% and 194% mark-ups respectively. To analyse the distribution of mark-ups received by FSS, each mark-up in appendix 11 is taken as a unique statistical observation and then grouped into classes of size 11. Each class represents a group of mark-ups within that range. The number of mark-ups in each class is computed as a percentage of the total number of mark-ups in appendix 11 and the results presented in table 13.

From the table, seventy six (76%) percent of the time the mark-ups are between 3% and 35%, with the majority of these falling between 25% and 35%. This range in mark-ups is none the less too high compared to the recommended 10%-25%. This is worse for those cases where the FSS are in the same location.

The open market margins over the suppliers' prices range from as low as 6% to as high as 358%, both figures inclusive. The distribution of this range is presented in table 14, which is constructed using the method employed for table 13.

Table   13:   <u>PERCENTAGE   DISTRIBUTION   OF   MARK-UPS</u>
              <u>RECEIVED BY FSS, FOR THE MAJOR ITEMS   IN</u>
              <u>APPENDIX 11.</u>

CLASS	% OF MARK-UPS IN THE CLASS
3-13	11
14-24	29
25-35	36
36-46	8
47-57	8
58-68	4
69-79	3
80-90	2
91-101	4
102+	1
TOTAL	106 *

SOURCE: COMPILED FROM QUESTIONNAIRE RESPONSES.

*Figures do not add up to 100 due to rounding.

Table 14: DISTRIBUTION OF OPEN MARKET MARGINS OVER THE SUPPLIERS' PRICES.

CLASS	% OF MARK-UPS IN THE CLASS
6-35	7
36-71	42
72-107	24
108-149	14
150+	11
TOTAL	98*

SOURCE: Compiled from questionnaire responses.

*Figures do not add to 100 due to rounding.

From table 14, the mark-ups are more often between 36% and 107%, with the majority falling between 36% and 71%. Thus a trader selling in the open market enjoys a mark-up, on average, of 33% to 72% over and above those enjoyed by FSS. This is no surprise since the input distribution system does not provide any privileges to FSS as opposed to open market hawkers. . A close look at appendix 11 reveals that there is no uniform suppliers' price and even shops in Kampala quote different suppliers' prices for similar items. The survey also revealed that most traders in the open market operate without any trade licence.

5.3: <u>THE OVERAL IMPLICATIONS OF THE PRICING SYSTEM.</u>

This section looks at the effects of the pricing system to both traders and farmers. Each formula that has been given in section 5.2 has some implications for the traders and farmers.

The formulae that add a fixed percentage margin to c.i.f. Kampala prices is simplistic and not sufficiently flexible to cope with exigencies of a rapidly changing price situation. Such a formula is likely to be incapable of covering replacement costs and traders are unlikely to abide by it. The formulae encourages traders either to formulate their own prices that are likely to cover their distribution costs or to withdraw from distributing the inputs. The first alternative will make prices too high for farmers, while the second alternative may lead to serious misallocation of resources e.g. if cooperative unions withdrew from distributing inputs under donor aided projects, the project officers will have to take over the responsibility.

The formula by donor-aided projects like ARP-IDA formula, is an improvement over the government and ADP formulae that add a fixed percentage mark-up to c.i.f. Kampala prices. This is because it takes care of transport, handling and storage costs which tend to be greatly affected by the existing inflationary trends. The 5% difference in margins to

be charged by cooperative unions, primary societies, etc. is unrealistic. This ought to be flexible enough to reflect the differences in distance of the distributing agents from the source. The donor aided projects formula, on the other hand, allows distributing agents to fix their own margins which are likely to reflect the differences in distances from the source. This encourages the traders to distribute the inputs deep in the rural areas, as they would be assured of covering their costs. Farmers may, however, remain exploited through imposition of unrealistically high margins by some traders since there is neither competition in the market nor any follow-up mechanism to ensure that the retailers stick to the agreed upon prices.

Like the cooperative unions and primary societies, UHL fixes a percentage margin (17%) for retailers. Such formulae are likely to discourage distribution of inputs deep in the rural areas and the retailers are likely to be 'open market hawkers' who will then charge the farmers, in rural small markets, about 100% mark-up. It has been shown that UHL's pricing formula provides the parastatal an average net profit of UG. shs. 929.50 per hoe while the agents who transport the hoes get an average of UG. shs. 1685 per hoe (table 12). This is unrealistic compared to the increased costs incurred

by the agents. Transporation has been cited by 45 percent of FSS as a major constraint in selling of inputs (table 4). Similarly, major inputs distributors gave high running expenses (30%) as leading to inefficient input distribution (section 4.2.3.2). All these suggest that UHL gets very high profits relative to the agents who have to meet the high distribution and operational costs. This further implies that the parastatal's formula is biased by offering UHL such high profits, when the parastatal does not incur distribution costs.

The consequences of such a bias is encouragement of non-movement of goods outside Kampala region. Where they are moved, it is likely to be dominated by 'open market hawkers' who will then sell the inputs at much higher prices. Such prices may be too high to be afforded by ordinary, non-progressive farmers. This also suggests that if the formula is to work it would require heavy administrative inputs interms of monitoring the flow of the hoes to rural areas.

Taken together, all the forementioned inputs pricing formulae (section 5.2) form what one may call the inputs pricing system in Uganda'. The efficiency of this pricing system can be assessed basing the arguments on Ngumi (1976)'s model which, according to him, can be used for any market category. Based on the model, the inputs pricing

system in Uganda appears to be inefficient. The following provides evidence as to the inefficiencies by highlighting the deviations between the model and the actual situation in the country.

a) Traders in the same locality charge as high as over 50 percent differences in the price of similar items. For example a litre of Ambush costs UG.SHs 15,000 in Bukola FSS and UGShs. 8,000 in West Mengo cooperative society FSS while both FSS are in Kampala. The percentage difference in the price charged is about 76.5%. Similarly one kilogramme of pencozeb costs UGShs. 6,900 in pet shop (FSS) and UGShs. 11,000 in Bukola FSS. These two FSS are again found in Kampala and yet they charge a price difference as high as 59.4 percent.

b) The formulae by major distributors indicate that for similar items, from the same source, the Kampala landed costs will differ.

c) The price differences among geographically separated markets are not anywhere equal to transfer costs. For example, no transfer costs can explain why a litre of ambush costs UGShs 15,000 in Bukola FSS (Kampala) and UGShs. 12,000 in Tukole Kangurumira FSS (Jinja) given that Jinja is 150

kms from Kampala and Kampala is closest to the source of the input. Similarly Dithane M-45 is costed at shs. 12,000 in Famous distributors (Kampala) and UGShs. 10,000 in South Bukedi FSS (Tororo) yet the two are 300 kms apart.

d) The pricing system appears to be speculative based on scarcity of the items. Thus they do not reflect market forces of demand and supply.

In summary, the major input distributors' pricing formulae suggest that farmers should be able to get their inputs at Kampala landed cost + (10% – 25%) handling charges. On the contrary, FSS which include cooperative unions and primary societies, sell the inputs to farmers at prices far above those worked out by those distributors.

5.4. ANALYSIS OF FACTORS DETERMINING SOURCES OF SUPPLIES, INPUT STOCKS AND SALES PROMOTION EFFORTS.

This section is based on questionnaire responses from FSS and is divided into three subsections. These are:-

i) Factors determining sources of input supplies

ii) Factors determining input stocks for FSS.

iii) Sales promotion efforts taken to attract customers to the FSS

5.4.1. FACTORS DETERMINING SOURCES OF INPUT SUPPLIES.

TABLE 15: MAJOR PARAMETERS IN DECIDING ON SOURCES OF
INPUTS SUPPLIES.

PARAMETER	% OF FSS
Fair prices	40
Availability of the inputs	16
Transport costs	12
Quality of inputs	12
Whether UCCU has the supplies	9
Credit facility arrangements	7
Extension officers' advice	2
TOTAL	98*

SOURCE: Compiled from questionnaire responses.

*Figures do not add to 100 due to rounding.

Table 15 indicates that most FSS do prudent
shopping by comparing prices and quality of the items.
Price is the major parameter (40%), although it is
limited by the availability of the items (16%).   An
important observation is that the FSS (9%) will first
consider UCCU as their source before turning to the
other major distributors. This suggests that UCCU is
the most favoured source since no other specific
distributors are mentioned. It also suggests that
UCCU may be the cheapest source given that price is

their major parameter in the decision-making.

From the same table, one can conclude that the FSS owners are rational in deciding on input supply sources. This is illustrated by the order of the major factors; i.e., price, availability, transport, quality, etc. It is noted also that among their operational and distribution costs, transport is given highest consideration, an indication of the importance of infrastructure in determining the interactions of market functionairies and hence market conduct.

5.4.2. FACTORS DETERMINING INPUT STOCKS.

Table 16 (next page) helps to bring out those factors upon which FSS base their choice of what type of inputs they stock in their shops. The table indicates that input stocks are determined mainly according to farmers' demands, which take into consideration seasonal requirements (51%).

Although farmers' demands measure highest in deciding on input stocks for FSS, they are also guided by their previous sales records (13%). This helps to indicate that personal experience, in terms of both rate of stock turn-over and profitability, will always determine what a trader deals in. As indicated earlier (section 5.4.1) scarcity of the items may limit the flexibility of the traders in

TABLE 16: **FACTORS DETERMINING TYPES OF INPUTS THAT
ARE STOCKED BY FSS**

FACTORS	% OF FSS
Farmers' demand	51
Availability of items	11
Area of operation	6
Previous sales record	13
District agricultural officers' advice	6
Requirement by primary societies*	5
Current market prices	5
Availability of funds	2
New business opportunities	1
TOTAL	100

SOURCE: Compiled from questionnaire responses.

*Given by cooperative unions only.

whatever decisions they take regarding input
distribution. Other parameters that are considered
include: requirements as per area of operation (6%),
advice from agricultural officers (6%), requirements
by primary societies (5%), availability of funds or
working capital (2%), and existence of new business
opportunities.

5.4.3.   SALES   PROMOTION EFFORTS   TAKEN   TO   **ATTRACT** CUSTOMERS.

TABLE   17:   SALES PROMOTION EFFORTS TAKEN BY   FSS   TO ATTRACT CUSTOMERS.

EFFORT TAKEN	% OF FSS TAKING THE EFFORT
Advertising	32
Lowering prices relative to other FSS	29
None	11
Offering quick services/using a nice language	9
Offering regular customers credit	6
Stocking enough	4
Visiting progressive farmers	2
Observing quality	2
Increasing society's membership*	2
TOTAL	99

SOURCE: Compiled from questionnaire responses.

   *Only cooperative union FSS

Table 17 gives promotion efforts taken by FSS to attract   customers.   The table   indicates   that   FSS compete   for   their   customers,   mainly,   through advertising (32%) and price cutting (29%).   There   is

a possibility, however, that some of these FSS may claim to advertise while they actually do not. If this hypothesis remains true, then price cutting remains the major form of competition they adopt. An important observation is that 11% of these shops make no promotion efforts, an indication that scarcity of the inputs has reduced the intensity of competition to very low levels. When these shops were asked why their prices differ, they advanced reasons presented in table 18.

TABLE 18:   SOURCES OF VARIANCES IN FSS PRICES

REASON	% OF FSS GIVING THE REASON
Varying transport means and costs	25
Different sources of supplies and hence different purchase prices	36
Varying rents/storage costs	11
Handling costs differ	6
Wages paid to workers differ	3
Some FSS have access to credit while others do not	6
There are so many kiosks dealing in the selling of inputs	14
TOTAL	101*

SOURCE: Compiled from questionnaire responses.

*Percentages exceed 100 due to rounding.

From the table, it is evident that due to existence of so many sources of supplies with each source having its own prices makes farm supply shops to sell at different prices. This is again reflected in table 15 where the FSS stress comparison of prices as a major parameter in determining where they purchase their input stocks. Other reasons advanced for these differences in prices include; varying transport costs (see also section 5.4.1), existence of so many privately owned kiosks, different storage/rent costs, handling costs, etc. While it may be argued that existence of so many privately owned kiosks would lead to more competition and therefore fairly uniform prices, the situation is different. The kiosks purchase their inputs from established FSS and because inter-FSS purchases are high (table 6) this aggravates the scarcity of inputs in FSS. Consequently, the FSS speculate when setting their prices. It is due to different levels of these speculations that prices will then vary from one FSS to another.

In summary, poor infrastructure, scarcity of inputs, existence of so many middlemen, lack of credit facilities and limited working capital are the major factors affecting the behaviour of FSS and hence the patterns of behaviour of the entire market.

5.5.   FOREIGN EXCHANGE RATES, FOREIGN EXCHANGE ALLOCATION POLICY AND THEIR IMPLICATIONS

In the first part of this section, an attempt is made to analyse the effects of overvalued exchange rates on the availability of foreign exchange.   The second part focusses on Uganda's foreign exchange allocation policy and its imolications on the availability of agricultural inputs.

5.5.1   EFFECTS OF OVERVALUED EXCHANGE RATES   ON AVAILABILITY OF FOREIGN EXCHANGE

Uganda's foreign exchange rate is overvalued by nearly 1036% (section 5.1a). The more a   country's exchange rate is overvalued the less it tends to export and the more it imports (D. Salvatore, 1983). This is illustrated in chart 9 below. The analysis assumes country "A" to represent all the countries which receive Uganda's exports and at the same time export   to Uganda. It is assumed that the foreign exchange involved in the transactions is in the United States (US) dollars ($). The analysis also assumes the notion of ceteris paribus, so that it   is only exchange rates affecting level of exports and imports.

In the left panel of chart 9 below, SM' is Country "A"'s supply curve of imports to Uganda expressed in Uganda Shillings (Shs) when the exchange rate is R = Shs 16000/$ 1, and DM' is Uganda's demand

CHART 9. EFFECTS OF OVERVALUATION OF EXCHANGE RATES
ON LEVEL OF IMPORTS AND EXPORTS.

UGANDA'S IMPORT MARKET IN SHS.   UGANDA'S EXPORT MARKET IN SHS.

in Shs. | Sm' | Sm'' | Px in Shs. | Sx'
DM' | B | N | Px1 | C
Pm1 | Pm2 | | Px2 | E | Dx'
Qm1 | Qm2 | (UNITS) | Qm. | Qx2 | Qx1 | (UNITS) | Qx
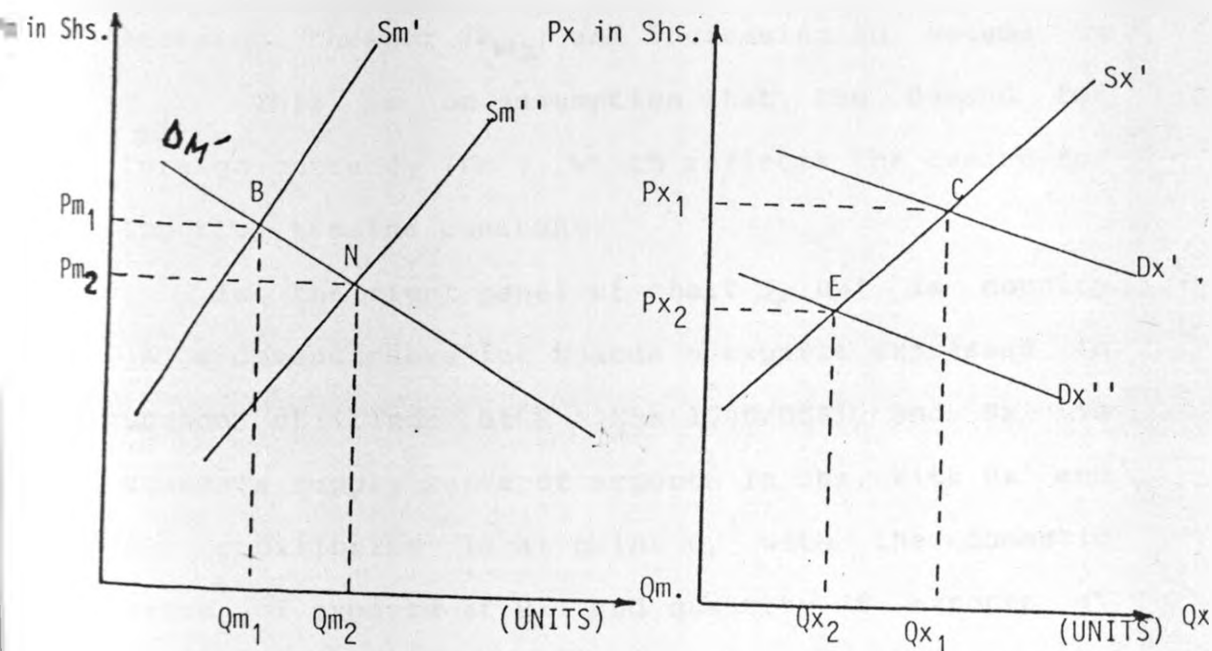
curve for imports in Uganda Shillings (Shs.).   With
DM' and SM' equilibrium is at point "B", where the
domestic price of the imports is P_{M1} and the quantity
of the imports at Q_{m1} . This is the equilibrium at
the real exchange rate as reflected by forces of
demand and supply for foreign currency ($) in the
open market.   When the government overvalues the
foreign exchange rate (so that one shilling becomes
equivalent to more foreign currency, $) to R = Shs
1400/$1, country "A"'s supply curve of imports to
Uganda in terms of Uganda Shs. rises (shift

downwards) to Sm". This is because, at the new rate, each shilling that country "A" 's exporters earn in Uganda is now 1036 percent more in terms of dollars ($). The new equilibrium is at point N, with imports becoming cheaper (P_{M2}) and increasing in volume to Q_{m2}. This is on assumption that the demand for foreign currency (Dm'), which reflects the demand for imports, remains constant.

In the right panel of chart 9, Dx' is country 'A''s demand curve for Uganda's exports expressed in Uganda shillings at R = Shs 1600/US$1, and Sx' is Uganda's supply curve of exports in Shs. With Dx' and Sx' equilibrium is at point C, with the domestic price of exports at Px1 and quantity of exports at Qx1. When the government overvalues the foreign exchange rate to R = Shs 1400/$1, country 'A''s demand curve falls (shifts down) to Dx" and the equilibrium is at point E. The domestic price of the exports falls to Px2 and the quantity of the exports to Qx2. The fall in demand is because each dollar ($) is now worth 1036 percent less in terms of Uganda shillings.

In general, therefore, Uganda's imports tend to increase due to lower domestic prices and this reduces foreign exchange reserves. On the other hand, her exports are reduced thereby lowering her foreign exchange earnings capacity. The consequence

of the two effects, taken together, is the increased
unavailability of foreign exchange due to the
overvaluation of the country's foreign exchange rate.
It is in this respect, that the country's foreign
exchange for importation of agricultural inputs is
inadequate, leading to scarcity of the inputs and
unfair pricing. In comparison, Kenya's foreign
exchange rate (which is overvalued by 20%-25%) is
more realistic and consequently Kenya gets more
inputs relative to her needs than Uganda.

5.5.2: FOREIGN EXCHANGE ALLOCATION POLICY AND ITS
IMPLICATIONS

In Uganda, the amount of foreign exchange
allocated to any sector varies monthly depending on
the revenue from coffee. According to information
available in Research department of Bank of Uganda,
50 percent of total foreign exchange earned goes to
debt servicing, 20 percent to petroleum products, 25
percent to ministries and 5 percent to miscellaneuos
expenses. Thus, it is the 5 percent that forms
direct allocations for importing, travelling,
servicing exports, remmittances, etc. From this 5
percent, an allocation of 50 percent goes to direct
imports and 40 percent of this (1% of total monthly
foreign exchange earned) goes to importation of
agricultural requirements. These may not be

confined to agricultural inputs, implying that direct allocation to importation of agricultural inputs is less than 1 (one) percent of total monthly foreign exchange earned.

The Ministries of Agriculture, Animal Industry and Forestry, and Rehabilitation may also direct part of their allocation to purchase of agricultural inputs. Nevertheless the amount that goes into direct purchases of agricultural chemicals and farm tools remains very small.

Government policy, in agriculture, stresses increased agricultural production through adoption of modern agricultural practices with special emphasis on utilisation of modern agricultural inputs. This is in line with the fact that agriculture earns 95 percent of total foreign exchange for the country. Given the meagre allocation of foreign exchange to boost the availability of agricultural inputs and the existing overvalued foreign exchange rates, one would conclude that the sector has been underrated. Such a situation is unrealistic and suggets a critical review with special emphasis on sectoral balance. Policy guidelines are thus drawn (chapter six) for the concerned to alleviate the exsisting malfunctions in the marketing and distribution of agricultural inputs.

C H A P T E R   S I X

SUMMARY AND POLICY RECOMMENDATIONS

6.1.   SUMMARY

This study revealed the following main points:
First, that the firms and institutions handling
agricultural chemicals can be grouped into private
commercial firms, cooperatives and government
departments. All donor projects are directly or
indirectly supervised by government departments.
Similarly, inputs coming into the country under
bilateral or unilateral agreements are handled by
government departments. All the agricultural
chemicals, except for non-manufactured ones like
manure, are imported from Kenya and overseas.
Delivery time takes from three weeks to thirty two
weeks after a letter of credit has been opened for
the local firm or institution. Farm tools are both
imported and locally produced. directly or indirectly
takes from three to thirty two weeks after a letter
of credit has been opened for the local
firm/institution. Farm tools are, in addition to
what happens to marketing of agricultural chemicals,
partly locally produced.

Second, that for whatever channel of
distribution, a portion of both categories of inputs
will reach the open market before reaching farmers.

In connection with this is the fact that these inputs are scarce and their prices are mainly based on speculation. This speculation is caused by excess demand coupled with uncertainities in the open market dollar value and arrival of next consignment of the inputs.

Third, that with the exception of government and donor- inputs, all the others are financed mainly through own-savings. That is to say, only in very insignificant instances are the private commercial firms and cooperatives able to raise funds through seeking credit or loan facilities. Consequently sales of these inputs are mainly on cash-basis. Shortage of foreign exchange and its unduely long processing procedures, high nominal and negative real interest rates, and the long time taken to process importation documents are the major constraints in procurement of the inputs.

Fourth, poor infrastructure is a major hinderance in the local distribution of the inputs. This is in addition to lack of adequate operating capital and absence of credit/loan facilities. Farm supply shops are of the opinion that to ease distribution of these inputs in a bid to make the marketing more efficient, three issues need strong consideration. These are:- avail credit facilities, improve transport infrastructure and increase foreign

exchange allocation quota for those agricultural inputs.

Fifth, that the marketing system for both agricultural chemicals and farm tools is such that the inputs were concentrated in a few hands. That is to say, only a few firms and institutions controlled a much bigger share of the traded volume, there by suggesting lack of competitiveness in the trade. When the firms and institutions were grouped, government ministries and donor agencies under them assumed a greater and growing role in procurement of these inputs. Lack of competitiveness in the market can be tied to shortage of foreign exchange and its allocation procedures. If foreign exchange was enough or the little that was available had been allocated evenly over all registered importers of the inputs, some element of competitiveness would have been assured. On the contrary, the procedures have tended to favour a few firms or institutions, every year, while ignoring the majority.

Sixth, that there exists poor market transparency. That is, information on prices and markets for these inputs (domestically) is lacking. This is despite the existence of large number of

farm supply shops characterized by very low intensity of competition. The study also reveals lack of market integration, vertical or horizontal.

Seventh, there are no serious barriers to free entry in the domestic component of the market, except for capital constraint. As far as importation of the inputs is concerned, the major constraints to free entry are: non-competitive reactions of established firms, institutional restrictions in the form of lengthy procedures involved in issuance of import licences and foreign exchange, inadequate foreign exchange, and to a less extent inadequate capital combined with limited credit facilities.

Eighth and lastly, that there is no uniform pricing system for these inputs. All the formulae practiced by the major firms and institutions show lack of flexibility to the existing inflationary trends and can thus be regarded as unrealistic. There appeared to be some distortions in the marketing system in the form of unreasonable profits being earned by some middlemen. This has the effect of unnecessarily raising the prices paid by farmers. In general, the study reveals pricing inefficiency in the market and general marketing inefficiencies.

6.2 POLICY RECOMMENDATIONS

Based on the results of this study, the following recommendations are proposed for policy

action:

First, the assumptions of significant roles in input procurement and distribution by government departments (section 4.3.1) should be discontinued. This is because such a role tends to divert the energies of public servants and government resources, particularly in the Ministry of Forestry and Agriculture, away from much more important tasks of agricultural research, extension, sector planning and monitoring. Thus the government sector should concentrate on:-

i) Testing agricultural chemicals with intent to banning importation of those found to be harmful to humans and/or the environment.

ii) Issuing positive lists of agricultural chemicals found to be effective and safe if used properly. In this connection, government should play a leading role in the training of private traders and farmers on correct application of particular agricultural chemicals.

iii) Disseminating information to the relevant persons on the existing markets and prices of agricultural inputs. It should thus create incentives, for both the private and cooperative sectors to become more involved in the procurement and distribution of the inputs. To

bring distribution centres close to farmers, both the cooperative and private sectors should be encouraged to open up more retail points close to farmers. It is the role of the government sector to ensure security and political stability which would induce the business community to invest more in such ventures.

iv) Repairing the existing road network and providing all those other amenities likely to improve transport infrastructure and eliminate any unnecessary rules and regulations which may hamper business operations.

Second, in the event where private firms are unable to open retail points at and beyond district levels, there is need for them to get integrated with the existing FSS and primary societies. This requires providing the FSS and primary societies with credit facilities, allowing them to sell the inputs on a commission basis, and any other measures or agreements likely to create close collaboration between the firms and FSS.

Third, there is need to review the current foreign exchange allocation policy with a view to realising increased flow of these agricultural inputs. This requires a review of the present quota system so as to have the allocations reflect the

actual contributions of the different sectors to gross domestic product (GDP) and export earnings of the sectors. Similarly, consideration should be given to adopting a system of direct and regular allocations of foreign exchange for critical agro-industrial input procedures. In the long-run this may greatly alleviate the exsisting scarcity of the inputs. The current Bank of Uganda foreign exchange procedures for scrutinizing importers granted allocations should be further tightened to ensure that these importers actually use allocations for the authorized imports. Commercial Banks should explore more flexible approaches to the problem of importers presenting 100 percent of the local cover for foreign exchange at the time of allocation. That is, credit facilities should be easily availed to private and cooperative importers so that lack of local cover should not limit the volume of inputs they would otherwise have imported.

Fourth, as long as scarcity remains, there is need to properly coordinate and monitor agricultural inputs flow in the country. The major objective should be elimination of unneccessary middlemen who strive on lack of market information thereby making the input prices too high for farmers whose produce prices are government controlled.. This may be achieved if the office of the commissioner for

inputs (MAF) in collaboration with agricultural secratariat (Bank of Uganda) could come up with a working method aimed at performing the following principle functions:-

a) Monitor and compile, on a continuous basis, information on the volumes and prices (cif) for agricultural inputs entering the country. With such information, the unit should come out with a suitable National pricing structure for aid, privately or otherwise imported inputs and locally produced inputs so that subsidisation in any of the categories does not distort the true picture in working and competition. It is hoped that with a national pricing policy, differences in the prices of basic inputs supplied by different agents and the resultant movement between markets would cease.

b) Regularly assess the actual input flows against government sectorial planning priorities to determine if situations of over or under supply exist and to issue regular situation advisories to government, donor agencies, and private sector input suppliers on such situations.

c) Monitor the in-country distribution of these inputs with respect to end-user destinations:- Margins for dealer costs, including administration, handling, transport, and profit, and major problems incured in the distribution networks.

d) Conduct detailed analysis on the technical, financial and economic costs and benefits of input use in improved technical packages. This should be done in collaboration with government ministries of MAF and MAIF, UCCU, and the private input suppliers. The unit should then issue regular advisories to Bank of Uganda and the foreign exchange allocation committee on the findings. Such information would be helpful in achieving the second policy recommendation which is an foreign exchange allocation policy.

e) Look into possibilities of improving market integration. The unit should encourage the importers and in-country agricultural inputs distributors to draw up operational contracts or agreements. These should aim at making sure that no single importer is allowed to sell to end users and or unlicensed middlemen while the in-country distributors are prohibited from importing the inputs. Such operational

agreements exist in the marketing of pesticides in Kenya (Aloys Tumbo et al, 1983).

Fifth, there is need for the marketing Boards (LINT MARKETING BOARD, COFFEE MARKETING BOARD, etc) to look into possibilities of providing inputs to their farmers on a credit-scheme basis. B.A.T., for example, provides inputs to tobacco growers on credit and recovers the repayments from farmers' crop sales. The inputs are provided through their district tobacco growers cooperative unions. Thus, the suggestion is for the other marketing boards to emulate their B.A.T. counterparts. This may be quite feasible for tea growers, cotton growers, coffee growers and commercial farmers of traditional crops like sim-sim, cowpeas, maize, sorghum, etc. This policy suggestion should be temporal and should not operate in a situation where enough agricultural inputs can be either imported into the country or locally produced.

Sixth and lastly, it has been shown that real interest rates in Uganda are negative and that such a situation reduces the capacity to lend. Although nominal interest rates are high the government monetary policy should desist any attempt to lower nominal interest rates to avoid dwindling lending capacity. This is because any attempt to lower nominal interest rates without proportionately

lowering the level of inflation, will result in more negative real interest rates. Thus, the government monetary policy should be directed towards reduction of inflation. If this could be accomplished, real and nominal interest rates would be reduced leading to more stable financial markets. Also as a broader economic policy, more realistic foreign exchange rates should be aimed at so as to reduce the shortage of foreign exchange. This would make exports of agricultural products more competitive and increase returns to the producers (farmers), assuming that the increased revenues were reflected back to them. In summary, it seems that a combination of realistic exchange rates and sound monetary and fiscal policies are necessary conditions to put the input marketing system in better order.

BIBLIOGRAPHY

ACKELLO-OGUTU, A.C.

The Marketing of Poultry Meat and Eggs in Nairobi. M.Sc. Thesis University of Nairobi, 1976.

ANDIC, S. AND PEACOCK, A. T.

"The International distribution of Income, 1949 and 1957". Journal of Royal Statistical Society. Part 2, 1961.

BAIN,J.S.
Industrial Organisation. Second Edition, New York,John Wiley and Sons, Inc. October 1967.

DONDE, W.B. AND DORRIS, D.B

IBRD, International Development Association. Effective Demand for Fertilizers in India, March 1972.

GERFIELD, E.B.

The Impact of Technical change on the Rural Kenya Household. Working Paper No. 358 IDS University Of Nairobi.

HABIMANA

DIARY DEVELOPMENT COOPERATION. PRIVATE COMMUNICATION, MARCH 1987.

HAYS, H.M

The Marketing And Storage Of Food Grains In

Northern Nigeria. Samaru Miscellaneous Paper

50,1975.

HENDERSON AND QUANDT

Microeconomic Theory. A Mathematical Approach,

Second Edition.

INTERNATIONAL LABOUR ORGANISATION (I.L.O)
Employment, Incomes, and Equality :A Strategy

for Increasing Productive Emploments in Kenya. I.L.O

Geneva 1972. (P.152)

JAYKAY AGENCIES LTD.

Report On Fertilzer Use And Consumption In

Uganda, 1971.

KAYONDO, D.B.

The effect of DFI Courses on Improved Farming

Practices and Innovations. Unpublished M.Sc.

Thesis, University of Nairobi, 1975.

KUIKLIJK INSTITUT VOOR de TROPEN(KIT).

Towards a National Food Strategy. Report

Prepared for Ministry of Agriculture and

Forestry, Uganda. Volume 1, December 1984.

KOHLS, R.L. AND DOWNEY, W.D

Marketing of Agricultural Products. Fourth

edition New York, 1972.

MILLER, J.P.

"Measures of monopoly power and concentration; Their significance". University National Bureau Committee for Economic Research. Business Concentration and Price Policy. Princeton, Princeton University Press, 1955.

MOSHER, A. T.

Getting Agriculture Moving. Agricultural Development Council; New York, 1966.

MUKASA, S.K.

Agricultural Inputs: Procurement, Stocking and Distribution. March, 1984.

MUTHEE, A.M.

A Comperative Analysis of the Degree of Privatization of Uganda's and Kenya's Agricultural Inputs Distribution Systems. April/May 1985.

MUTHEE, A.M.

Distribution of Non-farm Inputs in Kenya With Special Emphasis on the Role of Agricultural Cooperatives. Unpublished M.Sc. Thesis University of Nairobi, 1975.

MUTHEE, A.M.

Strategies for Improving Availability and Distribution of Agricultural Inputs in South Western Uganda. Agricultural Secretariat, Bank

of Uganda, Dec. 1986.

MUTHEE, A.M.

   The Rural Households and its Requirements for

   Agricultural Services: Revision of Constraints

   to Increased Food Crops Production in Uganda. A

   Paper Prepared by Uganda Government/World Bank

   Task Force on Agricultural Services for Food

   Crops. Feb. 1985.

NORSWORTHY , MICHAEL
        Rehabilitation of the Coffee Industry.
        Reconnaissance Survey Report. July, 1980.

ORWA ONG'IRO

   Marketing of Eggs and Poultry Meet in Mombasa

   Metropolitan Urban Area.   Unpublished   M.Sc.

   Thesis, University of Nairobi, 1979.

PATERSON, D.B.

   Coping With Land Scarcity; The Pattern   of

   Household Adoption in one Luhya Community.

   Working paper • No. 360 I.D.S, University of

   Nairobi, 1980.

PRITCHARD, N.T.

   "Framework for Analysis of Agricultural

   Marketing Systems in Developing Countries".

   Agricultural Economics Research, Vol. 21, No.3

   (July, 1969) pp 78-85.

SALVATORE, DOMINIC.
    International Economics,1983.

TIMMER, C.PETER, FALCON, W.P. AND PEARSON, S.R.
    Food Policy Analyis. Quality of Communication

    Award, American Agricultural Economics Association,

    1984.
TUMBO- OERI, ALOYS.
    A Market Survey of Agro-Chemicals in Kenya.
    Final Report, March 1983.

UGANDA.

    Agricultural Rehabilitation Programme: Eastern

    and Northern Uganda: Completion Report, November
            1985.

UGANDA

    Rehabilitation and Development Plan. 1987/88-

    1990/91.

UGANDA

    The Institute of Bankers Kampala Local Centre:

    Unpublished Report of the Task Forces on Crop

    Finance.

APPENDIX 1.

CONTRIBUTION OF AGRICULTURAL SECTOR TO GROSS DOMESTIC PRODUCT 1970-1985

(Ug. Shs millions at 1966 Prices)

	T/GDP				AGRI/GDP														
	Mone-tary	Subsis-tance	Total	% Change	Mone-tary	Change	(M/GDP)(Agl)	(Agl)	Subsis-tance	% change T/GDP	(% Ag)	Total AGDP	% change	T/GDP	Total Popula-tion Mid year	Per Capita GDP	% change	Agric/Rural Popula-tion	Per Capita Ag GDP
1970	5,095	2,187	7,282		1,781		24	50	1,763		50	3,544		48	9,758	746		8,979	395
1971	5,627	2,245	7,512	3.2	1,633	8.3	24	52	1,803	2.2	52	3,476	3.0	**48**	10,013	750	0.5	9,181	374
1972	5,290	2,342	7,542	0.4	1,680	2.9	22	47	1,886	4.6	53	3,566	3.8	47	10,275	734	2.1	9,385	380
1973	5,040	2,428	7,476	0.6	1,795	6.8	24	48	1,995	3.6	53	3,750	5.2	50	10,544	709	3.4	9,593	391
1974	4,984	2,525	7,509	0.2	1,669	7.0	22	45	2,037	4.2	55	3,706	1.2	49	10,819	694	2.1	9,802	378
1975	4,768	2,589	7,357	2.0	1,605	3.8	22	43	2,085	2.4	57	3,698	0.4	**48**	11,102	663	4.5	10,015	368
1976	4,738	2,673	7,411	0.7	1,541	4.0	21	42	2,151	3.2	58	3,692		50	11,392	650	2.0	10,302	358
1977	4,757	2,770	7,527	1.6	1,547	0.4	21	41	2,230	3.7	59	3,777	2.3	51	11,690	644	0.9	10,598	356
1978	4,333	2,848	7,181	4.6	1,462	5.5	20	39	2,291	2.7	61	3,753	0.6	52	11,995	599	7.0	10,901	344
1979	3,377	2,453	6,330	11.9	1,319	9.8	21	41	1,872	18.3	59	3,191	15.0	51	12,308	514	14.3	11,212	285
1980	3,822	2,293	6,115	3.4	1,234	6.4	20	42	1,734	7.4	58	2,968	7.0	48	12,637	478	7.0	11,531	257
1981	3,873	2,519	6,352	3.9	1,221	1.1	19	38	1,962	13.1	62	3,183	7.2	50	12,990	489	2.3	11,837.1	268
1982	4,169	2,704	6,873	8.2	1,421	16.4	21	40	2,133	8.7	60	3,554	11.6	52	13,354	515	5.3	12,233.4	291
1983	4,278	2,893	7,171	4.3	1,416	0.4	20	38	2,309	8.3	62	3,725	4.8	52	13,728	522	1.4	12,600.0	291
1984	4,229	2,558	6,787	5.4	1,308	7.6	19	40	1,957	15.2	60	3,265	12.3	48	14,113	481	2.9	12,978.5	252
1985	4,063	2,353	6,416	5.5	1,250	4.4	17	42	1,738	11.2	58	2,988	8.5	46	14,508	492	0.1	13,367.8	244
1986	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	14,914	n.a	n.a	13,768.9	n.a

APPENDIX 2

PERSONNEL DIRECTLY INVOLVED IN HANDLING

AGRICULTURAL INPUTS.

FIRM OR INSTITU-TION CODE NUMBER	AGRICULTURAL STAFF		FIELD REPRESENTATIVES	
	GRADUATES	DIPLOMATS	O' LEVEL TO A' LEVEL	ABOVE A' LEVEL
1	1	-	110	-
2	45	-	-	30 DAO'S
3	30*	-	-	30 DVO'S
4	30*	-	-	30 DVO'S
5	13	9	-	22
6	6	13	-	13
7	2	-	-	-
8	1	1	5	-
9	1	1	-	-
10	1	-	-	-
11	1a	2	6	-
12	1	-	4	-
13	2	-	4	-
14	3	1	3	-
15	1	-	2	-
16	2a	3	2	-
17	4	18	-	-
18	5	15	219	-
19	8	-	-	4
20	3a	1a	-	-
21	1a	12	-	-
22	12	5	'b	4
23	1	2	-	-

SOURCE: COMPILED FROM SURVEY RESULTS.

SEE KEY NEXT PAGE.

KEY TO APPENDIX 2

* = VETERINARY MEDICINE

a - Not trained in either Agriculture or Veterinary.

'b - Management of Cooperative Unions and Societies are subjected to continuous training on agricultural input use and general management at their respective District Farm Institute (DFI).

APPENDIX 3: FETILIZERS DEMAND AND SUPPLY 1971 - 1975

(TONNE)		YEAR					AVERAGE
		1971	1972	1973	1974	1975	1971-75
AMONIUM	DEMAND	1,500	1,500	1,500	2,000	3,000	1,900
SULPHATE	RECIEVED	771	674	230	923	500	620
	UNSATISFIED DEMAND	729	826	1,270	1,077	2,500	1,280
AMONIUM	DEMAND	1,000	2,000	2,500	2,500	2,500	1,280
SULPHATE	RECIEVED	1,720	1,145	2,331	506	1,505	1,441
NITRATE	UNSATIFIED DEMAND	280	855	169	1,994	995	859
UREA WITH	DEMAND	1,000	1,500	1,500	1,500	2,000	1,500
< 45% N	RECIEVED	1,260	180	205	2	1,500	630
	UNSATISFIED DEMAND	260	1,320	1,295	1,498	500	870
UREA WITH	DEMAND	1,000	1,000	1,000	1,000	1,000	1,000<
45% N	RECIEVED	826	1,945	550	29 3	-	-
	UNSATISFIED DEMAND	174	945	450	707	1,000	-
OTHER NITRO-	DEMAND	4,000	4,000	5,000	5,500	6,500	5,000
GENOUS FERTI-	RECEIVED	3,934	3,107	2,224	1,844	350	2,292
LIZERS N.E.S.	UNSATISFIED DEMAND	66	893	2,776	3,656	6,150	2,709
SUPPER	DEMAND	2,500	2,500	3,000	5,000	6,600	3,920
PHOSPHATES	RECEIVED	895	920	2,000	1,972	-	-
	UNSATISFIED DEMAND	1,605	1,580	1,000	3,028	6,600	-
OTHER	DEMAND	100	150	150	200	200	160
PHOSPHATIC	RECEIVED	63	38	91	3	-	-
FERTILIZERS	UNSATISFIED DEMAND	37	112	59	197	200	-
POTASSIC	DEMAND	2,000	3,000	3,000	4,000	6,500	3,750
FERTILIZERS	RECEIVED	1,596	2,992	1,420	-	350	1,272
	UNSATISFIED DEMAND	404	8	1,580	4,000	6,150	2,428
FERTILIZERS	DEMAND	18,000	15,400	14,000	10,300	4,000	9,640
N.E.S.	RECEIVED	16,092	9,238	4,471	4,348	-	-
	UNSATISFIED DEMAND	1,908	6,162	9,529	5,952	4,000	-

SOURCE: PLANNING UNIT, MAF 1976.

APPENDIX 4:   DEMAND AND SUPPLY OF JEMBES AND PANGAS 1971 - 1975

	YEAR	DEMAND	SUPPLY	UNIT PRICE	% CHANGE OVER PREVIOUS YEAR (PER UNIT)
1.	HOES				
	1971	1,500,000	121,407	4.25	-
	1972	2,000,000	238,209	4.50	+6
	1973	2,500,000	900,000	6.70	+49
	1974	2,900,000	457,787	16.25	+143%
	1975	3,600,000	890,000	21.50	+32%
1971 - 1975 Average		2,500,000	521,581	10.64	+63
2.	PANGAS				
	1971	1,000,000	823,190	2.40	
	1972	1,000,000	246,910	2.50	+4%
	1973	1,500,000	108,410	5.00	+100%
	1974	1,500,000	61,834	5.90	+18%
	1975	2,000,000	205,300	12.50	+112%
1971 - 1975 Average		1,400,000	289,129	5.66	+59%

SOURCE: PLANNING UNIT, MAF 1976.

APPENDIX 5: REQUIREMENTS AND AVAILABILITY OF BASIC CHEMICALS (1971 - 1975)

TYPE		1971	1972	1973	1974	1975	AVERAGE 1971-75
FUNGCIDES (TONNE)	DEMAND	247	300	350	400	600	379.40
	RECEIVED	59	212	195	17	616	220
	UNSATISFIED DEMAND	188	88	155	383	16	159.40
HERBICIDEES (TONNE)	DEMAND	400	400	450	500	550	460
	RECEIVED	301	155	93	124	327	200
	UNSATISFIED DEMAND	99	245	357	376	223	260
INSECTICIDES (TONNE)	DEMAND	1075	1100	1257	1607	2000	1408
	RECEIVED	473	64	108	246	548	288
	UNSATISFIED DEMAND	602	1036	1149	1361	1452	1120

SOURCE: Planning Unit MAF 1976.

APPENDIX 6

THE POPULATION OF UGANDA
BY DISTPICTS 1980

Mubende
510,260

Mpigi
639,919

Masaka
631,156

Rakai
274,588

Bushenyi
524,669

Mbarara
688,153

Kabale
445,421

Mukono

Jinja

Iganga
643,881

Tororo

Mbale

Kapcherwa

K E N Y A

T A N Z A N I A

Lake Victoria

KENYA

International boundaries
District boundaries

```
0          50          100 Kms
0     25        50 Mls
```
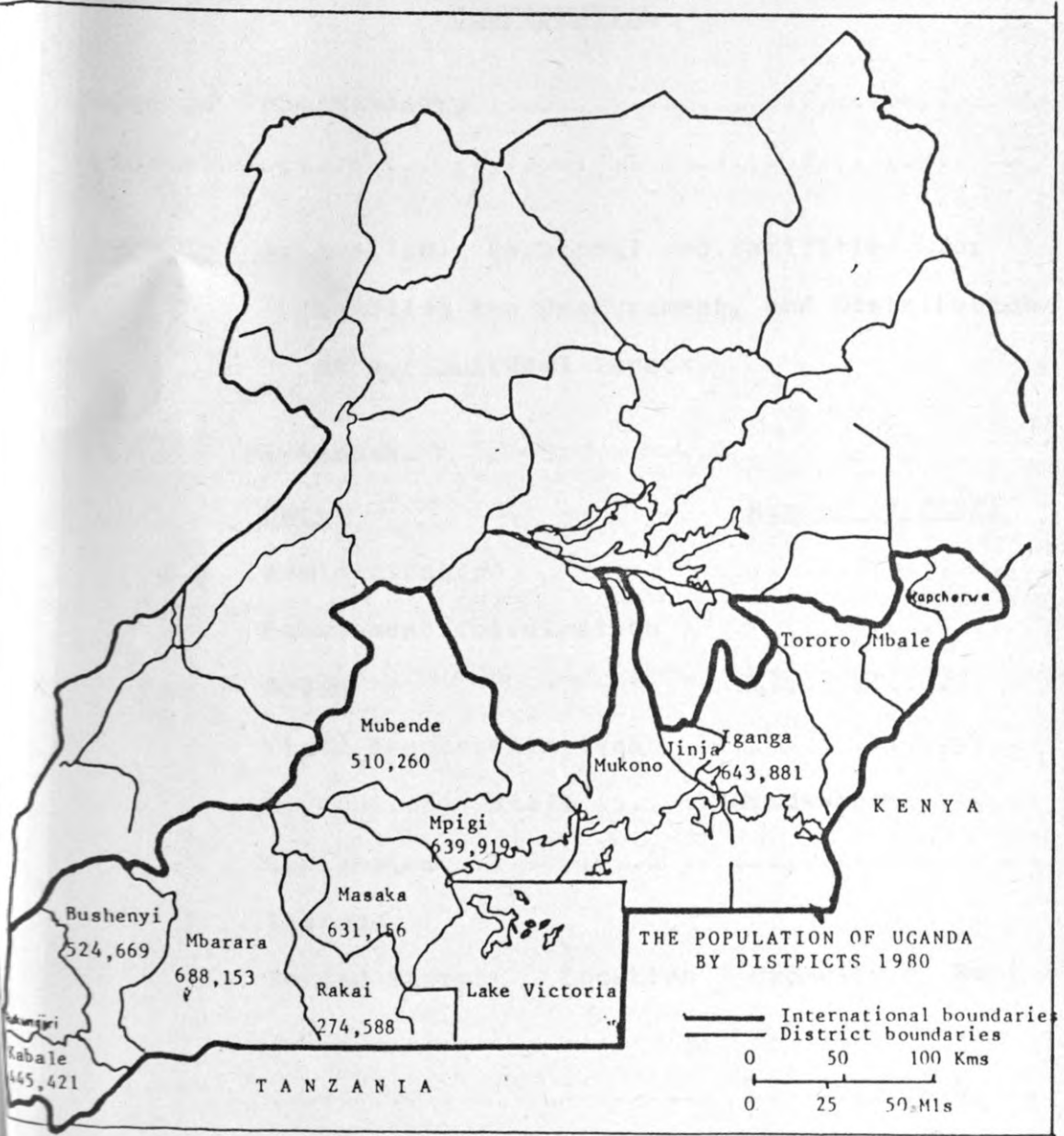
Study Area.

APPENDIX 7.

QUESTIONNAIRE FOR IDENTIFIED MARKETING FUNCTIONARIES

CONFIDENTIAL

Name of Firm/Ministry ....

Address ....

SECTION A: Available Personnel and Facilities for
handling the Procurement, and Distribution
of Agricultural Inputs.

A. 1: Personnel

Duty	Number of Staff
e.g Administration	....
Management/Coordination	....
Sales	....
Field Respresentatives	....
Agricultural Staff .... Graduates	....
Diplomates.................................	

A. 2: Storage

i. Bonded Stores	Location	Capacity	Rent
....	....	....	......
....	....	....	......
....	....	....	......
....	....	....	......

ii. Other stores

....

....

....

....

iii State problems experienced in storage, and
    also your future plans in storage (e.g. new
    stores and their capacities)

    ....
    ....
    ....
    ....

A.3 Transport

a) Own transport Type   Capacity   Number

                  ....

                  ....

                  ....

                  ....

b) Hired Transport Type   Rates/km   Normal
                                         Distances
                                         covered (k

                  ....

                  ....

                  ....

                  ....

c) State problems experienced in transport and
   future plans for improving your transport
   (e.g purchase of new vehicles, types and
    capacity)

....
....
....
....

A. 4 Finances

   a) Source of funds for importation

....
....
....
....

   b) Source of funds distribution/operations

....
....
....
....

   c) Terms of Sales

....
....
....
....

d)   State problems encountered in financing
      importation and distribution.

      ....
      ....
      ....
      ....

AGRICULTURAL INPUTS HANDLED DURING THE LAST THREE YEARS

INPUTS HANDLED DURING THE LAST THREE YEARS

INPUT PROCUREMENT

Item	1984		1985		1986		Purchase Arrangement.	Main Source.	Aproximate Delivery Time (Weeks)	Main Channels of Distribution	Recommended Unit Price in 1986 (Shs.)
	Quantity	Value Shs. (m)	Quantity	Value Shs. (m)	Quantity	Value Shs. (m)					

B.2

(i)   Do you operate retail outlets ? YES/NO.........

(ii)   If yes, which specific areas do you cover?

        ....

(iii)   Are you resticted to any area of operation ?

        Give reasons advanced for such action ....

        ....

(iv)   What is your feeling towards new entrants into

        this business ?

        ....

(v)   Do you prefer customers who come to purchase

        directly from you or those to whom you deliver

        the supplies ?

        ....

(vi)   Can you please give a reason for your answer ...

        ....

(vii)   For how long have you been in this business ?

        ....

(viii) Is the business personal or you share with

        others ? specify

        ....

(ix)   Do you know other traders who deal in the same

        business ?

        ....

(x)   If yes, do you know their sources of supplies?

        ....

(xi)   How then do your selling and purchasing prices
         compare ?

         ....

(xii)   How do you obtain information   on   your
         competitors ?

         ....

(xix)   What do you consider to be your major
         problems in this business ?

         ....

(xiv)   How do you consider the government can   help
         you to become more successful in   your
         business ?

         ....

APPENDIX 8

C O N F I D E N T I A L

QUESTIONNAIRE FOR COOPERATIVE AND PRIVATE FARM SUPPLY SHOPS

Date of Interview 1987

1. FARM SUPPLY SHOP PARTICULARS

i. Name of Supply Shop ....

ii. Owner of Supply Shop ....

iii. Respondents Name and Title ....

iv. District ....Town........Street.......

v. Date when opened ....

vi. Number of people employed: Total ....

Category	No.
....	....
....	....
....	....
....	....
....	....
....	....

II. PROCUREMENT AND DISTRIBUTION.

-List the major items you have been dealing in and

provide the other required information in the table.

| ITEM | INPUT PROCUREMENT | | Delivery time in days | Types of customers e.g. Farmers Traders Societies | Average Unit Price in 1986 |
	Purchase Arrange-ment	Main Source			

III TRANSPORT

3.1 How do you Transport your inputs from your

suppliers?

a) Private means   Type   Capacity

------------   ------------

------------   ------------

------------   ------------

------------   ------------

b) Hired means   ....

....

....

....

IV.   STORAGE

4.1 Type of store:

Permanent .... Temporary...........

4.2 Category of Store

Category	Capacity(M^3)	Rent per month (Sh.)
Own Store	....	....
Rented Store	....	....
Other	....	....

4.3 Average length of storage before whole stock is sold.

Items	Length of storage (days/Weeks/months)
. . . .	. . . .
. . . .	. . . .
. . . .	. . . .
. . . .	. . . .
. . . .	. . . .

4.4 What is your estimated storage costs per month? . . . . Sh/month.

V SALES PROCEDURES

5.1 Indicate the quantities of major items sold in each month during 1986.

Major Item	J	F	M	A	M	J	J	A	S	O	N	D	Total 1986

5.2   For which items do you experience shortages?

....

....

....

....

....

5.3   Which items experience quick or slow sales?

       (tick where necessary)

       <u>Item</u>   <u>Quick Sales</u>   <u>Slow sales</u>

       ....

       ....

       ....

       ....

       ....

       ....

       ....

       ....

       ....

       ....

       ....

       ....

       ....

       ....

       ....

       ....

5.4 How do you determine retail prices? Please give

the range of margin in percentage or shillings.

Major Items	Suppliers Price	Margin	Price in shop	Price in open Market
....	....	....	....	....
....	....	....	....	....
....	....	....	....	....

5.5 Are there any other farm supply shops in your

town or district?

(Name them and give their location)

....

....

....

....

....

....

....

5.6 How do your prices compare to those of other

farm supply shops in your area?

i.   below my price   ....

ii.   above my price   ....

iii.   equal to my price   ....

5.7 If prices are different what do you think is the
     reason for this difference?

     ....
     ....
     ....
     ....

5.8   How do you decide which supplier to get your
      supplies from?

     ....
     ....
     ....
     ....

5.9   Explain by using examples of your major sales
      items, how different suppliers charge different
      prices for similar items.

Item	Suppliers Name and Price		
	1st Supplier	2nd Supplier	3rd Supplier
....	....	....	....
....	....	....	....
....	....	....	....
....	....	....	....

5.10   Do you have any other retail outlet in the district? Yes/No

If yes give name and location and state how you supply them (type of transport and transport costs)

....

....

....

....

VI   SALES PROMOTION AND FARMERS AWARENESS OF INPUTS AVAILABILITY IN THE SHOP

6.1   How do you determine the types of inputs to stock in your shop?

i. ....

ii. ....

iii. ....

iv. ....

6.2   Who informs farmers about the inputs available in your shop?

....

....

....

6.3   What sales promotion efforts do you undertake to attract customers to your shop?

....

....

....

6.4   Who advises   farmers   on   how   to   use   inputs
       purchased from your shop?

       ....
       ....
       ....

6.5   If advisory work is done by yourself give   the
       following particulars about yourself and   other
       members of staff

       i.   Level of education attained   ....

       ii. Type of education e.g. agriculture,
            commerce ....

       iii. Other members of staff with agricultural
             training

             <u>Number</u>   <u>Level of agricultural training</u>

             ....
             ....
             ....

6.6   State whether you or any other member of your

       staff have attended   any short   course   on

       agriculture, cooperatives or inputs sales either

       at the district farm institute or elsewhere.

Category of staff	Type of course	Where held	Duration and year
. . . .	. . . .	. . . .	. . . .
. . . .	. . . .	. . . .	. . . .
. . . .	. . . .	. . . .	. . . .
. . . .	. . . .	. . . .	. . . .
. . . .	. . . .	. . . .	. . . .

6.7   State briefly how you think farmers in your area

       think about inputs use, how they acquire them

       and how they should be assisted.

       . . . .
       . . . .
       . . . .
       . . . .

6.8   Do you have any credit or loan facilities? Yes/No

       If, Yes state the source of loan, amount and

       repayment period

       . . . .
       . . . .
       . . . .
       . . . .

If, no, give the reasons why you don't borrow,
and incentives which would make you borrow

....

....

....

....

VII State your major problems in selling inputs

....

....

....

....

....

....

....

VIII Suggest ways in which government could help in
solving your problems.

....

....

....

....

....

APPENDIX 9: AGRICULTURAL CHEMICALS AND FARM TOOLS HANDLED BY THE VARIOUS FIRMS / INSTITUTIONS

1984				1985				1986			
Cumulative percentage of the Number of firms	Cumulative % of total annual agricultural chemical inputs handled.	Cumulative percentage of the Number of firms.	Cumulative % of the total annual farm tools handled.	Cumulative percentage of the Number of firms.	Cumulative % of total annual agricultural chemical inputs handled.	Cumulative percentage of the Number of firms.	Cumulative % of the total annual farm tools handled.	Cumulative percentage of the Number of firms.	Cumulative % of total annual agricultural chemical inputs handled.	Cumulative percentage of the Number of firms.	Cumulative % of the total annual farm tools handled.
9.1	0.1	12.5	0.0	7.7	0.0	11.1	0.0	7.1	0.0	7.7	0.0
18.2	0.2	25.0	0.1	15.4	0.1	22.2	0.0	14.3	0.0	15.4	0.1
27.3	0.4	37.5	0.2	23.1	0.5	33.3	0.3	21.4	0.5	23.1	0.4
36.4	0.7	50.0	0.7	30.8	0.9	44.4	0.9	28.6	1.0	30.8	0.7
45.5	2.2	62.5	3.3	38.5	2.1	55.6	1.4	35.7	2.2	38.5	2.0
54.5	4.5	75.0	16.0	46.2	3.4	66.7	2.8	42.8	3.8	46.2	3.8
63.6	7.5	87.5	53.7	53.8	5.2	77.8	12.0	50.0	5.7	53.8	5.7
72.7	12.5	100.0	100.0	61.5	8.2	88.9	24.9	57.1	8.2	61.5	8.3
81.8	29.1			69.2	11.2	100.0	100.0	64.3	14.2	69.2	12.3
90.9	47.4			76.9	19.5			71.4	20.2	76.9	24.1
100.0	100.0			84.6	35.0			78.6	30.0	84.6	47.?
				92.3	63.0			85.7	44.9	92.?	60.?
				100.0	100.0			92.9	58.0	100.0	100.0
								100.0	100.0		

APPENDIX 10.

PERCENTAGE OF AGRICULTURAL CHEMICALS AND FARM TOOLS

HANDLED BY THE VARIOUS SECTORS, BY CATEGORIES.

CATEGORY OF INPUT	YEAR	% OF TOTAL BY PRIVATE FIRMS	% OF TOTAL BY NON-GOVT ORGAN.	% OF TOTAL BY GOVT. SECT.	% OF TOTAL BY COOPERATIVES
HERBICIDES		80.56	-	14.34	5.12
INSECTICIDES		35.82	-	60.99	3.21
FUNGICIDES		47.27	-	30.97	21.78
ACARICIDES		51.98	-	-	47.83
FERTILIZERS		2.88	-	44.61	52.52
DEWORMERS		62.05	-	-	37.96
DISINFECTANTS		100.00	-	-	-
FARM TOOLS		13.27	-	40.41	46.34
HERBICIDES		19.17	-	41.42	39.43
INSECTICIDES		17.15	-	80.42	2.43
FUNGICIDES		21.41	-	32.98	45.61
ACARICIDES		-	-	11.89	88.11
FERTILIZERS		-	-	34.95	65.05
DEWORMERS		21.24	-	-	78.76
DISINFECTANTS		8.24	-	-	91.36
FARM TOOLS		14.00	-	10.00	75.00
HERBICIDES		37.98	-	60.05	1.97
INSECTICIDES		1.00	-	97.00	2.00
FUNGICIDES		11.43	-	52.95	35.62
ACARICIDES		6.47	-	77.15	16.38
FERTILIZERS		25.32	-	22.68	52.00
DEWORMERS		1.75	-	62.42	35.83
DISINFECTANTS		5.55	-	81.82	12.63
FARM TOOLS		35.00	3.00	29.00	33.00

- Did not handle the inputs in question

Source: Compiled from questionnaire responses

COMARISION OF RETAIL PRICES AND MARGINS CHARGED AT SOME FARM SUPPLY SHOPS

FARM SUPPLY SHOP (F.S.S)		DUDU BITOKE 25kg bag	AMBUSH (a litre)	FENITRO-THION (a litre)	DIELDRIX	FERTILIZERS	ROUND-UP	GRAMAXONE per litre	TORDON	DITHANE M-45	PENCOZEB (per kg)	HOES	PANGAS	SPRAY PUMPS CP (15)
LUKAJO	SUPPLIERS PRICE	27,000	6,000	9,000		22,000	32,000			6,500	6,000	6,200		14,000
	F. S. S. PRICE	35,000	9,000	12,000		28,000	40,000			8,500	10,000	7,500		18,000
	% MARGIN	29	50	33		27	25			31	67	21		29
	OPEN MARKET PRICE	45,000	17,000	14,000		52,000	45,000			10,000	12,000	10,000		220,000
	% MARGIN/SUPPLIES	67	183	56		136	41			54	100	61		58
FAMOUS DISTRIBUTORS	SUPPLIERS PRICE		6,000		27,000	28,000	42,000	17,000		8,000		6,500		150,000
	F. S. S. PRICE		9,000		40,000	31,000	50,000	19,500		12,000		7,500		180,000
	% MARGIN		50		48	11	19	15		50		15		20
	OPEN MARKET PRICE		17,000		56,000	50,000	60,000	26,500		15,000		10,000		200,000
	% MARGIN/SUPPLIES		183		107	79	43	56		98		54		33
PETSHOP	SUPPLIERS PRICE	27,500			27,000	24,000		15,000		6,500	5,500	6,000		150,000
	F. S. S. PRICE	35,000			42,000	30,000		18,000		8,500	6,900	7,200		180,000
	% MARGIN	27			56	25		20		31	25	20		20
	OPEN MARKET PRICE	45,000			55,000	52,000		25,000		13,000	12,500	9,000		220,000
	% MARGIN/SUPPLIES	64			104	117		67		100	127	50		47
BUKOLA	SUPPLIERS PRICE	34,000	7,500	7,000		28,000	32,000	17,500		6,500	6,500	6,200		140,000
	F. S. S. PRICE	39,000	15,000	11,500		50,000	36,000	20,000		8,500	11,000	9,000		150,000
	% MARGIN	15	100	64		79	13	14		31	69	45		7
	OPEN MARKET PRICE	45,000	17,500	14,000		52,000	60,000	26,000		14,000	12,500	12,000		220,000
	% MARGIN/SUPPLIES	32	133	100		86	88	49		115	92	94		57
WEST MENGO	SUPPLIERS PRICE		6,000	6,500	25,000	14,400		11,000		6,500		6,000		140,000
	F. S. S. PRICE		8,500	11,000	40,000	26,000		18,000		8,500		6,500		200,000
	% MARGIN		42	69	60	81		62		30				43
	OPEN MARKET PRICE		17,000	14,000	55,000	38,000		25,000		10,000		12,000		250,000
	% MARGIN/SUPPLIES		183	115	120	164		125		115		100		79

APPENDIX 11 (continued...)

FARM SUPPLY SHOP (F.S.S)		DUDU BITOKE 25kg bag	AMBUSH (a litre)	FENITRO-THION (a litre)	DIELDRIX	FERTILI-ZERS
SOUTH BUKEDI	SUPPLIERS PRICE	43,000	15,000		43,000	24,000
	F. S. S. PRICE	46,000	18,500		54,500	38,000
	% MARGIN	7	23		27	58
	OPEN MARKET PRICE	60,000	20,000		60,000	50,000
	% MARGIN/SUPPLIES	40	33		40	108
BUGISU CO-OPERATIVE UNION	SUPPLIERS PRICE	38,650		12,000		16,000
	F. S. S. PRICE	50,000		14,500		25,000
	% MARGIN	29		21		56
	OPEN MARKET PRICE	60,000		20,500		52,000
	% MARGIN/SUPPLIES	55		71		225
TUKOLE KANGULUMIRA	SUPPLIERS PRICE	38,750	9,000		41,000	25,000
	F. S. S. PRICE	40,000	12,000		49,650	32,000
	% MARGIN	3	33		21	
	OPEN MARKET PRICE	54,000	18,000		59,500	50,000
	% MARGIN/SUPPLIES	39	100		43	
SEBEI ELGON	SUPPLIERS PRICE			12,500	12,500	18,500
	F. S. S. PRICE			24,650	15,000	37,000
	% MARGIN			97	20	100
	OPEN MARKET PRICE			27,850	21,000	50,000
	% MARGIN/SUPPLIES			123	68	170
BANYANKOLE KWETERANA	SUPPLIERS PRICE	45,000	15,900	14,620		
	F. S. S. PRICE	51,650	20,000	25,000		
	% MARGIN	15	26	70		
	OPEN MARKET PRICE	60,000	25,000	30,000		
	% MARGIN/SUPPLIES	33	57	105		

ROUND-UP	GRAMAXONE per litre	TORDON	DITHANE M-45	PENCOZEB (per kg)	HOES	PANGAS	SPRAY PUMPS CP (15)
							150,000
	18,650		5,580		6,500		195,000
	23,500		10,000		10,000		30
	26		79		54		250,000
	30,000		15,000		12,000		67
	61		169		85		
				10,500	6,500		180,000
	18,750			12,000	13,000		200,000
	24,000			14	100		11
	28			15,000	15,000		250,000
	31,500			43	130		38
	68						
	19,590			7,500	6,000		
	23,650			12,000	7,500		
	21			68	25		
	30,000			13,500	10,000		
	54			80	67		
					8,500		150,000
					10,000		210,000
					18		40
					13,000		250,000
					53		67
	13,000		6,468		7,150		175,000
	17,500		8,500		9,000		220,000
	TE		31		26		26
	23,000		15,000		10,000		270,000
	73		132		40		54

FARM SUPPLY SHOP (F.S.S)		DUDU BITOKE 25kg bag	AMBUSH (a litre)	FENITRO-THION (a litre)	DIELDRIX	FERTILI-ZERS
WESTERN FARM SUPPLY SHOP	SUPPLIERS PRICE		16,000			
	F. S. S. PRICE		18,000			
	% MARGIN		13			
	OPEN MARKET PRICE		25,500			
	% MARGIN/SUPPLIES		59			
RWARIGANGURA GROUP CO-OPE-RATIVE UNION	SUPPLIERS PRICE					
	F. S. S. PRICE					
	% MARGIN					
	OPEN MARKET PRICE					
	% MARGIN/SUPPLIES					
KIGEZI VEG. GROWERS	SUPPLIERS PRICE		9,000		42,000	22,500
	F. S. S. PRICE		17,650		52,000	29,000
	% MARGIN		96		23	28
	OPEN MARKET PRICE		25,500		60,000	50,000
	% MARGIN/SUPPLIES		183		42	122
KYOTERA F.S.S	SUPPLIERS PRICE	40,000	8,000			20,000
	F. S. S. PRICE	48,000	17,500			30,000
	% MARGIN	20	118			50
	OPEN MARKET PRICE	52,000	25,650			48,000
	% MARGIN/SUPPLIES	30				140
MASAKA CO-OPERATIVE UNION	SUPPLIERS PRICE	35,000		6,000		
	F. S. S. PRICE	40,000		11,000		
	% MARGIN	14		83		
	OPEN MARKET PRICE	51,000		27,500		
	% MARGIN/SUPPLIES	47		358		

ROUND-UP	GRAMAXONE per litre	TORDON	DITHANE M-45	PENCOZEB (per kg)	HOES	PANGAS	SPRAY PUMPS CP (15)
50,000			10,650	10,000	15,500		180,000
60,000			15,000	12,000	16,500		250,000
20			40	20	6		39
95,000			15,000	13,650	16,500		265,000
90			40	36	6		47
33,000					6,500		
50,000					7,500		
51					15		
85,000					12,500		
157					92		
			5,880		6,750		150,000
			8,500		9,000		210,000
			45		33		40
			15,000		12,500		265,000
			155		85		77
60,000	10,000		10,000		7,500		85,000
62,500	12,500		13,000		9,000		250,000
4	25		30		20		194
95,000	18,000		15,000		12,500		250,000
58	89		50		67		194
36,000			5,500		8,400		150,000
52,500			8,500		11,000		195,000
45			54		31		30
90,000			15,000		12,500		250,000
150			172		49		67

FARM SUPPLY SHOP (F.S.S)		DUDU BITOKE 25kg bag	AMBUSH (a litre)	FENITRO-THION (a litre)	DIELDRIX	FERTILI-ZERS
NTEGANANGI TRADERS CO-OPERATIVES	SUPPLIERS PRICE	43,000			40,000	26,000
	F.S.S. PRICE	45,000			48,000	40,000
	% MARGIN	5			21	53
	OPEN MARKET PRICE	60,000			58,000	48,000
	% MARGIN/SUPPLIES	40			45	84
KAAHA FARMING AND TRADING COMPANY	SUPPLIERS PRICE	30,000	8,000		47,000	
	F.S.S. PRICE	36,250	11,000		52,000	
	% MARGIN	21	38		11	
	OPEN MARKET PRICE	68,750	12,500		80,000	
	% MARGIN/SUPPLIES	129	56		70	
LUGAZI GROWERS COOPERATIVE SOCIETY	SUPPLIERS PRICE	30,750	7,500	120,000	45,500	24,000
	F.S.S. PRICE	37,000	9,000	125,000	50,000	30,000
	% MARGIN	20	20	42	10	25
	OPEN MARKET PRICE	72,000	10,000	130,000	82,000	36,000
	% MARGIN/SUPPLIES	134	40	83	100	50

SOURCE: Own compilation from questionnaire responses.

ROUND-UP	GRAMAXONE (per litre)	TORDON	DITHANE M-45	PENCOZEB (per kg)	HOES	PANGAS	SPRAY PUMPS CP (15)
	16,000		8,500		6,500		150,000
	18,000		13,750		8,500		200,000
	15		61		31		33
	25,000		15,000		13,000		250,000
	56		76		100		67
16,000	38,500		9,500		6,500	6,500	
18,500	45,000		11,250		8,000	8,000	
16	100		18		23	23	
	68,000		11,750		13,500	12,000	
	8		24		108	85	
	40,000		9,750	9,000	7,000	6,500	
	47,000		12,000	11,500	8,500	7,500	
	18		23	28	21	15	
	67,000		13,000	12,000	14,000	12,500	
	68		35	33	100	92	

-170-

APPENDIX 12

FORMULA 1.   INPUTS IMPORTED BY UCCU

(I) INVESTORIABLE COSTS

(a) C & F or CiF or FOB Value   . . . .

(b) SGS ....% on F.O.B.   . . . .

(c) Withholoding tax 2%   . . . .

(d) Dealers' Commission 1/2%
     C & F/Cif/FOB   . . . .

(e) U.A.B.T.* Commission 1/2%   . . . .

(f) Bank Charges   . . . .

(g) Handling expenses   . . . .

(h) Sales Tax/duty (Variable)   . . . .

     STOCK VALUE (Sub-Total)
                                            ================

(II) NON-INVENTORIABLE COSTS:

(a) Interest on overdraft estimate
     42% for 4 months   . . . .

(b) Transport within Kampala   . . . .

(c) Loading and off-loading   . . . .

(d) Other overheads (estimate) 15%   . . . .

(e) Total cost-ex. Kawempe   . . . .

(f) Add 10% Profit Mergin (Retaillers)   . . . .
     SUB TOTAL (II)
                                            ================

     SELLING PRICE = SUBTOTAL (I) + SUBTOTAL (II)

*   Uganda Advisory Board of Trade.

FORMULA 2: DONOR INPUTS DISTRIBUTED BY UCCU.

     UCCU DEPOT PRICE = Ia+Ib+....+Ih+IIb+IIc+IId.

     UNION/SOCIETY SALES PRICE = UCCU DEPOT PRICE
                                 + 10% PROFIT MARGIN.

FORMULA 3: UCCU DEPOT PRICE = IIa + IIb + IIc + IId

UNION SALES PRICES = UCCU DEPOT PRICE +
10% OF THE PROFIT MARGIN

NOTE: Formula 2 and 3 are based on the numbering in

price of the formula for Imported goods.

Source: Uganda Central Cooperative Union, Kampala.

APPENDIX (13)

PRICE BUILD-UP FOR ASSOCIATED CHEMICAL

INDUSTRIES' IMPORTS

1.   U.A.B.T. 1/2 % CHARGE

2.   First BID Ammount + BANK CHARGES   ....

3.   2nd   BID Ammount + BANK CHARGES   ....

4.   3rd   BID Ammount + BANK CHARGES   ....

5.   Differences in Rates Charged   ....

6.   LOCAL INSURANCE COST   ....

7.   S.G.S. 1% Charge + Bank Charges   ....

8.   LETTER OF CREDIT (4C) CHARGES
      + BANK CHARGES   ....

9.   TELEPHONE AND TELEXES   ....

10.   WITH-HOLDING TAX, 2% OF Cif   ....

11.   SALES TAX and DUTY   ....

12.   OFF LOADING EXPENSES   ....

13.   PHOTOCOPIES   ....

14.   CLEARING CHARGES   ....

15.   ADVERTISING CHARGES   ....

16.   MISCELLANEOUS CHARGES   ....

      TOTAL LANDED COST
                                                ===============

      UNIT LANDED COST   ....

      ESTIMATED UNIT SELLING PRICE   ....
                                                ===============

SOURCE: Associated Chemical Industries, Kampala.

APPENDIX 14

STORAGE FACILITIES AND RELATED STORAGE PROBLEMS.

FIRM OR INSTITU-TION CODE NUMBER	BONDED STORES		OTHER STORES		STORAGE PROBLEMS		
	NUMBER	OWNERSHIP	NUMBER	OWNER-SHIP	STORES NOT ENOUGH	INSECU-RITY	OTHERS
1	2	RENT	3	RENT	-	-	CONTROL OF PESTS AND
2	-	-	4	OWN	-	\/	INSECTS-EXPENSIVE
3	na	na	na	na	na	na	na
4	-	-	1	OWN	-	-	-
5	-	-	1a	OWN	-	-	LACK QUARANTINE
6	1	OWN	3	OWN	-	-	STORES FOR INSECTICIDES INPUTS ARE STORED FAR FROM FARMERS
7	-	-	b		-	-	-
8	1	RENT	-	-	-	-	-
9	-	-	2	RENT	-	-	‡
10	-	-	1	RENT	-	-	-
11	4	OWN	-	-	-	-	-
12	1	OWN	-	-	-	-	‡
13	-	-	3	RENT	-	\/	-
14	-	-	-	-	\/	-	‡
15	-	-	3	RENT	-	\/	CONTROL OF PESTS AND INSECTS-EXPENSIVE
16	-	-	2	OWN	-	-	-
17	-	-	4	3 OWNED 1 RENT	\/ for RENT	-	-
18	-	-	10	RENT	\/	\/	STORES ARE FAR FROM FARMERS.
19	-	-	5	OWN	-	\/	-
20	-	-	1	RENT	-	-	-
21	-	-	1	RENT	-	-	-
22	1	OWN	2c	OWN	-	\/	-
23	1	OWN	-	-	\/	-	-

SOURCE: COMPLIED FROM SURVEY RESULTS.

NOTE: - means no stores/no storage problems.
         na = Information not provided
         a = have 4 temporal and 4 permanent metal huts.
         b = hires only when necessary.
         c = in addition each district cooperative union has its store.
         ‡ = No incentive to build stores due to shortages of inputs.
         \/ = gave this as a positive response.

APPENDIX 15

SOURCES OF FUNDS FOR IMPORTATION AND DISTRIBUTION/OPERATIONS FOR MAJOR MARKETING FUNCTIONARIES.

CODE		Marked NUMBER(s) (1–23)
FUNDS FOR DISTRIBUTION/OPERATIONS	Loans From Friendly Companies.	11
	Funds From Treasury.	11, 16, 17, 18, 19, 20, 21, 22
	Bank-Overdrafts	11
	Short-Term Commercial Loans.	1, 4, 5
	Own Savings.	1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 13, 15
	Donor Agency Firms	13, 14, 15, 18, 21
	Importing Firms	3
FUNDS FOR IMPORTATION	Treasury	16, 17, 18, 19, 20, 21, 22
	Long-Term Bank Loans	11
	Own Savings	1, 2, 3, 4, 7, 8, 9, 11, 13
	Consignment Stock	1, 3
	Solicit Funds From Donors	1, 3, 4, 7, 9, 12, 13, 14, 18, 19, 20, 22
	Commercial Bank Overdrafts.	1, 4, 7, 10, 13
	Short-term commercial loans	1, 2, 4, 6, 8, 10, 12

NUMBER: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

SOURCE: COMPILED FROM QUESTIONNAIRE RESPONSES.

NOTE " t " Indicates firm or institution giving that response.

APPENDIX 16

TERMS OF SALES FOR MAJOR MARKETING FUNCTIONARIES

INSTITUTION OR FIRM CODE NUMBER	TERMS OF SALES			
	CASH ONLY	CASH AND CREDIT	CREDIT ONLY	FREE
1	\/			
2	\/			
3	\/	\/‡		
4		\/		
5		\/	\/‡‡	
6	\/			
7	\/			
8				
9	\/		\/‡	
10	\/		\/‡	
11		\/		
12		\/		
13				\/
14				\/
15		\/		
16		\/‡		
17		\/		
18	\/			
19	\/			
20				\/
21		\/		
22	\/			
23	\/			

SOURCE: COMPILED FROM QUESTIONNAIRE RESPONSES.

NOTE: " \/ " Indicates a firm or institution giving the

response.

‡ short-term credit to only good customers

‡‡ extended to UCCU and BUKOLA General

enterprises only.

APPENDIX 17

MAJOR PROBLEMS ENCOUNTERED IN FINANCING IMPORTATION AND DISTRIBUTION

	FIRM OR INSTITUTION CODE NUMBER →	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
DISTRIBUTION PROBLEMS	Insufficient Funds From Treasury.																†	†			†			†
	Lack of enough capital and Credit Facilities	†	†	†	†			†	†	†	†	†										†		
	Heavy Hotel, Food, etc Bills					†			†	†				†	†			†	†		†	†		†
	High Motor Running expenses	†	†				†	†		†				†	†		†				†	†		
IMPORTATION PROBLEMS	Fluctuations in Exchange rates.					†		†																
	Treasury takes too long to release funds																	†	†		†	†	†	†
	Insufficient local cover		†	†	†																			
	Interest on Bank Loans too High	†	†	†	†	†	†	†		†		†	†	†	†	†		†	†		†			†
	Lengthy time b/w obtaining I.P & opening L/C.			†	†		†	†			†	†					†	†		†				
	Forex. Allocation Takes too long	†	†	†	†	†	†	†	†		†	†	†				†	†		†	†		†	†
	Shortage of foreign Exchange	†	†	†	†	†	†	†	†		†	†					†	†		†				†

SOURCE: Compiled from Questionnaire responses.

NOTE: " † " Indicates firm or institution giving the corresponding response

I.P. = Import Permit

APPENDIX 18
CATEGORY OF PERSONNEL AND ADVISERS TO CUSTOMERS ON
USE OF INPUTS THEY PURCHASE:

FSS CODE NUMBER	PERSONNEL EMPLOYED (CATEGORY)					OFFERS ADVICE TO CUSTOMERS ON INPUT USE	
	Graduates of Agric. or Vet.	Diplomates of Agriculture	High School Drop-outs	Have had course at D.F.I	Diplomates of C.B.M	MAF/MAIF Extension officers	FSS's Sales Staff
1	1	1	-	2	-	‡	
2	-	-	-	-	-		‡
3	-	-	5	1	1	‡	‡
4	-	-	-	-	-	‡	
5	-	-	1	-	-		‡
6	-	1	-	1	-		‡
7	3	1	-	-	-		
8	-	-	-	-	-	‡	
9	1	-	1	-	-		‡
10	-	1	-	-	-		‡
11	-	1	-	-	-		‡
12	-	2	1	-	-		‡
13	1	-	-	-	-		‡
14	-	-	1	2	-		‡
15	-	-	-	-	1		‡
16	-	-	-	-	-	‡	‡
17	-	-	1	-	-		
18	-	-	-	-	-	‡	
19	-	-	1	-	-		‡
20	-	1	-	1	-		‡
21	-	-	-	-	-	‡	
22	1	-	-	2	-		‡
23	1	2	-	3	1	‡	‡
24	-	1	-	-	-	‡	‡
25	1	-	-	-	-		‡
26	-	-	1	-	-	‡	‡
27	-	-	1	-	-		‡
28	-	-	1	1	-		‡
29	-	-	1	-	1		
30	-	-	4	-	-		‡
31	-	-	-	-	1		‡

SOURCE: Compiled from Questionnaire responses.
NOTE: - implies no employee in that category
  ‡ implies FSS which uses the corresponding
  category to advise customers.

C.B.M = Cooperative or Business Management
D.F.I = District Farm Institute

APPEDIX 19

MAJOR MARKETING FUNCTIONARIES AND FARM SUPPLY SHOPS

AND   THEIR CODE NUMBERS

FIRMS/INSTITUTIONS	FARM SUPPLY SHOPS.
1.Industrial and Agricultural chemical industries Ltd.	1. SEBEI ELGON F.S.S 2. South Bukedi coop. Union F.S.S
2.Associated chemical industries	3. BUGISU Growers Coop Union F.S.S
3.Mayer & Baker (U) Ltd.	4. IGANGA F.S.S.
4.Shell (U) Ltd.	5. TUKOLE KANGURUMIRA F.S.S
5.Twiga chemical industries	6. TICARO ENTERPRISES
6.Welcome (U) Ltd.	7. MAKULA FARMERS F.S.S
7.Agricultural enterprises (U) Ltd.	8. LUGAZI GROWERS F.S.S
8.Uganda Hardwares (Ltd)	9. UCCU F.S.S
9.General Machinery (U) Ltd	10. West Mengo Coop. Union F.S.S
10.B.A.T (1984, U. Ltd)	11. PET SHOP
11.Uganda Tea growers Corporation.	12. KIREKA SANYU COMPANY
12.Gailey & Roberts (U) Ltd	13. Uganda agricultural Supplies
13.Uganda Red Cross	14. LUKAJO FARM Supplies
14.UNHCR	15. Kyandondo farmers F.S.S
15.UCCU	16. BUKOLA General enterprises
16.Agricultural Rehabilitation programme - UCB	17. MUSAJJAWAZA Stores
17.MINISTRY OF REHABILATION	18. Bweyinda Hardwares
18.MAF	19. FAMOUS DISTRIBUTORS
19.Dairy Development Committee	20. KAAMA FARMING & TRADING
20.MAIF - Tsetse Control	21. Uganda Farm Masters
21.MAIF - VETERINARY	22. Ntegawangi Traders Co.
22.Cocoa-Development Project	23. MASAKA Coop. Union F.S.S

FIRMS/INSTITUTIONS		FARM SUPPLY SHOPS.
- MAF	:	24. Kyotera Farm Supplies
23.Agricultural Reconstruction	:	25. BANYANKORE Kweterana Livestock
Programme - MAF	:	F.S.S
24.NILE CHEMICAL‡	:	26. BANYANKORE Kweterana GENERAL
	:	F.S.S
25.PFIZER‡	:	
26.MOTOR-MART (U) Ltd‡	:	27. KABEREBERE CONSUMERS F.S.S
27.CIGA - GEIGY T.M.S Co. Ltd‡	:	28. Western Farm Supplies Agency
28.FARM INPUTS (U) Ltd‡	:	29. KIHIHI CONSUMERS Coop. SOCIETY
29.ARMSTRADES (U) Ltd‡	:	30. Rwabigangura F.S.S
	:	31. KIGEZI VEGETABLE GROWERS F.S.S

‡ = These firms were identified and interviewed. However they had
handled no inputs for the period 1984-1986 and were therefore excluded
from the analysis.
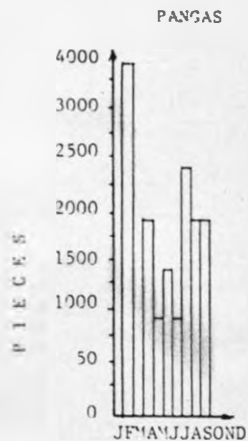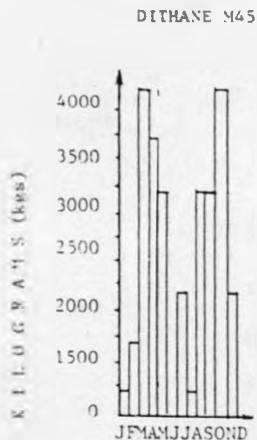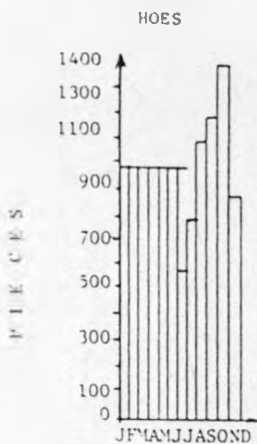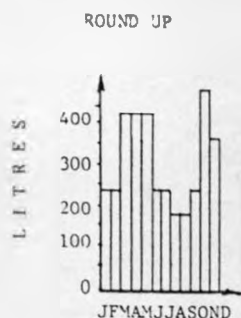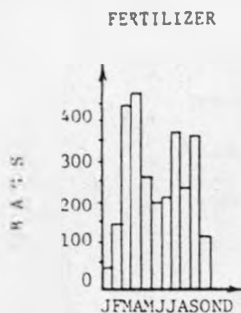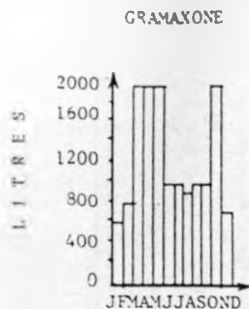
SOURCE: COMPILED FROM SURVEY RESULTS

HYVAR-X
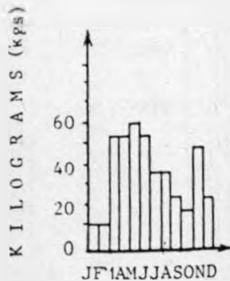
DUDUBITOKE
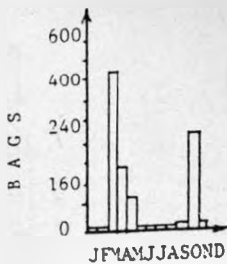
CP 15 PUMP
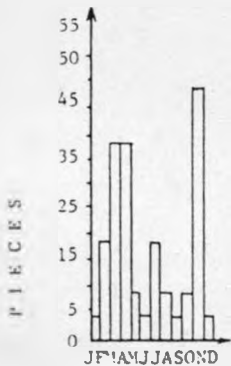
APPENDIX 21

SEASONALITY OF SALES MBALE

SEASONALITY OF SALES RAKAI
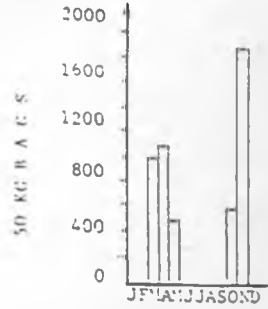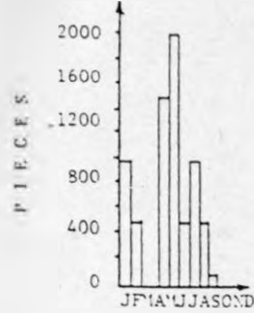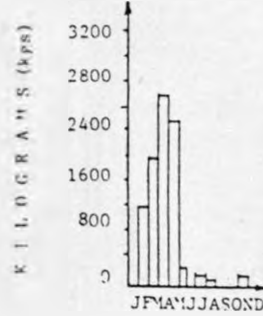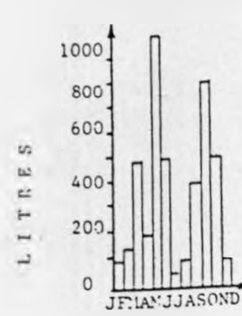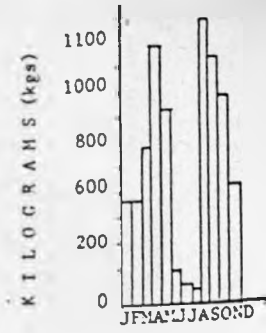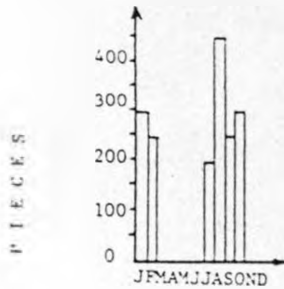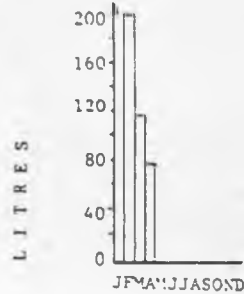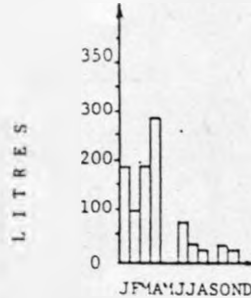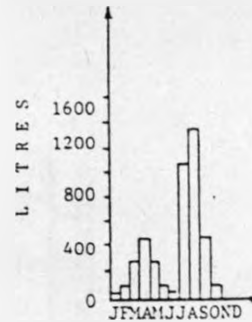
SOURCE: Compiled from Questionnaire responses

Appendix 22: SEASONALITY OF SALES MBARARA/BUSHENYI

AMBUSH CY
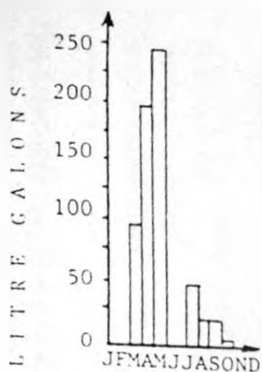
TORDON
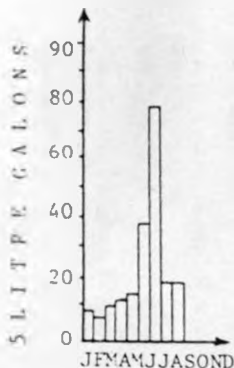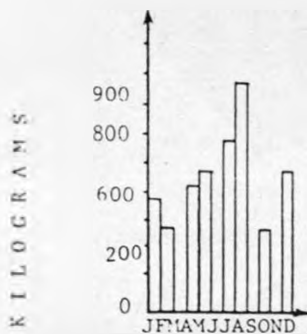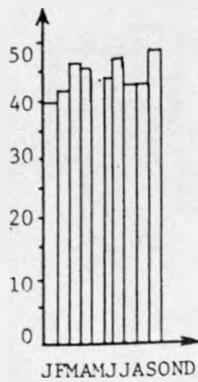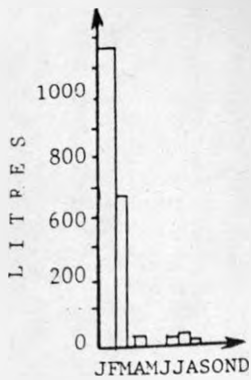

PANGAS
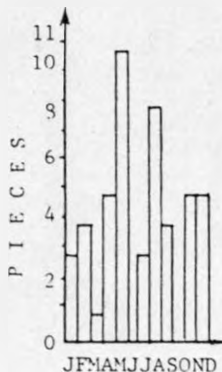
DUDUBITOKE
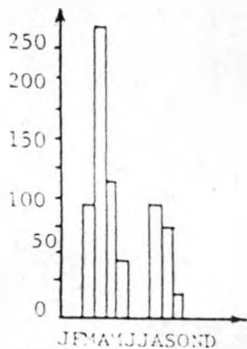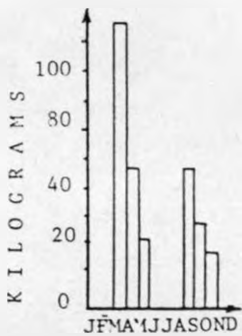

WIRE NAILS

SOURCE: Compiled From Survey Results
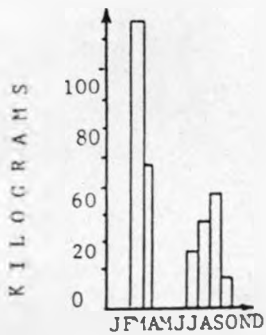
DOOM.V.POWDER

FENITROTHION

DALAPON

SHELL COPPER

APPENDIX 23

TYPES AND ANNUAL VALUES OF AGRICULTURAL INPUTS HANDLED BY MINISTRIES,
CO-OPERATIVE UNION AND PRIVATE FIRMS (1981-1983 RETURNS)

Ministry/Firm	Annual Value of Inputs (Million Shillings)	1981 U.Shs. 1214.79	1982 U.Shs 3487.159	1983 U. Shs 4415.291	1981/83 Average U.Shs 9117
	Types of Inputs Handled	%	%	%	%
Min. Agriculture and Forestry	All types except veterinary drugs.	10.3	17.6	39.6	22.5
Min. of Animal Industry and Fisheries	Vet. chemicals, drugs feeds, breeding stock and tractors.	10.4	21.5	15.4	15.8
Uganda Central Co-operative Union.	All types except breeding stock and tractors.	5.0	5.8	13.7	8.2
Twiga Chemical Industries.	Agric. chemicals and appliance equipment.	1.4	26.0	7.7	11.7
Ciba Geigy	Agric. chemicals vet. drugs and appliances.	18.5	7.9	-	8.8
Farm inputs (U) Ltd. Hoechsts Ltd.	AGRICULTURAL CHEMICAL	18.5	4.6	1.0	8.0
Pfizer Ltd.	Veterinary drugs and chemicals.	1.3	0.9	0.4	0.9
Wellcome Limited.	Veterinary drugs and chemicals.	0.9	0.1	0.6	0.5
Farm Machinery Distribution Limited.	Tractors and Implements.	5.2	5.7	5.6	5.6
Gailey and Roberts.	General Agric. machinery and equipment.	0.5	-	2.0	0.8
General Machinery Limited.	Tractors and implements general machinery and tools.	28.0	9.9	14.0	17.3

SOURCE: Muthee, 1986 STRATEGIES FOR IMPROVING AVAILABILITY AND DISTRIBUTION
OF AGRICULTURAL INPUTS IN SOUTH WESTERN UGANDA. MUTHEE DEC. 1986.