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A SURVEY OF AGRICULTURAL DEVELOPMENT  
IN THE SMALL FARM AREAS OF KENYA  
SINCE THE 1920s

By

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ABSTRACT

This paper summarises briefly some of the principle features of agricultural development in small farm areas of Kenya since the 1920s, in an attempt to increase understanding of current inequalities between different areas by adding a historical dimension. A primary goal of the paper is to suggest a fruitful area for further research by indicating how such investigations can contribute to an understanding of the current situation.

This paper puts particular emphasis on the role and activities of the Agricultural Department, the reports of which provided the most important source of material. It uses differences in the growth of marketed output from different parts of Kenya as the primary indicator of differences in development because this is the only indicator on which detailed information is readily available. The paper shows how close the marketed output of Nyanza and Central Provinces was until the mid-1950s, and how fast Central Province drew ahead after that. It also shows how concentrated the benefits of the coffee boom of the 1950s were, and how similar the more recent expansion of pyrethrum, tea and dairying appears to be in this respect. This paper highlights the more readily available information. Further work would certainly enhance our understanding of the processes through which the inequalities develop as well as predicting likely future patterns and suggesting means of broadening the development process.

A SURVEY OF AGRICULTURAL DEVELOPMENT IN THE SMALL FARM AREAS OF KENYA  
SINCE THE 1920S

"To him that hath shall be given; from him that hath not, even  
that which he hath shall be taken away..."

INTRODUCTION

This paper grew out of an attempt to summarise briefly the origins of the present disparities in agricultural development in small farm areas in Kenya. No broad historical account of development in African areas appears to be available, and it was necessary to go back to primary sources to get even a rough account of African agricultural development since the 1920s. This paper is offered as a quick run-through of the material. It summarises the more important and more easily accessible facts in the hope that this will be useful to others until fuller accounts become available, and in the hope that it will suggest an area for further research.

As a background to understanding the relative positions of different small farm areas in Kenya today, the historical material is valuable. In going over it, one is struck by the wealth of some of the easily available sources, but also by the many data gaps that can only be filled by researching more thoroughly beyond the obvious primary sources. In this paper, the main sources used are the annual reports of the Native Affairs Department, the Agricultural Department, and the Veterinary Department and a few major official reports such as the Carter Land Commission, the Maher reports on soil erosion in the 1930s, and the 1930 Agricultural Census report. More recent official statistical sources, published papers and books and some unpublished papers and Ph.D. dissertations that are relevant to the main theme have also been consulted. A full list of sources is given at the end of the paper.

The paper concentrates on the growth of output, and particularly the growth of marketed output from different provinces and districts as the primary measure of development. Determinants of the growth in output are many and complex and include such factors as the growth of markets for agricultural products, the growth of markets for labour, the provision of infrastructure, the provision of educational facilities, the introduction of new technology, exposure to new consumption possibilities, and so on. Important agents of change include not only the Government, but also the Missions and European and Asian enterprises for which many members of small farm families worked at one time or another. In this paper, the emphasis is heavily on Government policy and Government influence, but it must be remembered that this is only part of the story, and that the Government was by no means always the most important influence on the pace and the pattern of development that emerged.



Early Beginnings

The development of small farms in Kenya was extremely slow in the early period of colonial rule when little attention was paid to the African areas and many Government policies had the effect of retarding rather than promoting their development. For much of the early period, and certainly in the 1920s, the primary concern of the colonial Government was the development of European agriculture, and African agriculture was only developed to the extent that it was not competitive with the interests of the European sector. The African areas provided labour to work on European farms and much policy was influenced by the need to maintain or augment this labour supply. The African areas also supplied the European areas with livestock for breeding into the European herds and as work oxen. This trade in livestock necessitated a measure of veterinary control in African areas at an early date, and Veterinary Officers preceded Agricultural Officers in many African areas for this reason.

The development of the African areas could proceed provided it did not seriously hamper the supply of labour to European farms, and provided it relied on products that did not compete for markets with those produced by Europeans. Thus, the early development of the African areas was based on food crop and livestock production for subsistence, to improve the diet and reduce the incidence of famine, and on a few cash crops that did not seriously threaten to reduce the European farm labour supply.<sup>1</sup> Efforts were made to improve the varieties of food crops grown, to improve cultivation practices, and to introduce more crops that could serve as famine reserves. The cash crops that were developed first were cotton and then wattle. Hides and skins and live animal exports were also important sources of cash at an early stage. As early as the 1920s it was recognised that the most suitable crop for the highland areas was coffee, but this was actively discouraged until the 1930s when it was given very restricted support in areas far away from European coffee growing.

The strength of the European farming lobby waxed and waned depending on how well European farming was doing.<sup>2</sup> When European farming was

1. There were some people who argued that the labour supply would be increased rather than decreased by development in the African areas but the opposite view was more common.

2. Brett (23) makes this point.

prospering, the attention paid to African areas was little, but when European farming was in difficulty African areas received more attention. The need to provide alternative sources of tax revenue became important when European production fell and employment on European farms tailed off. The possibility of raising export revenue and business for the railway from African areas was more strongly supported at such times. When European agriculture was doing less well, there was more labour to augment production in the African areas and more incentive to increase output there in order to fulfill cash needs. At times of weakness in the European farming sector, arguments about the dangers of competition and putting too many resources into African areas also lost their strength.

Until 1923, agricultural development in the African areas was one of the many responsibilities of the administrative officials who played an active role in promoting agricultural development from time to time. Most prominent among their early efforts was the attempt to introduce cotton in Nyanza starting in 1910 but not really succeeding until just after the First World War. Long after 1923, when agricultural staff were first posted to African areas, the administration continued to play an important role. In many districts, agricultural staff only appeared in the 1930s or even after the Second World War. In others administrative officials worked closely with the agricultural staff which was very thin on the ground for a long time.

The role of the administration in veterinary matters was even more important. Veterinary staff were first posted to African areas in 1922, but administrative officials were always involved in veterinary control as well. The posting of veterinary staff to African areas followed the recommendations of a 1922 Select Committee of the Legislative Council which was concerned about the spread of disease from African to European areas. It concluded that the only effective way of preventing the spread of disease was to have veterinary staff in African as well as European areas and its recommendation was implemented immediately. Trade in livestock has been going on from the time of arrival of the first Europeans. Breeding stock were brought in from the north and work oxen from all over the African areas. This trade was important to the European farmers, and it made strong demands on veterinary control services.

Government agricultural staff were posted to some African areas in 1923, and from then on there was a very gradual build-up of agricultural instructors responsible for the implementation of agricultural policy under agricultural officers posted at the district level. Two training centres

were set up in 1923 to train agricultural instructors for work in African areas, but it was some time before large numbers of trained instructors became available. Even those who were trained had only a very rudimentary knowledge of agriculture and they often worked as messengers and liaison officers for the agricultural officers as much as anything else.

Policy for the African areas in the 1920s was to improve the yields of food crops through the provision of better seed which was distributed free, and through improved cultivation practices; to promote the introduction of a limited number of non-food crops prominent among which were cotton and then wattle; to control serious outbreaks of disease among livestock and to protect the livestock trade; to improve the methods of treatment of hides and skins to encourage destocking; and to encourage the production of ghee. These policies were implemented by the very small numbers of agricultural staff allocated to African areas and by the administration through a series of seed farms which were established for the multiplication of improved seed and the demonstration of improved farming practices. Veterinary activities included spotting and checking outbreaks of disease, supervising quarantine stations for exports, and controlling movement between African areas several of which were relative free of some of the major diseases at the time. The veterinary staff were also responsible for improving the treatment of hides and skins and improving methods of preparation of ghee.

In the 1920s the total number of European agricultural officers posted to African areas varied from 6 to 9, no increasing trend being apparent as is shown in Table 1. There were also 3 to 5 veterinary officers at this time. Between 2 and 5 agricultural officers worked in the then Nyanza Province. This consisted of three districts: North Kavirondo which included almost the whole of present day Western Province; Central Kavirondo which included the whole of present day Central Nyanza; and South Kavirondo which included the present South Nyanza and Kisii. This was an enormous area of scattered population and uneven agricultural development, and the impact of the 2 to 5 agricultural officers responsible must have been extremely limited. The agricultural officers were assisted by agricultural instructors trained at Bukura from 1923, but many of the first recruits had no training at all. The number of instructors in Nyanza reached a maximum of 26 in the 1920s, but it expanded more rapidly and more consistently after that. Although the instructors had so little training, and acted primarily as liaison officers, they were the crucial link between agricultural officers and farmers for a very long time.

TABLE 1. AGRICULTURAL STAFF IN AFRICAN AREAS 1924-1938

	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
<u>NYANZA</u>															
Europeans	5	4	2½	2½	3	2	4	4	4	5	5	3	6	n.a.	n.a.
Africans	26	22	16	8	12	14	29	n.a.	n.a.	45	111	n.a.	n.a.	n.a.	n.a.
<u>CENTRAL</u>															
Europeans	3	3	2½	3	5	4	4	4	5	6	7	n.a.	7	n.a.	n.a.
Africans	11	13	18	15	26	35	33	n.a.	n.a.	42	69	n.a.	n.a.	n.a.	n.a.
<u>COAST</u>															
Europeans	1	1	1	1	1	2	1	1	1	1	1½	n.a.	4	n.a.	n.a.
Africans	1	8	10	13	13	17	23	n.a.	n.a.	n.a.	48	n.a.	n.a.	n.a.	n.a.
<u>TOTAL</u>															
Europeans	9	8	6	6½	9	7	10	9	10	12	13½	n.a.	17	n.a.	n.a.
Africans	40	43	44	36	51	66	85	n.a.	n.a.	n.a.	228	n.a.	n.a.	n.a.	n.a.

Source: Agricultural Department, Annual Reports.



"Central Province" and "Ukamba", the two of which were later combined, had between 3 and 5 agricultural officers in the 1920s. Kitui got virtually no specialised attention at all, Machakos only intermittently, and Nyeri only got occasional visits from an officer responsible for a neighbouring district. The other districts, Kiambu, Fort Hall, Embu and Meru all had agricultural officers from 1923 and these were building up the staff of instructors below. Coast Province had one officer in the 1920s stationed in Kilifi and responsible for the coastal areas of Kwale and Kilifi but not Taita district. Taita was not covered by any agricultural staff until the Second World War.

With this staffing situation it is clear that the impact of the Agricultural Department must have been very small in the 1920s. Seeds were distributed and a few new products were introduced. Major outbreaks of disease among livestock were treated and livestock trading was controlled. But Maher's comments about Embu in 1938(7) were probably true for many of the African areas. He noted that the Agricultural Department had had remarkably little impact, but commented that this was not surprising when one looked at the staff situation. He also commented that seed distribution alone did little good as so much was eaten or wasted. What progress there was was often due as much to the Missions and to the labourers returning from work on European farms and elsewhere as to the Agricultural Department. The 1920s was a period of establishing a role for the Agricultural Department. The following quote from the annual report of 1931 which is also quoted by Clayton (24) sums up the position:

"As work becomes more developed, agricultural officers find more and more scope for their activities and their work is becoming increasingly recognised as an essential and integral part of the economic life of the reserves. The agricultural officer has now a full day's work to do, a change indeed from the splendid isolation forced on him a few years ago when any attempt to help the population brought only sullen answers and suspicious looks, and produced the wildest rumours as to his intentions. The agricultural officer is no longer regarded as a person deputed by government to spy out good land but he is regarded as one to whom the native may go for assistance. Where four years ago natives refused to take good seed or to allow an instructor to show them how to plant their seed properly, they now anxiously and eagerly request these services from him. It may be safely said that this feeling of confidence is felt by all but the most stupid or reactionary of the people".

No doubt this representation of the position is somewhat exaggerated, and no doubt it applies only to some areas, but it is an interesting comment on the role of the Agricultural Department at that time.

A description of agricultural conditions in African areas at the beginning of the 1930s is available in the 1930 Agricultural Census (3) and in the evidence given to the Carter Land Commission of 1933 (4). The Agricultural Census information is summarised in Table 2. The relative importance of crops as opposed to livestock is not so easy to document from the 1930 information. Population figures for 1930 are extremely unreliable. Instead, 1942 population estimates have been compared with 1930 cropped areas to give some idea of the relative importance of crops in the different districts. No significance should be attached to the absolute figures though. The highest proportion of cropping appears in the Kikuyu districts of Central Province and in Kitui (? mistake). Next come the Kavirondo districts of Nyanza, Embu, Meru and possibly Kilifi although the figure for Kilifi cannot be distinguished. The rest of the Coast is behind these, and finally Taita, Machakos and Kericho are way behind being districts that relied heavily on livestock at that time.

On the crop side, sorghums and millets had been the staple cereals traditionally, and although maize was grown in small quantities well before the beginning of the 20th Century it only came into prominence with the distribution of improved varieties of white maize in early colonial days. By 1930, maize had become important in most of the areas covered by the Census, but not in South Kavirondo where sorghums and millets were still dominant, and not so much in Embu, Meru, Kitui, Mombasa or Lamu where relatively small proportions of maize were still grown. Pulses were always less important in Nyanza than elsewhere, but they appear relatively less important in Kwale, Machakos and Nyeri in 1930 too. Cotton was still only responsible for very small fractions of the total area under crops although more concentrated in particular locations. Wattle already figures in the Kikuyu districts of Central Province.

There are some very rough estimates of African agricultural exports for this period and these are shown in Table 3. They suggest that the value of exports did not increase in the 1920s, but fluctuated around a given level. African agricultural exports that were important in this period were live animals, hides and skins, maize, cotton, groundnuts, simsim and copra. It is hardly surprising that there was no increase in agricultural export values when so little was being done to encourage



TABLE 2: 1930 AGRICULTURAL CENSUS: AREAS UNDER DIFFERENT CROPS

	Cropped Area '000 ac. 1946	1930 acres/ pop	PERCENTAGES											
			Sorghum							Coco-				
			Maize	Millets	Roots	Pulses	Simsin	Cotton	Bananas	Sugar	Kattle	nuts	Veget.	Other
<b>NYANZA</b>														
N. Kavirondo	269	.42	19	41	9	16	9	3	2	-	-	-	-	1
C. Kavirondo	213	.45	27	47	6	12	4	1	0	-	-	-	-	2
S. Kavirondo	193	.35	4	74	4	7	6	0	-	-	-	-	-	6
Mericho	16	.07	28	72	-	-	-	-	-	-	-	-	-	-
<b>CENTRAL</b>														
Kiambu	118	.68	33	13	9	33	-	-	3	3	5	-	-	1
Fort Hall	189	.62	36	18	10	24	-	-	6	2	3	-	-	1
S. Nyeri	130	.71	35	10	20	17	-	-	5	5	7	-	-	2
Zebu	76	.37	16	26	9	30	-	-	5	-	-	-	-	13(?)
Meru	98	.31	10	27	23	20	-	-	15	3	-	-	-	1
<b>UKAUSA</b>														
Machakos	33	.09	42	21	12	16	-	-	1	2	-	-	1	2
Kitui	147	.70	16	30	20	32	-	-	0	0	-	-	0	2
Taita	10	.16	24	6	14	24	-	-	12	9	-	-	5	6
<b>COAST</b>														
Digo	23	.26	23	5	17	13	-	-	0	-	-	35	-	4
Nwabasa	20		11	0	18	6	-	-	5	-	-	50	-	11
Kilifi	36		48	6	14	25	2	3	-	-	-	-	-	3
Lamu	18		9	17	5	0	6	1	-	-	-	56	-	6

Source: Agricultural Department, Agricultural Census, 1930.

TABLE 3: TOTAL VALUE OF EXPORTS FROM AFRICAN AREAS 1922-38 £'000

	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
Naize	73	120	130	100	70	75	50	45	75	-	13	36			21		32
Milletts	1	4	1	10	3	3	10	10	3	0	10	10					0
Cotton			12	41	33	15	24	30	22	7	9	24	29	76	150	192	104
Ghee								5	5	4	7	7					
Hides	45	60	121	210	140	160	200	220	105	60	87	130	167	142	122	196	125
Skins	5	3	30	50	51	56	100	87	73	35	16	20	26	36	67	106	63
Grnuts	20	24	26	19	31	23	20	30	17	6	1	3				29	3
Pulses	7	12	15	16	20	20	13	13	14	6	6	6					22
Simsim	5	22	84	65	77	67	27	28	15	5	24	37					
Wattle								35	42	75	84	79	71	84	92	96	91
Potatoes	5	3	4	4	7	8	7	24	11	13	9	8	9	20	21	17	39
Beeswax								3	2	5	4	4					
Copra	12	10	35	28	21	12	23	3	2	1	1	1					
Oils		2	2	3	6	4	5	10	7	3	6	6				16	11
Misc	1	1	1	1	2	3	2	2	2	2	4	5					
Animals	1	10	20	17	11	12	11	10	9	5	4	2					
Total	175	271	480	555	472	458	482	545	404	227	275	368	301	357	472	652	488

Obvious omissions: eggs, poultry, rice, veg fr fl, sisal, wattle before 1930, animals after 1935. Correct content.

Source: Agricultural Department, Annual Reports.

African agriculture and what little encouragement there was was directed towards subsistence rather than export activities. Much was happening to discourage African agriculture at this time, notably the extraction of large numbers of labourers to work on European farms. The numbers fluctuated as Table 4 shows. In Table 5 there is a more detailed breakdown by district together with rough contemporary estimates of the percentages of the working male population absent from the different districts. These percentages are extremely high in some cases, reaching between 50 and 62% in Kiambu, and over 30% for many districts. This must have had an important influence on agricultural activity in the African areas. The absence of large numbers of young working men must have reduced agricultural output both because it decreased the amount of labour and enterprise available for agriculture and because the most pressing cash needs were provided for out of labour earnings.

Agricultural production was still carried on in a fairly traditional way in the 1920s. Shifting cultivation was the rule and it was only in the Kikuyu districts and a few areas of Nyanza Province that population densities were forcing more continuous cultivation. In Central Province agricultural implements were made of wood and metal, but in much of the Kamba area and in parts of Embu and Meru wooden hoes and digging sticks were more common. In Nyanza there were increasing numbers of ox-ploughs in use, the numbers sold increasing from 104 and 103 in 1927 and 1928 to 209 and then 275 in 1929 and 1930. But it was only in some areas that ploughs were in use at all, (one of the outstanding was Kericho, another Bungoma) and the numbers were very small when one considers the area involved. In other areas implements were still very primitive. In the 1920s the use of hand and mechanically operated maize mills was spreading, as were separators for producing ghee.

The 1930s: The Beginnings of Change

If the 1920s was a period of stagnation, the 1930s saw the beginnings of growth. The situation changed quite substantially. The dominant influence throughout was the depression with its strong repercussions for European agriculture and the gradual building of a protected position for the European farming sector. The demand for labour on European farms slackened, and the strength of European arguments against increasing African production was reduced by the weakness of the European position. There was more encouragement of African agriculture from every point of view.

TABLE 4: THOUSANDS IN REPORTED EMPLOYMENT 1923-1932

	<u>1923</u>	<u>1925</u>	<u>1928</u>	<u>1930</u>	<u>1932</u>
KaVirondo	47.24	51.57	55.02	59.46	49.45
Kikuyu, Embu, Meru	48.58	56.83	50.75	46.73	41.72
Kamba	5.89	11.32	9.25	10.84	7.23
Kipsigis	3.17	6.55	6.79	6.68	5.87
Nandi	2.34	3.58	3.78	4.93	5.30
Taita	2.56	2.91	2.17	1.97	1.16
Marakwet, Suk, Masai	2.21	2.90	4.57	4.35	3.85
Coast	1.77	2.05	2.77	4.18	0.97
Northern			0.02	0.08	0.11
Total Kenya Africans	113.76	136.70	144.38	139.12	115.67

Source: Native Affairs Department, Annual Reports.



TABLE 5: ESTIMATED PERCENTAGE OF MALES OF WORKING AGE FROM DIFFERENT DISTRICTS IN REPORTED EMPLOYMENT, 1928-33

	1928		1929		1930		1932		1933	
	Number (thousands)	% Males 15-40	Number (thousands)	% Males 15-40	Number (thousands)	% Males 15-40	Number (thousands)	% Males 15-40	Number (thousands)	% Males 15-40
Central Kavirondo	21.02	29.1	22.70	29.4	25.54	34.6	21.51	30.3	30.3	10.6*
South Kavirondo	9.49	14.7	11.61	17.8	10.66	15.8	2.24*	10.6*	10.6*	10.6*
North Kavirondo	23.91	35.7	24.46	35.3	23.27	29.5	25.71	24.3	24.3	24.3
Kisumu	14.08	62.0	13.32	57.7	12.86	55.2	12.02	49.7	49.7	49.7
Fort Hall	13.28	37.4	12.39	36.3	12.11	28.3	10.73	27.1	27.1	27.1
Nyeri	14.27	33.5	14.11	33.0	13.42	29.3	12.84	28.7	28.7	28.7
Embu	3.97	21.2	3.77	19.9	3.95	20.7	2.31	12.7	12.7	12.7
Meru	5.15	18.0	5.40	16.5	4.33	12.5	3.81	11.3	11.3	11.3
Machakos	6.73	15.4	8.08	18.2	7.95	17.6	4.95	10.8	10.8	10.8
Kitui	2.52	9.4	2.78	10.2	2.89	10.1	2.28	7.7	7.7	7.7
Kericho	6.79	42.7	6.75	35.1	6.68	42.7	5.85	34.9	34.9	34.9
Nandi	5.78	48.2	4.49	53.9	4.93	55.2	5.30	59.4	59.4	59.4
Taita	2.11	29.0	2.51	30.4	1.97	20.5	1.16	14.9	14.9	14.9
Coast	2.77	7.2	2.04	10.9	2.18	10.3	0.97	n.a.	n.a.	n.a.
Kerio	3.47	10.4	3.08	12.0	3.39	10.0	2.63	n.a.	n.a.	n.a.
Masai	1.00	9.6	0.92	9.3	0.97	9.6	1.22	12.0	12.0	12.0
North	0.02	0.8	0.08	0.5	0.08	0.6	0.11	0.8	0.8	0.8
Total	144.39		127.05		139.12		115.67			

\* Kisii only.

Source: Native Affairs Department, Annual Reports.

There were serious famines in 1929 and again in 1933 and 1934, and this prompted a concern with famine reserve crops which figured more prominently in the 1930s policy than they had before. Finally, there was a growing concern with soil erosion and deteriorating natural resources in the African areas which became quite important in influencing agricultural policy even before the war.

In the 1930s the African areas got more staff. The development of food production intensified and famine reserve crops, particularly cassava, were encouraged. With the fall in output from the European farms, African areas began to be seen as useful supplemental sources of food, exports, railway revenue and tax revenue. There was a substantial growth in marketed output, despite the fall in prices, and coffee was introduced in a very small way for the first time. There were attempts at destocking which aroused strong political opposition in some areas, and soil conservation and rehabilitation of over-grazed land became important features of agricultural department activity in the 1930s.

There was a very gradual increase in the number of agricultural officers posted to African areas, the total rising from 10 in 1930 to 17 in 1938. The quality of these officers also improved with the introduction of a specialist agricultural officer cadre in the colonial civil service in the early 1930s. There was an increase in the number of instructors and other subordinate staff serving under the agricultural officers, the total number exceeding 200 in 1934. But staffing was still thin, with one agricultural officer serving between 100,000 and 200,000 people over a widely scattered area, and coverage was selective. Nyeri, Kitui and Machakos got agricultural officers in the 1930s, but Meru was without from 1931 to 1937. In the Rift Valley districts: Nandi, Elgeyo-Marakwet, Baringo and West Suk (West Pokot) administrative officers were responsible for agriculture until after the Second World War, and the same was true for Taita in Coast Province. Nandi, Elgeyo-Marakwet and West Suk had veterinary officers, but these were exclusively concerned with veterinary matters and did not have any responsibility for agriculture at all. Even in the districts that were staffed with agricultural staff there must have been concentrations of effort favouring the areas suited to particular crop or livestock products, favouring the areas that were reasonably accessible, and favouring the farmers who responded well. The impact of agricultural policy was certainly very uneven at this stage.



The product-mix in different provinces and districts varied considerably. In Nyanza there was a rapid expansion of cotton production in the lower areas around the Lake and along the Uganda border. There was considerable emphasis on cotton and despite the 1930s decline in the cotton price the value of cotton exports reached £90,000 from Nyanza in 1938. Other substantial Nyanza exports included hides and skins, and then maize, simsim (primarily from North Nyanza), ghee (primarily from Central and South Nyanza), millets and rice, as Appendix tables 9A-9C show. In Central Province the dominant export of the time was maize and then wattle, legumes, hides and skins. Exports came predominantly from the Kikuyu areas. There was a little cotton coming from the lower areas of Kitui, Embu and Machakos but never very much and it disappeared completely at the beginning of the war. Coast African agricultural exports were very small, the most important being the small export of cotton and copra, mainly from Kilifi and Lamu. Crops that were being introduced in the 1930s included potatoes in Central Province, tobacco in the lower areas of Fort Hall, Embu and Kitui, cashews at the Coast, and wattle in Nyanza. Cassava was also being strongly encouraged.

It was in the 1930s that permission was first granted for limited experiments in African coffee growing. Despite strong representations from European coffee growers who argued that this would reduce their labour supply, spread disease, make difficult the prevention of theft, and damage the good name of Kenya coffee, pressure to experiment with African coffee growing finally prevailed. There had been a number of demands from African organisations and groups of farmers through the 1920s, all of which had been turned down. Policy was influenced by experience in the neighbouring British East African territories in which African coffee growing was expanding very successfully. The colonial office raised the issue a number of times.<sup>3</sup> Finally in 1933, permission was given to go ahead with African coffee growing on a limited experimental basis. The districts in which the 1st experiments were allowed were Kisii, Embu and Meru on the grounds that these were isolated districts badly in need of high-value cash crops where coffee would do well. Not mentioned in the reports of the Agricultural Department was the fact that they were also far from European coffee growing areas and thus less likely to come into direct conflict with European coffee growing. In 1933 the first nurseries were set up, and in 1934 and 1935 first plantings took place on African holdings in blocks. Each of the

3. See Brett (23) for more of the detail on this point.

three districts was allowed up to 100 acres, but progress in reaching this limit was rather slow once permission had been given. Requests from other districts were turned down with ease on the grounds that they must now wait until the results of the experiments were available. Although this early start was so small and it took a long time before it really got going, it was undoubtedly the beginning of a lead for Kisii, Embu and Meru that was significant. The Kisii, Embu and Meru coffee areas gained a decided advantage from getting in on the start of African coffee growing.

On the livestock side, the emphasis in the 1930s was on disease control, destocking and the production of ghee. By the end of the 1930s the serious diseases were still very widespread and the major preoccupation of veterinary staff still had to be with disease control. During the 1930s considerable progress had been made in trying to establish a strain of improved Zebu stock that would be suitable for smallholdings, but by the end of the 1930s the veterinary staff were dissatisfied and they introduced Sahiwal crosses as well to see if they would do better. The need for a 'hardy commercial dairy animal' was stressed as the only solution to a gradually deteriorating livestock situation in the more densely populated areas, but no such solution had yet been found.

The 1930s was a period of substantial development effort concentrated on the avoidance of famine and the encouragement of products that did not compete too much with European interests, but a limited amount of competition began to creep in. The 1930s saw the beginnings of a concern with soil conservation that was to be so important after the war. Market forces were still much more influential than direct development policies or the influence of officials, but there was a great deal of progress shown in the increased output figures despite the very depressed prices that persisted and discouraged European agriculture so strongly during this period.

#### The Second World War and Beyond

In the Second World War there were major changes for African agriculture. Everything was subordinated to the need to increase the production of food, and in spite of reductions in staffing there were very substantial increases in marketed food production and radical changes in the balance of production in African areas as a result. During the war a great deal of attention was paid to marketing, also, much of it highly organised and controlled. Many more African smallholders started marketing some of their output, and there was substantially increased pressure on the land in African areas.

By the end of the war Nyanza had emerged as a major maize producing area: in 1944 and 1945 Nyanza maize sales were worth over £250,000 and dwarfed all other exports from the province. (This can be seen in Appendix Tables/<sup>3A-3C</sup> Hides and skins and cotton were still important exports but far behind maize. Ghee, millets, eggs, groundnuts and rice also featured prominently. The shift into maize strengthened the position of North Nyanza, Kericho and Kisii relative to other areas in Nyanza Province. Previously the lower areas growing cotton and other food crops had been the centre of attention, but the war changed this and the highland areas became the more substantial producers of exports, especially maize. Large surpluses of maize were produced by systems of monoculture that led to a much more serious concern with the exhaustion of soil resources due to excessive maize cropping in many parts of Nyanza.

Central Province production patterns were also transformed. By the end of the war, the Central Province maize surplus had virtually disappeared, and Central Province only produced occasional maize surpluses after that. Instead wattle, fruit and vegetables, potatoes, eggs, poultry and pulses became important, and also hides and skins. Tobacco output increased too. There was a shift in favour of the well-organised producers near Nairobi who could supply the war-time market for food, particularly the more perishable food products. Other areas like Nyeri that used to produce substantial surpluses of maize actually suffered setbacks during the war.<sup>4</sup> Embu and Meru, on the other hand, started producing their first noticeable exports of pulses at this time. Embu, Fort Hall and Kitui also began producing considerable quantities of tobacco.

In the Coast Province, the most important development took place in Taita which became the major source of vegetables for the Mombasa market which had also expanded during war time. By the end of the war, Taita was exporting £60,000 worth of vegetables, an impressive growth in a comparatively short period of time.

This was also the time when rinderpest was finally brought under control. Mass immunizations against rinderpest started in 1940 and by 1947 the Veterinary Department was able to report that rinderpest was no longer a major threat except in the North. This was a major accomplishment. Other serious diseases were still widespread, but they were to become the next target for eradication. Dips were beginning to be built in African

4. See Cowen (25) for an account of the way in which a Nyeri area was affected by the war.

areas and already in 1943 it was reported that farmers in Nyeri had asked for the application of compulsory dipping rules in their area.

This progress in African areas was accompanied by increases in the amount of labour withdrawn. By the end of the war the numbers reported employed outside the African areas were great twice as high as they had been around 1930, and by 1947 they had increased greatly again. Table 6 shows this.

Post-war policy had a new emphasis. At the end of the war there was an atmosphere of crisis regarding the preservation of soil resources in the African areas, many of which had deteriorated visibly during the war. There were public statements, several of which were extremely alarmist, but there is no doubt that all of them contained some degree of truth. Translated into policy terms, soil conservation was to be paramount, even to the detriment of incomes in African areas which were bound to suffer as a result. The strategy was to be to rely on reduced cropping, increased 'mixed farming'; the use of manure and compost; the introduction of crop rotations, fallows and grass leys; physical soil conservation measures; destocking; and the rehabilitation of grossly denuded areas. In many areas it was thought that this could only be done in conjunction with the removal of population to new areas of settlement, and these were to be investigated. The intentions were clear and often stated in strongly paternalistic and moral tones. However, implementation was not so easy.

Crucial to the strategy was the upgrading of livestock in the African areas, but there were difficulties in breeding a suitable line of Zebu and the Sahiwal crosses had not yet been developed to the point where they could provide an answer to the problem. The Veterinary Department was still firmly opposed to the introduction of exotic strains in African areas because serious diseases were still a major problem and levels of husbandry were not yet good. There were numbers of exotic stock in Central Province, at least, but they were given no official support.

As far as crops were concerned, food shortages and high prices continued well beyond the end of the war, putting irresistible pressure on continued and increased intensive cropping. Despite strong efforts to introduce 'mixed farming' which meant reduced cropping and grass leys, the intensification continued. Agricultural officials stepped up the soil conservation campaigns relying on physical soil conservation measures many of which were enforced and extremely unpopular. The Agricultural Department reports of this period are full of records of numbers of miles of terracing



TABLE 6: NUMBERS IN EMPLOYMENT OUTSIDE THE AFRICAN AREAS 1942-

	<u>1942</u>	<u>1943</u>	<u>1944</u>	<u>1945</u>	<u>1947</u>	<u>1948</u>	<u>1954</u>
Kavirondo, Luo, Kisii	98,751	88,514	93,306	101,646	115,591	125,383	179,880
Kikuyu, Meru, Embu	76,071	79,574	76,225	76,569	81,878	84,058	111,213
Kamba	21,782	24,674	25,546	24,498	28,027	28,285	64,009
Lumbwa, Nandi	-	13,566	12,118	13,769	13,072	14,495	50,700
Coast	-	-	-	14,879	13,598	14,362	28,284
Other Kenya	42,527	33,283	28,585	14,574	15,263	15,647	35,837
Total	239,131	239,611	235,330	245,935	267,429	282,230	469,923

Source: Labour Department, Annual Reports.

and benches, numbers of wash stops, and other soil conservation works. At the same time active investigations were under way to find new settlement areas to which surplus population could be moved. Increasing attention was also being paid to marketing, and the implementation of the elaborate system of marketing controls that had been introduced during the war. There were complaints that an inordinate amount of agricultural officers' time was still spent on controlling marketing immediately after the war, but this soon led to the appointment of marketing officers with specific responsibilities in this field, leaving agricultural officers responsible for general extension and other work.

New cash crops were coming in at this time. By 1946, Kiambu had started producing pyrethrum and there were 2 growers in Fort Hall. But the market appeared limited, and in 1947 the Pyrethrum Board asked African growers to give up growing pyrethrum voluntarily. An agricultural officer concerned reported that African growers were naturally upset, and saw this as an unwarranted sacrifice to support European pyrethrum growing. Pressure was brought to bear on the Pyrethrum Board which eventually decided that it did not matter if African growers continued in production as their output was so small. Pyrethrum growing in African areas expanded after this. By 1951 a substantial acreage had been added in Nyeri, and Meru had just begun planting. Embu and Fort Hall began planting pyrethrum in 1951. By 1953 Kisii and Elgeyo were also pyrethrum producing districts, but the bulk of African grown pyrethrum still came overwhelmingly from Kiambu.

In the 1948 report of the Agricultural Department, mention was made of a very small local tea industry in Fort Hall and the fact that consideration was being given to the possibility of expanding tea production in the higher areas of Kikuyu country, perhaps to factory scale. This materialised in 1952 when 35 acres of tea were planted in Nyeri where the factory was to be built. The plans were interrupted by the Emergency and in 1953 a tea nursery was started in Embu where the problems were fewer. However, Nyeri tea production soon went ahead again and the first factory was built in Nyeri, at Ragati, and it started production in July 1957.

Meanwhile, coffee was expanding slowly. In 1946, Kisii, Embu and Meru were allowed to expand their acreages from 100 to 200 each, and Taita was allowed to start a nursery. Development was still strictly limited and it was not until 1949 that the acreage restrictions were relaxed and other districts were also given the go ahead to grow coffee. In 1950 and 1951, North Nyanza (Bungoma), Fort Hall, Nyeri and Machakos were added.



By 1952, the annual target for new coffee had risen to 2000 acres, and the notion of controlled encouragement for coffee in all suitable African areas was finally fully accepted.

Staffing expanded fairly rapidly in African areas after the war. Most districts were staffed from 1946 on, and in 1946 an agricultural officer was posted to the Rift Valley African areas for the first time. By 1948 there were 5 agricultural officers in the African areas of the Rift Valley which put them on a par with other parts of the country in that respect. They were still regarded as backward areas, however. Policy was not to encourage the production of cash crops in these areas but to ensure their self-sufficiency in food. Cash income was to come from livestock because the Rift Valley people were semi-pastoralists and 'grossly overstocked'. There were regulations prohibiting the opening of new land without the permission of the District Commissioner in the Tugen Hills, West Suk, and Elgeyo. The Rift Valley districts were way behind some of the others at this time.

Enclosure of land had been taking place in some African areas even before the war, and the pace accelerated rapidly during and after the war. Kericho, Nandi, Elgeyo and Central Province were the areas where enclosure was important. In Kericho, Nandi and Elgeyo the enclosures appeared to be a means of individualising title to land. There was no question of consolidating fragments into single holdings. In Central Province, the situation was different. Fragmentation was severe, and the early enclosures involved informal exchanges of fragments to make consolidated holdings. By 1951, consolidation and enclosure was proceeding so fast in Central Province that the Agricultural Department expressed fears over supervision. They were afraid that individual holdings too small to be viable were being enclosed, and that holdings irrational from the point of view of soil conservation would emerge. The Department encouraged enclosure, but it wanted control over the way it was done as it did over almost every other change.

During the 1940s there was considerable argument in official circles about the desirability of promoting the establishment of individual freehold tenure in African areas. The land tenure situation, particularly in Central Province, was becoming impossible, and it was clear that something had to be done, but there was considerable disagreement about the appropriate policy. There were strong reservations in some quarters about an individual land tenure system that would lead to the creation of a landed and a landless class once there was a definite market in land. It was not until the early

1950s that the debate was resolved in favour of an individual land tenure system, the conclusive policy statement being that in the Swynnerton Plan published in 1954 (10). In the Swynnerton Plan the implications of an individual land tenure system were spelt out at some length, and support was given to the creation of a landed class that would accumulate relatively larger holdings and provide employment on these, and a landless class that could not make good use of their own holdings but that would be useful in providing the labour needed on the more successful holdings. The Swynnerton Plan first outlined the huge land consolidation and registration programme which is still continuing today.

At the end of the 1940s and in the early 1950s there was a good deal of support for group farming in Nyanza, while it was recognised that individual farming was more likely to succeed in Central Province. The encouragement of group farming was part of official policy in Nyanza for several years after 1948, and there was considerable enthusiasm for group farming in the Agricultural Department at that time. Contiguous farms were planned as single units for soil conservation purposes, and crop and livestock production patterns were established for the group as a whole. The group farming movement never attained very large proportions, however, and after the publication of the Swynnerton Plan and then the Report of the East African Royal Commission in 1955(12) there were no more serious attempts to institute group farming as the dominant pattern for Nyanza Province.

The early post-war enthusiasm for resettlement of population from over-crowded areas soon gave way as the possibilities of increasing the productive capacity of the already settled areas became evident, and as the difficulties of new settlements also became apparent. Nevertheless, settlement schemes were started in Makueni, Lambwe Valley, Kimulot, Sarora, Gedi and Chepalungu, accommodating less than 5000 families in total. The notion that new settlements could solve the problems of the African areas was soon rejected.

#### The Swynnerton Era

The Swynnerton Plan, completed in 1953 and published in 1954, provided the definitive statement on land tenure policy. It also set out a policy to expand cash cropping in African areas as part of a general policy of maintaining and increasing incomes simultaneously with improving land utilisation techniques. Prepared by senior officials in the Ministry

of Agriculture, it represented a new phase in African agricultural development policy, and it is often cited as the basis for policy in African areas even today. It envisaged a vastly increased rate of expansion of cash crop production, the introduction of new crop and livestock enterprises, and it was notable for its strong emphasis on increasing income. Coffee was to expand at the rate of 5000 new acres per year, reaching 71,500 acres in 1968; tea was to reach 70,000 acres in 1968; and pyrethrum 48,300 acres. Substantial increases in the acreage under pineapples (25,000 acres by 1968), sugar (45,000 acres in 1968), and wattle in areas other than Central Province, and additional sisal schemes, were all in the plan, as well.

In the event, coffee went ahead much faster than the Swynnerton Plan envisaged, but most of the other crops expanded more slowly. Nevertheless, the Plan gave the necessary encouragement to cash crop development and modifications, including the addition of other cash crops did not substantially alter the original intention of generating income on small farms on a scale that had never been anticipated hitherto.

Alongside the cash-generating innovations of the Swynnerton Plan was the soil conservation programme. This was an important aspect of agricultural activity in most areas, but Machakos district received special attention. Machakos was singled out as a crisis area as far as soil erosion was concerned, and it received unprecedented staff allocations for an all-out campaign to arrest the soil erosion. The experience gained in Machakos in the 1950s was encouraging in that it demonstrated how quickly serious erosion could be reversed, far more quickly than had been anticipated. But the campaign used very large quantities of resources, a fair amount of force, and it gained very little acceptance among the people of Machakos with serious consequences for the longer term. The situation deteriorated rapidly when the use of force disappeared, and the problem of soil erosion is now becoming serious again.

The 1950s were dominated by the Emergency and its aftermath. The Kikuyu areas of Central Province received increased attention and extra staff, and there was an overlay of force that enabled the administration and the agricultural staff to push through measures that would otherwise have been unacceptable to the farming population. The background of force existed in other areas too, but it was far stronger in Central Province which lived through war conditions for many years after the lifting of the official State of Emergency.

The Swynnerton Plan relied on a general increase in levels of staffing and a system of very strict control over cash crop expansion. The expansion of cash crops was limited to what could be supervised, and in many cases the planting of cash crops was only allowed on holdings that reached certain minimum levels of management. When official support was finally given to the introduction of grade cattle, in 1955, very stringent conditions had to be met on individual holdings before they could get grade cattle. With coffee, new growers<sup>were</sup> limited to 100 trees at first, and in 1958 this limit was raised to 250 only in consolidated areas. As the areas under cash crops expanded, and likewise the numbers of grade cattle, inevitably the degree of control became less severe. But throughout the 1950s an attempt was made to keep the expansion firmly under control, and to limit it to what was manageable under these conditions. As a result the quality of the coffee and tea that was first produced from African areas was extremely high, but there was a definite sacrifice in terms of quantity. Without such strict controls coffee and perhaps also some other products would have expanded faster in the 1950s.

The value of marketed output from small farm areas increased in the 1950s as Table 7 shows. The marketed output figures are very rough. They include only output that is known to cross district boundaries and not the output that is marketed in small rural markets or crosses district boundaries without being detected. The figures before 1960 exclude the marketed output of the Rift small farm areas which appear for the first time in 1960. Their coverage generally increases as the years go by but there are some notable gaps in series. The figures should only be treated as very rough indicators of what was going on. A new series starting in 1958 and published in Statistical Abstracts after that date contains somewhat higher figures than those obtained from the annual reports of the Agricultural Department and reproduced in Table 7. Another later series started in 1964 with greater coverage again starts considerably higher than both the earlier series as Table 8 on page 33 shows.

There was a gradual increase in marketed output in the 1950s, with some fluctuations, but the increase was much faster in the 1960s as will be seen. The changes in marketed output from different provinces from 1945 to 1962 are shown in Diagram 1. Nyanza marketed output was dominated by maize until the mid-1950s and this accounts for the comparatively high degree of instability in the Nyanza figures before 1956 or 1957. After that, Nyanza marketed output became more diversified and the fluctuations



**TABLE 7: VALUE OF GROSS MARKETED OUTPUT FROM SMALL FARMS IN DIFFERENT PROVINCES 1945-62**

						£000
	<u>Nyanza</u>	<u>Rift</u>	<u>Central</u>	<u>Southern*</u>	<u>Coast</u>	<u>Total</u>
1945	438	n.a.	525	-	80	1043
1946	501	n.a.	516	-	119	1136
1947	536	n.a.	898	-	122	1556
1948	485	n.a.	878	-	139	1502
1949	730	n.a.	948	-	175	1853
1950	1411	n.a.	1358	-	268	3037
1951	1246	n.a.	1609	-	427	3282
1952	1317	n.a.	1729	-	393	3439
1953	1429	n.a.	1252	319	440	3440
1954	2728	n.a.	1635	327	504	5194
1955	2500	n.a.	1462	407	208	4577
1956	1752	n.a.	1720	388	494	4354
1957	2032	n.a.	2055	538	536	5161
1958	1985	n.a.	2501	574	632	5692
1959	2404	n.a.	3059	597	1321	7381
1960	2654	308	3259	713	1133	8067
1961	2596	398	3917	1170	1080	9161
1962	2191	650	4018	1017	751	8627

\* Southern Province was part of Central Province until 1953.

Source: Agricultural Department, Annual Reports.

could no longer be attributed primarily to maize. Until 1957 Nyanza and Central Province produced roughly the same value of marketed output, but after 1957 Central Province drew rapidly ahead and it has remained well ahead ever since. The basis of the dramatic increase in marketed output from Central Province after 1957 was coffee. Other products became significant sources of output growth in the 1960s, but coffee was the first and most sensational source of growth in Central Province and indeed in marketed output from the small farm areas as a whole. The rapid expansion of marketed output from Central Province, based primarily on coffee but including also many other products, can be attributed to a number of factors. Central Province had been held back in not being allowed to grow the cash crops for which it was most suited, and once the restrictions were relaxed in the early 1950s Central Province quickly went ahead to exploit the potential. At the same time as the restrictions were relaxed, Central Province received a substantial increase in development resources during and after the Emergency. The infrastructure that was developed to help control the political situation benefitted agricultural development greatly. Similarly, the increase in the provision of agricultural services which was associated with the political situation made a considerable contribution. It was at this time that land consolidation and registration of title also took place. These factors combined with the complete reversal of policy with respect to coffee and other high value products enabled Central Province to gain a dominant position in the 1950s, a position which it has retained ever since.

Nyanza's development during this period was disappointing in contrast with the rapid rate of development in Central Province. Nyanza did not have such large areas that were well suited to the expansion of cash crops hitherto prohibited, and in much of Nyanza there was a lack of suitable high value products on which a faster rate of development could be based. Coupled with this was the fact that Nyanza's more limited development opportunities had already been more fully exploited previously than had those in Central Province. Nyanza did not stagnate, but its marketed output grew much less dramatically than that of Central Province.

The products that were important in Central Province in the 1950s were wattle until 1954, and then coffee which took over from 1957 as the leading export of the Province. Some way behind came maize, hides and skins, pulses, vegetables and fruits. Tea, dairy products and pyrethrum



only became important and in the 1960s, much later on. The detailed individual product figures are all shown in Appendix Tables 3A-3C.

Nyanza Province's major product was maize until 1955, after which the value of maize marketed fell and other products grew in importance. Other products that were important in Nyanza were cotton, coffee, hides and skins, and groundnuts for a while, but coffee never became anything like as important in Nyanza as in Central Province. Pyrethrum and tea came up in substantial quantities only in the 1960s as in Central Province

At the Coast there was an upward trend in marketed output figures with cotton, coconut products and cattle prominent. Cashews became substantially more important at the end of the 1950s. From Taita, which is in Coast Province, vegetables fluctuated, chillies grew in importance, and coffee developed in a small way but not nearly so substantially as in other districts or provinces as will be shown.

Southern Province is the poorest of the four, relying on hides and skins, cattle, poultry, some vegetables, castor and maize and pulses. Sisal production was important in some years and coffee became important in 1962 and at times. Sisal production was important even then only on a small scale. Only limited areas of this province are suitable for coffee.

The expansion of coffee from the early 1950s when the restrictions had been relaxed, until 1964 when further planting was abruptly banned, is interesting. It is often said that Kenya's small farm areas really came into their own with coffee, and this is true for some of them. But the differences in rates of expansion in different coffee areas are striking as Diagram 2 shows. Meru, Embu and Kisii had an early start as already described and in 1957 these three districts were still well ahead of the others. They remained in the lead, with others catching up but Meru always far ahead. The expansion of coffee acreage in Meru far exceeds that anywhere else. Murang'a, Nyeri and Kiambu all started later, and were still well behind in 1957, but they came up strikingly in the 3 or 4 years before the planting ban came into force, Murang'a particularly. The other coffee producing districts, Bungoma, Machakos, Taita and Kakamega expanded their coffee acreages only gradually right up to the time of the ban and they never became major coffee producers. Thus, if Kenya's small farm areas really came into their own with coffee, it was only Meru and then Embu, Murang'a, Nyeri, Kisii and Kiambu that participated in the coffee boom substantially.

The 1960s and Early 1970s

The 1950s had seen the start of a transformation of the small farm areas in Kenya, led by the dramatic growth of coffee in some areas but also laying the foundations for growth in other potentially important fields. The 1960s was a period of diversification during which small farm production of several other important products grew to substantial proportions. Marketed output grew much more rapidly in the 1960s and early 1970s than in the 1950s despite the abrupt halt to the expansion of coffee planting in 1964 and this is shown in Table 8. The value of marketed output from small farms exceeded that from large farms from 1967 on. (If one takes into account all the marketed output that is not recorded and all the subsistence output that is not marketed, the small farms have clearly been more important than the large farms for a much longer time).

Although much of the growth of the 1960s is genuine, one has to remember that part of that growth is due to the enlargement of the small farm sector and the corresponding reduction of the large farm sector in the transfer from large farms to small farms on settlement schemes. From 1960 to 1970, nearly half a million hectares of land was transferred from the large farm sector to the small farm sector, 34,000 families being settled in this way. If one includes also the haraka and harambee settlement schemes the number settled reaches 50,000, as shown in Table 9.

If the growth of the 1950s and early 1960s was based on coffee, the growth of the later period was based also on tea and pyrethrum. By the time of the ban on new coffee planting under the International Coffee Agreement, both pyrethrum and tea had got going in the small farm areas, and many other minor crops were also important: sugar, wattle, cotton, coconuts, cashews and horticultural products among them, and also dairy products.

Pyrethrum was the first of these other products to come forward but its impact was even more concentrated than the impact of coffee. Initially, it was concentrated in Kiambu, and later in Kisii which dominates the pyrethrum industry in Kenya now. In 1955,

TABLE 8: VALUE OF GROSS MARKETED PRODUCTION FROM SMALL FARMS 1958-1972

	<u>£ m.</u>		<u>% total</u>		<u>£m. Subsist.</u>
	<u>Old Series</u>	<u>New Series</u>	<u>Old Series</u>	<u>New Series</u>	
1958	7.8	(13.3)	19.0	(30.3)	
1959	8.4	(14.3)	19.7	(31.4)	
1960	9.6	(16.4)	20.3	(32.4)	
1961	10.4	(17.8)	22.5	(35.9)	£47 m.
1962	10.6	(18.1)	22.2	(34.4)	
1963	11.3	19.3	21.7	34.6	
1964		24.6		40.8	
1965		23.8		41.7	
1966		32.8		47.5	
1967		34.1		51.0	
1968		35.8		51.0	
1969		38.3		50.3	
1970		44.2		51.7	
1971		44.6		51.4	
1972		55.6		52.5	
1973		63.2		51.2	

Source: Statistical Abstracts 1961, 1964, 1968, Economic Survey, 1974.

TABLE 9: LAND SETTLEMENT

The Million-Acre Scheme

	<u>Th. Hectares Purchased</u> (cumulative)	<u>No. families settled</u> (cumulative)
1961-1963	236.0	10,441
1964	342.9	19,300
1965	425.6	26,089
1966	471.1	29,096
1967	479.7	31,531
1968	485.0	33,195
1969	491.0	33,581
1970	494.4	34,173

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<u>Paraka</u> (terminated 1971)	57.1	15,480
<u>Harambee</u> (terminated 1971)	6.3	431
<u>ALDEV and other early Schemes.</u>	139.7	>11,000

Sources: Economic Survey 1974, pp.79-80, ALDEV Reports.



Central Province had 1711 acres of pyrethrum and within Central Province Kiambu had 1368, while Kisii had only 101. By 1958, however, Kisii had 1000 of the total of 3866 acres in the small farm areas, and in 1959 Kisii overtook Central Province with an unprecedented increase bringing the Kisii total up to 8000 acres. There were fears that Kisii growers would suffer as overproduction set in, and although the acreage was maintained in 1960 and 1961, it was reduced in all areas in 1962. In 1963, it was decided that Central Province quotas should be reduced to discourage pyrethrum in that area which was less suitable, and that Nyanza and Rift Valley quotas should be increased as these areas were more suitable for pyrethrum. Thereafter, Central Province continued to produce pyrethrum, but the expansion took place in Nyanza and the Rift, with Kisii leading the expansion. Small farms are now responsible for about 90% of all pyrethrum production in Kenya and Kisii and the settlement schemes dominated small farm pyrethrum production, the total value of which now exceeds £3 million.

Tea production started in a small way before the publication of the Swynnerton Plan, as described earlier, expanded gradually until the middle 1960s, and then started to expand at a very rapid rate as Diagram 3 shows. In the early years, most of the districts involved expanded at roughly the same pace, but towards the end of the 1960s some moved rapidly ahead leaving a much more uneven pattern in the 1970s. Nyeri, having started first, was ahead in the early period, but it was overtaken by several districts later. Kisii by a long way from 1969/70 on. Murang'a, Kericho, Kiambu and Meru also showed rapid rates of expansion in tea growing in the early 1970s, Kirinyaga less rapid, and Nandi, Embu, Kakamega and Elgeyo-Marakwet were far behind.

Table 10 shows the relative importance of the different agricultural products in marketed output from 1958 to 1967. After 1967 there are no more figures for small farms on their own, but the figures up to 1967 show the emerging pattern. Coffee dominates crop production that is marketed, and next come pyrethrum and tea. Tea has now overtaken pyrethrum by far and is coming close to coffee. Horticultural products represent a substantial proportion of marketed output, but a much more important proportion of total output if one takes into account subsistence and unrecorded marketed output as well. As important as the crop products are some of the livestock products, particularly cattle and calves for slaughter, and dairy. We now look at these a little more closely.

TABLE 10: CASH REVENUE TO PRODUCERS, SMALL FARMS, 1958-67 (€'000)

	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
Maize	1118	1006	960	1082	1131	1244	1487	820	1416	1346
Wheat	-	-	-	-	-	-	122	265	313	493
Pulses	373	294	307	312	251	282	263	308	629	438
Potatoes	60	96	125	199	105	132	147	66	180	190
Coffee	1266	1830	2241	2816	3295	3022	3808	5398	9335	8409
Tea	-	40	66	26	54	122	366	542	754	1081
Pyrethrum	89	200	545	611	533	359	422	796	1791	2275
Battle	267	193	231	147	220	268	281	218	329	344
Sisal	3	65	284	435	132	519	796	197	65	15
Sugar	-	20	16	13	24	45	209	244	109	566
Perm. Fruits							402	491	487	625
Temp. Fruits										
Veg. Flower	499	435	434	354	303	566	139	112	156	203
Oil Seeds	329	173	241	216	284	337	222	216	359	349
Cotton	348	499	545	505	460	440	594	641	681	603
Coconuts	236	405	289	286	215	246	324	403	449	450
Cashews	57	120	193	252	68	113	156	393	395	392
Total	5225	5977	7176	8055	7906	8455	12188	11490	17973	18336

Contd/.....

TABLE 10: Contd....

- 36 -

(e'000) IIS/L'04

	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
Cattle & calves for slaughter	1876	1848	1955	1760	2120	2184	7091	7271	8738	9169
Sheep & lambs for slaughter	242	248	208	252	306	316	244	252	247	181
Pigs for slaughter	153	25	8	5	9	5	21	84	62	75
Poultry & eggs	64	74	57	62	82	54	85	8	80	110
Wool	-	-	-	-	-	-	6	24	37	63
Hides & skins?	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	472	470	592	630
Dairy P Product	200	178	180	246	161	260	1630	1450	1950	2440
Total	2535	2373	2448	2325	2678	2819	9549	9559	11706	12668
Total crops & livestock	7760	8350	9024	10380	10582	11304	(21737) 24569	(21049) 23801	(29679) 32666	(31004) 34036
% Crops	67.3	71.6	74.6	77.6	67.0	75.1	56.1	54.6	60.6	59.1

Source: Statistical Abstract 1961, 1968.

Exotic stock were only officially supported in the higher areas from 1955 on, as was mentioned earlier in the paper. In the later 1950s and early 1960s they were still being given very restricted support and in some districts high standards of husbandry, fodder crops and water supplies had to be demonstrated before individuals were given official support for grade cattle. Nevertheless, the estimated numbers of grade cattle in small farm areas already by 1963 and 1964 were startling:

<u>Province</u>	<u>1963</u>	<u>1964</u>	<u>1967a</u>	<u>1967b</u>
Central	38,000	46,800	70,185	131,176
Rift	6,000	11,000	29,917	66,184
Eastern	4,000	5,160	8,101	10,579
Nyanza	1,000	3,200	4,968	11,570
Western	350	650	2,083	19,245
Coast	50	62	585	585
Total	49,400	66,872	115,839	239,339

1967a excludes the Settlement Schemes; 1967b includes them.

Sources: Veterinary Department Annual Reports for 1963 & 1964;  
J. Peberdy, private communication for 1967.

The figures for 1967 are also shown. The figures are all undoubtedly fairly rough, and not much importance can be attached to the changes between the years. It is likely that the accuracy of the figures increases with time.

The old policy of supporting Zebu cattle and Sahiwal crosses for the lower areas was gradually superceded by the new policy of supporting grade cattle. There was a tremendous expansion of smallholder dairy production in the 1960s, mainly but not only based on grade cattle. Much of the expansion came from within the old small farm areas, but even more came from the transfer to settlement schemes on many of which the new smallholders took over large numbers of dairy cattle that had previously been run on the large farms. They also took over the milk quotas that were then in existence.

Table 11 gives more detailed district figures on dairy production in 1967 and 1968. At that time, there was a system of whole milk quotas which meant that only a certain amount of whole milk could be sold at the high price. The rest had to be sold as milk for manufacturing or as butterfat both of which fetched a much lower price. The allocation of



TABLE 11: DISTRICT CATTLE NUMBERS AND DAIRY PRODUCTION 1967, 1968

	No. of		Milk & Ghee		No. of	
	Zebu Cattle	Grade Cattle	'000 gals. p.a. through Coops.	'000 gals. p.a. through Coops.	Coolers	Separators
	1967	1967	1967	1968	1968	1968
Nyeri	98,359	49,063	2922	2564	6	32
Kiambu	30,111	20,258	1831	2312	15	13
Nairobi	1,200	702	27	136	1	1
Nyandarua	6,790	45,613	2402	2640	10	19
Kirinyaga	40,100	33,385	60	214	1	4
Nurang'a	62,143	12,155	112	332	2	1
Nandi	166,689	14,908	1433	912	0	21
Kericho	335,602	25,515	601	898	6	35
Elgeyo	101,019	9,442	491	376	0	0
Baringo	187,265	5,851	572	798	1	18
Uasin Gishu	1,604	10,040	895	377	0	0
Nakuru	0	428	0	147	0	2
Mochokos	215,684	2,610	25	513	1	1
Meru	20,047	7,270	65	489	1	8
Embu	43,000	699	0	439	0	0
Kisii	257,735	8,990	166	498	5	12
S. Nyanza	350,000	304	475	1529	0	36
C. Nyanza	153,227	2,255	59	51	0	0

TABLE 11: Contd/...

	No. of		Milk & Chee		No. of	No. of
	Zebu Cattle	Crude Cattle	1900 gals. p.u. through Coops.	1968		
	1967	1967	1967	1968	1968	1968
Siaya	112,000	81	n.a.	n.a.	0	0
Kakamega	241,085	9,234	433	447	1	5
Bungoma	163,702	9,963	380	309	0	2
Busia	86,900	48	n.a.	n.a.	0	0
Kwale	112,000	435	1023	2,300	2	0
Kilifi	75,000	0	525	n.a.	0	2
Taita	36,000	150	n.a.	56	0	0
Total	2,646,177	239,339	14,497	17,839	52	212

Source: J. Peberdy.

wholemilk quotas was usually based on past delivery records and thus it was difficult for new areas to get in on the whole milk market. However, many of the new settlers on the settlement schemes took over quotas that had previously been allocated to the large farms that were resettled. And some of the other small farm areas did manage to get quotas for part of their whole milk production. Others had to be content with supplying the less lucrative market for butterfat and manufactured milk. The quota system was abolished in 1970 and now anyone can supply the milk market and receive a uniform price for wholemilk, and a lower price for butterfat if he chooses to supply butterfat rather than wholemilk.

In Table 11 the wholemilk equivalents supplied to the market are given without distinguishing whether it was quota milk or not, nor whether it was butterfat. Districts that were leading suppliers of dairy products were Nyeri, Nyandarua (all settlement scheme farms), Kiambu, Kwale and then South Nyanza and Nandi. Kericho and Murang'a also had large numbers of dairy cattle and there may then have been marketing problems, but these districts probably supply substantial quantities of dairy products now. Of the leading districts, South Nyanza is exceptional in having had a strong ghee industry for some time. Due to its relative isolation, and the absence of milk processing facilities in the area, it has been difficult for South Nyanza to supply milk in any other form. The returns from supplying ghee as opposed to milk are relatively low, and the value of South Nyanza's dairy industry is thus much lower than the quantities suggest. The other leading districts have all supplied much more wholemilk, even Kwale which has a special milk scheme at Mariakani and supplies much of the Mombasa market. The numbers of separators and coolers give some indication of the relative importance of milk and ghee or butterfat supplies, but much of the wholemilk is supplied without any cooling at all. The coolers enable farmers to supply evening as well as morning milk and are thus a considerable advantage. In many areas there is a substantial local market in milk and this is always lucrative compared with the organised milk market involving exports from the district. But once the industry gets big, exports become necessary and the lower prices prevail.

Much more important than milk, and dominating all other marketed output figures, are the figures for exports of beef. Some of the beef that is marketed comes from the 'pastoral' areas which have been excluded from this discussion, but most still comes from small farm areas. The leading areas among the small farm agricultural districts are Machakos, and then South Nyanza, Kitui, Baringo, and Nandi. A substantial number of animals also come from Kericho, and smaller quantities are worth mentioning from Elgeyo, Taita and Kwale. These are the districts that still produce substantial quantities of beef. At the other end of the scale, the greatest imports come into Kiambu and Kisumu and Siaya, partly because these districts themselves produce so little beef and partly because their beef consumption is relatively high. The detailed figures are shown in Table 12.

The districts that really contributed to the tremendous growth of marketed output since the later 1950s are Kisii, Nyeri, Kiambu, Murang'a, Kirinyaga, and Meru, and to a lesser extent Embu and Kericho. The table below ranks these districts in coffee, tea, pyrethrum and dairy production:

	<u>Coffee</u>	<u>Tea</u>	<u>Pyrethrum</u>	<u>Dairy</u>
Kisii	6	1	1	
Nyeri	5	6		1
Kiambu	7	4		2
Meru	1	5		
Murang'a	4	2		
Kirinyaga	2*	7		
Kericho		3		
Embu	2*	8		

\* Kirinyaga and Embu together.

The addition of other products like horticultural products important in Kiambu and Nyeri especially, and maize important in Bungoma, Kakamega, Kericho and Nandi, does not really alter the basic picture. The eight districts listed above are the eight high potential districts that have performed impressively since the introduction of the Swynnerton Plan. Others have gained to a lesser extent, and still others have hardly gained at all. The areas with low rainfall have gained much less than the areas in which rainfall



TABLE 12: NET CATTLE EXPORT AND BEEF AND MUTTON CONSUMPTION 1967

	Beef lb/head	Shoat lb/head	Total lb/head	Net Exports of cattle Nos.
Baringo	28.7	14.5	43.2	13,783
Nandi	27.5	4.7	32.2	12,166
Kiambu	30.1	1.6	31.7	-24,000
Kericho	27.8	3.6	31.4	6,920
Embu	24.2	5.4	29.6	1,268
S. Nyanza	24.0	2.1	26.1	17,162
Kitui	18.3	6.3	24.6	15,515
W. Province	23.8	0.5	24.3	-18,944
Nyeri	19.7	2.8	22.5	-1,799
Murang'a	17.1	2.2	19.3	-820
Kirinyaga	16.6	0.9	17.5	-109
Meru	13.1	3.8	16.9	1,492
Elgeyo-M	12.3	4.5	16.8	3,859
Taita	12.3	2.5	14.8	2,412
Siaya & Kisumu	12.6	1.1	13.7	-10,277
Kilifi	9.6	4.0	13.6	-1,281
Kisii	10.8	2.7	13.5	713
Machakos	10.9	2.6	13.5	28,598
Kwale	10.7	1.5	12.2	2,381

Source: Aldington and Wilson, The Marketing of Beef in Kenya(20).

is high. For the areas with low rainfall there have been few significant new products, new varieties, or changes in technology that have radically altered their position. In some of the low rainfall areas where population pressure is becoming acute there may well have been a deterioration in standards of living.

It is interesting to look at subsistence output and output marketed within districts as well as official marketed output changes. Table 13 shows the proportion of the area under different crops in the small farm districts in 1969/70. This can be compared roughly with Table 2 which gave the 1930 position. The areas are not strictly comparable because district boundaries have changed. There is also a difference in the way in which crop mixtures were treated in the two censuses. In the 1969/70 census, the areas of crops grown in mixtures were double counted, the area being counted again for every crop that appeared in the mixture. In the 1930 census, the aggregate area of crops is the same as the total cropped area so crops in crop mixtures must have been assessed in proportion to their densities in the mixtures. The 1969/70 census exaggerates the role of crops that tend to appear in small proportions in crop mixtures, and it underestimates the role of crops that tend to dominate in their crop mixtures.

In spite of the difficulties with the comparison, there are some broad trends that stand out clearly. There is a big decrease in the role of sorghums and millets since 1930, as one would expect. In 1930, sorghums and millets accounted for well over 40% of the area in Nyanza and Western Provinces, and as high as 74% in South Nyanza and Kisii. In Central Kenya the percentages varied from 10 to 30, but there was less at the Coast. By 1969/70, the role of sorghums and millets had decreased substantially in all districts, some districts recording none, the majority under 10% and the highest, Kisumu district, only 27%. The increase in maize was very considerable in Nyanza and Western Provinces and in Kericho, but much less considerable in Central and Eastern Provinces. Pulses increased in some areas and decreased in others, as did root crops (among which were Irish potatoes as well as the more traditional ones). Bananas increased in importance in most banana-growing areas. There were more groundnuts and cotton in 1969/70 than in 1930, even proportionately, and there were the new products: coffee, pyrethrum and tea.

TABLE 13: 1969/70 AGRICULTURAL SAMPLE CENSUS: PERCENTAGE AREAS UNDER DIFFERENT CROPS

	Cult. area 1000	% Farm land cult.	% Cult. pop.	Mixed crop index*	Maize	Sorghum Milllets	Roots	Pulses	Cotton	Bananas	Sugar	Coff.	Tea	Pyre.	Gruts	Other
Western	212	28	.16	1.39	46	13	14	9	5	7	2	1	1	1	1	2
Kakamega	114	334	.15	1.33	50	10	9	10	0	10	3	2	3	1	1	2
Bungoma	56	22	.16	1.33	52	14	13	6	4	6	0	1	1	1	1	3
Busia	42	26	.21	1.62	29	22	24	8	16	1	0	1	1	1	1	0 M
Yanza	284	23	.13	1.62	41	20	10	11	4	3	2	2	1	2	3	2
Uisumu	49	23	.12	1.83	38	27	12	15	9	2	3	1	1	1	3	1
Slava	57	25	.15	1.89	41	22	11	13	4	1	1	1	1	1	2	5
S. Nyanza	102	18	.15	1.59	39	21	12	10	8	1	3	1	1	1	5	1
Kisii	77	37	.11	1.33	48	10	5	4	10	2	9	4	7	1	1	2
Central	267	42	.16	1.80	36	1	8	26	1	11	2	6	1	3	1	5
Kisumu	45	42	.09	1.10	38	1	10	24	1	10	1	7	2	1	1	7
Kurung'a	95	61	.21	1.89	41	1	3	28	0	16	3	5	1	1	0	7
Meru	36	32	.10	1.72	32	1	10	22	1	11	2	10	6	1	1	6
Kericho	56	51	.26	1.89	35	5	2	36	5	8	2	6	1	1	1	1
Lyandarua	36	25	.20	1.80	25	1	24	9	1	1	1	1	1	1	1	17
Rift	92	12	.11	1.19	67	0	3	10	1	0	10	0	4	0	1	2
Fericho	48	17	.10	1.05	73	6	3	1	1	1	12	0	5	1	1	0
Mandi	25	13	.12	1.11	77	3	1	4	1	1	10	0	4	1	1	0
Elgeyo-N	19	7	.12	1.63	47	8	8	29	1	1	1	1	1	1	1	7

Contd/.....

TABLE 13: Contd.

	Cult. area '000	% Farm land cult.	Ag. Cult. pop.	Mixed crop.	Rubber	Sorghum	Roots	Pulses	Cotton	Bananas	Sugarcane	Coffee	Tea	Pyrethroids	Other
Eastern	470	14	.26	1,92	32	9	7	34	3	4	2	2	0	1	0
Ebwa	39	15	.22	1,81	31	23	4	23	2	7	2	4	1	-	4
Muru	109	14	.18	1,73	24	9	17	18	0	12	4	7	0	2	0
Mechikas	188	24	.27	1,94	36	1	7	43	3	2	22	1	-	-	5
Uvui	140	9	.41	2,08	33	16	2	37	4	2	1	-	-	-	5
Cocon. Cashes															
Coast	214	15	.34	2,13	28	1	14	3	1	1	1	0	10	15	0
Uvifi	118	16	.38	2,16	27	-	12	1	1	6	-	-	24	20	0
Muli	98	12	.33	2,03	30	4	10	0	0	2	1	-	13	12	0
Tufu	28	14	.25	2,08	30	1	14	19	2	5	5	3	-	-	19

<sup>a</sup> Appropo area of crop/cultivated area.

Source: Statistical Abstract 1972.



The substitution of maize and other products for sorghums and millets deserves some comment. Maize had been introduced to Kenya way back, but improved varieties were distributed from the early years of the 20th Century. Maize was taken up fairly quickly in some areas, mainly because of its reduced labour demands. It was also given a boost by being the basis of the diet for nearly all wage labour employed away from the small farm areas. While there are obviously substantial advantages in maize in many areas, there are also reasons for retaining sorghums and millets particularly in the areas with little rain. Sorghums and millets are much more drought-resistant than maize, and they have another advantage in being more nutritious. While a great deal of effort has gone into encouraging improvements in maize production, relatively little has been done to encourage the production of millets and sorghum. Some of the lower rainfall areas might have fared much better if these crops had received more attention.

Table 13 also shows the percentages of farm land in cultivation, the cultivated area per head, and the extent of mixed cropping. The percentage of farm land cultivated obviously relates to the density of population, but also to the quality of the land, the economic opportunities available and the general level of development. The role of livestock production in the economy of the district should also affect the intensity of cultivation. Table 13 shows that the percentage of farm land cultivated is highest in Central Province, though there are marked differences between districts in Central Province, and it is lowest in Rift and Coast Provinces, as one might expect. A great deal of the land in Rift and Coast Provinces is not suitable for cultivation, but there are obviously other factors that also help to explain the low intensities of cultivation in those Provinces. The area cultivated per person also varies substantially, and again there are many factors that might explain the variation. Land pressure would tend to reduce the area cultivated per person, but it would also be related to the quality of the land, the kind of products grown and many other factors. The highest areas cultivated per person appear in Kitui and Coast Province, perhaps partly because there are large areas of permanent crops, partly also because land pressure is low as is land quality. Finally mixed cropping is clearly far more important in some districts than in others. The areas under crop mixtures, and the number of crops in a crop mixture, are low in Kericho and Nandi, where a lot of maize is grown in pure stands, and relatively low in Kakamega and Bungoma and Kisii which are also substantial maize growing districts. Elsewhere, mixed cropping is obviously extensive and intricate.

Conclusion

To conclude this survey of agricultural development in Kenya's small farm areas, it remains to mention the gaps, further possible areas for investigation, and some of the more important questions that might be followed up. It should be stressed again that this paper represents only a start. Only the very obvious sources have been consulted, but even these have provided much interesting material. Further study of the sources listed here together with a study of other sources like the reports of the district administration and district agricultural officials, the reports of the Labour Department, and reports of contemporary observers like the staff of the Missions, would all undoubtedly add to an understanding of why different areas developed as they did, what the most significant factors in their development were, and where the different areas stand at present. Perhaps as fruitful as any documentary sources are the oral history sources that are being used with such effect by East African historians. These are likely to yield as much as any documentary sources on recent agricultural history.

There are many obvious gaps in a paper such as this that summarises the information available rather than seeking for information that it would be useful to know. Two of the most important gaps are worth comment. First, the paper concentrates heavily on changes in products and product-mixes and ignores the equally interesting and important subject of changes in production techniques. Unfortunately, information on changes in production techniques is difficult to obtain. Information on the process of change from shifting to settled agriculture, the different implements and equipment that were used, and methods of husbandry is almost entirely lacking in the sources consulted for this paper. For this important aspect of agricultural development one would have to go elsewhere. There is a little on the more recent period during which the use of purchased inputs like fertilisers, insecticides and improved seed have become widespread and this has not been summarised here. But for the earlier period the information is much more difficult to get.

The second important omission is any discussion of the vertical differences between different groups in the farming population, as opposed to the regional differences between different geographical areas. The inequalities between different groups of farmers, who has gained and why,

how policy has affected the question of who lost and who gained in the process of development are some of the interesting questions that have been ignored, again mainly for data reasons. The effect that the controls over the expansion of coffee, pyrethrum, dairying and tea had on the changing inequalities; the consequences of extension strategy; the implications of land reform and of resettlement programmes for agrarian structure are all interesting questions that could do with investigation. There has been some work on these questions recently in particular areas, notably that of Lamb (35) Cowen (26) and Hurt (32). All suggest strong inequalities in the present small farm societies, and Cowen shows some of the changes that have taken place over time. Cowen's figures for a small part of Nyeri show 30% of the tea producers getting 70-75% of the income from tea, and 30% of the dairy producers getting 64-68% of the income from dairying. When one remembers the large numbers that do not participate at all in tea or dairy production one sees that the benefits from the expansion of dairying and tea growing only reach a small fraction of the total population in the dairy and tea producing districts. The gains are as unequally spread within districts as between districts, but only the latter kind of inequality has been discussed here.

This paper ends with a plea for further work in a field that has been neglected both by economists and by historians. The recent history of agricultural development in Kenya's small farm areas could shed light on a number of current development issues, as well as contributing to our understanding of the broader field of development historically.

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APPENDIX TABLE 1A

POPULATION AREAS DENSITIES IN SMALL SCALE AGRICULTURAL DISTRICTS 1948 & 1962

	1948			1962			
	Pop. '000	Area sq. m.	Density per sq.m.	Pop. '000	Area sq. m.	Density per sq. m.	
<u>Nyanza</u>							
<u>NYANZA</u>							
N. Nyanza	636	2584	237	Elgon	348	1500	232
C. Nyanza	470	2507	187	North	608	1200	507
S. Nyanza	547	3753	146	Central	664	2476	268
Kericho	215	2157	100	South	482	3003	160
				Kisii	519	752	690
				Kericho	391	2133	183
<u>CENTRAL</u>							
Kiambu	259	615	420	407	730	557	
Murang'a	304	739	412	345	702	491	
Nyeri	184	673	274	255	595	428	
Embu	203	1657	122	293	1603	183	
Meru	313	3740	84	469	3763	125	
Machakos	358	5614	64	551	5790	95	
Kitui	211	13207	16	285	11696	24	
<u>COAST</u>							
Kwale	116	3052	38	158	3212	49	
Kilifi	185	4957	37	248	4835	51	
Taita	62	6019	10	90	5805	15	
<u>RIFT</u>							
Nandi	81	630	128	119	714	167	
Elgeyo-Mar.	64	1144	56	161	1009	160	
Baringo	72	3511	21	130	4004	32	
W.Suk (Pokot)	43	1821	24	59	1960	30	

Source: Statistical Abstract.

APPENDIX TABLE 1B - POPULATION AREAS & DENSITIES IN SMALL SCALE AGRICULTURAL  
DISTRICTS, 1969

	Pop. '000	Area sq. km.	Density per sq. km.	Area sq.m	Density per sq. m
Kakamega	783	3520	222	1358	575
Bungoma	345	3074	112	1186	290
Busia	200	1629	123	629	319
<u>NYANZA</u>					
South Nyanza	663	5714	116	2205	301
Kisii	675	2196	307	847	795
Kisumu	401	2081	193	803	500
Siaya	383	2534	151	9978	391
<u>CENTRAL</u>					
Nyeri	361	3284	110	1267	285
Murang'a	445	2476	180	955	466
Kirinyaga	217	1437	181	555	469
Kiambu	476	2448	194	945	503
Nyandarua	177	3528	50	1361	130
<u>Eastern</u>					
Machakos	707	14178	50	5471	130
Kitui	343	29389	12	11341	31
Embu	179	2714	66	486	171
Meru	597	9922	60	3829	155
<u>Coast</u>					
Kilifi	308	12414	25	4791	65
Kwale	206	8257	25	3186	65
Taita	111	16959	7	6545	18
<u>Rift Valley</u>					
Nandi	209	2745	76	1059	197
Kericho	479	4890	98	1887	254
Elgeyo-M	159	2722	59	1050	153
Baringo	162	10627	15	4101	39
W. Pokot	82	5076	16	1959	41

Source: Statistical Abstract 1972.

APPENDIX TABLE 2: CATEGORIES OF AGRICULTURAL LAND

	% High Potential*	% Medium Potential*	% Low Potential*	Agric. land Area '000 ha.	Total land Area '000 ha.
<b>WESTERN</b>	100	0	0	741	823
Kakamega	100	0	0	325	352
Bungoma	100	0	0	253	308
Busia	100	0	0	163	163
<b>NYANZA</b>	97	3	0	1252	1252
South Nyanza	99	1	0	571	571
Kisii	100	0	0	220	220
Kisumu } Siaya }	94	6	0	461	461
<b>CENTRAL</b>	96	1	3	839	839
Nyeri	93	0	7	172	329
Murang'a	100	0	0	157	187
Kirinyaga	91	9	0	108	143
Kiambu	96	0	4	132	264
Nyandarua	98	0	2	270	353
<b>EASTERN</b>	11	48	41	4533	5622
Machakos	9	57	34	1350	1419
Kitui	3	50	47	2282	2939
Embu	26	74	0	252	271
Meru	37	15	48	651	993
<b>COAST</b>	11	17	72	2540	3752
Kilifi	9	21	70	1202	1241
Kwale	16	20	64	796	825
Taita	7	2	91	642	1686
<b>RIFT</b>	43	4	53	2279	2610
Nandi	100	0	0	234	274
Kericho	100	0	0	380	489
Elgeyo-Marakwet	53	0	47	196	273
Baringo	17	8	75	1001	1057
West Pokot	22	0	75	458	507

\* High Potential: annual rainfall 35" or more (40" Coast)  
 Medium Potential: annual rainfall 30-35" (35-40" Coast, 25-35" Eastern)  
 Low Potential: annual rainfall 25" or less

Source: Statistical Abstract.



APPENDIX TABLE 3A: VALUE OF MARKETED OUTPUT FROM DIFFERENT PROVINCES 1938-50 (€'000)

	1938		1944		1945		1946		1947		1948		1949		1950								
	NY	CO	NY	CO	NY	CO	NY	CO	NY	CO	NY	CO	NY	CO	NY	CO							
Milze	78	106	252	7	260	2	0	293	1	0	317	100	0	253	132	0	452	51	14	953	78	15	
Millet	3	0	33	0	22	8	0	47	2	0	29	16	0	20	30	0	19	33	0	35	9	0	
Wheat	-	-	2	5	2	5	-	3	1	-	3	1	-	2	0	-	1	1	-	2	1	0	
Cotton	90	11	40	0	44	0	10	49	0	7	48	0	17	51	0	15	131	0	45	143	0	17	
G'nyts	13	0	11	0	8	0	0	14	0	5	26	0	0	23	0	0	21	0	0	35	0	0	
Pulses	8	0	0	0	9	84	0	8	108	6	19	195	9	12	132	42	9	99	26	19	196	31	
Rice	1	-	16	-	16	-	n.a.	10	-	6	4	-	26	16	-	42	21	-	20	19	-	30	
Cassava	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.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Smsim	13	-	0	-	4	-	-	1	-	4	1	-	0	1	-	2	2	-	0	1	-	0	
Coffee	-	-	1	2	1	2	-	2	3	4	4	2	-	3	4	-	3	6	-	3	21	-	
Bananas	n.a.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Plantains	n.a.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Wattle	-	37	-	110	-	102	-	0	154	-	3	167	-	6	259	-	-	416	-	-	354	-	
Veg.,fr.,fl.	5	6	8	148	9	117	59	2	161	35	9	146	28	12	155	28	1	16	1	0	82	108	
Potatoes	0	5	7	14	7	52	0	2	44	-	0	34	-	1	68	-	1	103	-	0	61	-	
Sisal	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	125	37
Tobacco	-	0	-	26	-	29	-	-	6	-	-	9	2	-	22	2	-	4	0	-	-	3	
Pyrethrum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Milrea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sugercane	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	12	*
Locusts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cappas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dashews	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Kapok	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Onions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Onillies	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Contd./.....

APPENDIX TABLE 3A: Contd/---

	1936			1944			1945			1946			1947			1948			1949			1950		
	NY.	CEH.	CO.	NY.	CEH.	CO.	NY.	CEH.	CO.	NY.	CEH.	CO.	NY.	CEH.	CO.	NY.	CEH.	CO.	NY.	CEH.	CO.	NY.	CEH.	CO.
Castor	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.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Caster	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.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Palm vine	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.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Cattle	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.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Sheats	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.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Pigs	*	*	*	*	*	*	5	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hides	*	*	*	*	*	*	10	*	*	20	*	*	*	*	*	*	*	*	50	*	*	50	*	*
																			(20)			(35)		
Stags	*	*	*	*	*	*	6	*	*	16	*	*	*	*	*	*	*	*	61	*	*	113	*	*
Milk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Green																								
Ghee	*	*	*	27	0	36	0	44	0	50	38	0	56	0	0	28	2	0	(30)	2	0			
Eggs				11	11	20	58	19	36	14	37	0	24	25	0	21	46	0	23	23	0			
Poultry	-	-	-	12	-	26	-	-	*	3	40	-	4	57	-	*	36	-	23	-	-			
Beeswax	-	2	-	3	-	1	-	-	*	-	*	-	-	*	-	-	7	-	3	-	-			
Total	221	205	409	425	439	525	80	501	516	119	536	898	112	485	878	139	730	948	175	1411	1359	238		

n.a. = not available

Source: Agricultural Department, Annual Reports.



APPENDIX TABLE 3B: VALUE OF MARKETED OUTPUT FROM DIFFERENT PROVINCES 1951-57

	1951			1952			1953				1954				1955				1956				1957				
	NY.	CEN.	CO.	NY.	CEN.	CO.	NY.	CEN.	S.	CO.	NY.	CEN.	S.	CO.	NY.	CEN.	S.	CO.	NY.	CEN.	S.	CO.	NY.	CEN.	S.	CO.	
Maize	643	122	27	828	259	0	835	17	0	4	1780	109	0	17	1400	28	(4)	13	703	127	7	26	842	199	126	13	
Millet	30	1	-	9	12	-	40	5	0	-	148	19	3	-	219	2	0	-	37	5	0	1	50	20	8	00	
Wheat	3	0	-	3	0	-	4	0	-	-	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cotton	243	-	142	276	-	127	247	-	-	40	415	-	-	373	331	-	-	66	398	-	-	122	249	-	-	1008	
Groundnuts	37	-	-	24	-	-	22	-	-	-	43	-	-	-	79	-	-	-	108	-	-	-	103	-	-	-	
Pulses	12	257	35	26	287	12	10	196	13	90	12	114	20	1	8	56	8	1	10	79	2	2	28	171	18	8	
Rice	14	-	32	31	-	5	44	-	-	6	59	-	-	0	135	-	-	8	37	8	-	20	60	10	-	27	
Cassava	15	-	5	2	-	6	0	-	0	9	0	-	-	0	0	-	-	34	2	-	-	1	1	-	-	2	
Simsim	0	-	1	1	-	0	2	-	-	2	1	-	-	0	0	-	-	1	14	-	-	0	21	-	-	9	
Coffee	15	40	-	7	40	-	19	128	-	-	36	225	-	-	50	258	-	2	131	354	-	1	198	679	11	6	
Bananas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	3	-	44	-	40	36	49	-	32	
Pineapples	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53	-	-	
Wattle	0	382	0	8	447	4	6	512	6	3	11	587	5	0	5	560	18	2	3	480	12	5	1	280	23	3	
Veg. Fr. Fl.	-	148	124	-	147	129	-	98	49	106	-	204	26	-	-	39	60	28	-	249	66	28	2	230	76	26	
Potatoes	3	58	-	0	52	-	7	93	-	-	9	61	-	-	19	81	7	-	10	82	-	-	0	101	3	3	
Sisal	113	231	-	0	115	-	7	-	20	-	0	0	15	-	-	-	9	-	-	-	23	-	-	-	-	5	
Tobacco	-	28	2	-	3	6	-	9	1	7	-	42	5	-	-	16	0	-	-	44	4	-	-	43	4	-	
Pyrethrum	-	9	-	-	13	-	0	30	-	-	1	39	-	-	2	50	34	-	5	72	-	-	18	43	-	-	
Tea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Miraa	-	9	-	-	29	-	-	-	-	-	-	40	-	-	-	136	-	-	-	53	-	-	-	78	-	-	
Sugar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Coconuts & Copra	-	-	16	-	-	65	-	-	-	108	-	-	-	26	-	-	89	-	-	-	-	64	-	-	-	56	
Cashews	-	-	9	-	-	4	-	-	-	21	-	-	-	30	-	-	34	-	-	-	-	51	-	-	-	85	
Kapok	-	-	9	-	-	2	-	-	-	3	-	-	-	1	4	4	-	5	-	-	-	6	-	-	-	2	
Chillies	-	-	25	-	-	30	-	-	-	36	-	-	-	51	-	-	18	-	-	-	-	34	-	-	-	42	
Castor	-	24	-	-	78	3	-	-	69	5	-	-	109	3	-	-	12	4	-	1	86	43	-	6	124	21	

Contd/.....

APPENDIX TABLE 3B: Contd..

	1951			1952			1953			1954			1955			1956			1957		
	NY	CEN.	CO.	NY	CEN.	CO.	NY	CEN.	CO.	NY	CEN.	CO.	NY	CEN.	CO.	NY	CEN.	CO.	NY	CEN.	CO.
Corriander	-	24	-	-	-	-	-	3	-	-	5	-	-	2	-	0	-	-	-	-	-
Palmoline	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cattle	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Sheats	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Pigs	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hides	(60)	113	-	(40)	65	-	(80)	77	61	-	50	69	37	2	50	90	200	-	117	57	41
Skins		126	-		113	-		47	69	-		64	40	-	31	113	47	-	35	44	55
Milk, cream	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ghee	42	0	-	43	1	-	102	-	0	-	147	-	9	-	156	-	0	-	114	-	2
Eggs	16	24	-	17	32	-	21	33	8	-	12	21	8	-	12	12	3	-	27	12	4
Poultry		28	-	2	24	-	3	12	18	-	3	9	31	-	3	7	-	1	8	18	-
Beeswax	-	9	-	-	11	-	-	1	2	-	-	2	14	-	-	2	3	-	-	1	8
Total	1246	1609	427	1317	1729	393	1429	1252	319	440	2728	1635	327	504	2500	1462	407	208	1752	1720	328

\* Not available.

Source: Agricultural Department, Annual Reports.



APPENDIX TABLE 32: VALUE OF MARKETED OUTPUT FROM DIFFERENT PROVINCES 1959-62

	1959				1960				1961				1962											
	NY	CEN	S	CO	NY	CEN	S	CO	NY	RWP	CEN	S	CO	NY	RWP	CEN	S	CO						
Melons	716	255	45	100	800	163	9	34	797	77	73	8	6	763	8	285	66	19	459	71	80	113	9	
Melons	98	25	3	0	103	9	8	6	110	0	0	0	5	26	0	0	4	1	15	0	14	28	0	
Wheat																								
Cotton	273	-	-	75	308	-	-	157	346	-	-	-	145	429	-	-	1	81	106	-	-	2	75	
Groundnuts	118	-	-	-	46	-	-	-	45	-	-	-	-	88	-	-	-	-	167	1	-	-	-	
Pulses	26	302	37	8	46	216	11	10	88	-	176	25	7	76	1	156	68	12	6	6	129	103	7	
Rice	103	30	-	5	60	38	-	5	80	-	164	-	21	85	-	240	-	2	8	-	256	-	3	
Cassava	1	-	-	28	8	-	-	24	19	-	-	-	8	7	-	-	-	15	0	-	0	-	11	
Sweet	23	-	-	13	32	-	-	26	41	-	-	-	21	17	-	-	-	28	7	-	-	-	19	
Coffee	216	1007	33	7	947	1700	44	14	479	-	1855	59	15	301	1	2289	42	20	405	2	2482	101	21	
Bananas	41	28	-	23	11	46	-	25	11	-	24	-	42	11	-	16	-	15	16	-	13	1	13	
Pineapples	-	71	-	-	-	51	-	-	-	-	40	-	-	-	-	42	-	1	-	-	84	-	3	
Melons	0	251	12	4	0	205	17	6	0	1	176	16	6	0	9	96	16	0	0	10	116	22	3	
Veg. Fr. & J	-	189	16	30	-	149	90	54	-	-	201	52	50	-	-	247	53	19	-	4	144	88	13	
Potatoes	2	56	2	-	8	88	2	-	16	4	105	-	-	13	26	158	2	-	4	44	44	3	-	
Maize	-	-	2	-	-	65	-	-	-	-	237	-	-	-	-	4	441	-	-	-	2	82	-	
Tobacco	-	26	25	0	-	23	0	6	-	-	31	3	6	-	-	14	82	6	-	1	50	11	3	
Pyrethrum	19	70	-	-	75	88	-	-	182	8	164	-	-	280	75	143	-	-	128	45	208	0	0	
Tea	-	0	-	-	1	28	-	2	-	0	-	-	-	8	-	82	-	-	16	-	43	-	-	
Misc	-	56	-	-	-	54	-	-	-	78	-	-	-	-	-	66	-	-	-	5	80	-	-	
Sugar	-	-	-	-	13	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Coconuts & Copra	-	-	-	215	-	-	-	253	-	-	-	-	204	-	-	-	-	198	-	-	-	-	68	
Cashew	-	-	-	58	-	-	-	120	-	-	-	-	183	-	-	-	-	252	-	-	-	-	68	
Spice	-	-	-	2	-	-	-	2	-	-	3	-	2	-	-	-	-	2	-	-	-	-	2	
Chillies	-	-	-	28	-	-	-	15	-	-	-	-	11	-	-	-	-	11	-	-	-	-	17	
Custard	0	8	152	16	2	5	40	20	3	-	7	45	80	3	-	7	57	13	3	-	4	91	12	
Cardamom	-	-	0	-	-	-	1	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	1	
Palm wine	-	-	-	-	-	-	-	132	-	-	-	-	80	-	-	-	-	87	-	-	-	-	147	

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APPENDIX TABLE 3C: Contd.

	1959				1958				1957				1956				1955						
	NY	CT	S	CO	NY	CT	S	CO	NY	CT	S	CO	NY	CT	S	CO	NY	CT	S	CO			
Cattle	*	*	*	*	*	140	202	*	156	-	132	188	*	144	*	221	256	*	233	*	285	110	
Sheets	*	*	*	*	*	1	18	31	*	25	-	23	1	*	*	46	13	*	23	34	27	*	
Pigs																							
Hides	197	67	39	-	358	42	43	18	274	13	81	32	2	240	82	74	105	24	267	16	70	15	28
Skins	63	48	41	-	110	40	59	14	81	18	48	42	2	78	45	55	52	17	61	32	34	17	76
Milk, cream	*	6	*	*	3	13	7	2	5	11				4	22				12	31			71
Ghee	08	-	5	-	01	-	0	11	40	1	-	7	2	72	2	-	1	1	25	-	-	2	17
Eggs	16	2	8	-	14	3	4	-	14	2	5	3	-	10	1	8	4	4	8	4	11	2	14
Poultry	1	3	16	-	1	4	32	3	3	3	6	20	31	5	4	7	11	2	4	20	22	21	1
Beeswax	-	1	17	-	-	-	8	-	-	-	-	8	-	-	-	-	3	-	5	-	1	11	0
Total	1895	2501	574	622	2404	3059	567	1321	2554	300	3159	713	1133	2560	388	3917	1170	1080	2191	650	4018	1077	753

\* Not available.

Source: Agricultural Department, Annual Reports.

APPENDIX TABLE 4: COFFEE - 1957-58

	1957		1958		1959		1960		1961		1962		1963		1964	
	AC.	GROUPS	AC.	GROUPS	AC.	GROUPS	AC.	GROUPS	AC.	GROUPS	AC.	GROUPS	AC.	GROUPS	AC.	GROUPS
Dunguon	1297	6948	1717	8000	2100	8525	2573	10,048	2669	11,049	3823	12,254	5074	17,019	5274	17,276
Kilimanjaro	257	1430	364	3630	417	2823	412	1,895	577	2,513	873	3,272	1179	2,475	1847	4,370
C. Nyanza	3	46	70	146	25	743	60	265	110	303	190	270	232	1,270	218	1,316
S. Nyanza																
Uvishi	2661	8578	2826	11,136	3800	14,761	4538	17,949	5914	21,400	7019	26,675	22602	35,140	28552	41,512
Utandu	613	2013	737	3,012	1290	3,238	3167	4,167	5418	5,231	6639	8,787	11,975	9,213	12411	13,821
Murang'a	1138	4777	1139	55,543	1911	6,168	2436	6,226	4038	10,205	8747	12,362	16624	16,194	17573	23,485
Ngari	1207	4134	1500	5,427	2175	6,912	3021	7,728	3945	10,445	7019	15,564	13531	22,512	14934	23,971
Mt Kenya	3718	10165	3680	12,087	4638	13,943	5567	14,818	7272	26,259	9864	22,688	11100	15,275	12779	15,558
Esau																
Neru	3641	20330	6889	22,716	8666	25,000	8766	21,561	11251	31,282	19475	36,387	27083	43,437	27000	49,531
Rehoboth	352	1824	502	2,751	933	4,363	1130	6,123	1768	9,072	2834	11,208	4751	14,078	5580	25,763
Uthmaniyah	-	-	-	-	-	-	-	-	-	-	-	-	50	150	81	150
Taita	252	1228	340	1,501	395	1,773	552	2,400	672	2,733	815	3,179	1065	1,857	1400	2,425
Elgeyo-Marakwet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W. Pokot	-	-	-	-	-	-	62	310	96	n.a.	130	n.a.	10	594	593	533
Kenia	-	-	-	-	-	-	53	463	195	n.a.	349	n.a.	471	1338	460	450
Kericho	144	75	38	130	74	262	96	385	125	331	182	423	218	432	454	480
Garissa	-	-	-	-	-	26	145	40	n.a.	59	n.a.	118	258	328	360	340
Murak/Kajiado	-	-	-	-	-	-	-	-	-	-	-	-	23	48	131	140
Total	18743	61512	22000	74,076	26174	87,971	32940	115,406	140,270	194,900	248,279	315,118	382,844	475,463	575,463	725,588

Source: Agricultural Department, Annual Reports.



APPENDIX TABLE 5: ROBUSTA COFFEE EXPANSION

	1957		1958		1959		1960		1961		1962		1963		1964	
	AC.	GROWERS	AC.	GROWERS	AC.	GROWERS	AC.	GROWERS	AC.	GROWERS	AC.	GROWERS	AC.	GROWERS	AC.	GROWERS
Elgon Nyanza																
Robusta	4	40	47	255	74	375	88	424	78	384	102	384	?	?	3	6
H. Nyanza																Busia
Robusta	18	172	30	318	40	481	34	320	72	408	108	477	330	n.a.	75	403
C. Nyanza																
Robusta	18	266	24	233	33	526	75	150	157	613	170	258	?	?	186	427

Source: Agricultural Department, Annual Reports.



APPENDIX TABLE 6: THE EXPANSION OF SMALLHOLDER TEA PRODUCTION 1960/61 - 1971/72

	1960/61		1961/62		1962/63		1963/64		1964/65		1965/66	
	Acres	Growers	Acres	Growers	Acres	Growers	Acres	Growers	Acres	Growers	Acres	Growers
Kianbu	643	1043	948	1278	1129	1433	1375	1523	1640	1894	2048	2539
Murang'a	121	323	413	1038	725	2139	1051	2640	1356	3141	1756	3400
Nyeri	1169	2970	1494	3560	1735	3839	2003	3988	2229	4260	2508	4399
Kirinyaga	519	1574	711	2008	670	2103	959	2168	1060	2277	1233	2434
Embu			104	351	205	550	316	768	419	944	575	1178
Meru	51	286	412	1715	654	2152	890	2292	1153	2445	1555	2834
Kericho	565	905	837	1262	1167	1586	1475	1627	1715	2040	2264	26171
Nandi	154	441	372	865	537	1183	742	1357	925	1679	1226	2236
Elgeyo-M	-	-	-	-	-	-	6	19	13	37	20	64
Kisii	416	1247	726	1737	1014	2372	1337	2372	1621	2559	2916	5186
Kakamega	77	236	218	580	406	921	506	1021	539	1033	636	1118
Bungoma	-	-	-	-	-	-	2	8	13	34	13	34
Total	3715	9025	6235	14394	8382	18278	10662	19783	12683	22343	16810	26123

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APPENDIX TABLE 8: Contd...

	1966/67		1967/68		1968/69		1969/70		1970/71		1971/72		1972/73	
	Acres	Growers	Acres	Growers	Acres	Growers	Acres	Growers	Acres	Growers	Acres	Growers	Acres	Growers
Alwalne	2773	3311	3522	3742	4337	4194	5203	4594	6210	5008	7188	5432	8243	6538
Murray's	2256	3138	3029	4763	4670	4923	5282	5373	6143	5009	6676	6533	8180	8125
Byerl	2940	4740	3351	4877	3874	5267	4506	5517	5395	2509	14523	6140	7638	7983
Vilfrayga	1459	2893	1621	2632	1971	2632	2532	3092	3208	1891	6130	4930	5803	4623
Edou	761	1327	970	1680	1239	1825	1417	2095	1900	2240	2485	2742	3113	3537
Heru	2125	3003	2956	4140	3225	4818	3025	4601	4325	6545	6538	7537	7995	9084
Karicha	3000	3421	4053	4308	5367	4842	6465	5402	6980	5199	6585	6769	6650	7525
Kandi	1561	2842	1826	3656	2946	3291	2166	3375	2699	3742	2896	3387	3015	3331
Elaysa-ll	38	125	38	137	75	159	73	159	939	748	1110	755	1428	757
Katli	2536	4515	4161	5549	5309	7434	6522	8934	10114	12439	14815	16752	18200	21234
Kakanga	829	1650	1377	2717	1587	2877	1711	3077	1880	3432	2083	3654	2835	4331
Bungana	13	34	13	34	13	34	13	34	13	34	13	34	13	34
Total	20016	32598	26017	37953	33134	42596	38885	48443	51680	40639	77861	66829	75240	79314

APPENDIX TABLE 2: AGRICULTURAL CENSUS 1969/70

Cult. area	Aggreg. area	Crops													
		Maize	Sorghum millets	Roots	Pulses	Cotton	Bananas	Sugar	Co'fee	Tea	Pyth.	Gr'nuts	Other		
<b>WESTERN</b>	212.2	294.9	134.1	39.5	39.7	25.7	14.2	19.3	4.6	4.2	4.2	-	3.4	6.0	
Kakamega	114.3	152.6	75.8	14.9	14.4	15.9	0.4	14.5	4.1	3.3	4.2	-	1.8	3.3	
Bungoma	56.0	74.5	38.8	10.1	9.3	4.6	3.3	4.1	0.3	0.9	-	-	1.0	2.1	
Busia	41.9	67.8	19.5	15.0	16.0	5.2	10.5	0.7	0.2	-	-	-	0.6	0.1	
<b>NYANZA</b>	284.2	461.3	190.5	91.8	45.6	48.7	17.9	13.6	10.6	10.4	3.8	6.9	13.0	8.5	
Kisumu	48.7	89.3	33.7	23.8	10.3	13.0	0.8	1.6	2.5	-	-	-	2.4	1.2	
Siaya	56.6	107.2	44.3	23.9	11.4	14.2	3.9	0.6	1.0	-	-	-	2.1	5.8	
S. Nyanza	101.9	162.2	63.7	33.9	19.3	16.9	12.3	1.3	5.0	1.0	-	-	8.0	0.8	
Kisii	77.0	102.6	48.8	10.2	4.6	4.2	-	10.1	2.1	9.4	3.8	6.9	0.5	2.0	
<b>CENTRAL</b>	267.2	479.8	173.1	6.7	36.9	124.7	6.1	50.6	9.7	27.0	6.6	16.3	0.3	21.8	
Kiambu	44.5	75.7	28.8	-	7.5	17.8	-	7.9	0.9	5.3	1.5	1.0	-	5.0	
Muranga	94.8	179.1	73.4	1.2	5.9	50.2	0.4	27.7	5.7	9.5	1.0	-	0.3	3.8	
Nyeri	36.2	62.2	20.0	-	6.4	13.4	-	6.9	1.3	5.0	3.6	0.7	-	3.9	
Kirinyaga	55.7	105.3	36.7	5.5	2.2	38.1	5.7	8.1	1.8	6.2	0.5	-	-	0.5	
Nyandarua	36.0	57.5	14.2	-	13.9	5.2	-	-	-	-	-	14.6	-	9.6	
<b>RIFT</b>	91.5	108.7	72.6	6.2	3.7	10.3	-	0.4	8.8	0.3	3.9	0.4	-	2.1	
Kericho	47.6	50.2	36.6	2.9	1.3	0.5	-	-	5.9	0.2	2.7	-	-	0.1	
Nandi	25.4	28.3	21.9	0.8	-	1.2	-	0.2	2.9	0.1	1.2	-	-	0.0	
Elgeyo-M.	18.5	30.2	14.1	2.5	2.4	8.6	-	0.2	-	-	-	0.4	-	2.0	

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APPENDIX TABLE 7: (Contd.)

	Dult area		Aggreg. area		Sorghum									
	'000ha.	acres	Maize	Willetts	Roots	Pulses	Cotton	Bananas	Sugar	Coffee	Coconuts	Cashew	C'ruis	Other
<b>COAST</b>	214.1	466.3	128.6	5.7	64.7	13.9	3.2	26.5	4.8	1.6	78.9	66.3	0.7	59.5
Kilifi	116.2	255.7	69.2	-	29.7	2.3	2.1	15.0	-	-	61.3	49.6	0.5	26.8
Kwale	68.3	149.9	42.9	5.0	25.9	0.5	0.2	7.4	2.1	-	16.6	16.4	0.2	22.6
Taita	27.6	57.7	17.4	0.7	8.1	11.1	0.9	4.1	2.7	1.6	-	-	-	11.1
<b>EASTERN</b>	476.4	916.3	286.8	84.7	62.5	314.3	25.1	40.0	18.1	19.1	17.1	17.5	3.8	47.6
Embu	33.9	70.4	21.7	16.0	2.6	15.5	1.3	4.9	1.1	2.8	0.7	-	-	2.9
Muru	109.4	189.7	46.0	17.2	31.3	34.8	0.6	22.6	7.6	13.1	0.4	4.5	0.7	10.9
Machakos	186.2	355.8	133.2	4.8	24.0	155.6	11.5	7.1	7.4	3.2	-	-	-	19.0
Kitui	139.9	290.4	94.6	46.7	4.7	107.4	11.7	5.4	2.0	-	-	-	3.1	14.8

Source: Statistical Abstract.