

A REVIEW OF KENYA'S AGRICULTURAL POLICY AND PERFORMANCE

Kay Muir*

WORKING PAPER 4/82

Department of Land Management,
University of Zimbabwe,
P.O. Box MP 167,
Mount Pleasant,
Harare,
Zimbabwe.

August, 1982

This research was sponsored by the COMMONWEALTH FUND FOR TECHNICAL CO-OPERATION who funded an ASSOCIATION OF COMMONWEALTH UNIVERSITIES Academic Exchange Fellowship for the writer. The views and interpretations in this paper are those of the author and are not necessarily those of the Association of Commonwealth Universities.

* Kay Muir is a lecturer at the University of Zimbabwe.

Preface

The objective of this paper is to outline Kenya's agricultural situation since independence in order to evaluate agricultural pricing and wage policies and in particular their effect on output and employment. The information will be used in comparison with the policies in Tanzania, Malawi and Zambia. The comparison will be for a model being developed in Zimbabwe to determine the links and trade-offs from different agricultural crop pricing and formal wage employment policies on national objectives viz: income distribution, growth (output), employment, food self-sufficiency and foreign currency earnings. Work already undertaken in these countries will be collated and used as evidence and, whilst it is not anticipated that any new evidence will be brought to light for any one country, it is hoped that the comparison may highlight some important issues.

This is a background paper on Kenya's agricultural sector. The paper is being circulated within Zimbabwe because we have so little information on other African countries. A comprehensive bibliography is included and copies of documents marked with a star are held by the writer and will be available for reference at the Department of Land Management. Arrangements can be made to photostat any material which readers may wish to take away.

I should like to thank the Commonwealth Fund for Technical Co-operation who generously funded a scholarship to enable me to travel to Kenya. Contact between developing countries is important and the opportunity to meet and work with my counterparts in East Africa has been most interesting and informative.

Background (1)

Kenya has limited natural resources and a high population growth rate. Only 17.5% of the land area (10 million ha) is of high or medium potential arable land with 12% receiving over 857 mm of rain per annum and 5.5% over 700 mm. In 1979 this represented 0.6 ha per caput. The remainder of the land area received unreliable rainfall of less than 600 mm per annum with about 60% of total area receiving less than 400 mm per annum. (2) Kenya's mineral potential is very limited - currently mining and quarrying account for less than 0.3% of GDP at factor cost. Although there is scope for expansion of the

(1) Except where otherwise stated all information and data are taken from the Kenya Government Central Statistical Office: Economic Surveys, Statistical Abstracts and Digests of Statistics 1960-1981.

(2) The percentage of high and medium potential land given in the ILO mission report (page 33) is 7 and 4.5 percent respectively. Discrepancies were noted in other documents but all emphasised the scarcity of land receiving adequate rainfall for cropping.

fishing, tourist and manufacturing industries, Kenya is going to rely increasingly on intensification of agricultural production to meet the needs of the rapidly expanding population. Kenya's economy, like that of most developing countries, is strongly dualistic with a relatively small proportion of the population involved in the formal money economy. Most of the people live in the rural areas and produce primarily for subsistence. A growing number are, however, becoming involved in the modern economy and the share of smallholder marketed output increased from 20% in 1960 to 53% in 1979. (3)

Kenya's population is growing at approximately 4% per annum which places heavy demands on the economy if it is to provide increasing welfare to the majority of the population, most of whom live in the rural areas.

Kenya's population:	Total	14.3 million persons in 1977
urban	1.4 m.	9.7%
smallholders	10.5 m.	72.9%
large-farm sector	0.6 m.	4.1%
pastoral	0.7 m.	4.7%
rural non-agricultural	1.2 m.	8.6%

(Sharpley)

Estimates of average earnings are given below for 1974, which is the only year for which there is comprehensive rural survey data:

		K£
Agriculture:	wage workers (average annual earnings)	2 340
	smallholders (average farm operating surplus)	2 081
Urban:	private sector (average annual earnings)	6 084
	public sector (average annual earnings)	8 520

Until the early 1970s, Kenya's image of stability attracted substantial inflows of private capital and the balance of payments situation was relatively favourable with an adverse balance of trade always being more than offset by net capital inflows (Heyer). The 1974 oil crisis, however, resulted in balance of payments difficulties for the next few years but a sharp upturn in coffee prices, continued investment and increased tourist revenue resulted in a surplus on current account of K£24 million and an overall surplus of K£112.7 million in 1977. The position fluctuated for the next few years and then fell badly in 1980 with further oil price hikes and a large increase in the volume of imports resulted in a current account deficit of K£333 million. The volume of imports was hit by the necessity to import substantial quantities of maize and wheat. With primary commodity prices for Kenya's principal exports depressed, the

(3) There was a break in the series in 1964 and the 1960 figure is likely to be between 10 and 20% underestimated.

situation does not look promising for the immediate future as terms of trade are expected to continue to decline and the need to import food is likely to be present for the next decade.

<u>Terms of Trade</u>	1976	100	
	1977	131	
	1978	105	
	1979	97	
	1980	89	(Economic Survey, 1981)

The Agricultural Sector and the Economy

Agriculture accounts for 33% of GDP and manufacturing, the next most important sector, accounts for 13%. Agriculture provides employment for 32% of the nation's formal wage workers and the rural areas accommodate 83% of the population (70% of the economically active). In 1980 agricultural exports accounted for approximately 56% of total exports and coffee (as the principal agricultural export and until 1980 the highest export earner) accounted for 22% of total exports. In 1977 coffee represented 43% of all exports and total agricultural exports accounted for 70% of the value of domestic exports. The international coffee situation significantly affects Kenya's balance of trade and greatly influences the share of agriculture in total exports. Coffee's share of export earnings varied between 18% (1974) and 43% (1977).

In the past Kenya has been predominantly self-sufficient in food although there have been periodic crises. Kenya is considered to have the potential to become self-sufficient but declining per capita food production in the last two decades has meant that Kenya's food problems are serious. An annual growth rate of between 6 and 9% is required to achieve maize self-sufficiency by 1989 and a rate of approximately 15% for wheat flour (Sessional Paper No. 4/81, page 49). Unless the terms of trade were to move unexpectedly in Kenya's favour she will need to rely on food imports at concessional terms or reduce other imports which will seriously affect manufacturing, commerce and the agricultural inputs so necessary for agricultural expansion.

Per capita GDP in Kenya in 1980 was \$140 per annum with average wage earnings \$611 per annum. (4) Agricultural wage employees earned an average \$215 per annum but estimates of 1980 average incomes in the rural areas are not given for the approximately 88% self-employed on household farms. Only 6% of the economically active rural labour force were engaged in private wage employment.

The Integrated Rural Survey carried out in 1974/75 gives estimates of household incomes and population distribution as follows:

(4) Ksh20 = K\$1
Ksh14 = Z\$1 (August 1982)

- 4 -

Average farm operating surplus	\$104 per annum
Average income per household (includes remittances, employment, etc.)	\$183 per annum
Per capita income	\$ 26 per annum
Total number of holdings	1 483 422
Total rural population	10 340 000
Total urban population	1 500 000
Large farm and pastoral population	1 560 000
Total population	13 399 000

Government Policy Objectives

The national policy objectives at independence emphasised political equality, social justice and human dignity which were ranked above freedom from want; disease; equal opportunities and growing per capita incomes equitably distributed (African Socialism... page 2). In this first major policy statement, Kenyanisation was heavily emphasised and the first phase after independence was geared towards this goal. Heyer stated that by 1974

"Although the government is not yet satisfied with the performance, the achievements have nevertheless been impressive. Kenya has succeeded in putting Africans in senior positions throughout the government and in the private sector at relatively low cost in terms of efficiency ... Kenya is very sensitive to the issue of Africanisation and the government tries hard to keep the non-African presence to a minimum."

The transfer of land from white farmers to local blacks was a major issue. Some of the farms were bought by the Government and divided up for smallholder settlement schemes, others were transferred intact to black owners.

The First Development Plan (1964-70), in line with the policy of African socialism, emphasised Kenyanisation. In 1963/64 three-quarters of government spending in agriculture was for land transfer although after 1968 this dropped to less than half. Average growth in the plan period was 6.3%. Agricultural production fell short of targeted output mainly due to poor coffee and sisal realisations. Cereal production was up as a result of the increased yields associated with the introduction of hybrids.

The Second Development Plan (1970-74) emphasised growth and in particular agricultural growth. The plan called for Government expenditure to concentrate on increasing efficiency and agricultural incomes. An overall growth rate of 6.7% was achieved although expenditure and emphasis on agricultural development fell short of the apparent emphasis given in the development plan.

The International Labour Office Employment, Incomes and Equity Mission to Kenya acknowledged government's achievements in Africanisation and growth but were disturbed with the distribution record. Their report

emphasised the very urgent problem of increasing employment opportunities in Kenya. The Mission, reacting to the Sessional Paper on African Socialism, suggested that there should be no premature displacement of persons with essential, high level skills but that there should be maximum utilisation of the skills, experience and capital of non-citizens who should be heavily taxed rather than displaced.

With regard to agriculture they suggested that the most urgent areas were intensification of land use directed at the poorest sector, the redistribution of land into small, more labour-intensive farm units and settlement of unused and under-utilised land. The Mission recognised that government policy would have to be directed toward redistribution with growth since the country was so poor that redistribution alone would undermine the productive system it relied on without making a significant contribution to easing poverty. To achieve its aims the economy would have to grow at 7% per annum (or 3½% per capita per annum). With a high population growth rate any fall in the economic growth rate would have a disproportionately severe effect on per capita income and would significantly delay the attainment of the minimum income target (ILO, p. 106). The Mission's principal and most controversial recommendation for both increasing employment and greater equity was that government should take measures for land to be used more intensively by encouraging the subdivision of large farms and the introduction of a land tax (Clayton).

The Government replied to the Mission's report with a Sessional Paper on Employment which accepted most of the recommendations made in the report and the paper and subsequent development plans placed much greater stress on increasing employment and income distribution. The paper emphasised that growth and development would be pursued primarily for the benefit of those without land or work, pastoralists in arid areas and of the smallholders earning less than £60 per annum per household.

The Third Development Plan (1974-78) stressed equality but stated that equal opportunities and not equal incomes, was the goal. It expressed government's intention to tackle the serious differences in opportunity between rural and urban areas.

The Fourth Development Plan (1979-83) came after a dramatic decline in Kenya's terms of trade and balance of payments difficulties as a result of oil inflation and the international recession. It was recognised that government expenditure would have to be cut back but projections were still optimistic and equity still received a prominent place - "it is a major objective of the present plan to reduce further the degree of inequality" (4th Development Plan, page 5). Targets were set at the overall aim of alleviating poverty through the creation of employment opportunities and the provision of basic needs. Food security was recognised as a potentially serious problem in the future.

These targets proved optimistic and in 1980 a Sessional Paper on the economic prospects and policies was brought out to revise the targets and redirect the policy objectives. The Paper emphasised the necessity to cut back the budget deficit by controlling expenditure (Sessional Paper 4/80, page 11) and improving revenue collections. The targets would no longer aim at increasing per capita social and

economic services but at "maintaining the per capita availability of services, and to improving distribution throughout the nation" (Sessional Paper 4/80, page 14). Greater incentives were to be given to the private sector to expand social and economic services. Growth, emphasised for both agriculture and industry, was to be directed toward increasing exports rather than import substitution - with the exception of food. Food security was a serious problem and it was predicted that the government would be forced to buy KSh27 million imported grain and milk which would strain both foreign reserves and the government budget. A famine relief budget was implemented which meant further cuts in other government expenditure. Equity continued to be stressed and the stated policy was to try to invest for growth using labour intensive production systems and in those areas which would benefit the poorest sectors. Government programmes which were not income generating, however, were to be sharply reduced.

After a poor harvest in 1980 the food situation in Kenya became critical as reserves had been run down and there was a period of severe shortages of the staple cereals until imports were received and distributed. Increased food production became a major government objective and in the opening paragraphs of the Sessional Paper on National Food Policy, this was clearly outlined:

"One of the major objectives of Kenya's development policy during the course of the next decade will be to meet an ever increasing demand for food, stemming from a rapidly expanding population and rising per caput income. The agricultural sector must continue to play the leading role in Kenya's development and nearly all the nation's food requirements will need to be met from domestic production. In addition, the agricultural sector must continue to generate foreign exchange earnings to pay for oil, capital equipment and other imports and, at the same time, it must be the major source of new jobs for the rapidly growing labour force.

"To meet these needs, Kenya's agricultural development strategy is aimed at the continued expansion of productive investment, with the primary objective of the provision of basic needs and the alleviation of poverty through growth in agricultural output. The need to conserve national resources is now well recognized as an essential part of this strategy."

(Sessional Paper 4/81, page 1)

The paper did not outline detailed policies but set up five Food Policy Committees to deal with different aspects of the problem:

- 1 Increasing food production
- 2 Agricultural inputs
- 3 Processing and marketing
- 4 Nutrition
- 5 Mid and long-term policy issues. This committee to look into:

- the optimal land use pattern for food crops;
- the optimum mix of food and export crops and measures for their realisation;
- the relative advantages of the intensification of production on rain-fed land and the extension of irrigated land;
- the extent to which nutritional output per hectare, rather than short-term market forces, should be used to determine which foodstuffs should be produced;
- market versus administered pricing; the use of base point pricing; price intervention to encourage the production and consumption of non-luxury and nutritionally efficient foodstuffs;
- the extent to which Government should intervene in the marketing of foodstuffs; and
- the changes in consumption patterns necessary to accommodate food availability and nutritional efficiency."

(op. cit., page 26)

To achieve the goals a substantial increase will be required in the proportion of government resources devoted to agriculture (op. cit., page 12). Although food is the primary concern of the paper,

"As a general principle, there should be no diversification of land under export crops, the earnings from which are essential for national development, nor should there be further destruction of forests, which must be retained for ecological reasons... Any major increase in food production in these areas must come from increases in crop yields and from the adoption of more intensive techniques of animal husbandry."

(op. cit., page 13)

Structure of Agriculture

Agriculture, as with the rest of Kenya's economy, is dualistic. In 1964 the small farm sector produced approximately 41% of marketed output; this rose to 56% in 1978 but dropped back to 53% in 1980 following the poor season. The area planted to crops in the large-scale sector has remained relatively static despite the decline in total area of large farms (517 000 ha at independence and 483 000 in 1979.)

Arable land is scarce in Kenya with 60% of total land area receiving less than 400 mm per annum. The large scale farms occupy only 0.34% of Kenya's land but a greater proportion of high potential land (approximately 30%). Before the implementation of the Swynnerton plan, certain areas were restricted to white farmers and these areas are still referred to as "the former Scheduled Areas". Land holdings in these areas tended to be over 700 ha, with a few extensively-farmed large ranches of over 20 000 ha. The farms were privately owned on an individual tenure basis and predominantly owner-operated, with the exception of some of the larger plantations and ranches which were owned by international companies. After independence a number of the large farms were bought by government and resettled - the settlement

schemes involving about 35 000 people (Hayer). (5) Other large farms were bought from whites by black Kenyans with government aid and loans and the size of these holdings usually remained unchanged. In 1962 there were 3606 large farms on 3.5 million ha; in 1970 3175 on 2.69 million ha, and in 1979 3555 on 2.67 million ha. (6) In the rural survey carried out in 1974/75 a total of 1 483 422 smallholdings were identified outside the pastoral and large farm areas with an estimated 10.3 million people living on 34.6 million hectares. Most land outside Scheduled Areas was communally owned before independence but since then a policy of registering individual holdings and granting individual tenure has been followed and by 1979 just over one million holdings had been registered.

Kenya, with such varied climatic conditions and altitudes, is able to produce a diversity of agricultural products. Maize is Kenya's staple grain and accounts for approximately 50% of the total area planted by smallholders and 20% of the area under crops in the large-farm sector. Maize yields fluctuate markedly depending on the annual rainfall. Hybrid seed introduced in the late 1950s has greatly increased yield potential and the area planted to improved maize increased from 13 600 ha in 1964 to over 300 000 ha in 1972. No accurate figures are available on total harvested production as most of the output is consumed at the subsistence level. National production of maize for 1981/82 was forecast at 2.25 million tonnes whereas in 1980 it was estimated at 1.5 million tonnes. In spite of this hoped for record harvest, Kenya will still need to import 200 000 tonnes in 1981/82 to meet consumption and build up national stocks (Ministry of Agriculture, personal communication).

wheat is grown on high and medium potential land, mainly between 1850 and 3000 metres, by large-scale farmers using modern powered equipment - subsistence consumption is not significant. In the mid-1960s Kenya was able to export substantial quantities of wheat but production has since declined and consumption requirements have increased sharply. Wheat production reached a peak in 1967/68 falling to a low in 1973/74, recovered briefly and then fell again in 1979/80. Production picked up in 1980/81 after a rise in price was announced in early 1980 together with the introduction of a new seasonal credit scheme. Consumption has been increasing at the rate of 9% per annum since 1968 so that despite the increased production forecast for 1981/82 it is anticipated that 130 000 tonnes will have to be imported which would cost approximately KSh15 million if purchased entirely on a commercial basis. Wheat production needs to be expanded and schemes have been implemented in Narok. The area is Trust land held by the pastoral Masai who are

(5) For a more detailed background on land distribution in Kenya see Hayer chapter 5.

(6) The increased large holdings due principally to dividing larger holdings into medium-sized holdings - the total area of the holdings having continued to decline.

not familiar with crop farming and most of the personnel involved are drawn from outside the area with the Masai tribesmen receiving rent payments for their land. If used to the full potential the Narok district has approximately 400 000 ha suitable for wheat (Ibrahim and Cox).

Rice is produced mainly under irrigation on approximately 8 000 ha. Production has remained relatively static and since rice imports have been limited, there have been shortages and a reduction in per capita consumption. It is an important component in the diet of some of the coastal people. Other cereals grown include barley which is grown on contract for commercial breweries. Of growing importance in the marginal areas are sorghum and bullrush and finger millets. These crops are planted primarily for subsistence and yields are low.

The pulses are second to maize in terms of planted area. They are predominantly planted for subsistence and are frequently interplanted with maize and other crops. Oilseeds remain relatively minor although sunflower seed marketing is now controlled and efforts have been made to increase seed cotton for both the lint and seed. There is some copra produced in the coastal region. Groundnuts are grown by smallholders, who produce mainly the confectionery variety but yields and prices are low and the high labour requirement competes with subsistence crops. In 1977 imports of animal and vegetable oils and fats accounted for almost 3% of total imports including petroleum fuels.

Sugar is Kenya's third most important crop in terms of marketed value. A survey carried out in 1977 indicated that Kenya was one of the lowest-cost producers in the world, even though it has very large productivity reserves. Most of the crop is rain-fed. It is anticipated that even with rising demand Kenya will continue to have about 100 000 tonnes exportable annual surplus.

Coffee is Kenya's most important agricultural commodity in terms of marketed value, gross farm revenues and foreign exchange earnings. Apart from small quantities of robusta and unwashed arabica, Kenya produces mild arabica coffee. Sixty percent of Kenya's coffee is grown by smallholders and total production increased from 50 000 tons in 1962 to 91 000 tonnes in 1980. More than 95% of Kenya's coffee is exported, mainly to the EEC. With the reintroduction of quotas by the International Coffee Organisation coffee will either have to be stored, or sold at low prices on non-quota markets. This will affect Kenya at a time when she is faced with serious foreign currency and growth problems.

Tea production increased an average 12% per annum from 1962 to 1970 with 16 500 tons produced in 1962 and 41 100 in 1970. It continued to increase, reaching a peak of 99 275 tonnes in 1979 but fell slightly in 1980. Smallholders produce just over one third of marketed black tea and this share is expected to rise. Eighty-three percent of the national tea output in 1980 was exported. World demand for low and medium quality teas is uncertain and supply appears to be outpacing demand on world markets.

Cotton was first introduced in 1904 but although heavy investments were made production remained insignificant and marketed output was not reported for 1962. Production did increase to over 5 000 tons in 1966, rising to 15 000 tons in 1970 where it remained relatively static until 1976. During those years Kenya imported cotton from Tanzania and Uganda. However, after the closure of the Tanzania border, government took steps to encourage production and increased output followed increased prices.

Sisal was introduced in Kenya at the beginning of the century on large plantations and in 1962, 60 000 tons of sisal was produced. In the mid-sixties production declined and by 1972 only 41 000 tons was produced. Following high prices production rose again to 86 000 tons in 1974. World prices declined again and by 1979 only 36 000 tons was produced. However, prices were high in 1979 and production has risen again. An important factor in this latest increase has been the expansion of hedgerow sisal by smallholders who produced 11 000 tonnes in 1980 and who could produce up to 20 000 tonnes of sisal per annum.

Pyrethrum production has also fluctuated in response to world prices. There was a 22.5% average annual decrease between 1962 and 1971, when demand fell off as a result of the substitution of other chemicals. But the environmental dangers of substitutes renewed interest in pyrethrum and over 15 000 tonnes of pyrethrum flowers were produced in 1974. Production declined again though mainly in the smallholder sector who are disadvantaged by the marketing system.

Kenya produces a number of other agricultural products. Cashewnut production peaked in 1970/71 although there have been recent moves to try to encourage production with higher prices, but macadamia nuts have not fulfilled their earlier promise. Tobacco was originally supplied by Tanzania and Uganda but with the closure of the border emphasis was given to a programme to meet projected requirement for imported tobacco and it is anticipated that because the programme has been successful, from 1983 only negligible quantities will be imported for blending. One of the major constraints to production is wood fuels for curing and farmers on the programme are encouraged to plant 1000 trees annually to meet their fuel requirements. Vegetable production obviously plays an important role for subsistence but there is an increasing demand for vegetables and fruit for canning. Latterly exports of fresh fruit and vegetables have become more prominent and in 1980 they earned over KSh11 million in foreign currency.

Agricultural Marketing

Controlled marketing for most of Kenya's important food and export crops has been in operation for many years. The Agricultural Production Marketing Act was introduced in 1936 at the request of white settlers in response to the economic uncertainty of the depression years. By 1945 marketing boards had been established to handle maize, coffee, sisal, pyrethrum, passion fruit, flax, legumes, oilseeds and dairy and pork products (Livingstone and Ord). The Defence Regulations introduced in 1944 promulgated detailed rules regarding maize movement control and compulsory sales to the Board with the express intent of producing an export surplus for the allied war effort (Hesselmark). The existing laws on maize movement control and compulsory sales trace their origin to these regulations. Initially there was no price discrimination but in the 1950s prices were held below export parity and the refunds from the equalization fund were paid on an individual basis only to white farmers. The refund due to the many small farmers was paid into African Trust Funds or as a direct bonus to farmers with certificates of good husbandry, who were not necessarily the farmers who had produced the maize for which the bonus was paid. In later years when export losses re-appeared a quota system was introduced which shifted the whole burden of export loss financing to small farmers (Hesselmark). The quota system was abolished just before independence but the marketing controls were not removed.

The Maize Marketing Board was established in 1959, its functions being to "regulate, control and improve the collection, storage, marketing, distribution and supply of maize and maize products" (Livingstone and Ord, page 261). After 1955 the marketing boards did make more effort to service the small farmers. Many of the administrative functions of the national marketing boards were decentralised and handled by Provincial Marketing Boards which acted as agents for the major marketing boards. This led to a proliferation of boards and in 1966 all those dealing with maize and other specified food products were merged into a single Maize and General Produce Board. The Maize Marketing Ordinance gave the Board powers to "regulate, control and improve maize supply and marketing". The Board has monopoly power as the sole buyer and seller of maize. Farmers are permitted to sell maize within their own districts but a movement permit must be obtained to transport maize from one district to another. In practice a substantial proportion of the maize crop is either marketed through other channels or used for home consumption. The Maize and Produce Board only handled approximately 10% of the total maize crop in 1966 (Heyer). The Board operates through about thirty-three storage depots throughout the country although these tend to be found more in the producing than the consuming areas. Farmers may deliver a minimum quantity direct to the depot otherwise they use co-operative agents or agents licensed to buy maize from producers and deliver it to the nearest depot. There is usually only one agent in each market. They are required to buy at a fixed price from the farmer and sell at a fixed price to the Board. The Board then deliver maize from the depots to millers and wholesalers at a fixed price and these then deliver to retailers who sell the maize at a fixed price. The most important function of the Board is to ensure equitable distribution of maize from areas of surplus to areas of deficit in Kenya as well as to find outside markets for national surpluses or arrange for imports in times of shortage. The failure of

the Board to fulfil these responsibilities has resulted in a growing illegal trade between districts and the actual prices paid to farmers and by consumers differ markedly from those fixed by the Board.

The Maize and Produce Board was merged with the Wheat Board in 1979 to form the National Cereals and Produce Board (NCPB). This merger did not mean any substantial change in the regulations nor in the problems and thus in 1980 with the serious maize shortage the producer prices in some regions were up to four times greater than the official price (Ibrahim and Cox).

The National Cereals and Produce Board is the most important domestic marketing board with the widest powers but the Kenya Meat Commission and Kenya Dairy Board also directly control prices and marketing on the domestic market. Producer co-operatives play an important role in processing and marketing certain smallholder cash crops, particularly coffee and pyrethrum and for the distribution of inputs and credit, but government involvement in agricultural commodity marketing has deliberately limited the private sector's role.

The export marketing boards do have more producer and private representation and with the exception of cotton and pyrethrum government are not involved in price setting. The Coffee, Tea, Pyrethrum and Cotton Boards are directed toward external marketing of the commodities, quality control, crop development and to supplying inputs, extension, credit and research facilities. Generally the organizations handling the main export crops have managed to keep costs down and compete on world markets and have performed more satisfactorily than the marketing organizations handling domestic commodities which have tended to have very high administrative, storage and marketing costs. Overhead charges for maize averaged 34% of the domestic border price f.o.b. Mombasa (Sharples).

Market Structure in Kenya

1. Parastatals

a) Marketing Boards

- i) those involved in trading as well as processing, market and production promotion and research:

- National Cereals and Produce Board
- Cotton Lint and Seed Marketing Board
- Pyrethrum Board
- Tea Board
- Coffee Board of Kenya

- ii) those with primarily a supervisory role including some research and market promotion:

- Sisal Board
- Kenya Dairy Board
- Pig Industry Board

b). Development Authorities:

Kenya Tea Development Authority
Horticultural Crop Development Authority
Kenya Sugar Authority

c). Others:

Kenya Meat Commission

2 Co-operatives:

Kenya Farmers Association
Kenya Coffee Producers Union
Kenya Co-operative Creameries

3 Private or public companies with a high degree of market power:

Kenya Wattle Manufacturers Association
British American Tobacco (BAT)

4 Unregulated markets include poultry, eggs and the domestic market for fruit and vegetables

For a more detailed description of the marketing system for individual products, readers are referred to Heyer, chapter 10.

Agricultural Commodity Pricing

Government intervenes in both producer and consumer pricing of scheduled crops and animal products. Producer prices for major agricultural commodities are set in the annual Price Review and announced in December (pre-planting since the main rains are in April/May). The most important of these commodities include maize, wheat, rice, milk, beef, sugarcane, pulses, cotton and pyrethrum. Government does not set export prices or producer prices for coffee and tea. For the scheduled commodities "the Ministry of Agriculture submits price recommendations based on the analysis of domestic and international cost, price and supply trends. The prices are reviewed by the Ministries of Finance and Economic Planning and then sent to Cabinet for a final decision" (Ibrahim and Cox, page 53). The producer price recommendation by the Ministry of Agriculture includes recommendations for consumer prices but these are set by the Price Controller in the Ministry of Finance with Cabinet approval and are largely related to the effect of price changes on the urban consumer price index.

The Price Review examines both domestic and international production and pricing trends and in recent years prices have been linked to import and export parity. The high overhead charges for marketing and transport facilities in Kenya widen the margin between import and export parity prices and afford a measure of protection to domestic producers. One of the problems of the Price Review is that it has not given much weight to relative incentives among crops so that there is little consideration of substitution effects. Producer prices have latterly tended to exceed export parity prices (except for beef and maize) but most consumer prices have been held below world prices so that Government have had to cover the deficits incurred by the parastatal marketing boards.

Price Determination of Individual Commodities

Maize: price setting for maize is aimed at obtaining self-sufficiency. Given the high variability in yields it is not possible to grow exactly the required quantity. If government sets a price which encourages large surpluses, as happened in 1978, the country finds itself with inadequate facilities to handle the surplus and because of Kenya's high bridging costs, exports of maize normally involve losses. On the other hand with the large gap between import and export parity, importing maize is costly in terms of both revenue and scarce foreign exchange. Furthermore maize is the most important staple for the majority of the people and delays or difficulties in obtaining supplies from outside have serious repercussions both nutritionally and politically. The farm-gate price for maize dropped in 1979 after the large surpluses in 1978 but started to rise again in 1980.

Wheat: is another important staple commodity, particularly in the urban areas and although demand is presently outstripping supply and wheat has been imported for several years, the price is still below the import parity price. The producer price for 1981/82 was set at Ksh.161 per 100 kg and the import parity price was estimated to be Ksh.211 (Ministry of Agriculture, personal communication).

Rice: plays an important role in the diets of some of the ethnic groups and although the official retail price is 4.6 sh. per kg, the black market price was up to 15 sh. at the end of 1981. It is suggested that the official retail price should be increased to approximately 12 sh. per kg which will allow a substantial increase in the farm-gate price and increase domestic production of rain-fed rice. The producer prices for the main varieties were less than half their import parity prices in 1981.

Pyrethrum: producer prices are set annually by the Pyrethrum Board of Kenya on the basis of export realisations. An interim price is established per kg of pyrethrin and then a price per kg of dried flowers is calculated for the different contents of pyrethrin. At the end of the season a final payment is made to farmers in accordance with the overall trading result. This makes fair returns to small farmers, who market predominantly through co-operatives, difficult. Individual smallholders have little incentive to produce high quality flowers since their crop is communally analysed for pyrethrin content and they receive the average of the co-operative's delivery content. In addition, deductions are made on their payments to cover county council cess, union levy and the co-operative society commission. Large farmers get the full interim payment in accordance with the actual content of each delivery and have no deductions, and thus it has been mainly the large farmers who have responded to the recent price increases.

Cashews: prices increased 120% between 1976 and 1981 and recent production has reflected the response to these increases which encouraged greater attention to holdings. Processed nuts bring in much greater export earnings and a factory has been established which processed 10 000 kg in 1980 and is expected to process 13 000 kg in 1982. The rest (about half of total production) is sent to India for

processing. The farmers have been subsidising the local factory with farm-gate prices less than half the export parity price. MCPB sells to the factory at an agreed price which is well below the export parity price of the raw nuts.

Coffee: large-scale farmers deliver their crop direct to the Coffee Board whilst most of the smallholder crop is marketed through co-operatives. An initial payment is made after deductions for the Board's curing and marketing costs. Final payment is made at the end of the trading year. Kenya is a member of the International Coffee Organization and is subject to export quotas. With the high prices in the late seventies no quotas were imposed under the Agreement from 1976 to 1979. As a result of falling world prices ICO reintroduced quotas in 1980. Kenya has been left with large stocks as the quota was reduced four times during 1980/81.

Tea: grown on estates is marketed through individual tea companies. Any tea exporter requires a tea export licence issued by the Tea Board of Kenya. The Tea Act of 1979 requires tea manufacturers to deliver a mandatory quota at a fixed price to Ketepa which packages for the home market and thus local tea prices to consumers are kept artificially low. The tea companies market the export tea either by private treaty with overseas tea blenders or through the Mombasa or London tea auctions. Smallholders sell their tea to the Kenya Tea Development Authority who then sell the tea in the same way as the private companies. Growers get an initial uniform first payment and then at the end of the season a second payment is made which differs from factory to factory depending on the sales realisations of each factory. In 1980/81 the producers received 66% of the export realisation, the rest covers KTDA processing, marketing and administrative costs plus subsidising domestic consumption.

Sisal: demand for sisal tends to depend on the relative prices of petrochemical fibre. There is no fixed producer price for sisal, the bulk of which is produced on large estates. The Kenya Sisal Board is considering setting a producer price for smallholders to encourage hedgerow development. Twenty percent of present production is used locally. There are nine appointed sisal agents who handle export and local sales and seven companies licenced to purchase from smallholders and sell to the agents or local spinners. Most of the sisal is exported as raw fibre although some goes as cordage.

Tobacco: is all marketed through BAT who are a monopoly controlling both the purchase of unmanufactured tobacco and its manufacture and sale. Tobacco is grown for local consumption only. The tobacco is bought according to a complex grade and price schedule. Target average producer prices are negotiated annually with the Ministry of Agriculture but variations in quality result in differences in actual average prices. Fire-cured tobacco is lower priced than flue-cured though it has increased at a faster rate in the last few years to encourage production. The farm-gate price is below estimated import parity price.

Employment and Wages Policies

Kenya's initial concern after independence was with Africanisation and no significant changes were made to existing wage policies in either the urban or rural sectors. Minimum wage regulations had been introduced by the colonial government and they continued to be enforced by the independent government.

Initially, colonial policy aimed at providing wage labour at below its competitive price but this changed after World War II and in 1949 the first centrally organised Trade Unions were established. A Minimum Wage Ordinance had first been promulgated in 1932 and in 1952 the first Statutory Wages Council was set up. Each industry was responsible for setting wages within that industry and by 1973 there were seventeen different wages councils which has led to considerable differentials between industries (Bigsten). Between 1955 and 1963 real wages in Kenya rose together with output and labour productivity but employment fell back (Harris and Todaro). Bigsten considered that it was only during this period that minimum wages had an effect in raising the wages of unskilled urban workers.

In 1963 an Agricultural Wages Board was established and the first minimum wage was introduced in 1967 (Regulation of Wages (Rural General) Order). The wage was Ksh.60 per month for males over 18 years and Ksh.36 for all others. The statutory minimum in Nairobi at that time was Ksh.175 per month. In January 1968 the Regulations of Wages (Agricultural Industry) Order brought the agricultural wage up to Ksh.66 and Ksh.44 per month. It also introduced legislated differentials for particular jobs and the highest were farm foreman at Ksh.215 and clerks at Ksh.225 per month (Bigsten).

The minimum wage legislation affected mixed crop farms more than the plantation sector where each major commodity had its own council and wages were negotiated in the same way as the urban private sector. The ILO employment mission considered that such councils had an advantage over government wage setting as the parties concerned agreed to the level of remuneration and therefore felt more committed to it. However, it was difficult for a fair wage to be negotiated where wage earners were either unsophisticated or had little bargaining power.

Employment was not one of government's major concerns in either the first Development Plan or the sessional paper on African Socialism. However, due to some economic stagnation in the building and construction sectors, increased labour productivity and the break up of large mixed farms, employment fell 13% between 1960 and 1963 (Ghai, 1970). Government recognised that employment was to become a problem and in the revised first Plan "showed concern for the increasing capital-intensity of industrialisation and suggested the use of wages and tax policies, among others, to increase employment" (Nigam, page 56). In 1964 Government introduced the Tripartite Agreement according to which the unions agreed to keep down wage claims provided that government increase employment by 15% and the private sector by 10%. To fulfil their side of the contract Government initiated a number of public projects (in particular road building) which required outside financing. This proved to be very expensive and was discontinued after the completion of the agreed projects. Despite these projects

government did not fulfil their part of the bargain. Altogether some 34 000 jobs were created but there is much controversy centred around the effectiveness of these Agreements particularly as it is contended that the perceived additional job prospects increase rural-urban migration and urban unemployment.

Another measure for increasing employment was Africanisation but the total (even if all non-citizens were replaced) would have meant only an additional 46 000 employment opportunities, most of which involved skills which could not be immediately replaced. "To the extent that accelerated Kenyanisation has some adverse effects on output growth in the short-run, its net effect on employment is further reduced and could conceivably be negative" (Ghai, page 11).

The major thrust towards increasing employment opportunities was the break-up of large farms. There were no studies carried out to monitor the effects of these schemes on employment and incomes but Hunter makes the assumption that employment and incomes on settlements must have increased "if agriculture is efficient". By mid 1968, 45 000 families had been settled under various types of schemes, including squatter settlement schemes. Recorded wage employment in Agriculture and Forestry fell from 245 500 in 1962 to 173 000 in 1968, a loss of some 72 500 jobs. Since these figures include women and juveniles employed fulltime it is not possible to calculate the net loss or gain to employment from the settlement schemes without more information. Government estimates of a growth of 7.8% in wage employment in smallholder agriculture (1964-68 Development Plan 2nd) have been questioned since this would mean a falling labour productivity of about 2% per annum when all the other sectors, including the large-scale farming sector, recorded significant increases in labour productivity.

In 1973, Government introduced policies specifically designed to increase employment and keep wage awards below or in line with the rate of inflation. "Kenya has developed a national wage and incomes policy with the aim of inducing wage moderation in the modern sector as a significant element in its anti-inflationary, employment and equity policies" (Oduor-Otieno page 115). To achieve this the government introduced Wage Guidelines which restricted the percentage increase in wages which could be awarded by industrial agreements. In 1975 the government attempted to hold wages down to well below price increases but had to relax this policy to avoid labour unrest. In 1976 wages were to be held to an average of two-thirds of price increases. The coffee boom resulted in some relaxation of this policy and wages were allowed to rise in line with productivity over and above the cost of living allowances. However, by 1979 the overall wage increase was to be held to half the cost of living rise, spread over two years. The effectiveness of the wage guidelines policy has been questioned since most of the industrial agreements were within the ceiling under the guidelines which would suggest that market forces had a greater influence on actual wage levels than government regulations did. This was particularly marked in the agricultural councils where wage increases were kept to well within the guideline ceilings. This was probably because government were more generous with the ceilings for agricultural workers and because the agricultural workers were less sophisticated bargainers than their urban counterparts.

The Effectiveness of Wage Guidelines
in the Agricultural Sector

YEAR	AVERAGE PAY INCREASE	ESTIMATED GUIDELINE CEILING
1974	13.3%	33.5%
1975	19.3	48.0
1976	31.9	41.4
1977	20.1	25.8
1978	21.0	32.0

(Source: Oduor-Otieno)

There has been very little work carried out on wage employment in the agricultural sector and the approximately 600 000 persons living in the large farm sector (Sharples) are almost totally ignored by government and outside agencies and research workers.

The Kenya Tea Growers Association members employed approximately 50 000 labourers at a minimum wage of Ksh.11.30 per day (April, 1982), (Ksh.340 per month since Sundays and public holidays were paid even though they were not worked). These rates were higher when labourers were involved in applying herbicides or pruning the tea. Most of the labour involved in tea growing is required for picking. On one estate growing 150 ha of tea, 40 people were employed full time on the daily rate and approximately 166 on a contract basis of 39 cents per kg of tea picked. The smallholder tea growers actually paid higher contract and daily rates (approximately Ksh.15 per day) because they were unable to offer the benefits offered by the larger estates, including housing, paid maternity leave and security of employment.

The Kenya Coffee Growers Association members are the other major private wage employers in the agricultural sector. For 90 ha of coffee one estate employed 100 permanent labourers and between 110 and 130 casual reapers who came in from the neighbouring towns and villages to reap the coffee. The daily rate for permanent workers was Ksh.11.70 (April, 1982) per month for men and women and was shortly expected to go up to Ksh.17.20 or Ksh.500 per month. Coffee reapers were paid 5/- per 5 gallon tin, with most reapers picking around five tins per day and some as many as ten and in rare cases fifteen tins per day.

A recent study by Vandemoortele and Ngola looks at the minimum cash income requirements of urban and rural wage-workers. They show that the minimum cash requirements for an agricultural worker's household is Ksh.998.10 per month and an urban household Ksh.1700 per month. The rural household is likely to be larger than the urban household but its cash expenses for transport, housing and food are less. The urban household is estimated to have 1,173 income earners per poor household so that an urban worker's minimum wage should be approximately Ksh.1445 per month. Vandemoortele makes the assumption that there is only one income earner in the rural household and thus to meet the minimum cash requirements an agricultural worker should earn a minimum of Ksh.1000 a month. On most estates and plantations it is, however, most unlikely that there is only one cash income earner per family, where many of the wives are employed on a full time

basis and where contract work is carried out by the families of the permanent male employees.

As pointed out earlier, few researchers looking at employment and incomes in Kenya have given any consideration to agricultural wage labour. Most writers take for granted that the break-up of large farms into smallholdings resulted in significant additional employment without any careful study of the actual situation (Clayton; Hunter; ILO). The Tripartite Agreements have been heavily criticised as ineffective although the estimated increased employment as a result of these Agreements is greater than the increase from settlement schemes. (7)

Empirical evidence on the employment effects of settlement is scarce and the writers themselves would appear to be uncertain. On the one hand Clayton sees the settlement schemes as the most important aspect of the Government's employment policy stating that "the former large farms are providing incomes for more and more families". Whilst further on (when he is discussing foreclosures of those smallholdings where farmers have been unable to repay loans) he goes on to say "the more successful farmers are buying up these holdings and there is concern that this is extending the number of those who are landless. If, however, it is the more able cultivators who are extending their holdings, this should increase productivity and absorb the landless as hired labour" (Clayton, page 317). Essentially the number of job opportunities depends on the proportion of land under crops, the crop mix and the factor mix. Hayer shows that total employment per acre is inversely related to farm size, particularly on the settlement schemes where labour inputs per 1000 acres were ten times greater on farms of less than 10 acres each than on those of 70 acres each. The difference in the large farm sector was also marked (6 times greater on farms of less than 250 acres than on those of 2000 acres or more). This was principally as a result of a smaller area of the farm being planted to crops and the greater use of capital equipment.

Part of the reason that employment did not appear to increase as a result of the settlement schemes from 1962 to 1968 could be that the settlers moved on to estates which had been growing labour-intensive crops and the settlers were more concerned with food crops. The other reason is that labour productivity on the large farms was increasing so that "while employment in the 'modern' farming sector has been declining at the rate of 2.3% per annum since 1964, total output has risen by about 1% per annum. What seems to have been happening in large farms is that rising costs coupled with stagnant or falling prices of agricultural products have forced farmers to economise on the use of labour by improved management and more mechanised production techniques" (Ghai, 1970, page 6).

(7) See above 34 000 jobs from 1964 Tripartite Agreement; 45 000 families settled on former large farms; 72 500 less people employed in large farm sector.

Vandemoortele's paper, which looks at employment and earnings in the modern sector from 1972 to 1979, states that "The available data suggest that especially in the agricultural plantation industry, the factor use is very elastic with an important substitution between regular employment on the one hand and mechanization and casual labour on the other" (Vandemoortele, page 11). This was particularly noticeable in 1976 after the 1975 increase in the minimum wage. He found that the impact of minimum wages on employment depended on the sector involved. In general, in the private sector an increase in the minimum wage had a negative effect on employment but left the average wage rate unchanged. He estimated that if the minimum wage had not changed in 1975 employment from 1972-78 in the private sector would have risen 3.3% instead of 1%; i.e. 40 000 extra jobs in 1978 in the modern private sector. Minimum wages, as expected, had no significant effect on employment in the public sector. The number of persons earning less than Ksh.200 per month (mostly in agriculture) declined steadily over the period but was not significantly affected by the increased minimum wage in 1975.

Vandemoortele looks briefly at the feasibility of increasing the minimum wage to the normative wage implied by the poverty-datum line estimate of Ksh.1450 per month for urban workers and concludes that under present economic conditions it would have serious effects on growth and employment. He suggests instead that measures should be undertaken to reduce the high degree of inequality in the wage distribution, secondly an attempt should be made to halt the declining share of wages in total value and thirdly a new formula of some sort of differential indexation should be employed to protect the low income groups against the effects of inflation without compromising the growth rate of total employment.

Agricultural Performance (8)

In 1962, at independence, agriculture was the largest formal wage employer accounting for 47% of total employment. Rainfall in 1961 had been unfavourable and together with the decreased acreage, this caused production and farm incomes to fall and employment dropped by 8%. "Reduced profitability ... in conjunction with rising wage rates and political uncertainty, may have caused farmers to utilize labour more economically" (Economic Survey, 1962, page 26) from mid 1961. This decline in employment continued although agricultural output remained steady in 1962 with slightly more favourable prices. In 1963 the value of agricultural production rose 9% - in large measure due to a 50% increase in sisal prices and despite a slight drop in coffee and tea prices. Production in the large-scale sector

(8) Information on this section has been taken almost exclusively from the annual Economic Surveys published by the Kenya Government Central Bureau of Statistics.

increased despite the decrease in the number of farms but employment continued to fall. This decline was seen as a result of the sale of large farms, falling investment and over and above all this it is clear that wage increases have exceeded productivity increases ... and resulted in a more capital intensive agriculture" (Economic Survey, 1964, page 40). The value of agricultural production increased in 1964, principally as a result of high coffee and tea prices. Unfavourable export conditions and prices began the decline in the value of sisal and pyrethrum production. Kenya achieved wheat self-sufficiency for the first time in 1964 but there was a sharp decline in maize deliveries as a result of low producer prices in the previous two years and because of the increased threat of theft on large farms which caused them to switch to wheat (Economic Survey, 1965, page 24).

1965 was a bad rainfall year which resulted in food shortages and the need to import maize. The imported yellow maize was unpopular and delays in receipt and difficulties in distribution resulted in a Commission of Inquiry being established to look into the 1965 shortage. Rainfall and weather were favourable in 1966 and increased local production left the government with unsaleable stocks of the less popular imported yellow maize. There was an increase in export crop production but prices were poor. In 1967 total production was down 11% and prices continued to decline for export crops. Cereals were surplus to local requirements. National wage employment increased 3.4% despite a drop of 12 000 (7%) in the large farm section. This fall resulted mainly from difficulties in the coffee and sisal industries. 1968 was a good year for all the crops except coffee but exports were affected by the devaluation of the pound and prices were low. Cereal production, and in particular maize, continued in surplus and it was considered that production would continue to be above domestic requirements. There was a Ksh.14 per bag subsidy on maize exports and it was decided to reduce the producer price. It was also anticipated that the move to bulk handling would result in cheaper movement of maize and a ^{cost} reduction of between Ksh.5-6 a bag. The producer price for the following year was to be brought in line with export parity. Wheat, which was exported for the first time in 1967, continued in surplus at a Ksh.40 loss per bag and thus the price of wheat was dropped 15%. 1969 brought poor weather and a marked drop in food production. Despite the previous year's forecast of no future shortages, some yellow maize was imported to substitute for white maize in livestock feeds.

This pattern of fluctuations between expensive shortages and surpluses was to continue and by 1972 there was once again a surplus of maize for export. In that year both employment and earnings in the large-farm sector rose together for the first time. Marketed output was up 22% after a favourable year and farm receipts were the highest ever. By 1974 maize reserves fell below the minimum limit of two million bags and the maize price was increased by 38% for the following year. Wheat prices had been raised five times since 1972 when the fast increasing demand started to outstrip supply and with the wheat price at Ksh.100 for 1975 (against 57/- for 1973) larger acreages were expected. The price of sugar was also dramatically increased by 40% with the aim of achieving self-sufficiency in "white" sugar production by 1978. 1975, however, was not a good year for most crops with the

exception of maize which was once again in surplus. 1976 was very favourable with good coffee and tea production which resulted in an increase in employment. Substantial coffee and tea price rises were the main cause for the favourable shift in the terms of trade for agriculture. Marketed output of all crops but sugar increased significantly. 1977 was also a boom year for agriculture, particularly coffee and tea with favourable weather conditions and very high prices. The Kenya Maize and Produce Board was unable to purchase large quantities of the surplus maize because of limited storage capacity and high stocks held over from 1976. World prices were very low and with the board holding almost 4 million bags of maize, restrictions on the free movement and direct purchase of maize from farmers were lifted. This meant that despite the high preplanting prices promised by the board, most farmers received very low prices since they were unable to sell to the board.

From 1975 to 1977 agriculture almost doubled its contribution to GDP at current prices but in 1978 there was a decline as a result of poorer weather conditions and a significant drop in coffee and tea prices. Wage employment fell by 8.4% although average wage earnings rose by 18.6%. This was primarily the result of the cut-back in casual workers. Sales to the marketing boards fell 21%. Although the official preplanting price for maize in 1978 was the same as that for 1977 both acreage and hybrid seed sales were down. Many of the small farmers had lost faith in the official marketing system after the Board's failure to purchase the 1977 crop. Maize purchases in 1978 were low. However the stocks held by the Maize Produce Board remained at almost 4 million bags at the end of 1978 because of high carry-over stocks from 1976 and 1977. With the unfavourable world prices the Board held back exports. The storage capacity for maize was increased but despite this the preplanting producer price was dropped by 13%. The consumer demand for wheat continued to increase and 90 000 tonnes had to be imported in 1978. It was predicted that over the next five years wheat production would increase by 1% whilst consumption would increase by 7%. The wheat price was increased to try to encourage farmers to change from maize to wheat production. Cotton production increased as a result of increasing prices, better credit schemes and input services. In 1979 marketed production fell 1.8% in volume and 3.9% in value. Output from the small-farm sector fell. Total maize production was low as a result of a smaller acreage and a drop in the use of hybrid seed and fertiliser. Marketed output of maize, however, was slightly up on 1978 as the result of the reintroduction of stringent maize marketing restrictions. The minimum wage for agricultural workers was increased from Ksh.175 per month to Ksh.215. In 1979 the Guaranteed Minimum Return credit scheme was withdrawn. Although it was replaced in 1980 with a seasonal credit scheme, the conditions of the new scheme were not as favourable to maize and wheat producers.

Sugar, cotton, coffee, sisal and pyrethrum output increased in 1980 although relatively unfavourable prices for most of the crops, particularly coffee, meant that together with the lower maize and tea production agricultural value added in constant prices fell for the third year running. Total estimated maize production in 1980 fell fairly sharply compared with both 1978 and 1979 and the lower production was reflected in a drop in deliveries to the National

Cereals and Produce Board --with marketed output accounting for only 14% of total estimated production. Maize stocks had been exported during 1979 so that the reserve was less than half a million bags at the beginning of 1980 and maize to the value of K25 million had to be imported. Maize stocks had been raised to almost one million bags but this was still considered insufficient. This maize shortage was the result of the weather plus reduced plantings in response to lower prices, the inability to sell maize quickly and efficiently to the MPB during surplus years and the withdrawal of the Guaranteed Minimum Return scheme. "During 1980, the NCPB purchase price for maize was increased, a new system of seasonal credit was established and new buying centres were introduced. Farmers responded to these incentives and to the food shortages encountered by planting a record area under maize for the long rains. Unfortunately, this response was largely offset by unfavourable growing conditions" and Kenya went into 1981 expecting to have to purchase some 350 000 tonnes of maize (Sessional Paper 1981 on National Food Policy, page 6). The estimations of future demand and supply predicted that Kenya would not be self-sufficient in maize, wheat, rice, beans and milk by 1983 nor by 1989. Producer prices for both wheat and maize were substantially raised in mid-1980 in line with government policy to take definite steps to increase food production.

REFERENCES

* Asterisks denote items which are held at the Department of Land Management, University of Zimbabwe.

- Adlington, T.J. 1978. Pricing and Competition in Agricultural Markets in Kenya. (mimeo)
- * Alibaruho, G. 1974. "Resource Allocation, Commodity Supply and Income Distribution Aspects of Agricultural Pricing Policy in Kenya" Working Paper no. 151, Institute for Development Studies, University of Nairobi (good references)
- Bigsten, A. 1981. The Kenyan Labour Market: Institutions and Policy. Department of Economics, University of Gothenburg.
- Burrows, J. (ed.) 1975. Kenya: Into the Second Decade. Baltimore: Johns Hopkins University Press.
- Casley, D.J. and Marchant, J. 1979. "Smallholder Marketing in Kenya" Marketing Development Project Working Document Ken 75/005, FAO.
- * Clayton, F.S. 1978. "Kenya's Agriculture and the ILO Employment Mission Six Years After" Journal of Modern African Studies, vol. 16 no. 2.
- * Ghai, D.P. 1968. "Incomes Policy in Kenya: Need, Criteria and Machinery" East Africa Economic Review, vol. 4 no. 1, pp. 19-35.
- * Ghai, D.P. 1970. "Employment Performance, Prospects and Policies in Kenya" Institute of Development Studies Discussion Paper no. 99, University of Nairobi.
- Ghai, D. and M. Godfrey. 1979. Essays on Employment in Kenya. Nairobi: Kenya Literature Bureau.
- * Gsaenger, H.G. and G. Schmidt. 1977. "Decontrolling the Maize Marketing System in Kenya" Discussion Paper no. 254; Institute for Development Studies, University of Nairobi.
- Harris, J.R. and M.P. Todaro. 1969. "Wages, Industrial Employment and Labour Productivity: the Kenyan Experience" East Africa Economic Review vol. 1 no. 1, June.
- Hazlewood, A. 1979. The Economy of Kenya. Oxford. Oxford University Press.
- * Henning, F.H. and A.J. House. 1975. "The Problem of Slow Employment Growth in the Manufacturing Sector of Less Developed Countries" Journal of East African Research and Development vol. 5 no. 2.

- * Hesselmark, O. - 1977. "The Marketing of Maize and Beans in Kenya: a Proposal for Improved Effectiveness". Institute for Development Studies, Working Paper no. 300, University of Nairobi.
- Heyer, J., J.K. Maitha and W.M. Senga. 1976. Agricultural Development in Kenya: an Economic Assessment. Nairobi: Oxford University Press.
- * House, W.J. and H. Rempel. 1975. "The Role of Competitive Forces in the Determination of Wage Increases in Less Developed Economies: the Case of Kenya". Institute for Development Studies, Working Paper no. 245, University of Nairobi.
- Hunter, G. 1973. "Employment Policy in Tropical Africa: the Need for Radical Reform". In: Employment in Africa: Some Critical Issues. Geneva: International Labour Organization.
- Ibrahim, T. and P. Cox. 1980. Unpublished economic memorandum on agricultural issues in Kenya.
- ILO (International Labour Organization). 1972. Employment, Incomes and Equality, a Strategy for Increasing Employment in Kenya. Geneva: International Labour Organization.
- King, J.R. 1972. "Wages, Employment and Productivity in Kenya: a comment". East Africa Economic Review vol. 4 no. 1, pp. 71-74.
- * Klaus, H.G. 1979. "Parastatals in Kenya: Research Proposal". Institute of Development Studies, Working Paper no. 370, University of Nairobi.
- Livingstone, I. 1980. "Employment Creation by Decree: Kenya's Third Attempt". Development Studies Discussion Paper no. 71, University of East Anglia.
- * Livingstone, I. and E.W. Ord. 1981. Agricultural Economics for Tropical Africa. London: Heinemann.
- Mukui, J.T. 1978. "A Prelude to the Implementation of the 1979 Tripartite Agreement". Institute of Development Studies, University of Nairobi.
- Mukui, J.T. (ed.) 1979. "Price and Marketing Controls in Kenya". Institute of Development Studies, Occasional Paper no. 32, University of Nairobi.
- * Nigam, S.B.L. 1975. "Employment and Income Distribution Approach in Development Plans of African Countries". Addis Ababa: International Labour Organization (JASPA).
- * Odero-Ogwel, L. and E. Clayton. 1973. "A Regional Programming Approach to Agricultural Sector Analysis". Agrarian Studies Report no. 5, Wye College, University of London.

- Oduor-Otieno, B.S. 1979. "Wage and Incomes Policy in Kenya: a Brief Survey of Experience and Prospects" In: Mukui, J.T. (ed.), "Price and Marketing Controls in Kenya" cited above.
- Rempel, R. and W.J. House. 1978. The Kenya Employment Problem. Nairobi: Oxford University Press.
- Russell, L.W. 1961. The Natural Resources of East Africa. Nairobi: East African Literature Bureau.
- Schmidt, G. 1979. "Effectiveness of Maize Marketing Control in Kenya" Seminar, Institute of Development Studies, University of Nairobi.
- Schmidt, G. 1979. "Maize and Beans in Kenya: the Interaction and Effectiveness of the Informal and Formal Marketing Systems" Institute of Development Studies, Occasional Paper no. 31, University of Nairobi.
- * Schmidt, G. and E. Mbunga. 1976. "Aspects of Marketing Effectiveness for Selected Food Crops in Kenya. Proposals for Further Research" Institute of Development Studies, Working Paper no. 287, University of Nairobi.
- Sharpley, J. 1980. "Pricing Policies and Rural Incomes in Kenya" Bergen: Christian Michelson Institute, Derap Working Paper A174.
- * Vandemoortele, J. and S.M. Ngola. 1982. "The Setting of a Minimum wage and its Consequences on Employment and Earnings in the Modern Sector in Kenya" Institute of Development Studies, University of Nairobi (forthcoming).
- * Wilson, F.A. 1973. "Some Economic Aspects of the Structure and Organisation of Small Scale Marketing Systems - Marketing of Fruit and Vegetables in Kenya" Institute of Development Studies, Discussion Paper no. 176, University of Nairobi.
- * Witucki, L.A. 1976. "Agricultural Development in Kenya since 1967" Economic Research Service, FAER no. 123. Washington: United States Department of Agriculture.

Kenya Government:

1962. Agriculture Act. Laws of Kenya Chapter 318.
- * 1965. African Socialism and its Application to Planning in Kenya. Sessional Paper.
- * 1966. The Maize Commission of Inquiry.
1967. The Agricultural Produce Marketing Act. Laws of Kenya. Chapter 320.
1970. Development Plan 1970-74.
- 1972 (1962). The Maize Marketing Act. Laws of Kenya Chapter 338.
- * 1973. Sessional Paper on Employment no. 10 of 1973.

- * 1973. Report of the Select Committee on the Maize Industry.
- 1974. Development Plan 1974-78.
- 1979. Development Plan 1978-83.
- * 1980. Sessional Paper no. 4 of 1980 on Economic Prospects and Policies.
- * 1981. Sessional Paper no. 4 of 1981 on National Food Policy.
- 1981. Kenya Statistical Digest (monthly). Central Bureau of Statistics.
- 1963-80* (annual). Statistical Abstract. Central Bureau of Statistics.
- * 1962-81 (annual). Economic Survey. Central Bureau of Statistics.
- 1962-81 (monthly). Statistical Digest. Central Bureau of Statistics.

TABLE 1. OFFICIALLY MARKETED OUTPUT OF PRINCIPAL CROPS.

CROP	1962	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
WHEAT	152.5	134.3	248.8	352.6	280.3	205.7	256.6	373.0	440.8	365.4	487.8	564.7	424.0	236.3	241.7
WHEAT PADDY	15.2	16.6	15.9	18.7	22.7	28.5	30.0	33.8	36.1	33.2	32.1	39.3	41.4	35.8	37.5
MAIZE	84.2	128.4	162.2	216.3	241.6	221.5	192.9	153.0	124.6	159.5	145.5	186.8	169.9	165.9	207.2
COFFEE	50.0	56.9	48.0	39.6	52.4	58.3	59.5	62.0	71.2	70.1	66.2	80.3	97.1	84.3	75.1
TEA	16.5	21.4	22.8	29.8	36.1	41.1	36.3	53.3	56.6	53.4	56.7	62.0	86.3	93.4	99.3
SUGAR	n/a	514	706	947	1376	1551	1578	1562	1545	1719	1655	1653	1888	2349	3148
COTTON	5.4	14.4	12.7	14.3	17.1	14.0	16.8	17.0	16.2	15.0	16.1	15.8	16.3	27.2	27.6
PYRETHRUM															
EXTRACT	1.3	1.3	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1
SISAL	59.6	64.0	51.3	50.7	50.0	44.0	44.8	41.2	38.1	36.5	43.6	33.6	32.2	31.5	36.5

Sources Statistical Abstracts 1971 and 1979

Kenya Statistical Digest, Sept. 1980

TABLE 2 - AVERAGE PRODUCER PRICES FOR PRINCIPAL CROPS

K.Sh./100

CROP	1962	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
MAIZE	26.0	41.1	36.1	31	27.7	27.7	33.3	38.9	38.9	46.4	69.8	76.6	88.9	88.9	77.5
WHEAT PADDY	n/a	44.1	45.5	45.8	54.9	50.7	50.7	50.8	50.1	58.6	104.9	136.9	136	144.9	150.8
WHEAT	52.2	54.5	56.8	56.3	54.5	45.1	50.6	50.6	56.7	80.4	104.7	120.3	133.3	1333	143.6
COFFEE	669.9	654.6	583.0	640.4	617.1	747.8	636.5	778.9	920.7	1007.8	1068.6	2523.8	3975.0	2818.1	2815.1
TEA	845.8	780.0	783.0	585.0	618.9	673.8	650.4	601.5	592.7	720.6	807.8	1056.9	2149.2	1583.2	1356.7
SUGAR	n/a	n/a	4.2	4.5	4.5	4.5	4.5	5.0	5.2	6.2	8.9	10.5	12.7	13.3	13.3
COTTON	113.3	95	95	98	97.5	99.2	104.8	115.5	121.6	155.3	192.1	208.6	288.3	315.3	328.1
SISAL	n/a	122.4	107.8	92.6	90.0	78.1	67.8	90.4	191.3	443.0	343.5	262.6	306.4	282.4	373.2
PYRETHRUM	34.3	41.6	39.7	34.4	32.5	31.0	35.7	39.6	43.5	43.0	44.7	49.2	55.9	72.0	100.6
EXTRACT 1000 sh/100 Kg.															

Sources: Statistical Abstracts
and 1979Kenya Statistical Digest
Sept. 1981.

OTHER PAPERS IN THIS SERIES.

- 1/80 Muir, K.A., Blackie, M.J., de Swardt M.L.A., and Kinsey B.H.,
Price and Wage Policy in the Zimbabwe Maize and Tobacco Industries: 1980.
- 2/80 Blackie, M.J., The Evaluation of Wild Environments in Zimbabwe: A
Literature Review.
- 1/81 Muir, K.A., Economic Review of Crop Production in Zimbabwe 1890-1940.
- 2/81 Reynolds, N., The Utility of a Combined Periodic Service and
Regulated Market System in the Development of Peasant Farming
Areas in Zimbabwe.
- 3/81 Reynolds, N. Agricultural Research and Extension : Some Proposals
For the Future.
- 4/81 Muir K.A., Crop Production Statistics 1940 - 1979.
- 5/81 Blackie, M.J. A Time to Listen : A Perspective on Agricultural Policy
in Zimbabwe.
- 6/81 Muir, K.A., Crop Production in Zimbabwe's Commercial Agricultural
Sector : 1940-1979.
- 2/82 Blackie, M. J., Improved Productivity from Livestock Production
in the Communal Areas of Zimbabwe.
- 3/82 Scudder, T., Regional Planning for People, Parks and Wildlife in
the Northern Portion of the Sebungwe Region.