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The World Coffee Situation and the Importance of Quality to Peasant Producers of Arabica Coffee in East Africa

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This paper forms the draft of an introductory chapter for a dissertation on the economic and technical aspects of quality production of arabica coffee on peasant farms in Bugisu, Meru and Kilimanjaro Districts The writer apologises for the length of the paper and for certain irrelevancies, both of which result from its dual purpose nature.

The paper reviews the present world situation particularly current issues regarding the International Coffee Agreement. The coffee economy in East Africa is briefly described and the importance of quality to East Africa's peasant producers of mild arabicas is discussed.

THE WORLD SITUATION

1. Features of Supply

Coffee is mainly produced in the "developing" countries of the tropical and sub-tropical world. At the present time there are reckoned to be about 20 million producers in 42 countries, many of whom are small-scale peasant producers. The characteristics of the supply position are fairly typical of those for perennial tree crops grown in the low-income areas of the world, where opportunity costs of family labour are small. As prices advance there is an extension of productive capacity, as well as short-term increases in output as a result of intensified cultivation of existing capacity. Short-term improvements help to bring production into equilibrium with demand, whilst the extension of productive capacity leads to large surpluses as new trees come into bearing a few years later, when the price peak has probably been passed. As prices fall again cultivation becomes less intensive, but it is still profitable to maintain the new productive capacity on a low-cost regime until prices have reached a very low level.

These features, combined with the more inelastic demand situation described below have tended to result in dramatic cyclical fluctuations in the world's coffee trade since the beginning of this century, with very serious consequences.

In many of the major producing countries of the world, coffee is the main export and the whole economy is dependent on the crop for a large proportion of its total foreign exchange earnings and, due to the generally low elasticity of demand, any fall in price leads to a lowering of export income. This leads to a slowing down of national development, if not to economic chaos as well as causing hardship to the individual farmer.

The following table shows the importance of coffee to the economies of 12 exporting countries who together make up some 80 percent of total world trade in coffee.

Table 1. Export Value of Coffee as Percentage Total Exports

Country	1960	1961	1962	1963	1964
Brazil	56.2	50.6	52.9	53.1	53.1
Columbia	71.7	70.9	72.9	69.4	73.5
Costa Rica	50.5	49.0	55.5	49.7	42.2
Guatemala	69.8	62.8	62.4	49.5	36.5
El Salvador	65.7	58.9	55.5	43.5	50.9
Haiti	51.3	41.0	69.8	36.8	47.8
Angola	35.0	36.1	43.7	40.1	48.7
Ivory Coast	50.0	46.2	39.7	43.1	42.6
Ethiopia	51.0	51.0	53.7	49.7	60.5
Uganda *	40.9	35.7	53.6	52.8	54.9
Kenya *	29.2	30.0	27.9	25.1	32.7
Tanganyika*	13.4	13.9	12.8	10.8	15.8

Source: U.S. Dept., Agriculture, 1965.
*Corrected (see appendix 3)

In addition there are very large numbers of people employed in coffee production and the inevitable reduction in inputs by both plantation owners and small farmers as prices fall combined with the reduction in employment opportunities in other sectors of the economy is bound to have serious consequences for them too.

Dominating this situation is the world's major coffee producer, Brazil, whose particular position is of great importance to the rest of the coffee-growing world. Brazil's own share of world coffee trade has been falling steadily for many years as table 2 shows.

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Table 2. Percentage of Share of World Coffee Trade.

Period	Brazil	Africa
1929 - 33	60.5	4.8
1934 - 38	55.1	8.0
1946 - 50	53.6	13.4
1951 - 55	44.8	17.8
1956 - 60	40.3	23.7
1961	38.1	26.0
1962	35.2	28.5
1963	38.8	26.1
1964	31.9	31.3

Sources: F.A.O., 1961, 1965; U.S.D.A., 1966.

She has herself been partly responsible for this falling share in the market since her own price "defence" policies, both before the war and after about 1957 have tended to hold world prices above the equilibrium price and have thus encouraged the further extension of low-cost productive capacity elsewhere, and particularly so in Africa. The following table shows the relative growth in production in Brazil and Africa over a number of distinct phases in the development of the world coffee economy.

Table 3. Percentage Growth in Production

Phase	World	Brazil	Africa
1921-25 to 1926-30	+39	+45	+66
1926-30 to 1936-39	+18	+8	+181
1936-39 to 1947-50	-11	-26	+66
1947-50 to 1954-56	+25	+10	+88
1954-56 to 1957-59	+44	+70	+28

Source: F.A.O., 1961 p.11

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The maintenance of price levels has been essential to Brazil for two reasons. Firstly her expanding economy is very largely dependent on the export earnings of coffee (see table 1). Secondly her own productive capacity consists of two distinct parts; the new low-cost areas in the state of Parana, and the older, relatively high-cost areas which are mainly concentrated in the state of Sao Paulo. The new areas on their own could probably produce all Brazil's requirements for export and domestic consumption. Some fall in price would be sufficient to eliminate most of the high-cost production, but unless suitable alternatives exist for the re-development of the resources so released, much hardship would result. In addition in the old areas such as Sao Paulo there are numbers of large estates, some owned by a wealthy elite who possess considerable political influence.[1]

Table 4 summarizes Brazilian production, exports and stocks in recent years, and shows how very important her influence is in world trade.

Table 4. Brazil: Exportable Production, Exports and Stocks of Coffee, 1955 - 1966.[2]

'000,000 bags of 60 kilos each.

	Exportable (1) Production	Exports (2)	Balance to or from stocks	Known (3) Stocks	Stocks as % World Exports
1955	14.5	13.7	+ 0.8	n.a.	n.a.
1956	22.1	16.2	+ 5.9	n.a.	n.a.
1957	12.5	14.3	- 1.8	n.a.	n.a.
1958	21.6	12.9	+ 8.5	n.a.	n.a.
1959	26.8	17.7	+ 9.1	27.3	64
1960	43.8	16.8	+17.0	n.a.	n.a.
1961	29.8	17.0	+12.8	51.8	119
1962	35.9	16.4	+19.5	57.1	124
1963	28.7	19.5	+ 9.2	62.0	126
1964	23.2	14.9	+ 8.3	57.0	123
1965	17.2	n.a.	n.a.	n.a.	n.a.
1966	33.3 (4)	n.a.	n.a.	n.a.	n.a.

Sources (5) : Paton., 1966; F.A.O., 1961 and 1965; Rowe, 1963.

1. See Rowe, 1963 for a full analysis of Brazil's problems and their effect on the world coffee situation.

2. (See page 5).

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(Notes to table 4)

(1) Crop year ending in year stated.

(2) Calendar year stated.

(3) Discrepancies between this and apparent additions to stocks may be accounted for in part by industrialisation of stocks, inaccuracies in recording, etc.

(4) U.S.D.A. forecast.

(5) Where several statistical sources are quoted the most recent one is taken as correct, since most production statistics are based on estimates, which are revised as more accurate data become available.

2. The Demand Position.

The major net importers of coffee are the high-income "developed" nations of Western Europe and North America. The United States which alone accounts for nearly 50 percent or more of world imports is of particular importance.

Table 5. United States: Imports of Green Coffee 1959 - 1964.

: 000,000, bags of 60 kilos each.

	1959	1960	1961	1962	1963	1964
World Net Imports	41.6	42.3	44.0	47.0	48.6	48.4
U.S.A.-Imports	23.3	22.1	22.3	24.5	23.8	22.8
U.S.A. as % World Imports	56.0	52.2	50.7	52.1	49.0	46.0
U.S.A. - Imports from East Africa	0 .7	0.9	1.2	1.5	1.4	1.4

Source : Ukers, 1965; Paton 1966. U.S.D.A., 1965.

(Footnote to page 4)

2. The normal measure in world coffee trade is the 60 kilo bag (132,276 lbs.) There are 16.70 bags to the metric ton (used in F.A.O. statistics) and 16.94 bags to the long ton. In East African statistics the more usual measure is the long ton and this will be used when referring specifically to East African production.

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It is evident from this table that over a six-year period United States Imports have if anything declined despite the growth in population. This is now a matter of grave concern throughout the coffee producing world although East Africa's own sales to this market are increasing. Although per capita consumption rose from 15.2 pounds per annum in 1934 to 18.9 pounds in 1946, in 1964 it was back to the pre-war level as table 6 shows, and a consumption ceiling would appear to have been reached. This is despite a rise in income, and in fact in 1964, the average American spent only 0.378 percent of his income on coffee against 0.516 percent in 1939.[1]

Table 6. United States per capita Consumption of Coffee in Selected Years and 1959 - 1964.

Pounds of green coffee.

1939	1946	1950	1955	1959
15.2	18.9	16.5	15.3	15.9
1960	**1961**	**1962**	**1963**	**1964**
15.7	15.9	15.9	15.5	15.2

Sources : Paton, 1966; U.S.D.A., 1965; Ukers, 1965.

In certain coffee-drinking countries of Western Europe, a consumption ceiling also appears to have been virtually attained, and in the traditional markets generally, the price elasticity of demand, at least over the normally accepted price range is low (world elasticity of demand has been reckoned at only -0.25[2]). The Coffee Study Group has calculated that with elasticity of demand at wholesale roughly equivalent to -0.25 and at retail -0.50, a decrease in price of 80.2 percent would be required to achieve a 50 percent increase in consumption[3]. Thus any reduction in price is bound to lead to lower total gross earnings for the producing countries as a whole.

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1. Paton, 1966.
2. Coffee Study Group, 1960; p. 142.
3. <u>ibid</u>. appendix A. These calculations are of course only theoretical, since at a very much lower price-range the elasticity of demand is almost certain to be much higher - see p. 8 below.

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In Western Europe, the low price elasticity of demand has rendered coffee particularly suitable for the levying of indirect taxation as a source of raising revenue. As a result the import price, which may as a result of export duties and other changes already be as much as twice the producer's price, may bear little relation to the final retail price (see table 7). Thus any reduction in the producers price will have a disproportionately smaller effect on the price paid by the consumer.

Table 7. Tariffs and Retail Prices as[1] percentage Unit Import Price in Seven Importing Countries - 1958.

Country	Duty and Tax	Retail Price
Italy	118	357
West Germany	92	355
France	66	269
Sweden	14	199
Switzerland	12	204
United Kingdom	4	260
United States	nil	191

Source : F.A.O., 1961 p.34

There are a number of countries however where the elasticity of demand is relatively high. These include the traditional tea-drinking countries such as the United Kingdom and Japan where demand is more price responsive, lower-income countries of Southern Europe where income elasticity of demand is high and those large parts of the world where coffee is not traditionally consumed.

1. The wide differentials between import price plus taxes and the retail price are in part accounted for by processing costs to change raw coffee into the finished product. Exporting countries may be able to raise the value of their product and thus their export earnings by processing to the finished state. However fairly heavy capital investment and the possession of technical know-how are essential. (At Bukoba in Tanzania an instant coffee factory is now being built with the financial and technical assistance of a West German coffee concern. One of the main objects of this is presumably import substitution in East Africa).

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In these areas there is almost certainly greater scope for stimulating demand provided that the price range is such as to make it competitive with alternative beverages. An unknown factor too is the elasticity of demand even in the traditional markets at a lower price range. Evidence from the United States suggests that when prices rose to an abnormal level in the mid 1950's, the negative demand response was fairly dramatic. A very substantial fall in price could possibly stimulate the development of new uses for coffee its complete substitution for other beverages such as tea, less economical use through the drinking of stronger coffee (a reversal of the consumer adjustment to higher prices in the mid-1950's) and demands for a better quality product.

One other feature of demand is the rather clear price differentials obtaining for the three major types of coffee in world trade. Milds are of an intrinsically better quality than Brazils and normally command a considerable premium over the latter. Rowe has shown that in fact Brazils comprise the residual or marginal demand after Milds and Robustas have been bought, and it is thus the former's present (or future) availability which conditions the strength of world prices.[1] Robustas occupy a rather special position; they are of lower quality than Brazils, possess a neutral flavour and are particularly required for production of soluble coffees. It is possible that if the price differential between Brazils and Robustas narrowed with a general fall in prices, that any technical advantage the latter possessed might be outweighed by price considerations, since it is possible to make a better quality product with superior coffees.

Just as there are clear differentials between the three main groups, so there are clear quality preferences within them. Generally speaking as price levels fall, the market tends to become more discriminating and differentials are likely to increase. This forms the basis of a very pertinent argument for the maintenance of quality in East Africa,[2] particularly in view of the uncertainties regarding the future of the International Coffee Agreement.

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1. op. cit., 1963, pp. 24 - 25.
2. See pp. 23 - 26 below for a closer analysis.

RECENT TRENDS AND THE INTERNATIONAL COFFEE AGREEMENT 1962[1].

Appendix 4 (a) gives an indication of the movement of world coffee prices during the past forty-five years. During the 1939-45 war they were held at a relatively low level, but soon began to rise after 1945, with the recovery of Western Europe and the re-establishment of normal patterns of trade. At first supplies were supplemented by surplus stocks held in Brazil, but these were exhausted by 1949. The New York price of Santos 4 in 1950 of 50.5 U.S. cents was 57 per-cent higher than that of the previous year and was almost four times that which held during the war years. A further sharp rise followed reports of frost damage in Brazil in 1953, and the average 1954 price was a record of 78.7 U.S. cents. The result of these meteoric rises was a rapid increase in new planting throughout the coffee growing world from 1950, but nowhere more so than in Parana in Brazil and in tropical Africa.

Despite a steep fall to 57-1 cents in 1955 and a continued decline to 34 cents in 1962, planting continued on a large scale in Brazil until 1958 and in some parts of Africa until the early 1960's. The effects of these plantings have been increasingly felt in recent years and are summarised in the following statistics of world coffee trade for the years 1955 - 1964.

Table 8. Summary of World Coffee Trade 1955 - 1964.

'000,000, bags of 60 kilos each.

Year	Production (1)	% Change	Exports	% Change	Balance (2)	Known Stocks
1955	41.1	-	34.3	-	6.8	13.9
1956	47.4	+15.3	37.8	+10.2	9.6	17.5
1957	41.9	-11.6	35.9	-5.0	6.0	18.0
1958	52.8	+26.0	36.5	+ 1.7	16.3	25.2
1959	58.5	+10.8	42.6	+16.7	15.9	27.9
1960	76.5	+30.8	42.5	-0.2	34.0	50.6
1961	72.5	-5.2	43.7	+ 2.8	28.8	51.8 (3)
1962	68.0	-6.2	46.2	+ 5.7	21.8	57.1 (3)
1963	68.1	+ 0.1	49.1	+ 6.3	19.0	62.0 (3)
1964	52.0	-24.6	46.5	-5.3	5.5	57.0 (3)

Sources: Paton, 1966; F.A.O., 1965 and 1961; Rowe, 1963.

1. See page 10 footnote 1.

(notes to table 8)

(1) Production in crop year ending in year stated.

(2) To Domestic consumption, stocks, industrialisation, etc.

(3) Brazil only - see table 4.

By 1956, Brazil had started to accumulate surplus stocks again and with the danger of a serious fall in prices and its inevitable effects on her whole economy she negotiated the first of a series of one-year agreements with a number of other Latin American countries. These agreements were gradually widened to include other producers, thus paving the way for the long-term International Coffee Agreement (I.C.A.) of 1962. The aims of Brazil and Columbia (the worlds major producer of Milds) were to win the confidence and support of other producers as well as of the United States as the major importer. In order to do this they accepted a quota restriction or their own production in the early agreements which was more severe than that which applied to other producers.

In 1962 the long-term agreement for five years was negotiated in New York and signed by the main importing nations as well as the majority of exporters.[2] Its aims may be briefly summarised as follows:-[3]

1. To maintain or increase the level of foreign exchange earnings of the exporting members. In order to do this it was agreed that the general level of prices should not fall below that ruling in 1962 (article 27). The maintenance of prices is achieved by fixing quotas to regulate exports to the main consuming countries known as "traditional markets" (article 28). Advantage is taken of the greater elasticity of demand in the "new" markets to practise price discrimination and to stimulate consumption by allowing non-quota sales in these areas (article 40).
2. To bring the level of production into equilibrium with world demand. The means of achieving a balance between supply and demand were not specified, although the agreement envisaged the setting of production goals for each country (article 48).

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1. See Rowe, 1963 and the Coffee Study Group, 1960 for a historical analysis. (Note from page 9).
2. By 18th February 1966, 35 coffee producing countries representing 97.4 percent of world exports and 23 importing nations representing 96 percent of world imports had become members of the I.C.A.
3. See appendix 1 for a full statement of the objectives of the agreement.

3. To promote consumption - this was left to the exporter nations (article 46) although importing countries undertook to remove obstacles to consumption (article 47).

4. To undertake studies, produce statistics, etc.

The administration of the agreement through the International Coffee Organisation (I.C.O.) is very complex. Brazil and the United States control 40 percent each of the exporters' and importers' votes respectively. Political motives appear to have figured largely in the United States Government's policy towards the agreement. In supporting the agreement the Under-Secretary of State for Political Affairs before the U.S. Senate Foreign Relations Committee stated: "If the Alliance for Progress is to be successful, we must at least attempt to stabilise proceeds from coffee and other commodities ----- this is one of the indirect objectives of this agreement ---------".[1] At the same hearing the President of the National Coffee Association (N.C.A.) said: "We are willing to make sacrifices -------- because we are aware of the dangers that could threaten our American way of life in the event of a breakdown in the economies of the coffee producing nations ------".[2] Rowe has recently concluded "This agreement is, however, admittedly a political move and to a large extent a move in the Cold War and must be judged as such".[3]

Under the agreement a global basic quota of 45587183 bags was fixed. This was divided among the importer members approximately in proportion with their exports in 1961. Provision was made for an annual quota to be agreed as a percentage of the basic quota before the start of each crop year. Annual quotas are divided between quarters and there are special clauses to allow waivers in extenuating circumstances and for the allotment of a share of the basic quota to new signatories. The present quota position is shown at appendix 2. In 1965 a technique for automatic quota revision based on the daily movement of indicator prices was introduced to ensure the maintenance of price levels. A new development has now introduced the possibility of separate quota revisions for the three distinct types of coffees, to meet the differential demand for them on the world market. At the same time various regional devices have been employed to manipulate the price of particular coffees, particularly by the Robusta producers of the Inter-African Coffee Organisation. (I.A.C.O.)

1. U.S. Government, 1962, p.58.
2. ibid p. 86 ff.
3. Rowe, 1965 (b) pp 181 - 182.

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From the producers point of view the agreement would appear to have worked reasonably well, and prices have in fact risen considerably <u>above</u> the 1962 level (see appendix 4 a.) However there are signs of growing discontent among consumers; for instance a prominent member of the British Coffee Trade has recently commented: "The average price of the world's major commodities, excluding metals ------- was in 1965 $2\frac{1}{2}$ times that of 1939. Coffee is 5 3/4 times the 1939 price. Consumption in U.S.A. has fallen, and is falling. Elsewhere coffee is considered a luxury. World production and stocks are rising ----- prices of the main types are between 18% and 75% ahead of the 1962 levels --------"[1]. Again a recent statement by the American N.C.A. (an influential supporter of the I.C.A. in 1962 - see p. 11 above) calls for "an orderly return to free trade as soon as possible". It refers to the quota and price indicater system of the I.C.A. as "a serious threat to the interests of both the trade and the consumer" and proposes several major changes.

One major weakness of the agreement is that the two major objectives, i.e., the maintenance of export earnings for the whole of the supply side through price control, and the adjustment of supply to the level of demand are in direct antipathy. Whilst coffee remains so highly profitable the elimination of excess high-cost capacity is almost impossible, in fact it has been said that it has received "a new lease of life".[2] This is particularly so as there are few alternative opportunities to which resources may be reallocated. This lack of opportunity is in part related to a slow or erratic rate of real economic growth in some of the major producing countries.

Attempts to fix production goals have not so far succeeded. A major session of the International Coffee Council (I.C.C.) is due to begin on 22nd August 1966 to review the workings of the agreement and in particular to consider production goals and a complete readjustment of quotas. It is likely that this session will decide the future of the whole agreement after the end of the five-year period in 1967.

The I.C.O. has now established a diversification fund and in November 1965 an agreement was signed in London by the I.C.O., F.A.O. and I.B.R.D. to study

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1. Schluter, 1966.

2. Rowe, 1965 (a), p. 91.

the outlook for world production and consumption of coffee, with special emphasis on diversification possibilities in 10 major Latin American and African producing countries.[1] The task of the investigating teams and the implementation of their findings will be difficult indeed and unless there is some revision of prices to bring them more in line with true costs of production may well prove impossible.

Brazil announced her own diversification scheme in 1961. Under this she intends to uproot two billion old trees, replacing only 20 percent of this acreage with high yielding varieties of better quality potential. Frosts and other natural disasters have given rise to spectacular increases in the internal coffee price since 1963, and the programme is reported to have slowed down. Apparently by March 1965, 691 million trees had been uprooted of which only 33 million (about 5 percent) have been since October 1963[2]. These were "uneconomic" trees which probably yielded very little in any case, whilst recent plantings in Parana have continued to come into full bearing, and it seems not unlikely that new areas may have been planted under the stimulus of higher prices.

Recent estimates by the United States foreign agricultural service put world production in 1965/66 at 80.6 million bags and in 1966/67 at 71.5 million bags. The executive director of I.C.O. has recently forecast that by 1970 world stocks will be equivalent to two years' supply.[3]

Thus as the I.C.A. approaches its fifth year of life, and a major review of the agreement by its members most of its objectives remain to be fulfilled and there are signs that the consumers, who are paying the bill, are possibly growing more impatient, especially since the rigidly applied quotas mean that they are unable to obtain the quantities of Robustas and good quality Milds which they require. It has recently been reported that 22 producing countries are bidding for a larger share of the quota. In particular, the low-cost producers of Robustas and high-quality Milds in Africa understandably feel that the demand for their coffees give them a justifiable case, especially since their present quotas were fixed in relation to exports before 1962, when much of their productive capacity was still to develop its full bearing potential. It is against this background that the price of coffee in the national economies of East Africa must be considered.

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1. See also I.C.O., International Coffee Council Resolution No.98 of 12/12/65.
2. Paton, 1966 p. 103.
3. "Supply" is not defined.

The East African Coffee Economy.

1. Uganda

As shown by appendix 3 (a), over the period 1955-1965 the total value of domestic exports[1] has risen from £41.9 million to £62.7 million. Coffee's share of this total has remained steady. Before 1955 coffee was less important than cotton, in 1951 for instance, the former represented 28.9 per cent and the latter 60.8 per cent of domestic exports.

Uganda's economy is very dependent on coffee and cotton for foreign exchange and their joint contribution since 1951 has remained fairly static although there has been a slight decline since about 1957 as other exports, particularly copper, have built up.

Table 9 Contribution of Coffee and Cotton to Uganda's Total Domestic Exports by Value in Selected Years

Source: Uganda, Statistical Abstracts 1959, 1965.

Year	Percentage Total Domestic Exports
1951	89.7
1955	87.2
1960	76.8
1964	79.5

The total value of coffee exports in the past eleven years has risen from £20.1 million to £30.4 million despite a fall in prices from the peak levels of 1954. This has been due to a large increase in the volume of coffee exported as a result of vastly increased plantings in the 1950's. Table 10 shows the magnitude of this growth in production since 1950.

Table 10 Uganda : Total Coffee Exports 1950-64
Sources: Uganda, Statistical Abstracts, 1965, 1959 and 1957

Year	Coffee Exports (tons)	Percentage change
1950	31850	-
1951	43650	+37
1952	39450	-10
1953	35700	-10
1954	34650	- 3
1955	74450	+ 115
1956	61650	-17
1957	84050	+36
1958	78700	- 6
1959	88400	+12
1960	116800	+32
1961	103200	-12
1962	130950	+27
1963	145250	+10
1964	137450	- 5

1. This excludes inter-territorial trade in East Africa.

The structure of coffee production is almost entirely peasant-farm based and Robusta is the predominant type as the following summary shows:-

Table 11 Uganda : Summary of Coffee Production in 1962

Type of Coffee	Producer	Production (tons clean)	Percentage of Total
All Coffee	All	118,992	100.0
Robusta	Peasant-farm(1)	100,352	84.3
Robusta	Estate(2)	6,506	5.5
Robusta	Total	106,858	89.8
Arabica	Bugisu(2)	8,002	6.7
Arabica	Other Peasant farm(1)	3,884	3.3
Arabica	Estate(2)	248	0.2
Arabica	Total	12,134	10.2

Source: Uganda, Dept. Agric. Ann. Rept. 1962.

(1) refers to calendar year

(2) refers to 1961/62 crop year.

These figures refer to one particular year, and fairly wide yield fluctuations do occur; again the records for Bugisu include an estimate of unrecorded sales through the Bugisu Coffee Marketing Association (see p below). However it indicates the general order of relative magnitude.

The importance of the Arabica crop lies in its relative unit value and its potential for increasing export earnings within the limitations imposed by the I.C.A. quota. Uganda Arabica fetches at least £90 per ton, more on the world market than her Robusta.[1] The differential may be as high as £150 per ton. In 1962, although Bugisu coffee constituted only 6.7 per cent of the total by volume, it made up about 10 per cent of the value of the whole crop. The value of the Bugisu coffee crop most of which is exported, fluctuates widely but with a current average value which is unlikely to fall far below £2 million it represents some 6.6 percent of total exports and 3.3 percent of total domestic exports by value in 1965.

Uganda became a signatory to the I.C.A. in her own right after the attainment of independence in 1962. Her basic quota is 1,887,737 bags (111,240 tons) which is 4.11 percent of the world basic quota.[2] She is the world's fifth largest producer. The quota was fixed in line with her production in 1961 and took no account of the new plantings of Robusta which are mainly concentrated in Buganda. Although her case for a larger

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1. Uganda Govt., 1966 p. 65

2. See appendix 2.

quota in the forthcoming review session of the I.C.C. is a strong one, it is unlikely that she will be granted sufficient to cover anything like the whole of her crop. Projections prepared for the new five-year plan suggest that by 1970/71 the total crop may have reached 240,000 tons of Robusta and 20,000 tons of Arabica; over twice the present basic quota. Allowances were made for an annual increase in quota of three percent, roughly in line with the growth in world demand and for non-quota sales of 25,000 tons per annum, nevertheless it was shown that cumulative surpluses could reach as much as 498,000 tons by 1970/71.

Thus, Uganda's major export faces a severe crisis. Although sales to non-quota markets provide an outlet, competition is severe and prices are considerably lower; and the cost of retentions will be high. These facts have been recognised in the recently published second Five-Year Development Plan. This states that "A vigorous policy of increasing the unit value of the crop will be necessary. Cutting back of over production will also be needed." [1] The measures envisaged to achieve these aims are (a) The improvement of robusta quality, particularly by the encouragement of wet processing (b) a vigorous campaign of diversification in the robusta areas where "a credit fund for the production of alternative crops will be tied to the uprooting of an equivelant acreage of robusta" [2] (c) a rapid increase in the production of arabica coffee by (i) expansion of acreage in Western Uganda and (ii) raising yields and quality in Bugisu[3]. It is envisaged that the value of the Arabica crop will rise from a forecast of £2.9 million in 1965/66 to £4.9 million in 1970/71[4].

Thus the position of Arabica production in general and of Bugisu Arabica in particular is small relative to the Robusta crop, but is of disproportionate significance to the national economy and particularly so in the light of Uganda's current development plans.

2. Kenya

Appendix 3 b (i) indicates the very significant position of coffee (almost entirely of the arabica variety) in the national economy of Kenya. Over the 11-year period 1955-1965 total domestic exports rose by 83.8 per cent from £25.7 million to £47.1 million, whilst the value of coffee exports increased from £8.9 million to £14.1 million . Thus in fact coffee has maintained its dominant position, despite a general fall in price levels over the period, at around 30-35 percent of the total value of domestic exports. The nearest rival in 1965 was tea, which contributed about 13 percent of the total value. Whilst there is ample evidence that the economy is more broadly based than that of Uganda, and that diversification

1. Uganda Govt., 1966 p.65.
2. Loc. cit. It is envisaged that in suitable areas Robusta may be replaced with Arabica.
3. Loc. cit.
4. Ibid.p. 57.

is progressing, nevertheless the Kenya economy is likely to remain for some time very dependent on exports of coffee for a large proportion of its gross foreign exchange earnings.

Although the overall export position of coffee has remained remarkably stable, yet the structure of the industry has undergone a complete revolution over the past ten years, as can be seen from appendix 3b (ii). The whole of the increase in the coffee crop between 1955 and 1964 is attributable to the rapid growth of the peasant-farm sector which, in the crop year 1955-56 supplied only 3.3 per cent of the total crop, but in 1964/65, 37.5 percent of a crop which had itself, risen by 62.3 percent. Over the period peasant-farm production increased by over 1,700 percent. The acreage figures (appendix 3b (iii) show that the major shift in the balance occured as late as 1963, so that the full effect in terms of production will not be felt until about 1967/68. In 1964, of the total value of Kenya's coffee exports of £15.4 million, the small-farm sector supplied £5.4 million. By 1970, the total value of coffee exports is expected to reach £22.7 million of which the small-farm sector will contribute £14.5 million.[1] Thus the peasant farms acreage has become by far the more important sector of the industry and in fact now constitutes the most valuable single productive asset in the whole Kenya economy.

The position of Meru district is of great significance. It was one of the first of the African areas to start large-scale coffee planting and up to 1956/57 was responsible for more than half the total small-farm production Since then its relative importance has declined as other areas which started planting later have striven to catch up. In 1964/65 Meru production still accounted for 27.1 percent of total peasant farm production and in 1965 the districts' coffee area was by far the largest of any district in Kenya, including both estate and peasant-farm areas.

Table 12 Kenya : Coffee Growing Statistics, 1965

SMALL FARM PRODUCTION		ESTATE PRODUCTION	
DISTRICT	ACREAGE	DISTRICT	ACREAGE
Meru	27,544	Kiambu	12,861
Muranga	19,773	Ruiru	12,565
Nyeri	14,904	Thika	11,328
Kirinyaga	12,779	Trans Nzoia	8,089
Kisii	12,752	Rift Valley	7,550
Kiambu	12,411	Upper Kiambu	4,381
Embu	7,667	Mitubiri	3,893
Machakos	5,590	Donyo Sabuk	3,492
Bungoma	5,214	Makuyu	3,337

1. Kenya Govt., 1966, pp. 85 and 95

SMALL FARM PRODUCTION		ESTATE PRODUCTION	
DISTRICT	ACREAGE	DISTRICT	ACREAGE
Rift Valley Province	1,887	Nyeri	3,149
S. Nyanza	1,559	Kabete	2,311
Taita	1,400	All others	8,108
C. Nyanza	218		
Kitui	81		
TOTAL	124,978	TOTAL	80,118

Source: Kenya Coffee, Dec. 1965, p. 543.

In monetary terms the importance of Meru coffee in the economy can be seen from the following statistics.

Table 13 Value of Meru Coffee Production as percentage total Coffee Exports and Total Domestic Exports

	1960	1961	1962	1963	1964
Meru Coffee Sales (£'000)[(1)]	760	842	985	1,195	1,600
Meru Sales as %					
(a) Total Coffee Exports	7.4	7.9	9.3	10.8	10.4
(b) Total Domestic Exports	2.2	2.4	2.6	2.7	3.4

Source of Meru data: Meru Farmers Co-operative Union Ltd.

(1) Refers to crop year ending in year stated.
The sales value is the total value received by M.F.C.U. The actual export value, which is not available, is up to 10 percent higher (see appendix 4 (b) for explanation)

Meru then is a very suitable area for study, particularly since the ecological conditions there are very similar to those in Embu and the Kikuyu district of Central Province, which together with Meru make up about 76 percent of the total peasant-farm coffee acreage.

Kenya has not applied for membership of the I.C.A. in her own right until very recently and is classified as a non-member. This has possibly been part of a long-term strategy designed to strengthen her position to negotiate a larger quota when she does become a member. Under the agreement, Kenya's share of the East African quota[1] was related to her level of production in 1961, and her basic quota is fixed at 516,835 bags (30,456 tons) which is 1.13 percent of the global quota. Although Kenya did not join

1. The short-term agreement of 1960 and subsequent agreements were originally signed by U.K. on behalf of her dependent territories in East Africa.

the agreement in 1963 she has been very particular to stress her adherance to "the spirit and the letter of the agreement" [1] she has abided by the quota restrictions, although not legally bound to do so and inspite of the rapid increase in her crop as the new African-owned productive capacity has come into bearing, and she has officially restricted the extension of planting since 1964. Now with her crop rising steeply in excess of the present quota and expected to reach 70,000 tons by 1970,[2] and at a time when a major review of quotas is to be undertaken by the I.C.C., Kenya has started negotiations with a view to joining the I.C.A. Her case for a larger quota may be ascertained from the recently published Development Plan: "It is Kenya's position that she should be allowed an I.C.A. quota corresponding to production at maturity from acreage planted before restrictions were imposed in 1964. For many years Africans in most parts of the country were prohibited by the colonial regime from growing coffee. The prohibition was relaxed in the 1950's, but only as a result of massive plantings in 1962-64, before restrictions were re-imposed in accordance with the Agreement, did the Africans' share in total coffee acreage rise above 50 percent - - - the Government has left a small acreage open for planting in districts which lacked the resources to keep up with the massive planting programmes - - -. Otherwise the Government has successfully held plantings beyond authorised totals in the more progressive districts to a trickle, and can be said to have observed the Agreement as well as any producing country and better than most." [3]

One important aspect of Kenya coffee is its reputation for quality. Kenya has enjoyed a strong preferential demand, particularly in the German market. It has been said recently that the peasant-farm sector enjoys particular advantage as a "very low-cost producer of high quality mild coffee" [4], and there is great potential for expansion. It is vital to Kenya that her reputation for quality and the low-cost advantage of the major sector of her industry are maintained.

In out lining its coffee policy in the new Plan, the Kenya Government has stressed the importance of maintaining quality. After admitting that "the 1963 rush to plant coffee led to a breakdown of supervision and a drastic fall in standards of husbandry" [5] it outlines proposals for a special

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1. See e.g. Kenya Coffee, Sept. 1964, p. 339 and Feb. 1965, p. 57. The point was made to the writer several times during conversations at the Kenya Coffee Marketing Board.
2. Kenya Govt., 1966, op. cit. p. 178
3. Ibid. p. 176
4. Rowe, 1965 (a)
5. Op. cit. p. 177

coffee extension service an inspection service and a coffee training centre. Another major problem is stated to be "the deterioration in management of many of the co-operative societies" [1] leading to inefficiency in processing and marketing and thus reducing returns to growers. Measures proposed include improved supervision, control and co-operative education, and the strengthening of the co-operative marketing unions.[2] **Thirdly** an increasing intensity of research into Coffee Berry Disease (C.B.D.) is proposed. The losses from this disease can be extremely heavy, and the only known methods of control now available are but partially successful and are costly to apply.

These problems and the remedies proposed in the plan will be considered further in the light of the experience in Meru District.

3. Tanzania[3]

Statistics of Tanganyika's domestic exports (appendix 3 c (i)) show that coffees' contribution by value is relatively less important than in either Uganda or Kenya, although still highly significant. In the years 1955-1965 the total domestic exports rose from £36.2 million to £62.8 million. Sisal was predominant throughout the period, but its relative share remained fairly stable at 25-30 percent of the total. Coffee's share declined from 20.6 to 13.7 percent over the period, and from 1959 onwards it was replaced by cotton as the second most valuable commodity, expect in 1964.

The volume of coffee exports has risen fairly steadily over the past eleven years and was 57.1 percent higher at the end of the period than at the beginning (appendix 3c (ii)), but the export value has increased by only 24.5 percent.

The structure of the Tanganyika coffee industry is fairly complex; about two thirds of the production is mild arabica, whilst the remainder is hard coffee, mainly Robusta, although a certain amount of hard Arabica is also produced. The production of mild coffees is centred mainly in Northern Tanganyika, though there is a growing industry in the Southern Highlands and other hill masses. There are three main groups selling mild arabicas; the plantation owners, who are mainly expatriates, organised into the Tanganyika Coffee Growers Association (T.C.G.A.), the large peasant-farm industry on Kilimanjaro, which is marketed by the Kilimanjaro Native Co-operative Union (K.N.C.U.) and the other peasant

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1. Loc. cit.
2. Ibid. pp. 197 - 202
3. The United Republic of Tanganyika and Zanzibar since 1968. This study refers entirely to the Tanganyika mainland.

farm producers who are scattered throughout the coffee-growing regions and are grouped together under the Tanganyika Co-operative Trading Agency (T.C.T.A.). The Robustas and hard arabicas are produced mainly in Bukoba and are . marketed through the Bukoba Native Co-operative Union (B.N.C.U.)

This study concentrate on the K.N.C.U. coffee area; its relative importance in the whole complex is shown in the following table.

Table 14 Relative Position of K.N.C.U. in Tanganyika Coffee Industry 1962/3-1964/5

CROP SOLD	1962/63		1963/64		1964/65	
	Tons	£	Tons	£	Tons	£
ARABICA	17965	4,723,485	25,535	8,393,219	20,403	6,804,021
ROBUSTA	7406	1,293,615	3,840	995,242	7,380	1,558,994
H. ARABICA	2152	468,461	2,369	691,175	1,125	332,199
TOTAL CROP	27523	6,485,560	31,744	10,079,672	28,908	8,694,214
KNCU	4956	1,275,971	10,337	3,379,672	8,052	2,661,492
ARABICA AS % TOTAL	65.27	72.83	80.44	83.27	70.58	78.26
KNCU AS % TOTAL	18.01	19.67	32.56	33.53	27.85	30.61
KNCU AS % ARABICA	27.59	27.01	40.48	40.27	39.46	39.12

Source: Tanganyika Coffee Board Sales Records.

Appendix 3c (ii) shows that in the years 1955-1964, K.N.C.U. production has varied between 20 and 35 percent of the total Tanganyika crop. In 1963/64 and 1964/65 it made up approximately 60 percent of the total peasant-farm mild arabica production - it is thus a highly significant part of the whole industry. K.N.C.U.'s long history of coffee growing and co-operative development and its proximity to the centre of Tanganyika's coffee industry in Moshi make it a very influential sector of the industry. On the other hand the differences in stage of development, the wide range in ecological conditions and the vast distances between the various coffee growing districts render it impossible to claim that K.N.C.U.is representative of all the peasant-farm arabica areas.

Tanzania,is a member of I.C.A. and her basic quota is 435,485 bags (25,660 tons) which is 0.95% of the world total. Based on exports in 1961, and considering prospects then, this was generally considered adequate at the time. Rowe suggested that total production during the life of the agreement was unlikely to rise more than 3,000 to 6,000 tons above output in 1960/61, and that the quota, allowing for some upward revision in line with the projected $2\frac{1}{2}$ - 3 percent rise in demand, would account for most of the crop, in fact that the agreement was advantageous from Tanganyika's point of view.[1]

However, in 1963/64, exports were at least 6,000 tons above the basic quota and the K.N.C.U. crop was a record of over 10,000 tons. It is now expected that the current (1965/66) crop will be even higher; estimates for the K.N.C.U. crop in Moshi ranged from 15 to 18 thousand tons (60 per cent of the whole basic quota). This rapid rise in K.N.C.U. production may in part be due to extension of planting, but is mainly a result of technological improvements particularly the wide acceptance of copper spraying, which will be discussed further.

These increases are entirely in line with current government policy as expressed, in the Five-Year Plan for 1964-1969,[2] which calls for a "considerable expansion - - -chiefly from increases in yield - - -"[3] and emphasises the need for improvement of husbandry practices, replacement of old, unproductive trees and copper spraying. It recognises that the increased production is unlikely to be absorbed by any increase in quota, and states "quality of the product alone will assure its profitable and ready disposal in non-traditional markets."[4] In order to improve quality it proposes the conversion of the entire arabica industry to central processing. To achieve these aims in raising yield and quality credit facilities for formers and co-operatives are envisaged, and the extension services are to be strengthened.

The planned increase in total production is from the approximate average of 27,000 tons in 1960-62 to 49,000 tons in 1970 with an increase in total value from £6.6 million to £12.2 million. It is estimated that unit value will increase as a result of improving quality from £216 per ton in 1960-1962 to £249 per ton in 1970.[5] In view of the stated policy of encouraging exports to the"new" markets to absorb production in excess of the quota, this may prove over-optimistic.

The impact of the policies outlined on the peasant farmers of Kilimanjaro will be discussed in later chapters.

4. Prospects for East Africa.

From the foregoing sections it will be seen that throughout East Africa production is already much in excess of current I.C.A. quotas, and projections

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2. Tanzania is also pressing for an increased quota (see Reporter July 15, 1966 p. 17). However her case may be more difficult to press particularly in view of her stated policy of encouraging increased production.

3. United Republic of Tanganyika and Zanzibar, 1964

4. *Ibid.* p. 24

5. *Loc. cit.*

6. *Ibid.*p. 20.

1. *Op. cit.*, 1963, p. 144

suggest that by 1970, in both countries, it will be at least double the quota levels. There is still great potential for further expansion in production of high quality arabicas, this is particularly so in Kenya, although there is also potential for further expansion in Western Uganda and Southern Tanzania. In the older established areas such as Bugisu and Kilimanjaro increase in production are likely to result from technological changes. The potential for expansion is relatively low-cost potential, and could compete in the world market at considerably lower prices than the present general level. It is important in passing to note though that the estate industries of Kenya and Tanzania are relatively high cost, and in the event of a major downward trend in prices, production in this sector could be expected to decline. In Kenya a decline in productivity in this sector, combined with a fall in the value of land might conceivably lead to Government acquisition of estates and their subdivision for small-holder or co-operative settlement. Such a move would alter the costs regime and might encourage a marginal increase in production in these areas.

The Imp rtance of Quality to East Africa's Arabica Producers

The need to maintain or raise coffee quality is recognised in all East Africa's current Development Plans. Its importance lies firstly in the fact that the relative unit value of any particular coffee is usually related to its quality so that, provided that the costs of producing quality are not in excess of the differential so obtained, it has a direct bearing on profitability. Secondly the maintenance of a consistent standard of quality helps to establish a reputation in the more discriminating markets, where high premiums are often paid for favoured growths. A case in point is the West German ma ket for Kenya's coffee. Over the two seasons 1959/60 and 1960/61, she took 43 percent of Kenya's coffee exports, but paid nearly 50 percent of their export earnings.[1]

It is also suggested that the demand for better coffees is more price-elastic than that for inferior types. Mild coffees are preferred to Brazils and as prices fall, demand is likely to shift in their favour. In countries of low elasticity of demand, roasters are unlikely to lower retail prices, but may improve the quality of their product to make it more competitive. In the c untries of higher price and income elasticity the shift may take place as a result of consumer preference for a better product as prices fall. Thus, in the event of the breakdown of the I.C.A., or a large increase in the world quota, under pressure from the consumer nations and the low-cost producers, producers of good quality milds could expect a relatively large increase in sales, and that prices might stabilise at a higher level, relative to those for inferior grades, with a substantially less serious effect on the level of foreign exchange earnings. Furthermore, in the event of large surpluses arriving on the world market it would become very difficult for a country to dispose of all its crop unless the quality factor was such as to

1. Rowe, 1963, p. 124.

make it highly competitive in the world market.

In figure 1 the average New York spot prices of Santos 4 and Columbian Manizales for the years 1946-1965 are compared. The former is a standard Brazilian grade. It has already been shown that it is the expected or actual supply of Brazils which determines coffee prices and Santos 4 is normally used as an indicator of world price movements.[1] Columbian Manizales is a standard grade of mild arabica coffee[2], approximately equivelant to an average Kenya type. It is noticeable that over the 20 years period, although Manizales was consistently higher than Santos 4, the differential tended to increase when prices were relatively stable, but to narrow when there was sharp upward or downward movement. Particularly noticable is the wide differential at the lower general price levels which obtained in the five years 1959-1963, when large stocks were being built up and before the stabilising and boosting effects of the I.C.A. quota system were really felt. The exact relationship is masked since it is also a function of the relative availability of Brazils and Milds, which may be affected in any one particular year by such transient factors as the size of roasters stocks of the two types in the U.S.A., or the Brazilian weather. Again a 20 year period is rather short to draw any general conclusions.

Figure 2 shows the relative positions of the three types of East African mild coffees with which this study is concerned in the years 1954/55 to 1964/65. The striking features are (a) the superior position of Meru coffee during most of the period and (b) the very close relationship which the prices of Bugisu and K.N.C.U.coffees bear to each other.

It is clear that when prices were relatively high at the beginning of the period, or rising again at the end of it, Meru lost most or all of its advantage. The graph suggests that when there is a general shortage of all coffees (or possibly even a shortage of milds alone) the buyers of quality milds tend to be less discriminating and the particular advantage of quality and reputation may be temporarily lost. However, when prices were falling the differential increased and when stabilised at a relatively low level, there was a very definite benefit from quality. In fact in the two years 1958/59 and 195./60, the average differential between Meru and Bugisu coffees was £122 and £130 per ton respectively[3]. This was the period when the decline in world prices had just reached the trough and they were beginning to stabilise (see fig.1). These trends are particularly important as it is this type of price movement which seems most likely to occur over the next few years, rather than any major advance in prices or their continued stabilisation at the present relatively high levels.

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1. e.g. in U.S.D.A. statistics, and in the I.C.A. price: quota regulator system.
2. Also used in the I.C.A. computations.
3. See appendix 4b.

One limitation to these conclusions is that they do not make allowanc for any real change in quality or in consumer preference which may have occured. It is extremely difficult to define quality in coffee, for its measurement is essentially subjective. However, it is generally accepted in Kenya that there has been a general decline in quality in recent years[2] and in particular that of the African-grown coffees of Meru and Embu which were renowned in the 1950's. This trend may in part account for the general reduction in differentials between Meru and the average Kenya price after 1959/60, which may be clearly seen from figure 3. This movement may be compared with the obvious strength of Meru coffees in the years 1956/57 and 1957/58, when its differential relative to the Kenya average continued to increase, whilst those of Bugisu and Kilimanjaro were in sharp decline. The world differential demand for milds was also falling, as shown by the relative position of Manizales to Santos 4 during these years. (Figure 3) Nevertheless it must be remembered that in the peak years of the mid-1950's when Meru coffees enjoyed a very high reputation, there was no differential at all.

Kenya's present concern with quality as emphasised in the Development Plan[2] is very understandable in view of the forgoing remarks. A research effort is being concentrated on the problems[3] and will be described later as the study develops. One further problem facing Kenya is the cost of quality. The maintenance of her superior standards of cultivation and processing, and the complex structure of marketing, research and other services are becoming increasingly costly. In recent years there is evidence that the actual prices received by peasant-farmers in Meru are, on a comparable basis, little if any more than those received in Bugisu. There is a danger that if the level of inputs in terms of labour, goods and services is reduced, then quality may decline even further and any advantage in this sphere might be lost. Thus this study will, as far as Meru is concerned, mainly concentrate on the problems (a) of quality, which is so essential to the future of Kenya's peasant farm coffee industry and (b) of effecting economies in the costs structure which alone can ensure an adequate return to the grower for his efforts and an incentive to improve his quality standards again.

The case of Bugisu and Kilimanjaro is rather different. These two types of coffee are rather similar, both are sold as large bulks, and are required as such for blending. They have not enjoyed a reputation for distinctive quality over the past fifteen or so years, although the "B.C.S." [4] mark did so prior to that. In both areas however, a change has occured in recent years and improvement of quality is being officially encouraged,

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1. See for example Wormer &Wootton, 1966 p. 1.

2. See p. 19 above

3. Reviewed in Wallis, 1966.

4. Bugisu Coffee Scheme - see p. below.

particularly through the introduction of c..ntral pulperies.

Besides the quality aspect, in both areas there is a problem of generally low productivity which is itself a confused issue due to the widespread interplanting of coffee with bananas. In fact, in both Uganda and Tanzania the main emphasis has been laid on raising the output of arabica coffee, particularly through increased yields, as far as Bugisu and Kilimanjaro are concerned. These two aspects will be considered further when discussing the problems of individual farmers in these two areas.

CONCLUSIONS

1. The International Coffee Agreement is currently subject to severe pressures including (a) consumer disatisfaction at the maintenance of prices at unrealistic levels and the inflexibilities in the quota system, which do not make allowance for the differential demand for various types of coffees. (b) Objections of the newer producers, mainly in Africa, to a dictated quota which bears no relation to current production capacity, relative efficiency or their potential to expand production of preferred types of coffee. (c) The main objectives of the agreement which are in direct antipathy since it would appear impossible to maintain prices at levels unrelated to costs of production and to achieve the adjustment of supply to the level of demand at the same time.

2. It is unlikely that either Brazil or the United States would wish the agreement to end for economic and political reasons, but pressures among other producers and consumers are likely to lead to greater flexibility in the future or might result in a complete breakdown. Brazil's reaction in either event cannot be prejudged but the low [illegible] -elasticity of demand for her coffees as prices decline means that she would probably be the main sufferer in a price war.

3. Mild arabica producers in East Africa enjoy a preferential demand which should enable them to survive any general price decline and might even enable them to improve their position in terms of total export earnings. The peasant farm sector also benefits from low production costs and is characterised by potential for expansion. The continuation of its advantages in Kenya is mainly dependant on the maintenance of a high quality reputation combined with improvement of efficiency in disease control and in the marketing sector. In Uganda and Tanzania the raising of quality standards and productivity are both important.

List of References

Coffee Board of Kenya, Kenya Coffee, 1955-1966.

Coffee Study group, The World Coffee Problem: Present Status of the Industry and Future Prospects Part VI Washington D.C., Coffee Study Group, 1960

East African Common Services Organisation, Annual Trade Report, Naibori, 1965

F.A.O., The World Coffee Economy, Comm. Bull. Ser., Rome, 1961

\- Commodity Review, 1965, Rome, 1965

International Coffee Organisation, International Coffee Agreement 1962, London, 1962.

Kenya Govt., Department of Agriculture Annual Reports, 1955-1964, Nairobi, Govt. Printer, 1956-1965

Kenya Govt., Kenya Statistical Digest, 1963-1965 Nairobi, G.P. 1963-1965.

Kenya Govt., Statistical Abstract 1965, Nairobi, G.P. 1965.

Kenya Govt., District Agricultural officer, Meru, Annual Report 1965, Meru, 1966 (mimeo)

Kenya Govt., Development Plan 1966-1970, Nairobi, G.P. 1966.

New Publishers Ltd., Reporter, Nairobi, 15-7.66.

Paton, (George) & Co. Ltd., Coffee Annual, 1965, New York, 1966.

Rowe, J.W.F., The World's Coffee, London, H.M.S.O., 1965

Rowe, J.W.F., "The Coffee Industries of East Africa in the World Market Setting" in I.G. Stewart and H.W. Ord (eds.) African Primary Products and International Trade, Edinburgy, E.U.P., 1965 (a)

Rowe, J.W.F., Primary Commodities in International Trade, Cambridge, C.U.P. 1965 (b)

Schluter, Gerald, Monthly Newsletter, Jan. 1966.

Tanzania Govt., Statistical Abstract, 1964.

Tanzania Govt., Tanganyika Five-Year Plan for Economic and Social Development Vols. I & II, Dar-es-Salaam, G.P., 1965

Tanzania Govt., Tea & Coffee Trade Journals Co., Ukers International Tea & Coffee Buyers Guide 1964-65, New York, 1964.

Uganda Govt., Department of Agriculture Annual Report 1962, Entebbe, G.P. 1963.

Uganda Govt., Statistical Abstracts, 1957, 1959, 1965, Entebbe, G.P. 1958, 1960, 1966.

Uganda Govt., Co-operative Officer, Bugisu, Annual Report 1965, Mbale, 1966 (mimeo).

Uganda Govt., Work for Progress, Entebbe, G.P. 1966.

U.S. Govt., U.S. Department of Agriculture (U.S.D.A.) Foreign Agricultural Circulars (Coffee) Washington D.C., 1965-1966.

U.S. Govt., International Coffee Agreement 1962: Hearing before the Committee on Foreign Relations, United States Senate, 88th Congress First Session; Washington, D.C., U.S. Govt.. Printing Office, 1963.

Wallis, J.A.N., "The Quality of Arabica Coffee in Kenya & Tanzania,"Proc. Specialist Meeting on Coffee Research, Nairobi, 1966 (to be published)

Wormer, T.M. and A.E. Wooton, "A Statistical Study of the Out-Turn Report," Proc. Specialist Meeting on Coffee Research, Nairobi, 1966 (to be Published.)

APPENDIX 1

International Coffee Agreement 1962 - Objectives*

"The Objectives of the Agreement are:-

(1) to achieve a reasonable balance between supply and demand on a basis which will assure adequate supplies of coffee to consumers and markets for coffee to producers at equitable prices, and which will bring about long-term equilibrium between production and consumption;

(2) to alleviate the serious hardship caused by burdensome surpluses and excessive fluctuations in the prices of coffee to the detriment of the interests of both producers and consumers;

(3) to contribute to the development of productive resources and to the promotion and maintenance of employment and income in the Member countries thereby helping to bring about fair wages, higher living standards, and better working conditions;

(4) to assist in increasing the purchasing power of coffee-exporting countries by keeping prices at equitable levels and by increasing consumption;

(5) to encourage the consumption of coffee by every possible means;

(6) in general, in recognition of the relationship of the trade in coffee to the economic stability of markets for industrial products, to further international co-operation in connexion with world coffee problems."

* International Coffee Agreement 1962; Chapter I, Article 1. (I.C.A., 1962 p. 7.)

Figure 1

New York Spot Prices of Santos 4 and Columbian Manizales 1946-1965 and Native Uganda 1948-1965

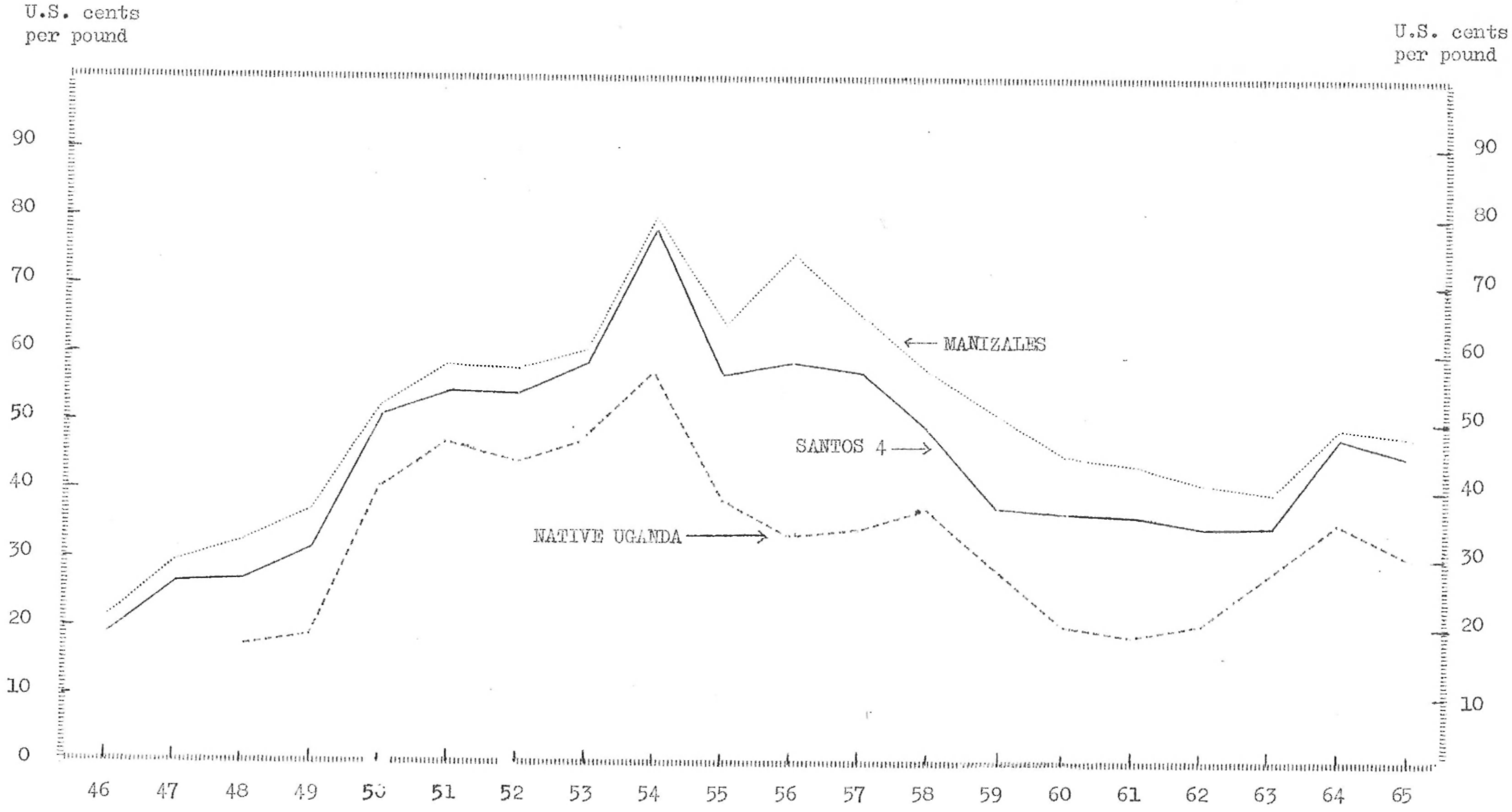


Figure 2

AVERAGE SALE VALUES : BUGISU, MERU AND KNCU COFFEES 1954/55-1964/65

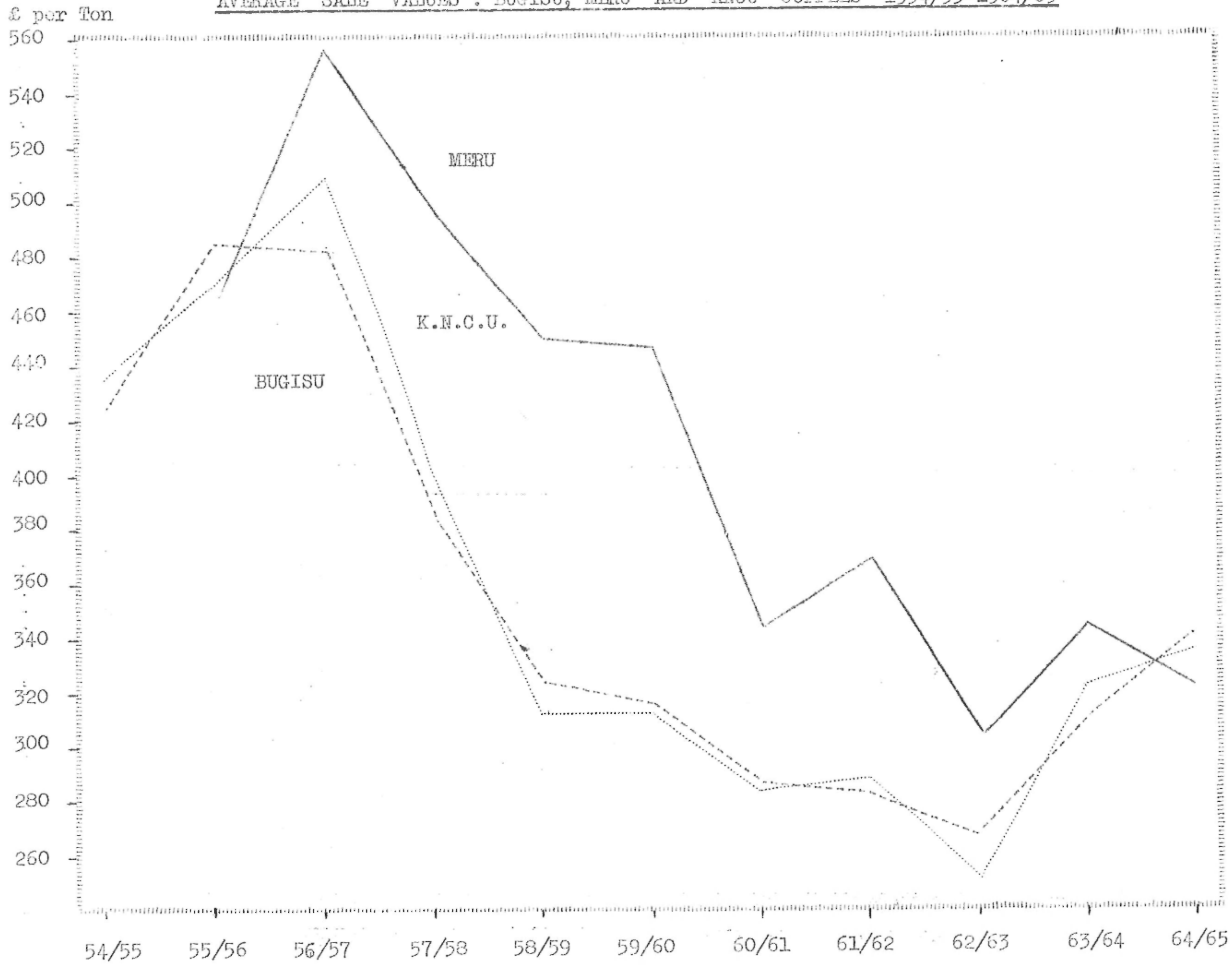
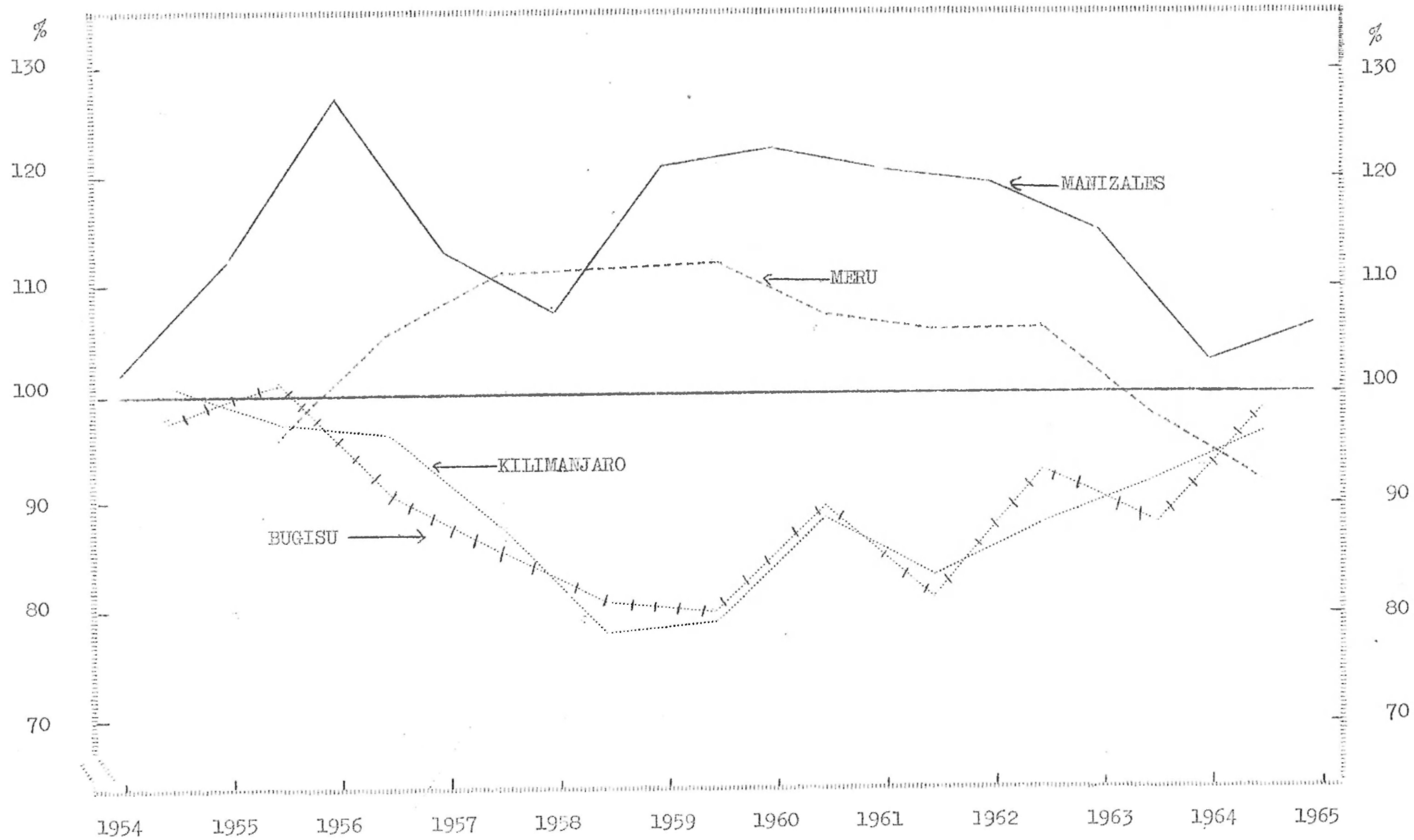


Figure 3

MANIZALES SPOT PRICE AS PERCENTAGE SANTOS 4, 1954-1965;
MERU, BUGISU AND K.N.C.U. SALE VALUES AS PERCENTAGE AV. KENYA PRICE 1954/55-1964/65



APPENDIX 3 a

Uganda : Value of Principal Domestic Exports, 1955-1965

£'000

	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	% change over period
Coffee	20,134	15,721	21,587	20,827	18,688	16,987	13,979	20,174	27,181	35,378	30,421	+ 51.1
Cotton	16,386	19,285	17,476	18,141	15,428	14,930	16,716	8,260	14,330	15,857	16,761	+ 2.3
Tea	1,062	891	1,081	979	1,186	1,453	1,472	1,997	2,041	2,212	2,388	+ 124.9
Copper	–	–	1,626	2,065	2,781	3,689	2,961	3,617	3,612	6.192	7.993	+ 391.6*
Others	4,320	4,521	4,087	3,397	4,008	4,499	4,037	3,587	4,311	4,791	5,146	+ 19.1
Total Domestic Exports	41,902	40,418	45,857	45,409	42,091	41,558	39,165	37,635	51,475	64,430	62,709	+ 49.7
Coffee as % T.D.E.	48.1	38.9	47.1	45.9	44.4	40.9	35.7	53.6	52.8	54.9	48.5	–
Cotton as % T.D.E.	39.1	47.7	38.1	40.0	36.7	35.9	42.7	21.9	27.8	24.6	26.7	–

Sources: Uganda, Statistical Abstract, 1959; Uganda, Second Five-Year Plan, 1966.

* Increase over 1957 exports.

APPENDIX 3 b

(i) KENYA : Value of Principal Domestic Exports, 1955-1965

£'000

	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	% Change over period
Coffee	8,904	13,653	10,793	10,405	10,577	10,261	10,609	10,592	11,015	15,396	14,096	+ 58.3
Sisal	1,959	2,075	2,078	2,228	3,458	4,566	4,192	4,323	7,532	6,028	3,852	+ 96.6
Tea	2,761	2,616	2,861	3,217	3,602	4,411	4,004	5,189	5,665	6,056	6,056	+119.3
Pyrethrum Ext.	954	810	597	1,289	1,863	2,019	2,267	2,723	2,543	2,167	1,964	+105.9
Manufactured goods	3,987	3,475	3,824	3,214	4,070	3,855	4,625	4,258	4,381	4,591	n.a.	+ 15.1**
Others	7,102	6,354	6,208	8,947	9,736	10,079	9,647	10,828	12,696	12,877	21,205*	+ 81.3**
Total Domestic Exports	25,667	28,983	26,361	29,300	33,306	35,191	35,326	37,913	43,632	47,115	47,173	+ 83.8
Coffee as % D.T.E.	34.7	47.1	40.9	35.5	31.8	29.2	30.0	27.9	25.1	32.7	29.9	-

Sources: Kenya, Statistical Astracts, 1965; E.A.C.S.O., Annual Trade Report, 1965.

* Includes manufactured goods

** Increase to 1964

APPENDIX 3 b

(ii) ANALYSIS OF KENYA COFFEE PRODUCTION 1955/56 - 1964/65

TONS CLEAN COFFEE

	1955/56	1956/57	1957/58	1958/59	1959/60	1960/61	1961/62	1962/63	1963/64	1964/65
ESTATE PRODUCTION	22,916	16,825	18,666	19,618	18,770	24,963	19,025	24,803	27,957	22,038
COOPERATIVE SOCIETY PRODUCTION	782	1,521	2,047	3,641	4,607	7,769	7,955	8,701	15,131	14,543
TOTAL KENYA PRODUCTION[1]	23,919	18,472	20,873	23,356	23,394	33,074	27,363	33,657[2]	43,454[2]	38,818
COOPERATIVE SOCIETY AS % TOTAL KENYA PRODUCTION	3.[illegible]	8.2	9.8	15.6	19.7	23.5	29.1	25.9	34.8	37.5
MERU DISTRICT PRODUCTION	394	767	973	1,586	1,605	2,398	2,393	2,437	4,278	3,942
MERU PRODUCTION AS % TOTAL COOPERATIVE PRODUCTION	50.4	50.4	47.5	43.6	34.8	30.1	30.1	28.0	28.3	27.1

Source: Kenya Coffee, 1956-1965, Kenya Statistical Digest, 1963-1965.

Notes: 1. The differences between estate and cooperative society production and the Kenya total is accounted for by such items as "sweeping", "miscellaneous", etc.

2. The Kenya totals quoted in Kenya Statistical Digest for these years differ somewhat from those published by the Coffee Board, and are as follows:- 1962/63 35,816 tons, 1963/64 43,496 tons.

APPENDIX 3 b

(iii) Analysis of Kenya Coffee Acreage : 1955-1965 (1)
'000 Acres

	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
Estate Acreage	59.6	59.8	62.8	64.4	67.8	69.5	69.9	70.0	79.1	80.5	80.1
Co-operative Society Acreage	7.8	12.1	15.3	19.5	24.6	33.1	44.3	69.8	115.4	121.5	125.0
Total Kenya Acreage	67.4	71.9	78.1	83.9	92.4	102.6	114.2	139.8	194.5	202.0	205.1
Co-operative Society as % Total Kenya Acreage	11.6	16.8	19.6	23.2	26.6	32.3	38.8	49.9	59.3	60.1	60.9
Meru District Acreage	3.7	4.3	5.8	6.9	8.1	8.8	11.3	19.5	27.1	27.5	27.9
Meru Acreage as % Total Co-operative Acreage	47.4	35.5	37.9	35.4	32.9	26.6	25.5	27.9	23.5	22.6	22.3
Meru Acreage as % Total Kenya Acreage	5.5	6.0	7.4	8.2	8.8	8.6	9.9	13.9	13.9	13.6	13.6

Sources: Kenya Coffee, 1955-1966; Kenya, Dept. Agric. Ann. Repts., 1955-1964; D.A.O., Meru Ann. Repts., 1965.

Notes: (1) Where possible year-end totals have been taken rather than mid-year totals.

APPENDIX 3 c

(i) TANZANIA : VALUE OF PRINCIPAL DOMESTIC EXPORTS, 1955-1965

£'000

	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	% Increase over period
Sisal	9,956	10,823	9,482	10,349	13,057	15,442	14,028	15,734	22,671	21,867	14,279	+43.4
Cotton Raw	5,534	7,486	6,578	7,249	6,657	8,827	6,794	7,393	10,717	9,882	12,212	+120.7
Coffee Green	6,897	9,221	6,969	7,359	5,745	7,326	6,762	6,575	6,840	11,051	8,588	+24.5
Diamonds	3,199	2,865	3,242	4,415	4,548	4,622	5,780	5,425	4,948	6,781	7,114	+122.4
Others	10,613	14,489	13,160	12,358	15,280	18,606	15,303	16,114	18,377	20,531	20,585	+94.0
Total Domestic Exports	36,199	44,884	39,431	41,730	45,287	54,823	48,667	51,241	63,553	70,112	62,778	+73.4
Sisal as % T.D.E.	27.5	24.1	24.1	24.8	28.8	28.2	28.8	30.7	35.7	31.2	22.7	-
Coffee as % T.D.E.	19.1	20.6	18.1	18.2	12.7	13.4	13.9	12.8	10.8	15.8	13.7	-

Sources: Tanzania, Statistical Abstract, 1964; E.A. Customs & Excise, Annual Trade Report, 1965.

APPENDIX 3 c

(ii) K.N.C.U. Sales as Percentage Tanganyika Coffee Exports, 1955-1965

	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
TOTAL COFFEE EXPORTS (1)	18.4	21.5	18.0	21.6	19.6	25.1	24.6	25.7	26.0	33.0	28.9
K.N.C.U. SALES (2)	4.4	6.6	5.5	5.6	5.8	6.8	8.7	5.9	5.1	9.6	8.1 (3)
K.N.C.U. SALES AS % TOTAL COFFEE EXPORTS	23.9	30.7	30.6	25.9	29.6	27.1	35.4	23.0	19.6	29.1	28.0

Sources: Tanzania, Statistical Abstract, 1964; E.A.C.S.O., Annual Trade Report, 1965; K.N.C.U. records.

(1) Calendar year

(2) Financial year. It is assumed that all K.N.C.U. sales are for export.

(3) Taken from T.C.B. sales records - probably refers to crop year.

APPENDIX 4 a

New York Spot Prices : Santos 4 and Columbian Manizales 1921–1962;
Native Uganda 1948–1965

U.S. cents per lb. green coffee

YEAR	SANTOS 4	MANIZALES	YEAR	SANTOS 4	MANIZALES	NATIVE UGANDA
1921	10.0	15.6	1946	18.7	21.0	n.a.
1922	14.1	17.4	1947	26.4	29.7	n.a.
1923	14.5	18.8	1948	26.8	32.5	17.8
1924	20.9	25.5	1949	31.8	37.3	18.9
1925	24.2	27.9	1950	50.9	52.5	40.1
1926	22.1	28.5				
1927	18.5	25.1	1951	54.3	58.9	46.8
1928	23.2	27.3	1952	54.1	57.5	44.0
1929	22.1	22.8	1953	58.5	60.2	47.6
1930	13.2	18.0	1954	78.3	80.1	57.9
			1955	57.0	64.2	38.4
1931	8.8	16.3	1956	58.3	74.5	33.6
1932	10.7	11.9	1957	57.3	64.9	34.6
1933	9.2	10.8	1958	48.9	52.7	37.6
1934	11.2	14.3	1959	37.6	45.6	28.7
1935	8.9	10.7	1960	36.9	45.2	20.2
1936	9.3	11.0				
1937	11.1	12.0	1961	36.3	43.9	18.5
1938	7.8	11.0	1962	34.4	41.1	20.6
1939	7.5	11.6	1963	34.6	39.9	27.9
1940	7.2	8.3	1964	47.9	49.5	35.6
			1965	(45.0)*	(48.0)*	(30.0)*
1941	11.4	15.0				
1942	13.4	15.9				
1943	13.4	15.9				
1944	13.4	15.9				
1945	13.6	15.9				

Sources: F.A.O., 1961 & 1965; U.S.D.A., 1966[(1)]

(1) Where sources differ, U.S.D.A. is taken to be correct.

* Estimate based on U.S.D.A. monthly statistics.

APPENDIX 4 b

AVERAGE PRICES OF MERU, BUGISU AND K.N.C.U. COFFEES IN RELATION TO AVERAGE KENYA PRICE 1953/54 - 1964/65

£ per Ton

YEAR	1953/4	1954/5	1955/6	1956/7	1957/8	1958/9	1959/60	1960/1	1961/2	1962/3	1963/4	1964/5
Kenya overall average	n.a.	434	481	528	444	401	397	320	348	286	351	346
Meru average[1]	n.a.	n.a.	463	558	494	448	446	344	369	304	345	320
Bugisu average	n.a.	425	487	481	381	326	316	287	286	267	310	341
Kilimanjaro average	591	437	469	509	391	314	315	286	287	252	323	336
Meru as % Kenya	n.a.	n.a.	96.3	105.7	111.3	111.7	112.3	107.5	106.0	106.3	98.3	92.2
Bugisu as % Kenya	n.a.	97.9	101.2	91.1	85.8	81.3	79.6	89.7	82.2	93.4	88.3	98.6
Kilimanjaro as % Kenya	n.a.	100.7	97.4	96.4	88.1	78.3	79.3	89.4	82.5	88.1	92.0	97.1

Sources: Kenya Coffee Marketing Board, Bugisu Co-operative Union, K.N.C.U.; Kenya Coffee; Bugisu, District Co-op. Off. Ann. Rept.,1965

Notes: 1. The only prices available for Meru are ex-coffee pool. These are export prices less coffee board levy, milling charges, etc. Actual F.O.R. prices are probably 5 - 10 per cent higher.

INTERNATIONAL COFFEE ORGANISATION EXPORT QUOTA FOR THE QUOTA YEAR OCTOBER 1965 - SEPTEMBER 1966

(EFFECTIVE AS OF DECEMBER 1965)

EXPORTING MEMBERS	BASIC QUOTA	WAIVERS AND ADJUSTMENT	EFFECTIVE QUOTA*	PERCENTAGE OF EFFECTIVE QUOTA
BRAZIL	18,000,000		16,975,911	37.5
BURUNDI	170,000	287,500 (a)	271,143	0.6
COLOMBIA	6,011,280		5,669,275	12.5
CONGO. D.R.	700,000	1,140,000 (a)	1,075,141	2.4
COSTA RICA	950,000		895,951	2.0
CUBA	200,000		188,621	0.4
DOMINICAN REPUBLIC	425,000	40,000	439,288	1.0
EQUADOR	552,000	50,000	570,594	1.3
EL SALVADOR	1,429,500	225,000	1,573,170	3.5
ETHIOPA	1,175,000	75,000	1,183,150	2.6
GHANA	43,000	5,000	45,554	0.1
GUATEMALA	1,344,500	135,000	1,403,006	3.1
HAITI	420,000	30,000	426,105	0.9
INDIA	360,000	50,000	389,519	0.9
INDONESIA	1,176,000		1,109,093	2.5
MEXICO	1,509,000		1,423,147	3.1
NICARAGUA	419,100	70,000	463,745	1.0
NIGERIA	44,180		41,666	0.09
OAMCAF	4,302,125	300,000	4,357,360	9.6
PANAMA	26,000		25,600	0.06

EXPORTING MEMBERS	BASIC QUOTA	WAIVERS AND ADJUSTMENT	EFFECTIVE QUOTA*	PERCENTAGE OF EFFECTIVE QUOTA
PERU	580,000	17,000	564,002	1.2
PORTUGAL	2,188,648	150,000	2,214,127	4.9
RWANDA	170,000	212,500 (a)	200,410	0.4
SIERRA LEONE	65,000		61,302	0.1
TANZANIA	435,458	50,000	460,684	1.0
TRINIDAD AND TOBAGO	44,000	25,000	66,497	0.1
UGANDA	1,887,737	135,000	1,915,336	4.2
VENEZULA	475,000		447,975	1.0
SUB TOTAL	45,102,528		44,456,772	
NON-MEMBERS				
BOLIVIA			25,000	0.06
HONDURAS	285,000		268,785	0.6
KENYA	516,835		487,430	1.1
TOTAL	45,904,363		45,237,987	

(a) Adjustment. * Annual quota fixed by Resolution No. 19 (43,700,000 bags), adjusted to reflect waivers, the basic quota granted to Nigeria and penalties cancelled (Dominican Republic 101,321 bags and Nicaragua 63,000 bags)

Source: Paton, 1966 p. 55.