This paper developed from my attempts to investigate the prospects for co-ordinated production and marketing policies for major food crops within East Africa. The maize industry provides a useful case-study in this context since, of all foodstuffs, maize has been the one most subject to regulation and the one most affected by consistent regional self-sufficiency policies. The intention of this paper is to point out some of the problems which have arisen as a result of this regulated marketing; a subsequent paper will attempt to suggest a viable alternative to the present system.

**Historical background**

Government control of the maize industry began in 1943. The first attempt to increase food production in the 1942 maize-planting season in Kenya coincided with a severe drought which had its two inevitable consequences, a maize shortage and a Commission of Inquiry. The Recommendations of the 1943 Food Shortage Commission of Inquiry not only determined the pattern of war-time control but remained the basis of Kenyan policy almost until the present-day. As Kenya is the chief maize-consuming country in East Africa, her policy has been the key factor in the development of maize-growing in East Africa.

The 1943 Commission advised that:-

i) The large-scale, European farmers were the only ones capable of producing the maize needed in the short time available.

ii) To induce them to increase production a price would have to be fixed which guaranteed them high and stable profits.

iii) The guaranteed minimum price should be announced before planting each season.

These recommendations were adopted and the industry was organised under the East African Cereals Pool. Kenya was the chief member and evolved the most "organised" system under its own maize and Produce Control but attempts were made to plan food production on an East African basis. One important consequence of this production drive was that Uganda became a producer of maize on a reasonably large scale and as a cash crop for the first time.

*Note: Economic Development Research Papers are written as a basis for discussion in the Makerere Economic Research Seminar. They are not publications and are subject to revision.*
The Cereals Pool ended in 1952 and, in the following year Uganda reverted to an uncontrolled marketing system. Tanganyika's Grain Storage Department struggled on for a while longer but was so bedevilled by losses caused by exporting surplus production on a glutted world market that its control was gradually dismantled between 1955 and 1957. In 1963 Tanganyika re-established control over maize under the National Agricultural Products Marketing Board. Throughout this period Kenya had soldiered on with a regulated system under statutory bodies whose regular changes of name (Maize Control, Maize Marketing Board, and now Maize and Produce Control) were punctuated by further Commissions of Inquiry.

Problems arising from this situation

As previously mentioned, Kenya's policy has been the crucial factor throughout this period. Although the other two countries have periodically imposed import or export restrictions, it has been Kenya which has most consistently denied Uganda and Tanganyika access to its internal market and has attempted to develop complete self-sufficiency. The failure of this policy can be seen in the regular imports of maize from outside East Africa (usually from the U.S.A.) in years of shortage.

Kenya has placed herself in the impossible position of trying to balance supply and demand in a market the underlying conditions of which are:

1) A supply subject to wide fluctuations depending upon weather conditions.
2) A highly price-inelastic demand on the internal market.
3) A highly price-elastic demand on the world market.

As the export price on the world market has, since the end of the Korean War, been below the price paid to Kenyan growers while, at the same time, the price of maize imported from the world market (including transport charges) has been higher than the Kenyan price, a serious problem ensues whenever supply and demand are not exactly equal. In years of shortage maize has to be imported, the Board normally covering the cost of this by imposing a cess on Kenyan growers. In years of excess supply the Board has to dispose of the surplus by exports at the low world price, the loss being recouped by a deduction from the payments made to growers, a reduction in the average price. Farming being the risky business that it is, every year Kenya has either a deficit or a shortage as the production cycle fluctuates around the level of 15 million bags which is the generally accepted estimate of total consumption.
The operation of this system, and the effects of the Board's attempts to control it can be seen from the following example of one wave of the cycle which followed the rain failure in the 1960/61 season and the consequent shortage during 1961.

1961
Maize shortage necessitated imports for famine relief. Appeals were made for farmers to plant more maize in the 1961/62 season and the "guaranteed" price was raised slightly to Shs.35.50 per bag (200 lb.). A Maize Marketing Board Working Party was appointed to investigate ways of making the marketing system more flexible.

1962
A bumper crop was produced and the Maize Board was left with a 650,000 surplus, the export price for which was only Shs.15/- per bag. To cover this loss a cess was imposed on the "guaranteed" price, leaving farmers with an average price of only Shs.25/- per bag. The farmers were angered by the failure to pay the promised price. Mr. V.G. Matthews was appointed to inquire into future pricing and marketing arrangements needed to take into account the impact of Independence and Settlement Schemes coupled with increasing use of high-yielding hybrid maize.

1963
Excellent climatic conditions produced a huge crop. The Board exported the record amount of 1,100,000 bags (meanwhile, from August until October, Uganda was experiencing a shortage and the Kampala price rose to Shs.40/- per bag #1). In May Matthews had reported and had recommended a "cheap posho policy" with a progressive reduction of price over the next three or four years until it was fixed at around Shs.20-24/- (#2). Again growers received between Shs.24/- and Shs.28/- per bag. The price for 1963/64 was declared as Shs.35.50 again but farmers had by now lost all faith in it.

1964
The crop sold to the Board was much smaller as a result of reduced planting but the average price paid was still only Shs.29/- as the export loss from 1963 was still being recovered. Farmers began to warn that hybrid maize was not having the rapid results which Matthews had expected. The Board was satisfied that there was no fear of a surplus in 1964/65 and, in order to ensure adequate supplies, raised the guaranteed price to Shs.32.50.

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(*1) Uganda Argus, various dates between August 19th and November 5th 1963.
1965

The large-scale farmers had no faith in the guaranteed price and reduced their acreage still further. This coincided with a disastrous drought; serious famine was only partially averted by the import of 250,000 bags from Uganda and Tanzania and 500,000 bags from the U.S.A. This shortage, plus the Board's delay in importing maize was investigated by the Maize Commission of Inquiry (*1).

1966

The gazetted price was raised to Shs.37.00 and appeals were made for greater production. A good growing season resulted in a large surplus, exports and a reduction in the actual price to Shs.33.00.

The recommendations of the 1965 maize Commission of Inquiry were broadly accepted by the Kenyan Government and most of them have been put into practice. This entails no drastic change in the system; the Commission accepted the basic premise of the need for self-sufficiency in maize production and advised the continuation of control via a Marketing Board using pricing and distribution arrangements little different from the pre-existing ones. The Commission's answer to the problem of alternating surpluses and deficits was an expansion of storage capacity so that a reserve of 500,000 bags could be held from year to year; a surplus in one year would be stored until it could be sold during the next shortage.

The Government has fully accepted this idea and, in fact, more than merely accepted it since by the start of 1968 the Maize and Produce Board had sufficient capacity to store a strategic reserve of 1,200,000 bags (*2). This is very nearly equal to an average year's throughput by the Board (normally around 1½ million bags) and it remains to be seen whether this will be adequate to stabilize maize supplies.

Fundamental faults of the Kenyan system

Although it is possible to point out many faults in the organization of the Board, the pricing system, transport and many other facets of the control structure (which are well covered in various Government reports and a great volume of other literature), it seems to me that the system has failed in the past as a result of two major faults. To the extent that these are not remedied in the future it will undoubtedly continue to fail.

The faults are:

i) The inadequacy of the Board's scale of operations

It is usually estimated that Kenyans consume about 15 million bags of maize each year. Most of this is supplied from small-scale subsistence farms direct to the consumers, supplemented by village-level trade which does not pass through the hands of the Maize Board (and is thus an illegal black-market). In addition to this, an unknown quantity of maize is smuggled from Kenya into the two neighbouring countries, the chief recipient being Uganda. Most of this maize probably comes from small African producers but some of it is undoubtedly obtained by theft from large-scale farms in the Western Region.

The Maize Board handles on an average only 1½ million bags, or roughly 10% of total production. With information on the rest of the crop virtually non-existent, this is a ridiculously small base from which to try to predict production levels or with which to attempt to stabilize supply. This is especially true because the amount handled by the Board does not bear a constant relation to total production but instead behaves to some extent as a residual after the needs of local consumption and smuggling have been satisfied. While the maize handled by the Board came almost solely from European farmers the fluctuations in the amount handled were not so severe since these farmers sold all their crop to the Board. Since Independence, however, the European-owned acreage has declined and African farmers, both large-scale and those on Settlement Schemes, have become important suppliers to the Board, either on a regular basis or simply in years when they grow too much to dispose of in any other way. By 1966 it was estimated that 50% of the Board's annual supplies came from African growers (*1).

For many years Government, the Boards and the European farmers appeared to be entirely ignorant of the fact that maize was grown anywhere else than on large farms. They were solely concerned with that maize which went through the official channels.

Many instances of the effects of this attitude could be given; the attempt of Mr. J.H. Feingold, President of the Kenya National Farmers Union, to explain the situation in the maize industry provides a good example. In arguing that the answer to the problem was to develop new uses for the maize so as to consume the surpluses, he stated that

"Each year 1,500,000 bags of maize are used for human consumption. If that figure was to be raised to 3,000,000 bags for human consumption and industrial use, a fluctuation of 500,000 bags would not affect prices". (*1)

The 1965 Maize Commission of Inquiry was the first official body to recognize the hopelessness of any attempt to deal with the overall maize position by handling only 10% of total production and having no knowledge of the other 90%. The Inquiry recommended the collection of more data on the unseen portion of the crop.

The various Kenyan Boards have then either ignored or declared illegal the methods by which the vast majority of Kenyans obtain their maize supplies. The Boards have been supplying, to an extent which depended on the degree of shortage in any year, only the urban demand; their role as suppliers to the rural community arose when it became necessary to distribute imported famine relief. In normal times most consumers grow their own maize or buy it from neighbours, risking prosecution for illegal trading. During every shortage the Board convinces itself that its price control is working while any farmer can obtain a price higher than the Board's offer in his local village and even that maize which is handled by the Board often ends up on the black market. Even without a shortage most growers can find a price higher than the Board's as a result of the margin between the Board's buying and selling prices. For example, at a time when the Board was buying for £ 29.50 per bag the price of maize from the Board was £ 39.15 (*2); most farmers could

(*1) reported in E.A. Standard, October 21st. 1966.
(*2) letter to E.A. Standard from Board General Manager, 4/1/64.
probably manage to find someone willing to pay them $35 for a bag, especially since the buyer might thus save himself a journey to the Board's store.

In such a situation any attempt at price control is bound to fail. The rigid prices, transport margins, buying points etc. provided by the Board are simply circumvented by farmers and traders who are able to perform the marketing function with a smaller margin of profit.

Thus Marketing Boards in Kenya have failed both in regulating the supply of maize and in controlling the producers' and consumers' prices. Unless they were able to handle a considerably larger proportion of the total supply it is difficult to see how they could have been more successful. Since the policing costs of ensuring that all maize went through the Board would be prohibitive, it would seem wisest to try to find some other method of regulating price and supply.

Given the inelastic demand and the highly erratic nature of supply, it seems unlikely that a completely free system would succeed in moderating the size of the fluctuations of these two variables any better than the Boards have done, though it might reduce the size of the marketing margin. A solution to this particular problem may lie in the creation of a body which acts merely as a residual buyer in the market, standing ready to buy, from anyone, at a certain guaranteed minimum price and selling off its stocks to prevent the price rising above a certain ceiling. This idea has been promoted for many years by Mr. K.P. Shah in Kenya (*1). The success of such a scheme would depend on the prices chosen as the floor and ceiling and upon the size of the stocks which could be carried. In this respect it would be no more likely to succeed than the present Maize and Produce Board but the big advantage would be that the operators of the buffer-stock would have to concern themselves with the whole of Kenya's production and take steps to collect more information on it. Governments have, however, always been chary of this solution as they fear that it would allow the "middlemen" to exploit both consumers and producers (*2).

ii) The insistence on Kenyan self-sufficiency

This aspect of Kenyan policy is closely connected with the control of only a small portion of total production and with the reliance upon large-scale farmers for production of maize for sale. The acceptance of the fact that African growers could not supply the cash market led to the creation of a particular type of marketing system and this system operated in such a way as to allow its operators and the Government to ignore the very considerable cash trade in maize in which African growers were in fact engaging.

This refusal to believe that African growers were capable of producing reliable supplies not only led to a concentration on the large European growers but also logically led to a determination not to rely for supplies on the African growers in Uganda and Tanganyika. There is an interesting exposition of this philosophy in a Kenya Government Paper of 1957 which merits fairly full quotation:

"In order to feed the Colony's African labour force ......... especially in the two major towns of Nairobi...... and Mombasa ......, it would be most imprudent to rely solely on deliveries by peasant farmers whether in Kenya or in neighbouring territories. ........., it still remains true that the majority of the 500,000 African farmers in Kenya plant maize primarily for family subsistence and only secondarily for cash. The result is that, out of a total crop grown in the non-scheduled areas which is estimated to vary between about 13 and 14 million bags each year, the bulk is retained for family consumption ....... Thus the surplus available for delivery to markets is only a small fraction of the whole and is liable to fluctuate widely from season to season according to weather conditions. ....... over the last five years high and low deliveries from the non-scheduled areas (have been) 691,000 and 1,483,000 bags, a fluctuation of over 100%. Deliveries are even less dependable in Uganda and Tanganyika ......... Since these deliveries cannot be relied on, the only other sources of maize are from overseas or from farmers in the scheduled areas." (*I)

Even if it were correct to assume that Africans could never become suppliers to the cash market, the reason for labelling them unreliable

(*I) Kenya Sessional Paper no. 6 1957/58
is somewhat surprising as, over the same five-year period (1952 to 1957) non-African production reached a high of 141,700 tons (1,587,000 bags) and a low of 82,900 tons (928,480 bags), a 70% fluctuation (*I) indicating that the European farmers were not remarkably more reliable.

It seems that, since Independence, this attitude towards the African producer is beginning to break down. Certainly the 1965 Commission of Inquiry found no reason to recommend reliance upon either the large or small farm sectors for maize supplies. The Report pointed out that deliveries to the Board from each source move together remarkably closely and each provides about 50% of the total supply.

If it is now accepted that African growers are a satisfactory source of maize, there is little reason for refusing to import supplies of maize from Uganda and Tanganyika. A move towards reliance on a supply area covering the whole of East Africa would not only help to stabilize the total supply, by balancing shortages in one area against good harvest elsewhere but would bring about a more efficient allocation of resources by concentrating production in the most suitable regions. An example was given earlier in this paper of an occasion in 1963 when a shortage in Kampala coincided with a huge exportable surplus in Kenya, freer trade between the two countries could have helped to solve both their problems. Similarly many writers have opined that the Kenyan price has been kept far too high by reliance on high-cost large-scale farmers (*2). While data on production costs are too scanty to make this easily verifiable the fact that wholesale prices (not grower prices) on the Kampala Produce Exchange vary between 19/- and 40/- per bag indicates that peasant production costs can be lower than the prevailing farm prices in Kenya. The continued growing of maize in extremely marginal areas of Kenya such as the Eastern Province is also an indication that prices are high enough to support relatively high-cost producers.

The extensive smuggling trade between Kenya and her

(*I) Source E.A. Quarterly Economic & Statistical Bulletin
(*2) see, for instance, R.P. Miracle, E.A. Ec. Rev. Dec. 1959
(*3) irregular reports in Uganda Argus
neighbours provides a more pragmatic argument for freer trade in maize. If figures were available on this trade it might well be a surprise to find the extent to which the complementarities in food production of the three countries, at least between border areas were already being exploited.

Conclusion
The failure of Kenya to evolve a stable system of maize supply at low prices has, in my opinion, as its fundamental cause the failure to utilize the African farmer as a cash producer. Instead of encouraging these farmers to produce for the market, the marketing system has, until recently, ignored them; indeed laws have been passed to prevent them from selling their maize in ways most convenient and profitable to them. In the few years since Independence African participation in even the official marketing channels has expanded to such an extent that it seems reasonable to assume that, had the efforts of the extension service and marketing officials been directed towards encouraging African production of maize for cash over the past twenty years, Kenya could long ago have ceased to rely on European farmers for supplies of her basic staple food.

Moreover this approach to maize production has helped to prevent the growth of a common market in East African maize production. This may well have resulted in Kenyans paying more than was necessary for their maize, with obvious effects on the cost of living, the level of wages and hence the general level of costs, but has probably also retarded the economic growth of East Africa as a whole by preventing certain areas of Uganda and Tanzania from developing cash farming based on the demand of the Kenyan market.

Given this decision to try for self-sufficiency, the fact that the Marketing Boards have handled a very small proportion of total production and have remained in ignorance about what was happening to the rest prevented the aim being achieved.

Thus Kenya has probably inflated the cost of her maize beyond what was necessary and has still not managed to reliably feed her population, still less to do so at a fairly stable price. It may well be that the current policy of massive reserve storage will enable her to succeed in doing this but the question of inflated costs and inefficient resource allocation will remain.
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