

Aid in Uganda—Agriculture

by Hal Mettrick

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The crucial nature of agriculture's role in economic development is being recognised more and more. But how can agricultural development be stimulated? What part can overseas aid donors play? These problems are considered in the context of a specific country in *Aid in Uganda—Agriculture*. This study analyses the difficulties facing the Uganda Government in developing agriculture and how it is dealing with them. It then goes on to consider the various programmes of aid to agriculture in Uganda, and discusses how these can be made more effective. Issues which are highlighted are the importance of technical assistance, and the need for donors to provide more capital aid for local and recurrent costs if they are to assist agricultural development.

This study is the final part of ODI's three-part case study of aid in Uganda. The previous volumes are *Aid in Uganda—Programmes and Policies* by Ralph Clark, and *Aid in Uganda—Education* by Peter Williams. The author of *Aid in Uganda—Agriculture* is Hal Mettrick.

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Aid in Uganda – Agriculture

by Hal Mettrick

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Foreword

This volume is the third in ODI's three-part case study of overseas aid in the development of Uganda. The previous volumes, *Aid in Uganda—Programmes and Policies* and *Aid in Uganda—Education*, were published in 1966. The first was a scene-setting survey of the many aid operations in Uganda and it examined some of the problems of utilising effectively the assistance that was provided by a multitude of donors. The second examined in detail the special problems of educational assistance in an agrarian society.

The study of Uganda has been undertaken for a number of reasons. In the course of its work on donor aid policies and the machinery of the programmes ODI had become, as was said in the foreword to the first part of the Uganda study, 'conscious of the fact that in these donor studies only one side of the medal was being looked at. We were developing a headquarters or staff officers' view point. Not that this was necessarily in opposition to other view points. It was simply that it did not give a complete picture of what was going on; and it was a hindrance to the identification of many of the weak links in aid programmes that needed to be strengthened if the quality of aid were to be improved . . . It was not that we had any specific anxiety about Uganda as such, but rather that we wished to use it as an illustration of a much more general anxiety about aid as a universal phenomenon.' We were particularly interested in Uganda because its 'economic base was largely agrarian and we felt that the problems of assisting the agricultural sector had, in the majority of donor aid programmes, been the least satisfactorily tackled'.

Over the past few years food production in the developing countries taken together has been lagging behind the rapid population increases which they have been experiencing. Concern over this situation has caused more attention than hitherto to be given to the problem of agricultural development. In particular donors of aid to developing countries have wanted to increase the effectiveness of their aid to agriculture and yet have been frustrated by the difficulties involved in doing this. This volume attempts to throw some light on the problems of providing aid to agriculture and of how the effectiveness of this aid can be improved. Unless the context indicates otherwise, agriculture is to be taken throughout to include livestock, forestry, and fisheries.

It is the intention that the studies in this series should have a wider relevance than merely to the problems of Uganda. A word of warning, however, is necessary. No developing country is typical. There are no general rules for developing agriculture, nor even general reasons why

a country should want to put a large part of its development effort into agriculture. It has been remarked above that interest has concentrated on agriculture because of the food problem, but this is certainly not the principal problem in Uganda. This fact probably increases rather than diminishes the relevance of Uganda for the present purpose, because the development of agriculture can then be treated in the context of general economic development and not as a special emergency problem with the inevitable accompanying distortions.

To study aid in a context divorced from the development problems which it is trying to help would obviously be nonsensical. This is particularly so in the case of agriculture where the problems have seemed more intractable than in other fields. For this reason a large part of this volume is devoted to a discussion of the problems which face the Uganda Government in attempting to stimulate agricultural development. It starts with a discussion of the role of agriculture in the economic development of Uganda. Then it discusses the problems of agricultural development in Uganda and sets them against their background. A third part deals with the Government's plans and policies for agricultural development and puts them in historical perspective. The fourth part describes the aid to agriculture which there has so far been and attempts to throw some light on its effectiveness. And the fifth comments on these experiences and tries to indicate scope for improvement in donor aid programmes. Additional background material is included in an appendix. The study is written to be read on its own, but it will no doubt be more meaningful if it is read in conjunction with the first volume in the series, *Aid in Uganda—Programmes and Policies*, so that aid for agriculture can be seen in the context of aid for the entire economy.

The present volume has been prepared by Hal Mettrick, who has been assisted by Alison Franks. Both are members of the ODI research staff. The author wishes to express his thanks to all those people in East Africa and the United Kingdom, in both governmental and other institutions, who have been so generous with their time in providing help and advice not only when the field work was being undertaken but later in reading and commenting on the study when it was in draft form. The guidance of the Steering Committee, which consisted of D. R. Carter (Barclays Bank DCO), R. Coleman (United Africa Company), Arthur Gaitskell (Commonwealth Development Corporation), Leonard Joy (London School of Economics), and R. J. M. Swynnerton (Commonwealth Development Corporation), is gratefully acknowledged. It should however be made clear that responsibility for the survey rests wholly with the author.

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TOM SOPER
Director of Studies

1—Introduction: Agriculture in Uganda's Economy

Uganda is an agricultural country. 90% of its people owe their livelihood to agriculture. More than 60% of gross domestic product is accounted for by agriculture. And nearly 90% of exports are agricultural products. Agriculture is thus the cornerstone on which Uganda's economic growth must be built.

The question which this introductory chapter sets out to answer is how agriculture is to play its part in this economic growth. It is not concerned with the allocation of resources between agriculture and other sectors. That depends upon a detailed analysis of the available options taking into account a large number of specific economic and social factors. Such an analysis is what development planning is for and consideration of the emphasis to be placed on agriculture is deferred, therefore, until development planning is discussed in Chapter 4.

A number of roles have been suggested which agriculture might play in economic development:—

- (a) to provide food for a rapidly expanding population;
- (b) to provide a food surplus for a rapidly growing non-agricultural population;
- (c) to provide employment for a rapidly growing labour force;
- (d) to increase rural earnings to provide a market for an expanding manufacturing sector;
- (e) to earn foreign exchange;
- (f) to provide raw materials for an expanding industrial sector; and
- (g) to generate savings for investment in the non-agricultural sector.

These roles are, of course, not mutually exclusive, nor are they all necessarily distinguishable one from another. Some are more important on a world scale than they are in the context of a particular developing country. Some will be of more importance in one developing country than they are in another. They are considered here in an attempt to place the relevance of Uganda's experience for other countries.

There is another reason, however, for looking at these alternatives in some detail. Even within the limits imposed by the available resources such as suitable land, water, and skilled manpower there are many choices to be made about the form of agricultural production. Should Uganda opt, for instance, for mechanisation or more labour-intensive methods, for large- or small-scale farming, for co-operative or individual enterprise, etc.? Consideration of the place of agriculture in economic development

can throw a little more light on this problem. Various forms of organisation of agricultural production are discussed in Chapter 2.

Producing enough food is not a serious problem in Uganda. The problem is to provide food of the right sort. Famine is not unknown, but is rare now and local in nature. This is because the rainfall is reliable and is also governed by a number of different climatic regimes¹ so that droughts tend to be local in nature rather than country-wide. Hence, with modern communications, provided that things are organised reasonably efficiently, a shortfall in one part can usually be made up from elsewhere in the country. During the days of the British Protectorate, the Government instituted a policy of district and territorial self-sufficiency as a guard against famine, and local rules were made that cultivators should maintain a finger-millet granary and plant a certain acreage of root-crops—usually one-quarter of an acre of cassava which will keep in the ground up to two years—as a famine reserve. The degree of enforcement of the rules, however, varied considerably from district to district. Self-sufficiency is obviously a sensible policy to follow when transport is rudimentary, but it acts as a serious barrier to the development of a market economy.

In a traditional system of agriculture where there is plenty of land for all, the growth of food production keeps pace with the growth in population—apart from the very great exception of drought and pestilence years—since each family provides for its own needs. It is usually estimated in Uganda, for instance, that the non-monetary, i.e. subsistence part of the economy is growing at present at the same rate as the population, $2\frac{1}{2}\%$ p.a. However, a point is reached in population growth, sooner or later, when land is no longer completely freely available and traditional cultivational practices have to be modified so that the land is given less fallow-time. Two things then begin to happen—yields begin to fall and the soil begins to erode. Soil erosion was one of the principal preoccupations of colonial agricultural policy and remarkable strides were made in soil conservation, particularly in Kigezi. As regards yields, it has been reckoned that in Uganda improvements in technique over the years more or less balanced the poorer conditions. 'If we reflect that the most crowded rural areas in Bugisu were by 1960 carrying a population of over 1,000 to the square mile, and these people were still obtaining much the same amount of food and income that they had been used to, the achievement must be reckoned a considerable one.'² There are two solutions to the problem: (a) migration to other areas, to the towns and into rural industry, so that there are fewer people on the land; and (b) an even greater emphasis on the introduction of new methods in order to increase yields.

¹See Appendix.

²G. B. Masfield, 'Agricultural Change in Uganda—1954–1960', reprinted from *Food Research Institute Studies*, Vol. III, No. 2, May 1962, Stanford University, page 102.

Pressure of population on land is, as yet, only a serious problem locally in Uganda—in Kigezi, Sebei, and Bugisu and parts of Buganda, Teso, and Bukedi. In other areas, notably Bunyoro and Toro, there is fertile land which as yet remains unsettled. In the past organised resettlement of people from one part of the country in another has been one of the principal ways of trying to alleviate population pressure and this is discussed in the next chapter. African workers are, however, remarkably mobile and individual migration is probably a much more important factor in the relief of over-crowding.

Although famine is rare in Uganda, malnutrition is far too common. It is particularly prevalent amongst the Bantu peoples of the southern half of Uganda, whose staple diet is *matoke*, i.e. plantain or cooking bananas. Dietary taboos are also important in many parts of the country. For example, in certain areas fish may not be eaten and in others women may not eat eggs or poultry. The result is protein deficiency and kwashiorkor, which saps the vitality of those who suffer from it. There are other dietary deficiency diseases in Uganda but it is protein deficiency which is the most common. Small children are particularly at risk and both the central and Buganda Governments have programmes to teach mothers the basic elements of nutrition. Efforts are also being made through women's courses at District Farm Institutes and Rural Training Centres to ensure that a more varied diet is produced. Education is essential, but this only has its full impact on nutritional standards as specialisation in production develops and with it a market economy.

The second possible role for agriculture in economic development is to provide a food surplus to feed a rapidly growing non-agricultural population. In Uganda, however, the non-agricultural population—or rather that part of it in employment—is not growing at all. Table I shows how the wage labour force has changed since 1958.

Table 1
Total Number of Africans Reported Employed 1958-1964

<i>Year</i>	<i>Total</i>	<i>Agriculture and Processing Industries</i>
1958	228,399	56,993
1961	220,999	54,346
1964	212,346	57,997

These figures exclude domestic service and seasonal labour in crop processing. They also exclude those employed in peasant agriculture, estimated at 80,000.

Source: Uganda Statistical Abstract, 1965.

This falling off in the size of the labour force cannot be accounted for by stagnation in the economy. During the period covered by the table

monetary GDP rose by some 40% in money terms or 4% p.a. in real terms. In addition gross capital formation in each year was about 15% of monetary GDP. An explanation must lie in the increased productivity of labour through more capital-intensive methods.

Over the last few years the minimum wage has increased considerably. As a result employers have been forced to use labour more economically and get rid of those who were only marginally useful. They use more capital-intensive methods, then, than they would if wage earnings were on a par with earnings in agriculture. Another reason for using capital-intensive methods is that the plans for factories and machinery to go in them are imported unmodified from developed countries where there is a relative shortage of labour. Finally, overseas aid plays a part in producing a bias towards capital-intensive methods. This is described in Uganda's Second Five-Year Development Plan. 'Moreover, there are practical difficulties which limit the scope for preferring labour-intensive methods. External aid is in practice largely a matter of providing goods on credit terms of greater or less generosity. This often means that a project can be financed more readily if it uses more machinery (which is imported) and less labour (which is local). Sometimes this factor, combined with lack of local capital, means that a project cannot be financed at all except on capital-intensive methods.'¹

In spite of the lack of job opportunities in the towns there is still a considerable migration from the country to the town. There are no reliable figures on the number of unemployed, but they are estimated to run into thousands. The Government hopes that some 100,000 new paid jobs will be created during the period 1966-71, an increase of 30% over the present level. Of these 45,000 are to be in the towns and at this level it is hoped that urban unemployment will not increase. Even if these very large increases are achieved, there will still be a far larger number of people coming on to the labour market each year than can be absorbed in wage employment. For them peasant agriculture will be the only choice.

A number of reasons can be advanced why there is a continuing migration to the towns in spite of the lack of opportunities there. The principal of these lies in the difference between earnings in the towns and in the rural areas. *If* one can get a job, then one is very much better off than working on the land. One might even be as well off working only one or two days a week. There are many who prefer a sure income each month to the hazards of peasant farming. Secondly, there is increasing education. Parents and children have expectations built on the job-opportunities available when a much smaller proportion received an education. A third factor is the better amenities which there are in the towns compared with the countryside. Ugandans place a very high value on the provision of

¹*Work for Progress, Uganda's Second Five-Year Plan, 1966-71, page 146.*

social services, particularly schooling and medical services, and these are almost inevitably better provided for in the towns than in the country.

It can be argued that unemployment in the towns merely replaces underemployment in rural areas, and that there is no loss in total agricultural production when workers migrate to the towns. It is not possible either to substantiate or to repudiate this in the Uganda context. It seems probable, though, that whereas it might be true for certain very heavily populated areas such as Kigezi and Bugisu that emigration does not result in a loss in agricultural production, it is not true for the country as a whole.

Whether rural underemployment exists or not, there can be no doubt that urban unemployment is the more serious social problem. The shanty dwellings of idle and frustrated youth on the fringes of the towns are inevitable foci for vice and disease. A stemming of the flow of people from country to town and a lessening of the consequent social tensions can only come about through a determined effort to raise rural incomes. The Second Plan states that a major principle of Ugandan development policy is that progress should be spread through the country.

There is, however, an important economic reason for attempting to increase rural earnings. That is to provide a market for an expanding manufacturing sector. One of the most effective barriers in Uganda to the development of manufacturing industry is the small size of the market. The size of the market for a particular manufactured product is determined as much by the distribution of income as by the total sum of incomes. If income is largely concentrated in the towns, the demand for many items which Uganda could manufacture will be too small to make it worthwhile. Even compared with other African countries Uganda is remarkably unurbanised. At the last census (1959) only five towns had populations of more than 10,000 and only three of these had African populations of more than 10,000. Even including small trading centres less than 4% of the African population lived in towns. The development of agriculture is, of course, not the only way that rural incomes are increased; rural industries also have their part to play, but these in their turn will depend upon agricultural earnings for a sustained demand.

The fifth possible role for agriculture is to earn foreign exchange. In an economy at the stage of development of that of Uganda, a large part of investment is in capital goods imported from abroad. The greater the development effort, the greater the imports of capital goods which are required. This is not the whole story, though. Capital equipment requires a certain amount in the way of maintenance imports to keep it going and even consumption expenditure is highly import-intensive. Estimates made for 1961 show that getting on for one-half of capital formation consisted of imports from outside East Africa and that a third of consumption expenditure went on goods imported from outside Uganda (more than one-

fifth from outside East Africa). In spite of this dependence on imports, Uganda's trade balance has been very healthy in the past and in spite of a negative balance on invisibles has been able to make a positive contribution to the East African balance of payments position. Unfortunately, the balance of payments is making itself felt for the first time as a serious constraint on development, just as Uganda's own currency and Central Bank have been launched.

The Second Five-Year Development Plan anticipates that exports will grow during the period 1966-71 at a rate of 4.4% p.a. However, imports are expected to grow so rapidly and the adverse balance on invisibles to increase to such an extent that there will be an overall gap of £17m in 1971. This gap will have to be covered by an inflow of capital, much of it in the form of aid. Whether this inflow materialises or not, a considerable effort in export promotion or import substitution will be required.

The very fact that consumption is so import-intensive indicates that scope exists for import substitution. It must be remarked, though, that the types of import substitution manufacturing which Uganda can most easily develop may well be at the expense of other developing countries. Textiles and clothing from India and Hong Kong are a case in point. This is not necessarily an argument for Uganda not to develop these industries, but it does mean that aid donors have to be careful in their programmes to reconcile the interests of the various recipients, particularly when there is a prospect of developing industry on a regional basis.

Because of the small size of the internal market for industrial goods, regional co-operation is particularly important. Although at present Uganda's distance from the coast places her at something of a competitive disadvantage, in the long-run as some of her neighbours become more stable and as the African economy develops she should find herself at the centre of a rapidly developing region. The Lake Victoria Basin with its comparatively high density of population and cheap water transport is a natural focus for development in this part of Africa. In the short-run, however, the prospects for exporting manufactures do not appear very hopeful. Neighbouring countries to which Uganda might hope to export manufactures are likely to develop exactly the same industries themselves.

Uganda's exports are almost entirely primary products. These are listed in Table 2. Agriculture at present accounts for 80-90% of overseas export earnings—the only runner up being copper and alloys accounting for less than 10%. The disadvantages of relying on primary exports are well-known. There are few forward and backward linkages, i.e. inputs are simple and products are exported with the minimum of processing. There is little value added to the products exported to accrue to the economy of the exporting country. The industries in Uganda which rely on agricultural inputs are mostly processing industries such as cotton ginning, coffee curing, seed crushing, meat canning, fish freezing, sugar and tea

manufacturing, grain milling, tanning, etc. There are, however, a number which continue manufacturing a stage further. These include textiles and clothing, footwear, furniture making, and distilling. By 1971 it is expected that as much as one-quarter of Uganda's cotton production will be utilised by the local textile industry.¹

Table 2

Domestic Exports—Principal Commodities by Quantity and Value

(excluding exports to Kenya and Tanzania)

Commodity	Unit of Quantity	1958		1961		1964	
		Quantity	Value	Quantity	Value	Quantity	Value
		'000	£'000	'000	£'000	'000	£'000
Fish, fresh or simply preserved	Cwt.	49	268	30	210	3	18
Maize and Maize Flour	Cwt.	—	—	15	11	21	25
Beans and Pulses	Cwt.	7	21	55	76	15	28
Coffee, not roasted	Cwt.	1,574	20,827	2,064	13,979	2,749	35,378
Tea	Cwt.	53	979	76	1,472	120	2,212
Animal Feeding Stuffs	Cwt.	1,342	1,104	1,338	1,425	1,322	1,641
Hides and Skins	Cwt.	56	765	66	816	80	1,083
Oilseeds, Nuts, and Kernels	Ton	12	539	12	704	7	385
Raw Cotton	100lb.	1,550	18,141	1,393	16,716	1,422	15,857
Sisal Fibre and Tow	Cwt.	8	23	11	43	6	31
Wolfram	Cwt.	1	6	4	73	—	—
Cottonseed Oil	Cwt.	42	239	4	28	31	164
Copper and Alloys, unwrought	Cwt.	256	2,065	259	2,961	364	6,192
All Other Commodities	—	—	431	—	681	—	1,415
Total		—	45,409	—	39,195	—	64,430

Source: Uganda Statistical Abstract, 1965.

Agricultural exports will have a vital role to play, therefore, for some long time to come. However, not only do cotton and coffee account for some three-quarters of export earnings, but they represent one-quarter of gross domestic product. This is a serious cause of instability in the economy.²

¹This raises the question whether it might not be more advantageous for Uganda to concentrate some of its effort into growing less valuable cottons.

²Although perhaps not as serious as one might have expected. '... the degree of resistance to externally-induced instability apparently shown by Uganda's economy is an occasion for wonder.' Alasdair I. Macbean, *Export Instability and Economic Development*, George Allen and Unwin, 1966, page 150.

Until recently the price of cotton has been reasonably steady as a result of the policy¹ of the United States, which is the world's largest producer. On the other hand, the amount produced is subject to serious fluctuations from season to season. In 1962 as a result of the poor yields that year the earnings from the cotton crop amounted to less than half the amount realised in 1961 or in 1965. Coffee has shown the opposite tendency. Whereas the amount produced has been growing steadily for a considerable number of years, prices have fluctuated violently. The index of coffee prices, taking 1954 as 100, was down to 35 in 1961, but back to 66 by 1964. Hence, although the amount produced only increased by one-third from 1961 to 1964, the returns increased to two and a half times their 1961 value. Whilst there is some hope that international action will stabilise prices, or better still receipts, it is obvious that Uganda must make every effort to diversify her economy and also her export earnings and this is, indeed, the major stress in the Second Plan.

The final role to be considered in this chapter, that of generating savings for investment in the non-agricultural sector, is in a somewhat different category from the others described since it need not necessarily be a dynamic one in terms of agricultural growth. It is perfectly possible for a static agriculture to be milked of its surplus to provide investment for rapid industrialisation.

It has been commonly argued in the past that a fast-growing manufacturing or industrial sector would automatically stimulate agriculture by its increasing demands for agricultural products. India is a country where this philosophy has had some influence, for example, and where experience has shown that a more positive stimulus to agricultural production is required. The theory might work out well enough in countries where the market is well developed and agriculture already responsive to demand. However, if agriculture is dominated by a subsistence mentality, then each family provides enough for its own needs and there is an inelastic supply of agricultural products. The result is to force up the price of food and to cause scarce foreign exchange to be spent on imports of food from abroad. It is suggested in another chapter that Ugandan farmers are not unresponsive to changes in the prices of crops for export, but they are much less experienced in the production of food crops for the domestic market, nor are the marketing arrangements as well developed as for export crops.

£85m of development spending in the Second Five-Year Development Plan 1966-71 is expected to come from overseas. None the less, this still leaves £155m to be found locally and it seems inevitable that a large part of it will have to come from the agricultural sector. It is unlikely, though,

¹This policy has now been modified. Following the US Agricultural Act of 1965 there was a sharp drop in the price which Uganda received for her cotton (15% for the best quality). The aim of the Act is to reduce US stocks of cotton by reducing the acreage grown and attempting to regain the US share of world markets.

that voluntary savings from the peasant population can become anything more than a minor source of funds for investment outside small-scale agriculture. On the other hand, in the past a considerable proportion of private savings has come from reinvestment of the profits of estate production and this might be expected to continue.

If voluntary saving is not a possibility, the Government can effect a transfer from the agricultural sector into other activities through taxation. The sources of Government revenues in recent years are shown in Table 3.

Table 3

Uganda Government Revenue: Sources (£ thousands)

					<i>Estimates</i>			
					1962/3	1963/4	1964/5	1965/6
Direct Taxation:								
Income tax	...	...	...	...	3,709	3,739	4,000	4,575
Export taxes	...	...	...	...	3,285	7,866	10,042	4,372
Other	...	...	...	...	189	37	—	13
Indirect Taxation:								
Import duties	...	...	...	...	9,028	8,945	9,596	11,771
Excise	...	...	...	...	3,084	3,812	4,150	6,507
Other	...	...	...	...	225	906	1,013	1,152
Other Revenue*	...	...	...	...	10,974	9,921	10,781	13,951
Total**	...	...	...	...	**31,095	35,226	39,583	42,341

* Interest, Dividends, Profits, Transfers (internal and from abroad). Sales of goods and services and Capital Account.

**This is the official figure, the total of the items shown is 30,494.

Source: Uganda Statistical Abstract, 1965.

It will be seen that indirect taxation represented a much more important source of revenue than income tax. It might be assumed that import duties bear more heavily on the sophisticated tastes of town-dwellers, but no firm evidence is available. On the other hand, excise revenue comes principally from cigarettes and sugar, both of which are consumed in the rural areas as well as in the towns. However, the really significant item in this table in its impact on the rural population is export taxes. These come mainly from cotton and coffee with a much smaller amount from hides and skins. It is hardly necessary to remark that they fluctuate violently from year to year. They do have the advantage, though, that the Marketing Boards offer a very convenient medium for collecting them.

It has been argued that these export taxes have a serious disincentive effect on the production of the crops concerned. In the case of robusta coffee this might well be desirable—Uganda will soon be producing very

much more than may be exported to traditional markets under her International Coffee Agreement quota. The case of cotton is quite different, though, and the Government is very keen to increase total cotton production. The question of cotton and coffee pricing is, however, a complex one and is discussed in greater detail in a later chapter.

2—Problems of Agricultural Development: Organisation of Production

Before considering the organisation of agricultural production it will be as well to look at the systems of land tenure in Uganda, to see how these affect production and the extent to which they are a hindrance to development.

1 Land Tenure

All land in Uganda is either privately owned, i.e. freehold or *mailo*, or public, what used to be called Crown Land. The latter category is much the larger. As at 31 December 1964 privately owned land accounted for only 10,336 square miles out of a total land area of 74,712 square miles. About 9,000¹ square miles of this was *mailo* land. This exists only in Buganda and is similar to freehold land, but differs in that mineral rights on private *mailo* land are vested in the owner rather than the state and that only Africans can own *mailo*, transfer being subject to the Buganda Land Law. The Government retains the right to appropriate land for public purposes.

Except for land used for public purposes, which is vested in the Land Commission or in public bodies, public land is held and managed by the Land Boards of the various kingdoms and districts for the benefit of the people. This is occupied without licence or lease in accordance with tribal custom which, of course, varies from place to place and which in some places is breaking down. Traditionally, the concept of individual ownership was foreign to most of the people of Uganda, although it did exist in Bugisu and Kigezi, for instance, and has been familiar in Buganda, Ankole, and Toro since the Agreements of 1900 and 1901.

There are obvious advantages to the cultivator in terms of security in communal tenure. Every member of the community has a right to land and can come back to the land in his old age or when there is unemployment. Provided that there is enough land to go round, there is no danger of a landless proletariat. There is also the advantage to the community that land which is not being used reverts to the community. On the other hand,

¹This figure has now been reduced, since it included 577 square miles of official *mailo* land, held by the Kabaka and some of his officials in virtue of their office. Official estates, except those held by rulers, have now been abolished (in Buganda, Ankole, and Toro—see also footnote on page 21).

the system has obvious disadvantages. Enterprising farmers are deterred from extending their acreage under cultivation. Because of lack of complete security of individual tenure, there is a disincentive to invest money and effort in the land, and also, since land is not a mortgageable asset, it cannot be used as security for raising loans. As land gets scarcer it acquires a value and a market develops which the traditional system is inadequate to cope with and a great strain is put on the public spirit of the traditional authorities.

Following the recommendations of the East Africa Royal Commission 1953-55, the Government began in 1958 for the first time outside the *mailo* lands issuing registered land titles to Africans who were already occupying the land according to tribal custom. A start was made in Kigezi and this was later extended to other parts of the country. However, surveying, adjudication, and registering titles are expensive and need to be accompanied by a certain degree of increased productivity in order to be economically worthwhile. Wholesale granting of title cannot, therefore, be undertaken on a nation-wide basis all at once. None the less, the Government has to be in a position to grant titles when population pressure and the development of a market in land make it desirable. Where the local people have flatly refused to have anything to do with registration of titles the Government has not pressed the issue. There can be no doubt, however, that traditional attitudes towards land tenure in many places are changing. Sales of land have been recorded in every district except Karamoja, although in the north they are still extremely rare.

The granting of title to individual ownership of land becomes more economically important when it is tied in with consolidation of fragmented holdings. Experience of land consolidation in Kenya has shown how successful this can be when it is part of a complete programme for agricultural advance. Fragmentation of holdings in Uganda is not as serious a problem as in some other African countries, but it does exist in the more densely populated districts such as Bugisu, Busoga, parts of Buganda, and particularly in Kigezi. Where cultivation takes the form of horticulture and the plots are close together, it is not necessarily bad from an agricultural point of view. However, at least in Kigezi the point has been reached where agricultural efficiency is affected. In a pilot survey in 1954, 10% of all plots were found to be over sixty minutes' walk from the farmer's house. Holdings of 20 to 30 parcels of land are not uncommon. When fragmentation gets to this stage, consolidation by voluntary exchange becomes impossibly complicated, and the Government has to step in. Consolidation, however, is a pointless exercise without some mitigation of the factors—population pressure and customs of inheritance—which led to fragmentation in the first place.

Mailo tenure resulted from the Buganda Agreement of 1900. Similar freehold title was created in Toro and Ankole by the Agreements of 1900

and 1901, but the areas of land involved were much smaller.¹ The Agreement was based on a misunderstanding of tribal custom and, by converting the political and usufructuary rights of the chiefs into a system of freehold tenure, had the effect of turning the aristocracy into owners, in some cases, of large estates. There were originally only 4,000 owners of *mailo* land, but as a result of inheritance and the sale of land there were as many as 63,000 registered titles by 1960. A sample of *mailo* owners in 1950 showed that 60.4% owned estates of 20 acres or less and another 26.4% held estates of between 20 and 100 acres each. Thus to a certain extent a landed peasantry has evolved, although there are still something over 250,000 *kibanja* tenants.

Kibanja was a form of tenure under the customary system which was adapted to the needs of the *mailo* system. In exchange for the payment of *busuulu* of shs 10/—, which is unrelated to the size of the holding, and *envujjo*, which is a small levy on certain cash crops, the tenant is guaranteed virtual permanency of tenure which he may bequeath to his heirs. Often *mailo* owners have been prevented from introducing methods of extensive agriculture, because they have been unable to find a consolidated piece. Many *mailo* owners refuse to accept further tenants under the terms of the Busuulu and Envujjo Law and let land on a temporary basis for one season at a time, often on a share-cropping basis. The adverse economic effects of this law have frequently been commented on. One proposal² for reform would create a form of 'perpetual' leasehold with a consolidated annual payment to the landlord. The existing *kibanja* tenants would be given a legal title to their plots which could be bought and sold and pledged as security for loans. Owners of tenancies would only lose their land if they failed to make the annual payment, but it would not revert back to the *mailo* owner.

Apart from *mailo* land there is no legal obstacle to a non-African buying land in Uganda, but to buy African-owned land the approval of the Minister must be sought and, in practice, this is not given. As at 31 December 1964 only 573 square miles or about three-quarters of 1% of the total land area of Uganda was alienated to non-Africans, and probably one-fifth of this was in the hands of religious missions. The World Bank Mission reported in 1961 that tea and sugar estates were being restricted in their expansion; in Buganda by the restriction on purchase of land by non-Africans and the difficulties of moving squatters from *mailo* land and in Western Province by the status of Crown Land and the lack of any encouragement for local governments to lease land to

¹In Toro 255 square miles of private and 121 square miles of official estates. In Ankole 167 square miles of private and 138 square miles of official estates.

²See *The Economic Development of the Kingdom of Buganda—Part I, Economic Survey*. A Report to the Kabaka's Council of Ministers by the Buganda Planning Commission, Kampala, 1966, page 16. The Busuulu and Envujjo Law is a law of the Lukiiko, the Buganda Legislature.

estate owners. The situation now varies considerably from district to district. In Toro, for instance, non-Africans have no difficulty in leasing land for up to 99 years, but this appears to be the exception rather than the rule.

2 Mechanisation

Mechanisation is a very live issue in Uganda today and it is of the greatest relevance not only to the organisation of production, but also to the question of aid for agriculture. It is tied in closely with the cotton expansion programme. The argument for it has been stated as follows:—

‘The process of mechanization has been described as one of substituting dear factors of production (tractors, etc.) for cheap factors of production, (labour, etc.). While this may be true of areas with high populations and high labour efficiencies, it is not generally true of Uganda. Labour is relatively scarce in Uganda. It costs much and it is inefficient. In many areas of Uganda it costs more to dig land with hired labour than it does to plough it by tractor, even when the tractor costs are based on the total true costs of hire-service operation.’¹

‘Although in many ways labour is relatively abundant there are certain critical tasks for which there is a scarcity of labour. This is because much of the crucial effort in agriculture must be concentrated into a relatively short part of the year. Therefore, mechanization of certain aspects of agriculture can provide very high returns. Mechanization has an important role in accelerating the rate of growth of agricultural output.’²

It is the labour bottle-neck at planting time that mechanisation can break. When there are competing calls on his labour resources it is not surprising that a farmer makes sure of his food crops first. The result is that his cotton is then planted late, with a disastrous effect on yields. However, one must be careful not to replace a bottle-neck at planting time with a bottle-neck at harvest. Cotton left in the fields unpicked gets spoilt and fetches a much lower price. It is not uncommon for cotton not to get picked at all, although this is probably due as much to lack of inclination as to non-availability of labour. If, however, tractors are only used for one or two operations in the farm year it is extremely difficult to make them pay. By suitable pricing policy, demand can be created for a larger number of operations, but it might be at prices which do not cover costs. Also if the service has to cover too wide an area the costs of transportation to and from the farm and the time wasted in travelling become prohibitive.

It was the original intention that the service provided by the Department would gradually be replaced by commercial enterprise, which would at first be subsidised, but would later operate on a fully commercial basis.

¹*Symposium on Mechanical Cultivation in Uganda*, ed. J. L. Joy, Kampala, 1960, page 142.

²Second Plan, page 58.

Encouragement was to be given to commercial contractors rather than to farmers to buy their own tractors, not only because the farmers would probably lack the necessary capital, but more importantly because they would not in general have the necessary experience of operation, maintenance, and repair. The Agricultural Productivity Committee in 1954 reported that commercial concerns who had gone into the matter were not satisfied that they were capable of running the services on a profitable basis. The Committee, therefore, proposed that the Government should assist farmers wishing to own and operate their own tractors either individually or co-operatively by training them in operation and maintenance. Individual ownership has subsequently been assisted by subsidy and by credit facilities. By 1963 there were 87 private tractor owners, most of whose tractors were used for contract work, rather than on the owners' own farms.

The Special Development Section of the Department of Agriculture operated some 30 or 40 tractors until 1963 when the Government decided on a very rapid expansion programme in conjunction with the establishment of group farms. By the end of 1964 British aid had supplied 350 tractors and implements. By 1966/7 the Special Development Section expected to be operating 870 tractors—a twenty-fold increase in four years! Not all of these, however, would be in the tractor hire service. In 1965 the Special Development Section operated 394 tractors of which 47 were used for bush-clearing, teaching, training mechanics, etc., 131 were used on group farms, and 216 were employed in 23 units of the tractor hire service.

As far as there is a conscious long-term policy behind the tractor hire service today, it is to introduce local farmers to the idea of mechanical cultivation, to encourage them to buy their own tractors and undertake contract work for their neighbours, after which it will pull out of the area. This raises the question, though, of the extent to which the Government ought to subsidise the service. If the subsidy is too small then it doesn't accomplish its purpose. On the other hand, charges at present are so low that tractor owners are unable to compete with the tractor hire service and consequently there is no incentive to buy. It seems unlikely anyway that the Government will be able to continue the subsidy at the present rate. It is estimated that the recurrent cost of operating the service with 870 tractors will be getting on for £1m. If the present charges were to continue, even at a very generous estimate revenue could not be more than £½m.¹ Even in its most efficient recent year, 1963, the service made a loss of shs 13/63² on every tractor hour worked, not taking into account depreciation and administrative overheads.

¹870 tractors x 650 hours per tractor x shs 17/50 per hour = £494,812.

²I.e. 13 shillings 63 cents.

Mechanisation is only a commercial proposition for a high-value crop. At the prevailing price of cotton a farmer must get a yield of 400 lb. per acre or more simply to pay off his tractor hire loan, even subsidised as heavily as it is. Mechanisation must, therefore, follow or be accompanied by improved husbandry. What the right rate of expansion of the service is depends on the level of the subsidy and the extent to which technical advice is provided and taken. There is insufficient information on the way the tractor hire service is affecting the behaviour of farmers, but it is reasonable to suppose that many of them are simply replacing their own labour with tractor labour and that the economy is benefiting neither by increased acreages nor by increased yields.

One of the unfortunate consequences of the present concentration on mechanical cultivation is that attention is shifted away from a much simpler and less capital-intensive way of raising labour productivity—the use of oxen. They are particularly suited to the more densely populated parts where holdings are smaller and more scattered. Oxen may be employed either as the sole means of motive power or in conjunction with tractors to undertake such operations as, for instance, cultivating, harrowing, planting, and inter-row weeding, after the tractor has done the preliminary opening up of the land. This complementary use of tractors and oxen is in use on the Department's own research station at Serere, for example, where it has been found to be the most economic. Only in Teso and neighbouring areas has ox-cultivation been adopted extensively and even there only recently for any operation other than ploughing. In recent years the Government has encouraged the use of oxen through subsidies and credit for ox-drawn implements and the provision of demonstration teams. These facilities are still in existence, but the extent to which they are used will depend upon the vigour with which the Department of Agriculture is prepared to push them.

3 Group Farming

Mechanisation and group farming are very closely related, since the mechanical cultivation of a group farm is done by the local unit of the tractor hire service, which is usually managed by the group farm manager. The World Bank Mission in 1961 recommended that a pilot project be undertaken as proposed by the Symposium on Mechanical Cultivation, at a very modest cost of £5,000. However, when the project was launched in 1963 it was launched as a full-scale operation. The first 19 farms were established in 1964 and by the beginning of 1966 there were 35 in existence. Another 20 were to be established during the course of 1966.

Group farms are an extension of co-operative societies from the traditional fields of bulking, processing, and marketing into actual production. In theory, it is a prerequisite for the formation of a group farm for there to

be in existence a first-rate co-operative society with its books in proper order. This is not always observed, though, partially because there may be no existing society in a particularly suitable area and partially from lack of good societies—in 1965 there were 100 applicant societies for 20 places, but only six of these were considered good enough.

The farms vary, of course, but a typical one might be said to have 60–100 members cultivating about 15 acres each. Of this 15 acres perhaps two would be used for a house and food crops and the rest would be part of the rotation. A member might cultivate nine acres in a year—three acres single cropping and three acres double cropping. Of these nine acres, three might be cotton and the rest finger millet, sorghum, maize, simsim, groundnuts, or beans. Most operations are done mechanically which are amenable to it. The cost of these operations, say shs 160/- per acre at the subsidised rates of the tractor hire service, is covered by credit from the Uganda Commercial Bank, through the Co-operative Credit Scheme at an interest rate of 12% which is repayable when the crop is sold. The crop will be sold by the society and the amount of the loan repayment deducted before payment is made to the farmer.

Mention is made above of space for a house and food crops, but in many cases members have their house and a few acres elsewhere. It is not surprising that a member is loath to move his house on to the group farm until he has seen how it is going to work out. The project is an experiment for him, even if the Government does not see it in that light. This will be particularly true if he has to abandon perennial crops at the old site. Unfortunately, if there is ever then a choice between work on the group farm plot and on the home plot, home will win out, if only because it is nearer and the crop is not mortgaged to pay off the tractor hire loan. There has, therefore, to be considerable incentive in the form of amenities such as water and electricity to make members transfer from their old *shamba* to a new plot on the group farm, and provision of these is expensive.

Certain group farms have managers, who are usually expatriates. The title is something of a misnomer, because it depends very much on the personality of the farm manager and the relations he has with his committee whether, in fact, he manages the farm at all. His official position is that of executive officer to the scheme management committee of which the District Agricultural Officer is chairman, the Co-operative Officer is secretary, and the other members are elected from the co-operative society. Unless a manager is an exceptional diplomat—and most of them only speak English—or unusually lucky in his committee, he may well find himself reduced to the status of machinery superintendent. Whether or not the manager can establish an efficient working relationship with his committee is probably a decisive factor in the success of a group farm. Another important factor is the attitude of the members themselves. In certain parts of the country there is a greater tradition of co-operation than in others and

it is in these areas that the more successful group farms tend to be situated. In particular, one might mention Lango, where there is the tradition of the *wang-tic* system of communal labour.

As yet group farms have been concerned principally with producing cotton. It is probable that in the future there will be less concentration on cotton and even some experiments in fields such as sugar and livestock production. In view of the doubt over economic returns—a subject discussed in Chapter 4—the experimental nature of group farming should constantly be borne in mind.

4 Small-scale Production

Small-scale farmers make up not only the vast majority of agricultural producers in Uganda, but also the bulk of the population. Whatever measures are taken to advance agricultural production, or any other production for that matter, they cannot be on a sufficiently large scale to alter the fact that peasant production will be dominant in the economy for the foreseeable future.

There is, however, a great diversity amongst African private producers and one must beware of oversimplification. It is a mistake, for instance, to think of the peasant economy as merely a subsistence economy overlain by cash crops. It is true that in most places most of the cash income is derived from export crops, particularly cotton and coffee. None the less, there is quite a sizeable trade into the towns of such products as meat, bananas, vegetables, etc., and this can be very profitable. In addition to this there is a considerable rural trade in fish, meat, maize, sorghum, etc. As long ago as 1954 it was estimated that Buganda was annually importing 65,000 adult cattle worth over £½m. Another item of rural trade which tends to get forgotten is local beer or its ingredients such as bananas or grains. Beer and foodstuffs are also, of course, used in payment for labour, either communal or individual. The traditional payment of the *wang tic* in Lango is in the form of beer and it is common for porters (i.e. labourers) in Buganda to work an evening shift for which they are paid in food.

The major sources of cash income are cotton and coffee. African production of cash crops began in Uganda in 1904 when 54 bales of cotton worth £236 were exported. The crop quickly caught on, at first in Buganda then subsequently in other parts of the country, and at the height of the post-war boom in prices was worth £3m. It is interesting to note that whereas the subsequent slump put a number of expatriate planters out of business, the small-scale cotton industry, which was no less severely hit, recovered its pre-slump production very rapidly indeed. This indicates how a desire for cash income to pay taxes and satisfy other wants had been stimulated in earlier years. It also demonstrates the great strength of a peasant economy in its ability to ride out periods of low prices.

The establishment of coffee as an African-grown crop was much less

spectacular: There was fierce opposition on the part of European planters to the extensive cultivation of coffee by Africans and probably at that time cotton was a more lucrative crop, as well as showing quicker returns. During the 1920s, however, the price relationship changed as well as the political climate and the acreage of African-grown coffee began to grow steadily. Almost all of the coffee grown in Uganda is robusta, the higher quality arabica being confined to higher altitudes, mainly in Bugisu. Most of the robusta is grown in Buganda, where there has been an absolute decline in the cotton acreage over the years as coffee acreage has expanded.

The history of the introduction of cotton and coffee in Uganda illustrates the responsiveness of African producers to economic opportunities, particularly in Buganda. There are other examples, however, and of more general application. The most striking one is in the behaviour of maize production, even in spite of official discouragement.¹ In 1953, in particular, there was a spectacular increase in the production of maize as the result of a guaranteed price. Other minor crops which have shown marked fluctuations as prices have changed have been chillies, soya beans, castor seed, and shea butter nuts.

One must also beware of taking too simple a view of the peasant's attitude to innovation. Much of his 'conservatism' can be seen as a natural desire for security, even at the expense of a higher income. Late planting of cotton, for instance, is often the result of making sure first of all of the food crops. Inter-planting of one crop with another, particularly finger millet with sorghum, is another form of insurance. Some of the resistance of farmers to the advice of the Department of Agriculture can be seen as a distrust of methods the advantages of which are not—to them—proven. This distrust has, perhaps, in the past been increased by blanket recommendations passed on by low-level extension staff who understood what they were recommending little more than the farmer did. As the skill of the farmer increases there will be need for a more rather than a less effective extension service—one which can genuinely advise rather than exhort.

Over the centuries, the African farmer had developed a technology which, though primitive, was firmly based on trial and error and which was very efficiently adapted to the needs, both social and economic, of a traditional society. 'It is abundantly clear that scientific tropical agriculture has yet to solve the problems of continuous cultivation except perhaps for a limited range of crops; and the former disrespect for traditional systems of shifting cultivation and bush fallowing has given way to an increasing realisation of our own need for tutelage.'²

¹On the grounds that maize cultivation leads to impoverishment of the soil, and to erosion.

²D. N. McMaster, *A Subsistence Crop Geography of Uganda*, The World Land Use Survey, Geographical Publications Limited, 1962, page 34.

On the other hand, it is an equal mistake to romanticise the peasants. Many of their attitudes are based on ignorance and superstition. The positive correlation for certain crops between production and price has been remarked on above, but this need not hold for every level of income and certainly many individuals behave 'perversely'. The behaviour of a man who will plant cotton at the right time, tend it perfectly until harvest, and then leave half the crop standing in the field is often commented upon. The usual explanation is that he has a target income which will cover his taxes, school fees, and simple wants and that when this is satisfied his preference for leisure is greater than his desire for a larger income. He has to plant a larger acreage than he needs because he is never sure until the harvest how big the crop will be.

None the less, if one considers the economic history of Uganda over the last 50 years, what is striking is not the lack of response to change, but the amazing changes which have, in fact, taken place. One of the great changes, for instance, has been to bring the men into agricultural production. In most of the traditional tribal societies of Uganda the division of labour between the sexes left almost all the growing of crops to the women, although the men would undertake the heavy work of breaking new ground. Such activities as cattle-minding, hunting, and fishing were considered as more proper manly pursuits. With the introduction of cash crops the division has tended to become more one of leaving the food crops to the women whilst the men are responsible for the cash crops, and even this division of responsibility is breaking down. Such changes as this are taking place in response to new needs. The demand for better housing and clothing, for bicycles and transistor radios, is being stimulated by better communications and the development of trading centres. The most important factor of all is the desire for education. Not only does this affect the needs of the parents for a cash income, but affects the children as they grow up with a completely new horizon of expectations and a willingness to adapt their attitudes in response to these needs.

The importance of a willingness to change lies in the fact that methods are available whereby peasant productivity can be increased enormously without large amounts of scarce capital being spent. What is needed are the means to persuade the peasant population of their effectiveness. The technological change which usually comes to mind is the application of fertiliser, which has had such remarkable results in countries such as Japan. Unfortunately, the situation with regard to fertiliser in Uganda is not so simple. In general, it appears that the physical structure of the soil is a more important determinant of its fertility than its chemical composition. Trials with chemical fertiliser have not produced the dramatic response which they have had in other countries. This does not mean that there is no place for fertiliser in Ugandan agriculture, but it does mean that for many crops and in many places the Department of Agriculture has not been able

to make fertiliser recommendations with confidence. Research has continued, however, and this year the Department was able to make quite a number of new fertiliser recommendations. In order to build up the physical structure of the soil it is necessary to rest it—the rotation which is usually proposed is three years cropping and three years resting under a sown grass ley.

The integration of cattle into this system is obvious, but as yet mixed farming has made very little headway in Uganda. The traditional system of cattle management by cultivators is one of parallel management. The cattle are grazed by day on common land, possibly by professional Bahima herdsman, and kept in a *kraal* at night, but no attempt is made to use the *kraal* manure as fertiliser. It is easy, though, to see why mixed farming has not yet had much success. In the absence of credit, the cost of fencing and provision of water supplies is enough to dissuade most farmers, and the hostility of their neighbours—either because fencing smacks of individual tenure or because of the danger of cattle roaming through their crops—will dissuade the rest. However, here again attitudes are slowly changing. As long ago as 1960, for instance, as many as 100 farmers in Buganda had fenced paddocks.

To return, however, to cultivation, there are other simple and cheaper means of increasing productivity which might be mentioned. Early preparation of the land allows the breakdown of organic matter and the build-up of nitrogen in the soil. Improved planting materials have been developed which will give higher yields. Timely planting of crops allows utilisation of nitrate in the soil which might otherwise be washed away during the heavy rains. Proper spacing and timely thinning and weeding are all recommended. Spraying of cotton against pests has been the subject of an extensive campaign by the Department of Agriculture. As yet the response has been very mixed, but the returns to the economy of an effective campaign will be very large and the campaign is to continue as one of the major points in the Department's policy. Proper harvesting and effective storage of crops are two more measures which can bring in large returns for a small outlay.

There is a growing number of farmers in Uganda who can be described neither as 'small-scale' nor as 'peasant' farmers. It is due more to the employment of more labour that they have broken through, however, than to the use of improved methods. None the less, there is an increasing number of farmers who actually seek the advice of the extension service. For a number of years now, to a greater or less degree, the Department of Agriculture has concentrated its extension effort upon 'progressive' farmers, i.e. those who are prepared to take the advice of the Department and act upon it. It is not easy to comment on the wisdom of this policy, because of the difficulties involved in attempting to assess the effectiveness of any particular extension policy. It is obvious that with only a limited

number of trained staff available there is a danger of spreading them too thinly. On the other hand, too great a concentration on a very few farmers could result in the vast mass of the population making no advance at all. In the new Development Plan it is proposed to concentrate on those farmers taking out loans.

The number of labourers employed by peasant producers has been estimated at 80,000. Many of these are immigrants from Rwanda, but many also come from the more distant parts of Uganda, such as West Nile, where opportunities for cash crop production have, in the past, been much fewer than elsewhere as a result of transportation difficulties. Since most immigrant labour is employed in Buganda one of its effects is to disseminate some of Buganda's wealth throughout the country. Some wealth does, of course, get exported out of the country, but there can be little doubt of the positive economic contribution foreign immigrants make. In addition to this labour force there are also small farmers who will undertake *leja-leja* work, i.e. a task or ticket of work for their wealthier neighbours. In general small-scale farmers pay their employees considerably less than they would earn on an estate, but they are correspondingly less efficient and tend to be more migratory than estate workers.

The concluding paragraphs of this section are taken up with an account of an experiment in 'supervised small-holdings', which attempts to combine efficient technical and commercial management with the cheapness of small-scale farming. The scheme is described in some detail, since it should be of the greatest interest to prospective aid donors. It is also interesting in throwing some light on the density of extension coverage which is commercially worthwhile with a high-value crop. The scheme is the 'master-grower' scheme run by the British-American Tobacco Company (BAT) in West Nile for the production of flue-cured tobacco.

There are now approximately 1,600 curing barns in the scheme. Each barn is jointly owned by up to four growers, usually relatives, and is serviced by one acre of tobacco, i.e. one-quarter of an acre each if there are four owners. There are 14 leaf-buying centres, to each of which is attached a primary co-operative society and also a wood-fuel society which is planting up eucalyptus at a rate of one acre per barn over a five-year period to secure the fuel supply. There is no co-operative union. Growers appear to be shrewd enough to realise that a union might succeed in pushing the company out, to their own detriment.

BAT has its own agricultural extension organisation which is much denser on the ground than the Government service. At one time during development they had as many as one extension worker to 10 barns. They now have about 30 supervisors of Agricultural Assistant standard as well as one or two more senior staff. This works out at one extension worker to less than 200 growers compared with a national average of one extension worker to 2,000. Since this is a commercial operation, it is not the taxpayer

who pays for the extension service, but the grower or the consumer; the crop is sufficiently profitable to pay for its own extension directly. Net returns are now something like shs 3,000/- per acre compared with shs 500/- when the grower sold his tobacco as green leaf. This is the result of increased yields as well as of the fact that the value added in the first stage of processing now accrues to the grower.

Each barn is financed initially by a loan of shs 2,000/- from the Uganda Commercial Bank which is repayable over two years and earns interest of $7\frac{1}{2}\%$. This is enough to pay for the barn and see the owners through the first year. Proceeds from the sale of leaf are paid into the growers' account with the Bank so that no cash changes hands. There was an average gross return of shs 3,659/- per barn in 1965. Outgoings, exclusive of loan repayments and family labour, amounted to shs 460—500/- per barn. Some individual barns have been taking out as much as shs 9,000/- and some centres have been averaging shs 5,000/- per barn. All cultivation is done by hand by family labour and there is no temptation for growers to over-reach themselves on labour costs. Company staff feel that hand cultivation is agronomically better—but at the insistence of the Department of Agriculture 40 acres were to be cultivated mechanically in 1966.

The Kenya Tea Development Authority (KTDA) runs a similar scheme in that the Authority controls the whole operation from provision of stumps for planting to disposal of the made tea. The consequence of this control is that there is a discipline in both these schemes which allows the management to make itself both technically and commercially effective. Before KTDA began they studied the BAT system and BAT have subsequently reciprocated. It is likely that Uganda's small-holder tea expansion programme will be modelled somewhat on the lines of the KTDA. The system would appear to be worth studying for possible application to other high-value crops.

5 Estate Production

Estate production has never played a dominant part in agricultural production in Uganda, although that is not to say that it does not make an important contribution to the national economy. Prior to 1920 there was a lively debate as to whether agriculture in Uganda would be developed on a plantation or a peasant basis, but after this date it was never really again an issue. The area of land alienated to non-Africans has not altered very much since that date. Table 4 illustrates the history of the plantation crops in Uganda.

By 1964 both rubber and cocoa had vanished from the scene and there was only a small acreage of sisal remaining. All these crops are scheduled for development during the period of the Second Five-Year Plan, but on a small-holder basis this time. After Uganda withdrew from the restrictive

Table 4

Cultivated Area on Non-African Estates 1920-1964

	1920	1938	'000 acres 1964
Coffee	27.4	13.3	30*
Rubber	18.8	10.8	—
Cocoa	4.3	—	—
Tea	0.1	2.9	26**
Sugar	0.3	15.3	47†
Sisal	—	7.2	3

*Estimate. Includes approximately 5,000 acres of African estate coffee.

**Estimate. Includes a small outgrower acreage.

†Includes a small outgrower acreage.

Source: C. C. Wrigley, *Crobs and Wealth in Uganda*, East African Institute of Social Research, Kampala, 1959, and Uganda Statistical Abstract, 1965.

international tea agreement in 1947 the tea industry developed rapidly and the sugar industry has expanded under the stimulus of a steadily increasing local demand. Both sugar and tea are particularly suited to estate production, since they need to be processed by elaborate equipment shortly after cutting or plucking. By centralised control of production a steady supply of cane or leaf to the factory is ensured. However, provided that they are close enough to the factory—although this is by no means critical if transport is good—and that they are subject to sufficient discipline to ensure a regular supply to the factory, there is no reason why small-holders cannot grow both tea and sugar. Already outgrower production has started in a small way and about half the planned increase in production will take this form in future. Tea appears to be more successful in this respect than sugar; being a permanent crop it is not subject to fluctuations in acreage and there is virtually no alternative outlet for the leaf than to the factory.

One of the features of the later history of estate agriculture in Uganda is the tendency for ownership of the estates to be concentrated in larger units. There are now few small individual owners. This has always been true of sugar, where there are just two producers who each have about 22,000 acres of sugar planted and also some tea and coffee as well as considerable other interests. Tea and coffee estates have now tended to pass out of individual ownership as well to be run as units of large organisations. The most important of these is the Uganda Company.

The Government, too, has gone into estate production since 1952, when the state-owned Uganda Development Corporation (UDC) bought a large group of estates in Buganda. Agricultural Enterprises Limited (AEL) was formed in 1955 to look after the agricultural side of the Corporation's business. Tea is very much the main effort of Agricultural Enterprises. There is a little coffee which is gradually being pulled up and

some cocoa which is not yet in bearing and also some vanilla. AEL is undertaking a vigorous expansion programme for tea and since 1960 has planted 1,000 acres each year. The present phase of expansion will last until 1970 and when all the tea is in full bearing they will be producing 14m lb. of made tea per annum. AEL is co-operating very closely with the Department of Agriculture's programme for tea outgrowers and is making stumps and processing space available. Probable future developments for AEL lie in the field of rubber and soft fibres.

6 Ranching

Expansion of beef production appears to be one of the most promising prospects for diversifying the agrarian economy of Uganda. It is not, however, without its problems. Attitudes towards cattle are amongst the most entrenched of traditions. Cattle are treated as a 'walking bank', a store of wealth which is more highly valued than cash. They are prized for the prestige which they confer upon their owner and are the principal currency in the payment of the bride-price. In many cases they are considered as being in trust for the family and are thus not a negotiable asset. It is the number of cattle and not their quality which is important. The tendency then is to allow cattle numbers to increase beyond the capacity of the land to feed them adequately. Since the range is owned communally it is the responsibility of nobody to see that pastures are maintained. The result is overstocking—which has been exacerbated by the success of the Veterinary Department in controlling epizootic diseases—and consequent overgrazing and the ever present danger of soil erosion. The Department has had a certain success in bringing about an increase in the offtake of cattle from pastoral areas. Teso and Lango have generally accepted the idea of cattle as a potential source of cash, but in Karamoja this is far from being the case.

It is necessary first of all to concentrate upon the marketing arrangements and then, when there is a satisfactory offtake, to think about means of improving the carrying capacity of the range lands. In some districts this second stage has been reached and improvements such as the installation of valley tanks are being made. The Ankole Ranching Scheme which is described in Chapter 5 illustrates the sort of innovations which can be made when stock owners are prepared to treat their stock as a commercial asset. It should be added, though, that this scheme is only possible because the land had previously been overrun with tsetse fly and hence was unoccupied.

During the 1930s and early 1940s large areas of the best grazing lands in Uganda were invaded by the savannah tsetse flies, *glossina morsitans* and *g. palidipes*, which are carriers of the parasite responsible for the animal form of sleeping sickness, trypanosomiasis. They were thus rendered

uninhabitable by cattle and have remained largely unused since. Cattle can be kept under economic prophylaxis in a tsetse-infested area provided that the fly population is not too great. Otherwise the only remedy against trypanosomiasis is to destroy the fly by insecticides, or by destruction of its habitat, i.e. by bush clearing. A third possibility is to break the life cycle of the fly by elimination of its host, i.e. game, but there are serious doubts about the effectiveness of this.

Since its establishment in 1947, the Tsetse Control Department, as it then was, has reclaimed something like 8,000 square miles of tsetse-infested land and established consolidation lines to prevent re-invasion. The problem is where to stop. The cost of clearing is something like £200 per square mile and must clearly be followed by some relatively high-value land use. In addition, the consolidation lines must be settled by cultivators in a sufficiently high density to prevent bush regeneration. This has not always been done in the past. In one particular consolidation line settlers were allocated plots of 20 acres, of which they cultivated about two with subsequent regeneration problems. In the past, tsetse schemes do not appear to have been subjected to full economic scrutiny taking into account the use to which the cleared land is to be put and the cost of a possible re-infestation, and the interest of the Tsetse Division will always be in pushing the consolidation lines back to some more natural barrier.

One solution to the problem of efficient land use following tsetse clearing is the establishment of commercial ranches. There have never been settler-ranchers in Uganda. Development of ranching, like so many other activities, has fallen within the public sector. The first ranch was established in 1956 by the Bunyoro Ranching Company, a subsidiary of Agricultural Enterprises Limited, and now carries 8,000 head. The Bunyoro Growers' Co-operative Union, in a piece of private diversification, is proposing to establish a fifty-thousand-acre ranch in the same area. Uganda Meat Packers, another subsidiary of UDC, has recently established a ranch in Teso—this is not on tsetse-cleared land—in order to ensure a minimum throughput for their meat factories. In the next few years UDC will establish a number of ranching projects under the control of a new subsidiary, Uganda Livestock Industries Limited. The first of these will be in the Aswa Valley in Acholi. It is interesting to note that prior to the decision to establish a ranch in this valley, tsetse clearing had been discontinued, because settlement was not following hard enough on its heels.

7 Resettlement Schemes

The purposes for which resettlement is undertaken are somewhat more mixed than those behind most of the other forms of organisation which we have been considering. Resettlement involves an organised redistribution of population and, one might add, 'rendering both land and people

more productive than before'. The main objective of resettlement schemes in Uganda has been to relieve population pressure in overpopulated areas and latterly to provide a livelihood for refugees from Rwanda. Since the mid-fifties, there has been the complementary objective of finding settlers for newly-cleared tsetse consolidation barriers. This has been commented on in the previous section.

Almost all of the people who were transferred from high density areas came from South Kigezi. Since the Second World War over 40,000 Bakiga have been resettled either in North Kigezi or at a later date in Ankole and Toro. As the settlement areas have got farther away from home the Bakiga have become correspondingly less interested in moving. Also other districts are often hostile to newcomers from other tribes. A third possible objective for resettlement is to increase agricultural production. In so far as new land is brought into cultivation this is no doubt achieved, but productivity seems only to have increased to the extent that opportunities were available for the production of new cash crops, husbandry practices for food crops having remained unaltered. Only recently has economic assessment of resettlement projects been attempted. The Government now appears to have dropped a policy of organised resettlement.

Resettlement, as it has been practised in Uganda, has been remarkably sparing of capital. A form of resettlement, on the other hand, which does require large amounts of capital is irrigation. As yet, settlement on large-scale or potentially large-scale irrigation schemes is only at an experimental stage. The Mubuku Scheme is described in Chapter 5. Because of the high capital cost involved, it is necessary that irrigation schemes are based on high value crops. The large Asian-owned estates have found the introduction of irrigation to be profitable in the production of both sugar and tea. However, since yields depend as much on the organisation of production as on technical factors, it is by no means certain that a settlement of peasant farmers could achieve comparable results. Experiments to determine the economics of irrigation need, therefore, to take full account of sociological as well as more economic and technical factors.

3—Problems of Agricultural Development: Some Other Issues

1 Manpower and Education

It is often remarked that the crucial constraint on development in Africa is lack of skilled manpower. In agriculture, of course, economic advance depends upon the skill of a very large number of small-scale farmers. But their skill can only be developed and put to its best use with the help of highly trained specialist staff.

The various grades of technical staff in the Department of Agriculture are shown in Table 5. In general, there are similar grades in the other departments,¹ and the salaries paid and qualifications required are broadly the same. For instance, in the Forestry Department a Forest Officer is equivalent to an AO, a Forester to an AAO, and a Forest Ranger to an AA.

Table 5
Qualifications and Salaries of Different Grades of Agricultural Staff

<i>Grade</i>	<i>Qualification</i>	<i>Starting Salary</i>	<i>Prerequisite for Training</i>
Agricultural Officer (AO)	Degree (+2yrs postgrad. trng)	£798	Higher School Certificate
Assistant Agricultural Officer (AAO)	Diploma (3 years)	£687	School Certificate plus certain credits
Agricultural Assistant (AA)	Certificate (2 years)	£264	School Certificate

In the past, graduates were recruited exclusively from overseas and it is only comparatively recently that there have been local graduates in the service. It was not until the 1950s that the University of East Africa began to issue degrees in agriculture, and in veterinary science not until the mid-1960s. According to the manpower projections in the Second Plan, Uganda will require 57 graduates in animal science and 157 agrono-

¹Department of Veterinary Services and Animal Industry, Department of Co-operative Development, Forestry Department, and Fisheries Department.

mists during the five years 1966-71. The intake of students into the Faculty of Agriculture at Makerere has increased from 40 to 80 over the last two years. Since there is, as yet, only one Faculty for the whole of East Africa, these numbers include Kenyan and Tanzanian students. The needs of Uganda's agricultural industry should be met, provided there is no significant increase in the number of graduates in the extension service, otherwise the deficit will have to be made up from overseas. However, as there is to be a dramatic increase in the number of diplomats recruited into the extension service, it would seem wise that there should be a corresponding increase in the number of graduates.

The Department of Veterinary Services is in a much happier position regarding staff than its counterpart in many African countries. Already 22 African veterinarians had joined the Department in March 1966 and half the students in the Veterinary Faculty of the University are Ugandans. On the other hand, both Forestry and Fisheries Departments were short of graduate staff. There were four vacant Regional Fisheries Officer posts out of a total establishment of eight and the holders of two of the remaining four were away on courses overseas.

The staffing situation as reported above does not, however, include research, and that is a very different matter. The research services are manned almost exclusively by expatriates. There is no graduate African veterinary research officer either in Uganda or at the East African Veterinary Research Organisation (EAVRO) at Muguga in Kenya. EAVRO's agricultural counterpart, the East African Agriculture and Forestry Research Organisation (EAAFRRO), has only two African graduates out of a total of nearly fifty scientists. The Uganda Department of Agriculture has some four or five African research officers only. The East African Freshwater Fishery Research Organisation (EAFFRO) at Jinja has five expatriates and one local research officer. The time scale for Africanisation of the research services is a very different one from that for other services. Some put it as long as fifteen years before there will be an adequate supply of local research officers. Research receives the lowest priority for Africanisation, and this is probably the field in which the most worthwhile contribution can be made by an experienced expatriate officer without previous knowledge of Uganda.

The situation with regard to non-graduate manpower is more complicated. Virtually all the posts at the AAO (diploma) level are now filled by Africans, although there has actually been recruitment in Britain of AAOs to fill posts created in the rapid expansion of the group farming programme. There are a number of institutions providing diploma and certificate training: the Agricultural Colleges at Bukalasa and Arapai, the Central Co-operative Training Institute at Bukalasa, the Veterinary Training School at Old Entebbe, and the Forestry School near Masindi. A British-aided Fisheries School is to be built in the near future.

Unfortunately, Government Departments are competing amongst themselves for the very limited supply of qualified people. There is apparently little in the way of central direction as to priorities. There is, for instance, need to review the relationship in salaries between the AAO and the AA level and also between the agricultural and non-agricultural sectors.

What is most noticeable in Table 5 is the gap in starting salary between an AA and an AAO. It is not surprising, therefore, that there has been a chronic lack of candidates in recent years for training at this level. The shortage of AAs is not a new one and was commented on in the First Five-Year Development Plan in 1963. At the beginning of 1966, the Veterinary Training School had only 18 students in its first-year class and 13 in each of the other classes of its three-year certificate course, although the school is organised for an intake of 40 students a year.

The Department of Agriculture has solved the problem by simply dropping certificate training and going over entirely to diploma courses. It is proposed in the Second Plan to increase the size of the extension service by at least one-third and possibly even to double it. The principal target for this expansion is to be the AAO cadre and there is to be no AA training during the next five years. Arapai and Bukalasa are to concentrate exclusively on diploma training and the output will be increased enormously. The 1966 intake was 100 students each at Arapai and Bukalasa. Even assuming a drop-out rate as high as 20%, this will mean an annual output of diplomates equal to twice the total number at present in the general extension service. There can be no doubt that a very large increase in the number of AAOs in the extension service is desirable, but it remains to be seen how numbers on this scale can be absorbed. Even though an increase in demand from the non-Government sector is expected for personnel at this level, it will absorb only a fraction of the output. In addition to the increase in the AAO cadre, arrangements are to be made for the recruitment of Field Assistants. These are of a much lower standard than AAs and will be recruited from those with junior secondary II qualifications, either from a farm school or with one year of field experience. They will then be given a more formal training, probably at a regional training school, in some particular skill.

It seems, therefore, that the Government is likely to be successful in its attempts to increase the size of the extension service and improve the balance between the cadres, but only at the expense of lowering the standards in each cadre. The only way that the 200 places in the agricultural colleges could be filled in 1966 was by lowering the entrance requirements. It is true that by dropping the requirement for credits in certain subjects in School Certificate the Department is merely returning the entrance qualification to what it was a few years ago. None the less, one of the problems of the agricultural colleges is their low prestige compared with, for instance, the university and the effect of lowering the entrance require-

ment is to reduce their status even further in the eyes of the best prospective candidates.

When lower standards coincide with a rapid increase in recruitment the result is a dilution of the service by a considerably increased proportion of less well qualified staff, all of whom are young and hence in the service for a long time to come. The total output of students with Cambridge School Certificate is expected to increase from 1,900 in 1966 to 3,900 in 1969 and 4,900 in 1971, with a university level intake of 870 in 1971. The potential number of good candidates for the Arapai and Bukalasa courses should increase, therefore, very markedly in the next few years. A more effective long-run policy, therefore, would be to slow down the intake of students into the agricultural colleges to a more manageable rate and to strengthen the extension service temporarily by recruitment of AAOs—and AOs—from overseas.

Agricultural education as well as education in a more general sense was considered by the Uganda Education Commission in 1963. The problems of agricultural education, the Commission pointed out, are not primarily educational. ' . . . until there has been a substantial breakthrough from relatively unproductive subsistence land-use to much more intensive and profitable forms of farming in which young people can see a reward for their efforts, school leavers will continue to seek other means of employment.'¹ The view of the Commission was that there is no place for formal education in agriculture in the primary schools and that the interest of the child could be stimulated through rural science and geography. The Commission did not, perhaps, stress enough that *all* teaching should be related to the rural environment. What is surprising is that more stress is not put on agricultural education in secondary schools in the Commission's recommendations. An agriculture syllabus has been developed for Kenya and this could be used in Uganda in addition to that for agricultural biology which is already to a small extent being taught. As regards farm schools, the Commission endorsed the Ministry of Education's plan to open four schools with a four-year course directed towards producing progressive farmers and skilled workers rather than agricultural advisers.

2 Marketing and Co-operatives

An efficient system of marketing, not only for the farmer's produce but also for what he can buy with the proceeds, is essential to agricultural development. There is a variety of different arrangements for marketing the crops produced in Uganda. The marketing of the cotton and robusta coffee crops is the responsibility respectively of the Lint Marketing

¹*Education in Uganda: The Report of the Uganda Education Commission—1963* (Castle Commission Report). The Government Printer, Entebbe.

Board and the Coffee Marketing Board. The price of cotton to both growers and ginneries is set by the Government and is announced at the beginning of the buying season. The country is divided into a number of zones and cotton grown in any particular zone must be sold to a ginnery in that zone. Since seed is issued free by the Board—the cost being allowed for in the cotton price structure—zoning allows the preservation of pure strains and the rotation of strains amongst different zones as a disease control measure. Free issue of seed also means, of course, that there is no problem about gaining acceptance for a new variety—it is simply issued. The Coffee Marketing Board operates in a similar fashion to the Lint Marketing Board, with the coffee being sold by the grower only to licensed buyers. In this case, though, the price announced is a minimum rather than a final price. The Board does not handle arabica coffee, which is marketed in Nairobi by the Bugisu Co-operative Union. Both tobacco and sugar are at present consumed entirely in East Africa and their prices are fixed by the three Governments. Tea is marketed by the estates themselves and is not subject to price control.

For none of the crops mentioned above can it be claimed that inadequacy of marketing facilities handicaps expansion of production. But what about other commodities for which less formal channels are available? The arrangement for livestock is that they are sold at numerous small markets which are run by local authorities with the aid of the Veterinary Department. The problem here, at least as far as cattle are concerned, is not so much one of making marketing easier for the producer, but of persuading him in certain areas that marketing at all is worthwhile. Fish, other than that which is bought by the processing firms, is bought at landings by itinerant fishmongers. The Second Development Plan expresses the opinion that production of fish has in the past been limited by lack of marketing facilities and proposes improving, in particular, markets and cold stores at landings and providing better access roads.

For the marketing of food and minor crops a complex network has grown up. The primary buyer may, if produce is in short supply, buy off the farm, but more likely it will be brought to him at the local market or, if he is a trader, at his shop. A shop-keeper may well also be an intermediary buyer with his own transport, who collects produce from primary buyers at a number of convenient points. The produce may then be kept by the shop-keeper himself or passed on to someone else for export or for consumption in town. Miss Anne Martin, who surveyed these arrangements in 1961, reported: 'I do not consider that the present marketing system, when compared with possible alternatives, acts as a substantial impediment to increased production; on the contrary, the trading community as a whole shows the energy and acumen which one would expect from ambitious entrepreneurs competing freely amongst themselves at a generally low standard of living. Where there is lack of interest in minor produce, the

security provided by trading in coffee and cotton is largely responsible.¹ She did admit, however, that at present the individual farmer who may produce a sizable surplus is handicapped in its marketing if the local trade is not accustomed to receiving substantial supplies, and is not familiar with the outlets for the crop. In 1960 it was remarked that the marketing situation in Teso for established crops was good, but that it was a different matter for new crops. 'Here, as in most other districts, there is a great need for a marketing organisation which will undertake to search out markets for new crops, and deal with the produce once it is in bearing.'² The Government proposes to set up a National Produce Marketing Board which will use the co-operatives as its agents.

One of the issues which will have to be faced by the Board when it is established is its pricing policy. There is a lot of sympathy in Uganda for controls, which are seen as protecting the simple African grower from the shrewd Asian trader. At present minimum prices are set for a number of staple foods, but there is no system to regulate the quantity traded. In general, actual trading prices are well above the minima, but the effect of the minimum price regulation, when there is a large supply of produce on the market, is to render the only offers illegal ones. The farmer will always be able to sell at a higher price a week or two later—the controlled crops are all to a greater or lesser extent storable—but he may have suffered real hardship if he was desperately short of cash. This desire for cash is an important factor in price fluctuations. It is very common, for instance, for farmers to sell their finger millet when it is harvested and buy it back a few months later with the proceeds of their cotton crop at a much higher price. If the Government wishes, therefore, to make price control effective, the Board will have to maintain buffer stocks. The experiences of the Grain Conditioning Plant in the early fifties in purchasing maize might serve, however, as a warning that this can be an expensive business. An unexpectedly large crop in 1953 with a guaranteed price involved the Government in a loss of £440,000. However, even without guaranteeing a price, it should be possible for the Board to dampen the more violent price fluctuations within a season by judicious buying and selling.

Storage of crops is a serious problem in a tropical country and there can be no doubt that there are considerable losses each year to insects and rodents—Worthington put it as high as 25% twenty years ago. A shop-keeper who buys grain at harvest time and sells it back a few months later at a higher price provides a service in so far as he accepts the risk of it being destroyed or covers the cost of preservation. A considerable amount of work has been done on the storage of food crops in the tropics, notably by the Tropical Stored Products Centre at Slough, but as yet the results

¹Anne Martin, *The Marketing of Minor Crops in Uganda*, HMSO 1963, page 70.

²D. J. Parsons, *Systems of Agriculture Practised in Uganda*, No. 1: Introduction and Teso Systems, Department of Agriculture, Mem. of the Res. Div., Ser. 3, 1960.

have not made much impact at the level of the peasant farmer. It has been suggested that storage is a service which co-operative societies might provide for their members. This is probably a field in which overseas aid donors could make a useful contribution.

The development of co-operatives really dates from the Co-operative Societies Ordinance of 1946, although there were one or two societies in existence before that date. Since then there has been a very rapid growth of the movement so that by 1962 there were 1,709 societies with 300,000 members.¹ Societies are small, with fewer than 200 members on average. Almost all societies are primarily crop marketing societies, although there are a few fishermen's, cattle, and dairy societies. Almost all societies are affiliated to one or other of the co-operative unions. The Department of Co-operative Development is responsible for the promotion and supervision of the societies, but the Registrar is separate.

Co-operatives keep the loyalty of their members only if they provide them with a real service, and at least as cheaply as they can get it elsewhere. Their basic function in Uganda is the collection and bulking of cotton and coffee. They have been helped in this by the policy of the Government on cotton and coffee pricing and processing, which has shielded both unions and societies from competition and entrepreneurial risk. Since 1952 when the Government took powers for the compulsory acquisition of ginneries for transfer to co-operative unions, the policy of successive governments has been that ultimately the processing of cotton and coffee should be in the hands of the growers. In order to shield co-operative ginneries from competition, quotas are allotted specifying the amount of cotton which a ginnery may process in a particular season. Members of societies which are affiliated to ginnery-owning unions are thus assured of a share in the guaranteed margin which ginneries receive. As yet the societies have tended to concentrate on cotton and coffee, because of the financial incentive, and indeed those which diversified their activities have usually not been very successful. However, having established themselves on the basis of these two crops, no doubt many societies are now in a sufficiently strong position to undertake other activities in response to the Government's diversification programme.

3 Cotton and Coffee Prices

Because of the place which cotton and coffee have in the economy, pricing policy for these two crops, including the imposition of export taxes and the operation of the Price Assistance Funds, is obviously of the greatest importance. It is a subject which has aroused considerable interest amongst economists and others for a number of years. The purpose of the Price Assistance Funds was basically one of protecting Uganda's cotton and

¹There are now some 500,000 members in more than 2,200 societies.

coffee growers from fluctuations in the prices of their products on the world market. However, owing to conservative management of the funds in a period of rising prices, large surpluses were built up which amounted in effect to an additional export tax, since large sums were transferred from the Price Assistance Funds to various development funds. The effects upon the incomes of cotton and coffee growers during the period 1945-60 are shown in Table 6.

Table 6
Levies on Incomes of Cotton and Coffee Growers 1945-1960

		<i>Cotton</i>		<i>Coffee</i>		<i>Total</i>	
		£'000	% of payment to growers	£'000	%	£'000	%
Payments to Growers	...	135,254	100	96,618	100	231,872	100
Export Tax	...	43,537	32.2	24,691	25.5	68,228	29.4
Contribution to Development Funds	...	24,200	17.9	625	0.6	24,825	10.7
Increase in P.A.F.s (plus net depreciation)		15,918	11.8	9,979	10.4	25,897	11.2
Total Deductions...	...	83,655	61.9	35,295	36.5	118,950	51.3

Source: D. A. Lury, 'Cotton and Coffee Growers and Government Development Finance in Uganda 1945-1960', *The East African Economic Review*, Vol. 10 No. 1, June 1963.

The interest of this table is twofold. Firstly, when one considers that overseas aid, almost entirely Commonwealth Development and Welfare funds, amounted to only about £5m, the 'exceptional amount of "self-help" in Uganda over this period is clear'.¹ Secondly, without taking into account poll tax, indirect taxes, etc., cotton growers had 38% and coffee growers 27% of their revenues deducted before receipt.

Since 1960 the situation has changed dramatically. The Coffee Price Assistance Fund paid out £6.5m during the four-year period 1960-64 and the export tax realised £8.5m, mostly in 1963/4. However, Uganda is now a party to the International Coffee Agreement and is allotted a quota of the amount of coffee which she is allowed to dispose of to traditional markets. The 1965/6 quota was 112,655 tons, whereas production reached 155,000 tons. By prodigious selling efforts the surplus is being disposed of to non-quota markets, but this will be more difficult as the surplus gets larger. The Second Plan expects that the total coffee crop will be 260,000 tons by 1971, but only anticipates an increase in the quota of 3% p.a. Provided that the Price Assistance Fund were to remain neutral in its effects, an increased export tax could be used as a disincentive to further

¹D. A. Lury, *op. cit.*

plantings. This, however, could also be achieved by physical controls such as those in Kenya where further plantings are forbidden by law. Anyway, when the cost of keeping an increasing proportion of the crop off the market is spread amongst growers this will bring the price down. The Plan anticipates a fall in price from £104 per ton in 1966 to £77 per ton in 1971. This will have a serious enough effect on incomes in certain areas without the addition of an increased tax. One ray of light in the situation is that the robusta areas are the ones with most opportunities for diversification and where the people are most cash-conscious and willing to change.

With cotton it is incentives rather than disincentives which are in question. In the four years 1960–64 the Price Assistance Fund paid out almost £5m to cotton growers and the cotton export tax raised £6.7m. Over the last two years the Government has deliberately subsidised growers by increasing the price of cotton to the grower, whilst the price realised by Uganda cotton on overseas markets has fallen. In 1964/5 the price of seed cotton (BP 52) to the grower was 57¢¹ per lb. of seed cotton, which represented a subsidy of 14¢ on the world price, and in 1965/6 it was 60¢, which involved a subsidy of 20¢. Since the Fund is now £2m in the red, this could not continue unless the Government were prepared to subsidise cotton growers from the general revenue. The price for the 1966/7 season has, therefore, been dropped to 40¢.

The question arises as to whether the export tax should be maintained. If it were to be abandoned, then something approaching £2m a year would have to be axed from the Development Plan. It is impossible to say whether this would pay off in its effects on the size of the cotton crop. It has been suggested in the last chapter that many growers are conscious of the relative profitability of the crops. On the other hand, in most cotton growing areas, despite the efforts to diversify production, the opportunities for any other cash crop are severely limited by marketing inadequacies.

4 Agricultural Credit

Although, as was remarked in the last chapter, there are many ways of increasing productivity in small-scale agriculture without injecting large amounts of capital, none the less there are few innovations which do not require some capital investment. The farmers' own resources are seldom sufficient to meet these expenditures.

To finance recurrent inputs such as fertiliser, insecticides, tractor hire, and labour for weeding, harvesting, etc., production credit is needed. In the case of annual crops it is what sees the farmer through from planting to harvest. The Co-operative Credit Scheme, which is described on page 74, is the main source of funds for production credit. The scheme is principally

¹The East African shilling (now Uganda shilling) is divided into 100 cents.

financed by the Government through the Uganda Commercial Bank, but a certain amount is also provided from co-operative societies' own funds. The amount fluctuates, but it has been as much as one-sixth of the total. In addition to the institutional sources of credit there are also private sources such as that provided by traders, and credit is often provided in kind by the delayed payment of wages to labourers.

In recent years the principal source of funds for farm development has been the Progressive Farmers' Loan Scheme which is described on page 74. This, however, was suspended in February 1964 and since that date there has been virtually no credit for farm improvement, apart from loans under special schemes (such as those for tea and tobacco) and a few on the basis of *mailo* security. The expatriate commercial banks have played little part in the provision of development credit. A certain amount of credit is also available in the form of hire-purchase terms for such equipment as pumps and tractors.

Estates are, of course, not covered by any of the schemes referred to above and must rely on normal commercial sources. Subsidiaries of AEL obtain most of their funds from the parent company, but there have been direct loans from the Commonwealth Development Corporation and also Barclays Overseas Development Corporation. They also obtain some of their production credit by overdrafts with the commercial banks. The principal role of the commercial banks in agricultural financing, however, is to provide crop finance. This comes in two stages, one to cover the cost of purchase of the unprocessed crop from the farmer by co-operative unions and private processors and the other to enable the marketing boards to buy it when it is processed. The first of these is financed almost entirely by the commercial banks with funds which migrate around East Africa with the crop seasons.¹ The crops covered are mainly cotton and coffee, but credit is also provided for groundnuts, tobacco, and milk. The marketing boards get their crop finance from the commercial banks and the Government.

It is credit for farm development which presents the greatest difficulty. The Government has drawn up a new scheme which it hopes the International Development Association will finance. Arrangements for credit in the Second Plan are described as follows:—

'During this Plan three types of credit will be made available; short-term credit to a large number of small farmers; medium-term credit to a smaller number of more efficient farmers; and finally a new scheme to replace the Progressive Farmers' Loan Scheme, for providing long-term credit to the growing nucleus of large-scale individual farmers.

Short-term credit: By 1971 it is planned that over 150,000 farmers will be receiving loans of between Shs 200 and Shs 300 each. These loans will be

¹This was prior to the nationalisation of the banks in Tanzania.

used for the purchase of simple equipment, fertilizers, and insecticides, and the hiring of tractors, ploughs and additional labour. Though this scheme is primarily designed to help cotton growers, credit will also be made available to farmers growing other cash crops such as tobacco and ground-nuts.

'Medium-term credit: About 5,000 farmers will receive loans of up to Shs 2,000 repayable over two years, during the Plan period. As with the short-term credit, these loans would be administered by the co-operative loan societies. For a farmer to qualify for a medium-term loan, however, he will have to have an outline farm plan drawn up to show how the loan will be spent.

'Longer-term credit: About 4,500 larger-scale farmers will receive loans up to Shs 5,000 repayable over several years. Detailed farm plans will have to be drawn up with the help of agricultural extension workers before such a loan can be obtained. These loans will be made directly to the farmer by the Commercial Bank. The co-operative societies will be involved in assessing the farmers' credit-worthiness.'¹

The problem with development credit is not so much in getting it to the farmer as in making sure that it is used for productive purposes. Lack of supervision, as is pointed out in Chapter 5, was a basic difficulty with the Progressive Farmers' Loan Scheme. In future, a large part of the extension effort is to be directly related to the provision of credit.

¹Second Development Plan, page 61.

4—Development Plans and Policies

No policy is created *de novo* by a new Government, but is the result of amending and adding to those of its predecessors. In considering the present plans for agricultural development, it is necessary, therefore, to go back a little in time and take a brief look at some of the earlier development plans.¹ Since the war there have been a number of these, but only the last can be said to be a comprehensive plan relating all sectors of the economy.

1 The Colonial Period

The first post-war plan, the Worthington Plan, was drawn up in 1946 and gave a clear priority to economic over social development. The reason for this was the Governor's concern at the 'rapidly increasing population which some students think will double itself in a quarter of a century; land which is progressively losing its fertility and from which the peasant cultivator will demand and need in future a greater cash return; and the ever advancing menace of the tsetse fly which has already swallowed up more than one-third of the land area of Uganda'.²

The Plan was to run for ten years and covered recurrent as well as capital expenditure. A vast increase, however, in the resources available, as a result of increases in the prices of cotton and coffee, meant that the Plan was largely irrelevant to the development which actually took place. 'The pace of development which became so marked in the period late 1951–1953 was set not by a comprehensive development plan but by a series of *ad hoc* plans relating to the various specific enterprises and services.'³ Although the *ad hoc* plans included co-operative development and mechanised farming, it cannot be said that agriculture was given a very high priority.

In 1954 a new plan was drawn up to cover the five-year period 1955–60. An Agricultural Productivity Committee was set up at the same time and its proposals, with trifling additions, were included in the Plan and its Report published as a supplement to it. The Committee remarked '... we do not consider that spectacular capital investment by the Government in major projects is *ipso facto* likely to increase the productivity of the

¹For a fuller discussion see *Aid in Uganda—Programmes and Policies*.

²E. B. Worthington, *A Development Plan for Uganda*, Government Printer, Entebbe, 1947, page v.

³*A Five-Year Capital Development Plan 1955–1960*, Government Printer, Entebbe, 1955, page 2.

Protectorate as a whole. The process of economic growth in a system of peasant farming rests primarily on the labour, enterprise and aptitudes of the many'

'It is in our view a fallacy to think that capital investment on a large scale will automatically result in progress and development profitable to the community—a fallacy to which the failure of numerous large scale enterprises in colonial territories during the last few years bears witness.

'We consider that investment in people through education and technical training in their various forms should in general have priority over investment in material resources; capital equipment and fertile land are wasted if they are not used with skill and efficiency.'¹

Once again, however, what actually happened was not closely related to what had been planned. A sharp reversal in the terms of trade and the efforts of an economy commission saw to that. A revised Plan was drawn up in 1957 but this was not adhered to either. ' . . . the pattern of expenditure in the preceding period did not stem from a rational approach to development but emerged after piecemeal attempts to reduce Government expenditure in which the productive sectors suffered severely.'²

The Agricultural Productivity Committee left the subject of land tenure to the East Africa Royal Commission which was sitting at the same time. The Commission's land tenure recommendations³ were for a policy aimed at individualisation of tenure and establishment of negotiable title. In order to reduce fragmentation they proposed a prohibition on the registration of sub-divisions of land below a certain size. The Commission stressed that individual land tenure in itself does not ensure proper land usage; it is a means to an end rather than an end in itself.

2 The World Bank Mission

The base line from which the First and Second Development Plans of independent Uganda have proceeded has been the development programme for the period 1961/2 – 1965/6 prepared by a Mission appointed by the World Bank. The proposals⁴ of the Mission, with a few exceptions, were accepted by the Government.

The major emphasis, the Mission said, should be on increasing production in the direct wealth-producing activities and that, in spite of doing everything possible in manufacturing and mining, it was quite obvious that the main opportunities for economic growth in the next five years would be in agriculture. It increased the allocation classified as 'Commodity Producing and Tourism', but only in comparison with actual expendi-

¹*Report of the Agricultural Productivity Committee*, Government Printer, Entebbe, 1955, pages 4 and 5.

²D. G. R. Belshaw, 'Public Investment in Agriculture and the Economic Development of Uganda', *East African Economic Review*, December 1962, page 76.

³*East Africa Royal Commission, 1953–1955, Report*, Cmd. 9475, HMSO, 1955.

⁴IBRD, *The Economic Development of Uganda*, Government Printer, Entebbe, 1961.

ture in the previous period, not with what had been planned. 'The broad effect of the World Bank proposals, apart from the increased attention given to livestock production, is to restore the status quo before the heavy cuts in agricultural capital development and staff expansion during the years 1957/61.'¹

In view of the restrictions of the International Coffee Agreement and the limited opportunities for altering the patterns of production in the short-run, the Mission's proposals for the short-run depended largely on a substantial increase in cotton production. They also proposed a fuller development of livestock production and an increase in the output of tea and some minor crops. These short-run aims were to be achieved mainly through subsidies and credit, tied as far as possible to specific schemes to increase output. This was particularly the case for cotton, for which £1.4m was allocated in subsidies for pest control.

In addition to its proposals for the short-run the Mission also proposed a longer-run policy for the transformation of the agricultural structure. In this it endorsed the programme of the Agricultural Productivity Committee, particularly in those parts related to raising labour productivity. This policy was to involve an increase in agricultural education to improve extension work, additional research, land tenure reform (following the Royal Commission), and development of the co-operative movement. However, in fact, research services and the provision of better qualified staff received lower priorities than in the 1955-60 Plan.

3 The First Five-Year Development Plan

The first Five-Year Plan was modelled on the recommendations of the World Bank Mission, and it was the first Uganda plan to rely heavily on overseas aid for its implementation. A comparison of First Plan proposals and those made by the World Bank Mission is set out in Table 7. What is striking is that, whereas the Plan's allocation for Central Government was about one-fifth higher than the Mission's, its allocation to the rest of the public sector was over half as large again. Since most of this increase was for commodity producing activities, the effect was to increase total public spending in the commodity producing sector from 27% to almost 40% of the whole. Agriculture's share was increased from 19% (£9.9m) of total public expenditure to 24% (£16.3m).² The First Plan can perhaps claim more fairly than the Mission's report to put the emphasis firmly on agriculture.

¹Belshaw, *op cit.*, page 78.

²Two adjustments have been made to make the figures comparable:—

(a) UDC expenditure which is unspecified in the Bank's proposals is allocated to agriculture in the same proportion as in the First Plan, i.e. approximately 50%; and

(b) of the £3.3m for credit in the First Plan, £1.3m is allocated to agriculture, i.e. £0.6m for agriculture and co-operatives, £0.2m for dairying, fishing, etc., and £0.5m for tea, but not £1m for ginneries.

Table 7

Comparison of Planned Sectoral Expenditure in Development Plans

	World Bank		First Plan		£m Second Plan	
	1961-6		1961-6		1966-71	
	Central Govt.	Other Public Sector	Central Govt.	Other Public Sector	Central Govt.	Other Public Sector
1 <i>Commodity Producing and Tourism</i>						
Agriculture & Co-operatives	4.0	—	4.5	7.6	19.36	
Livestock & Animal Industry ...	1.8	—	2.4	—	4.93	
Fisheries & Forestry ...	0.1	—	0.5	—	0.43	
Game & Tourism...	0.2	—	0.3	0.3	1.75	
Industry (& Commerce)	—	—	0.1	7.5	2.00	
Mining and Minerals ...	0.2	0.1	0.1	0.2	0.50	
Irrigation, Water, Reclamation ...	0.5	—	—	—	—	
UDC (unspecified) ...	—	7.0	—	—	—	
Credit ...	—	—	—	3.3	—	
Sub-total...	6.8	7.1	7.9	18.9	28.97	
2 <i>Basic Economic Infrastructure</i>	7.7	7.8	7.7	8.0	25.98	
3 <i>Social Services</i>	7.9	0.3	11.6	—	35.81	
4 <i>Administration & Miscellaneous</i>	1.8	—	3.2	—	4.88	
5 <i>Kingdom & Local Govts.</i>	4.4	3.0	5.8	2.0	1.50	
6 <i>Police, Prisons, & Immigration</i>	2.2	—	2.1	—	9.17	
7 <i>Reserve</i>	3.0	—	2.0	—	—	
Total ...	33.8	18.2	40.3*	28.9	106.31	60.0
Grand Total (Excluding Defence)	52.0		69.2		150.0**	

* In order to achieve comparability with the other plans, a sum of £2.5m for Defence has been omitted from the First Plan.

** Although the sum total of Central Government projects is £106.31m, it is assumed that actual expenditure will reach a target figure of £90m.

Source: IBRD, *The Economic Development of Uganda*, and the First and Second Development Plans.

The increased allocation to the non-Government public sector suggests a shift to large-scale agriculture. The principal feature, however, of the Government's own proposals was for an increase in the productivity of small-scale farming. In order to do this the Government's aims were:—

- '(1) to induce farmers to adopt new methods which will enable them both to expand acreages cultivated and increase yields per acre;

- (2) to encourage more rational use of land through proper farm planning and an integration of crops and livestock;
- (3) to improve strains of crops commonly grown, with particular reference to high yields and pest and disease resistance; and
- (4) to encourage diversification of agricultural crops so as to impart greater stability to cash incomes and improve nutritive value of the diet of the people' (page 25).

The Plan envisaged a considerable expansion in the tractor hire service together with a scheme to encourage group farming. This represented a major change from the recommendations of the Mission. 'Paradoxically, while the mission feels that low productivity of labor and, in some instances, a shortage of labor is the main drawback to increase output, we foresee no great advantages from mechanization of production on peasant farms for some years to come. Mechanization through the provision of tractors cannot be superimposed on traditional forms of production. This has been demonstrated in those areas where tractors have cleared land, but where a shortage of labor for harvesting, bad timing of operations and high costs of operation have resulted in disillusionment with tractor services' (page 194). Expenditure on mechanisation was to be £336,000 spread over the last four years of the period, a return to the proposals of the Productivity Committee. This was soon revised, though, and together with group farms well over £1m was spent on the service in the two years 1963-5 and the rate for 1965/6 was even greater.

As the Mission had proposed, cotton was the main target for expansion and, together with the increased emphasis on mechanisation, the principal weapon chosen was the same. The Mission proposed a 90% subsidy on insecticide for cotton spraying costing £1.125m. The Government increased this to 100% and the Plan estimated the cost at £1.588m in the hope 'that this will succeed in convincing farmers of the value of spraying, so that the subsidy may be tapered off' (page 26). Actual expenditure during the plan period on the subsidy amounted to £1.1m. It is extremely difficult to estimate how effective this expenditure has been. Actual production at the end of the 1966 season is estimated at about 440,000 bales. Although this is short of the target of 500,000 bales, it none the less represents a large increase over production of 366,000 bales in 1960/1. It is not clear, however, how much of the increase can be attributed to increases in yields and how much to increased acreage.¹

¹ Acreage estimates are notoriously unreliable—preliminary results of the agricultural census indicate that cotton acreages have been overestimated by as much as one-third. Using these acreage estimates to calculate yields there is no evidence of increasing yields over the country as a whole. Yields over the last four seasons 1962-6 are estimated at 257, 245, 257, and 264 lb. per acre compared with an average of 289 lb. per acre for the sixteen years to 1960. On the other hand, a sample survey carried out by the Department of Agriculture to estimate the effects of spraying shows yield increases of 174 lb. per acre.

The policy for Uganda's principal export, coffee, was a very limited one. The quality of robusta was to be improved by provision of drying trays, etc., under the equipment subsidy scheme and there was to be some expansion in arabica acreages plus attempts to improve standards of both cultivation and processing of arabica, particularly by spraying against pests and provision of central pulperies and a research station.

The proposals¹ for diversification crops—tea, tobacco, groundnuts, cocoa—largely followed those of the World Bank which had endorsed the Government's existing programme. Development of the livestock industry was seen as providing the greatest scope for diversification and here again the proposals were much the same, the principal difference being in greater allocations for tsetse eradication and for dams and tanks. Similarly the plan for fisheries remained basically unaltered with the exception of provision for a Fisheries Training School.

Details of proposals in the First Plan for expenditure in the agricultural sector are shown in Table 8 where they are compared with the proposals of the World Bank Mission and the Second Plan.

Table 8

Comparison of Planned Agricultural Expenditure in Development Plans

							<i>World Bank 1961-6</i>	<i>First Plan 1961-6</i>	<i>£m Second Plan 1966-71</i>
<i>Agriculture</i>									
Research	...	...	...	...	...	...	0.14	0.18	—
Extension	...	...	...	...	...	...	0.33	0.01 ^a	0.17
Cotton (insecticide subsidy)	...	...	...	...	...	...	1.21	1.59	1.70
Agricultural & Co-operative Education	...	...	...	...	...	...	0.04	0.74	1.32
Group Farms	...	...	...	...	...	...	—	0.06 ^a	4.29
Tractor Hire	...	...	...	...	...	...	—	0.34	1.50
Ox Demonstration	...	...	...	...	...	...	0.05	0.07	—
Equipment Subsidies	...	...	...	...	...	...	0.79 ^b	0.49 ^b	— ^c
Credit	...	...	...	...	...	...	0.60	—	1.20
Co-operatives	...	...	...	...	...	...	0.11	0.17	—
Agricultural Statistics	...	...	...	...	...	...	0.18	0.07	—
Marketing	...	...	...	...	...	...	0.02	—	—
Forestry	...	...	...	...	...	...	0.13	0.34	0.28
Resettlement	...	...	...	...	...	...	—	0.09	—
Irrigation & Swamp Reclamation	...	...	...	...	...	...	0.11	0.11	—

¹In 1964 the Government produced a Supplementary Agricultural Production Plan which was due for implementation before the end of the First Plan period. Many of the diversification proposals, particularly for tea, were carried over to the Second Plan.

Miscellaneous	...	...	...	...	0.50	0.10	0.25
Coffee	...	...	...	...	—	0.28	2.20
Cocoa	...	...	...	...	—	0.06	0.30
Tea	...	...	...	...	—	0.04	0.91
Tobacco	...	...	...	...	—	0.07	0.46
Groundnuts	...	...	...	...	—	0.02	0.70
Sugar...	...	...	...	...	—	—	4.00
Sisal	...	...	...	...	—	—	0.20
Citrus	...	...	...	...	—	—	0.15
Seed Multiplication...	...	...	...	...	—	—	0.01
Bush Clearing	...	...	...	...	—	0.08	—
					4.21	4.89	19.64
<i>Livestock</i>							
Education & Research	...	...	...	...	0.31	0.61	—
Dispensaries	...	...	...	...	0.26	0.08	—
Tsetse Eradication	...	...	...	...	0.24	0.60	—
Tick Control	...	...	...	...	0.20	0.14	—
Ranching Project	...	...	...	...	0.36	0.20	—
Fisheries	...	...	...	...	0.10	0.12	0.15
Miscellaneous	...	...	...	...	0.33	0.13	0.93
Stock Routes	...	...	...	...	0.10	0.12	—
Dams and Tanks	...	...	...	...	0.25	0.68	0.30 ^d
Research	...	...	...	...	—	0.12	—
Artificial Insemination	...	...	...	...	—	0.09	0.10
Dairy	...	...	...	...	—	—	2.17 ^e
Meat	...	...	...	...	—	—	1.60 ^f
Subsidies	...	...	...	...	—g	—g	0.13
					2.15	2.44	5.38

a Notional only.

b Includes Livestock.

c Equipment subsidies are shown only for Livestock in Second Plan.

d Shown under Water Development in Plan.

e Obtained by subtraction of £0.10m for AI and £0.03m for subsidies.

f Obtained by subtraction of £0.10m for subsidies.

g See Agriculture.

Note: The fact that there is no specific allocation against a particular item does not necessarily indicate that no provision is made for that item; it might be included elsewhere.

Source: IBRD, *The Economic Development of Uganda*, and the First and Second Development Plans.

It is beyond the scope of this study to attempt a detailed evaluation of the projects in the Plan. However, an idea of the extent to which they have been implemented can be gained by considering expenditure details. By the time the Plan was written actual expenditure for 1961/2 was already known and a very good estimate for 1962/3 could be made. In effect, therefore, the estimates in the Plan covered the three-year period 1963–6. Of the 70 projects listed under Agriculture and Co-operatives, Livestock and

Animal Industry, Fisheries and Forestry, only 13 had not begun when the Plan was published. Of these only four had not been started by the end of the Plan period. These were a Fisheries Training School and an Arabica Coffee Research Station which are to be built with British aid during the new Plan period, a Central Co-operative Training Institute which it is hoped the UN Development Programme will support, and a project for developing haplochromis fishery which appears to be in temporary abeyance.

On almost all the projects undertaken expenditure has been slower than was anticipated, with one major and some minor exceptions. Mechanical cultivation and group farms have gone very much faster than was originally planned as the result of a major change in the Government's policy. Tsetse eradication is another field where there has been considerably more expenditure than was anticipated. This is partially a result of increasing costs, of course, but it is also a result of its being given a high priority by the Government.

Table 9 compares planned and actual expenditure for a number of projects selected from the First Plan. The first five of these have been chosen because of their special interest and the remaining six as being typical of the rest. The typical projects will be seen, in general, to have been implemented rather more slowly than was planned.

The expenditure proposals for 1964/5 and 1965/6 were bunched together in the Plan and were at a much lower rate than for 1963/4—£2.7m for the two years together against £2.1m for the single year 1963/4. It is probably more meaningful, therefore, when comparing actual with planned expenditure, to take an average of the figures planned for the last three years. The planned average for the agricultural sector was £1,589,120 p.a., which compares with actual expenditure in 1964/5 of £1,991,905. However, if mechanical cultivation and tsetse eradication are subtracted, the planned figure becomes £1,396,863 compared with actual expenditure in 1964/5 of £997,371. All but £100,000 of the shortfall can be attributed to under-expenditure on the cotton insecticide and agricultural equipment subsidies.

There is one aspect of implementation of the Plan which merits special attention. In the list of projects, notional provision of £10,000 was included for additional extension staff. 'This scheme provides for expanding the extension staff of Agricultural Assistants and Agricultural Officers. This expansion will ultimately provide one Agricultural Assistant for every 1,300 farm units' (page 80). The text of the Plan was, however, more cautious. 'In 1961/2 the authorised establishment of Agricultural Assistants for the Extension Service was by no means filled, but it is hoped to rectify this situation during the plan period by increasing the numbers trained and, if possible, to expand the establishment' (page 27). In fact, the number of Agricultural Assistants and Field Assistants grew from 701 in 1960 to only 709 in 1965.

Table 9

Comparison of Planned and Actual Expenditure for Selected Projects in the First Plan

Project	Planned Expenditure						Actual Expenditure			Estimated Expenditure for 1965/6
	1962/3	1963/4	1964/5/6	1962/3	1963/4	1964/5	1962/3	1963/4	1964/5	1965/6
Cotton Spraying Subsidy	775,000	500,000	250,000	774,393	202,703	22,315	100,000
Agricultural Equipment Subsidy Scheme	85,000	100,000	200,000	62,274	54,197	33,920	50,000
Tractor Hire Service	135,000	67,000	134,000	1,551	563,290	561,129	796,300
Group Co-operative Farming	—	13,000*	50,000*	—	99,783	85,829	238,600
Tsetse Eradication	241,000	196,770	116,000	393,712	148,456	297,576	341,800
Cocoa Development	7,000	13,320	38,600	19,982	22,134	11,957	24,600
Tea Development	3,900	10,000	20,000	8,114	7,752	11,635	—
Coffee Development: Western and Northern Regions	30,000	35,000	56,000	24,990	30,488	27,116	2,700
Co-operative Training Institutes	67,075	20,300	30,500	62,980	31,430	10,187	47,650
Stock Routes	15,050	47,670	60,090	3,368	25,229	49,676	73,400
Artificial Insemination Extension	19,740	21,670	37,960	15,613	20,246	24,620	—

* Notional provision only.

Source: First Development Plan, *Appropriation Accounts*, and Uganda Government.

4 The Second Five-Year Development Plan

The Second Plan covers the period July 1966 to June 1971 and is the first phase of a Fifteen-Year Perspective Programme. 'The basic objectives of the Perspective Programme are—first to transform and expand the base of our economy in order to create a modern economy, and second to double the cash income per head. The Perspective Programme and this Plan are a part of Government policy to adopt an overall Plan rather than lists of fragmented departmental programmes' (page i). It is certainly the most sophisticated plan which has yet been produced for Uganda.

The campaign to develop the economy is to have three spearheads: agricultural development, industrialisation, and expansion and improvement of education and health services. Turning once again to Table 7, it will be seen what this implies in terms of investment. It means first of all increasing the share of the directly productive sector in Central Government expenditure from 20% (both the Bank and First Plan) to 27%. It also means increasing agriculture's share from 17% (Bank) or 18% (First Plan) to 23% of the total.

'The pursuit of increased agricultural output will be combined with a long-term policy of agricultural diversification. There will be special efforts to expand production of tea, sugar, animal products, tobacco, groundnuts and other cash crops which are now of only minor importance. In addition, a major expansion in the cotton crop is planned and considerable efforts are to be put into improving the quality of the coffee crops' (page 15).

The broad strategy for agriculture is to remain the same, then, and given the market opportunities, there can be little doubt that it is right. Doubts arise, however, on looking at the more detailed proposals.

The part of the Government's agricultural policy which must cause the gravest doubts is the speed with which it proposes to push ahead with the mechanisation programme, in spite of the poor results so far. A further 100 group farms, at least, are to be established during the plan period at a cost of £4.29m. The Plan states: 'What stands out is not so much the difficulties but both the rapidity with which many of these have been overcome and the record yields achieved' (page 58). It is true that prodigious efforts have been made to overcome the difficulties and where group farms are well run some relatively high yields have been achieved, but the results to date are far from justifying an expansion on this scale. Cost/benefit ratios have now been worked out for group farms which show that at yield levels which are probably attainable, group farms are far from economically attractive, using any realistic rate of interest in the calculation.

In addition to the £4.29m for group farms £1.5m is to be spent on tractor hire. 'Group farms, though very important, can for the time being only affect a very small proportion of the agricultural population directly. It is important that mechanical methods of cultivation be made available to as many farmers as possible so that they become involved in modern

farming techniques. The tractor-hire service will enable the great majority of farmers who still hold their small individual plots to make use of equipment that could otherwise only be used for large-scale farming. 1,250 more tractors will be available for hiring by the end of the Plan period than there are at the beginning. 800 of these will be stationed on group farms and used both by the group farms and by surrounding farmers; the remaining 450 will be hired to farmers from special tractor-hire stations' (page 59). No mention is made in the Plan, though, of the extent to which the Government will continue to subsidise tractor hire; at the present rate of subsidy it will be running at close to £1m by the end of the plan period unless there is an enormous improvement in the efficiency of the service before then. The economics of mechanisation have been commented on by the recent Committee of Inquiry into the Cotton Industry. 'If the Tractor Hire Service were to break even it would have to result either in an average yield increase of 793 lb. of seed cotton per acre of mechanically cultivated land or in an additional 61,562 acres producing, on average, 400 lb. of seed cotton per acre.'¹

Targets for the output of major products in the rural sector are shown in Table 10. Of these, cotton is one of the key targets for the achievement of overall plan goals. In view of the reduction in the price of cotton, however, the target of 575,000 bales seems a very ambitious one. It is proposed to achieve this expansion by (a) control of pests, (b) the use of fertilisers, (c) the introduction of higher yielding varieties, and (d) the adoption of more modern cultivation techniques. The most important of these will probably be the control of pests. Whilst doubts have been cast earlier in this chapter on the effectiveness of the insecticide subsidy in the past, it should be noted that a number of improvements in the programme are now proposed. In particular, insecticide is to be much more easily available than it has been in the past and the price to the farmer is to remain constant.

The Plan accepts that it will be unrealistic to expect Uganda's quota under the International Coffee Agreement to grow faster than world demand, say 3% p.a. Since arabica fetches at least £90 per ton more, acreages of robusta are to be cut back at the expense of arabica, although attempts are to be made to improve the quality of the former, principally by the provision of credit for forty new wet-processing plants. A credit fund is to be established for the production of alternative crops tied to the uprooting of an equivalent acreage of robusta. On the other hand, there is to be rapid expansion in production of arabica to be achieved by the treatment of existing acreages to control disease, pests, and fungi and the planting of new more resistant trees and also by a considerable expansion of coffee acreages in Western Uganda. Much of the investment of £2.2m will only bear fruit, of course, after the end of the Plan period.

¹*Report of the Committee of Inquiry into the Cotton Industry 1966*, Government Printer, Entebbe, 1966, page 17.

Table 10

**Gross Output* of Major Products from the Rural Sector—
Second Plan**

Product	Unit of Output	1966		1971	
		Quantity	Value** £m	Quantity	Value** £m
Robusta coffee	Th. tons	190	19.9	240	18.9
Arabica coffee	Th. tons	10	2.9	20	4.9
Cotton lint	Th. tons	77	16.8	103	19.8
Seeds	Th. tons	170	2.5	230	3.4
Sugar	Th. tons	115	4.7	230	9.3
Groundnuts	Th. tons	154	6.4	224	9.6
Tea	Th. tons	10	3.4	19	6.3
Tobacco	Th. tons	4	0.6	11	1.4
Soft-fibres	Th. tons	—	—	10	0.6
Cocoa	Th. tons	}	negligible	3	0.5
Sisal	Th. tons			2	0.2
Rubber	Th. tons	—	—	—	—
Other crops	Th. tons	—	58.0	—	67.8
Wood	Cu. ft.	5.1	0.6	5.4	0.7
Sub-total, Agriculture and Forestry		—	115.8	—	143.4
Meat	Mil. lb.	255	12.0	315	14.6
Milk	Mil. gal.	79	16.8	105	21.0
Hides and skins	Th. tons	3.9	1.0	4.3	1.3
Animal by-products	Th. tons	—	—	3.1	0.1
Eggs	Mil. doz.	16.5	1.7	21	2.2
Fish	Th. tons	76	3.1	104	4.2
Honey	Mil. lb.	}	negligible	11	}
Wax	Th. tons			0.3	
Sub-total, Animal Industry			34.6		43.8
Grand Total			150.4		187.2

*Including subsistence.

**Valued at locally processed stage, i.e. cured coffee, ginned cotton, white sugar, etc. 1966 forecast of value based on 1965 prices: 1971 targets based on forecast 1971 prices.

Source: Second Development Plan.

The four main crops for diversification are sugar, groundnuts, tea, and tobacco. To date sugar has been grown on two private estates with a few outgrowers, but now the Government is to establish its own estates which will be combined with equal acreages of outgrower sugar. The first of these in Bunyoro is to have Indian equity participation. The plans for increasing groundnut production are somewhat similar to those for cotton. In addition

the value of the crop is to be increased by establishing a number of grading units so that the better nuts may be sold at a higher price. Tea production is to double by 1971 and there will, of course, be tea in the ground at that time which will only come into bearing later. Much of the increase will be on the publicly-owned estates of Agricultural Enterprises Ltd., but there is to be a large increase from 3,975 to 13,666 in the acreage cultivated by small-holders. Total capital investment during the Plan period will be £4.3m. Output and exports of both flue-cured and fire-cured tobacco are to be increased considerably. At the present internal price, which is twice the world price, flue-cured gives a very high return to the grower. Fire-cured on the other hand does not. Efforts are to be made to increase yields in the hope of making the returns more attractive.

Marketing presents something of a problem for each of these crops. At present Uganda exports sugar within East Africa at a much higher price than the world price, but both Kenya and Tanzania are expanding their sugar production. The Plan remarks: 'The planned expansion of sugar is initially meant to supply the East African market but after the Plan period it is expected that some sugar will be exported' (page 66). The confectionery market for groundnuts is a limited one, and, therefore, the scope for increasing the value of the crop by grading is limited. However, the oil market should remain buoyant and, of course, a large quantity of groundnuts is grown for food. Since the East African market for tobacco is saturated, any increase in production must be disposed of overseas. The export prospects have improved considerably recently in the light of the Rhodesian situation and also the entry into the Uganda market of another buyer, Rothmans. Whilst world demand for tea is likely to rise fairly rapidly, there is a danger of a very rapid increase in the production side. Hence, although short-run prospects for tea look very favourable, in the long-run they are not so attractive.

As in the previous Plan, the livestock industry is to be a major target for expansion. The main means of achieving this will be through control of diseases. There is to be a major campaign against East Coast fever and other tick-borne diseases through area schemes for dipping and spraying, and a special Animal Husbandry Unit will be formed to man these tick control projects and to carry out extension work in the dipping areas. The programme for eradication of the tsetse fly will be continued and expanded, but the follow-up to this is covered in the Plan only by the bald statement that the 'land cleared of tsetse will be utilized for agricultural and livestock projects' (page 71). None of these projects is specified and as far as can be seen no financial provision is made for them, but presumably the proposed UDC ranches in Acholi, Lango, and Karamoja will be on tsetse-cleared land. In addition, 25 ranches a year are to be established on the Ankole Ranching Scheme and the UNDP is to assist in an Investigational Beef Production Unit in the Aswa Valley in Acholi.

The output of milk is expected to increase from an estimated 70m gallons in 1965 to 105m gallons by 1970/1. At present only one-twentieth of the output is marketed in urban areas but the marketable surplus should increase considerably over the plan period. None the less, it is not expected that imports of milk and milk products will have been substituted by home production until the end of the next decade. In order to raise milk yields it is proposed to import high-quality exotic cattle for cross-breeding with local animals and to introduce better management. In tick control areas there will be a special programme of artificial insemination to improve the quality of local animals. It is proposed to establish a hundred new dairy farms each year for ten years and, in addition, to provide loans and credit for dairy co-operatives, calf-rearing stations, and individual dairy farmers.

Other cash crops to receive attention during the plan period are cocoa and rubber—both of which were once grown by expatriates who subsequently went out of business—citrus, sisal, and soft fibres. Livestock industries scheduled for development are pigs, goats, sheep, hides and skins, animal by-products, poultry, and bee-keeping.

It is proposed to increase the catch of fish from 70,000 tons in 1965 to 104,000 tons in 1971. 'During this Plan period facilities at landings will be improved and access roads constructed; subsidies will be given to fisheries for the purchase of boats and fishing equipment, expert staff will be provided to teach fishermen more modern techniques and a fisheries training school will be set up. In addition a fish-canning factory will be established, and a large commercial boatyard set up' (page 74).

The supporting services for increasing agricultural productivity—extension, agricultural education, credit, research, marketing, and co-operatives—have all been discussed in Chapter 3. There is to be a complete reorganisation of the extension services. Specialist staff for particular crops such as coffee, tea, cocoa, and tobacco will continue as before, but the general extension service is to be co-ordinated with the credit schemes outlined on page 45. This shift in policy is to be accompanied by a dramatic increase in the number of extension workers. At present there is one extension worker for every 2,000 farmers approximately; it is hoped that by the end of the plan period there will be one to every 1,000—1,500 farmers. It is proposed, in addition, to establish ten new District Farm Institutes during the next five years.

The proposals for marketing involve the establishment of a number of marketing boards. An Agricultural Produce Marketing Board for minor crops, a Dairy Board, a Meat Commission, a Sisal Board, a Poultry Marketing Board, and a Sugar Development Authority are all to be set up in the Plan period and will be in part or exclusively concerned with marketing. No mention is made, however, of the policies which the boards are to follow and it seems doubtful whether a bureaucratisation of the existing arrangements will prove an advantage in all cases.

A peculiar omission from the Plan is any discussion of agricultural research. Mention is made of research to improve fishing techniques and of the establishment of a special tea research station, but surprisingly not the arabica coffee research station. Presumably any allocation for research will have to be found from the miscellaneous provision of £250,000.

The criticisms of the agricultural proposals in the Plan which have been made in this section are, with one major exception, of only a minor nature. The purpose of these criticisms is not to denigrate a very good plan, but to call the attention of aid donors to the sort of question which they will need to ask if they are effectively to aid agriculture in Uganda during the next few years.¹

5 Plan Preparation and Implementation

Preparation of the Second Plan took some two years. Preliminary studies of the structure of the economy and its long-range growth potential were begun in early 1964. The implications of the long-range targets were then worked out in some detail using a mathematical model of the Ugandan economy devised by two economists at Makerere University College. From this, provisional sectoral targets were worked out and also approximate estimates of capital requirements in each of ten sectors. Working parties were then set up to make a specific study of each sector and subsequently two further working parties were established to cover finance and employment. Three of the working parties were assigned to agriculture: small-scale agriculture and fishing; livestock; and large-scale agriculture, irrigation, and forestry. Each working party had about 12 members, drawn from Government, the University, and also from the industry.

On the basis of the reports of the working parties, a draft plan was drawn up for submission to the Planning Commission.² The draft was also studied by a panel of international experts who, at the request of the Government, visited Uganda in July 1965. The panel, with some small reservations, endorsed the draft, in both its overall and its sectoral proposals. Summaries of the working parties' reports were then considered in detail by the Planning Commission and, subsequently, the Cabinet. The draft was then returned to the Central Planning Bureau for the text to be written. There was, however, a step which was missed. After the Cabinet had reframed the draft in the light of its political priorities, the working parties were not reconvened to work out the technical implications of the changes. The

¹See also D. Foster Watt, 'Work for Progress and the Recent Design of Agricultural Development Policy in Uganda', *East African Economic Review*, Vol. 2 (New Series) No. 2, December 1966.

²The chairman of the Planning Commission was the Prime Minister. Membership consisted of eight other ministers, including both of those responsible for agricultural ministries, plus the Director of Planning and the chairmen of the Uganda Development Corporation and the Uganda Electricity Board.

seriousness of this omission will only come to light as the Plan is implemented.

The Plan remarks: 'It was, of course, not to be expected that every aspect of every single project which will be carried out in an ambitious five-year plan such as this could, or should, be planned, costed and evaluated in advance during the plan preparation. Much of this work is better done as a plan progresses, not only because it takes a great deal of time but also because many details have to be changed to suit changing circumstances' (page 43).

One of the changing circumstances will be the willingness of aid donors to support particular projects. If they are concerned to make their aid as effective as possible, they will only support projects which have been properly planned and the question then arises of the extent to which donors should participate in the planning process and the nature of this participation. It is for this reason that details of how the Plan was written have been set out above. It has been suggested that donors should be involved in the planning process from the very beginning in order to avoid turning the Plan upside down when a lot of work has gone into producing a final document. To a certain extent donors already are involved from the beginning. Projects which are included in the Plan are not dreamed up overnight; they have usually been in preparation and under discussion for some time. If the donor has aid representatives who are in constant touch with the technical departments, they will be aware of most of the projects which are going into the draft plan. They will be able to advise on the likely reaction of their own Government and, by keeping it informed, allow it to do some forward planning on its own account.

The international panel which considered the draft plan consisted of planning economists from India, Poland, Ghana, and the Economic Commission for Africa, none of whom is an important donor in Uganda. Whilst it is obviously useful to bring in completely independent experts, it would also have been very valuable to have invited representatives of the principal donors to comment on the broad strategy of the Plan, if not on particular projects. This would avoid having to make major changes in the Plan at a later date, because parts of it could not be financed. It would obviously be impossible to get donors to commit themselves on what they would finance before the Plan was published, if only because of the amount of time this would take. And after all, one of the main reasons for preparing a development plan is to submit it to prospective donors of aid.

If economic growth is the over-riding aim of a Government it is important that there should be a vested interest in development at a senior level. At the time the Plan was prepared, the Planning Bureau was part of the Ministry of Planning and Community Development. The Minister had his office in Kampala, however, whilst the Bureau had its own political head, the Director of Planning at Entebbe. It had, therefore, considerable aut-

onomy. Subsequently, a new Ministry of Economic Planning and Development has been created and the Director of Planning raised to ministerial rank. Added to the fact that the Prime Minister (now President) is chairman of the Planning Commission, this means that development gets a strong representation politically against more sectional interests.

There has been talk for a number of years of setting up a planning unit in the Ministry of Agriculture. This has now materialised and it is proposed also to set up planning units in a number of other ministries, including the Ministry of Veterinary Services and Animal Industry. Whilst it is important for the Planning Ministry to have staff who have a thorough knowledge of the agricultural problems and potential of the country, which they can only get by working closely with the agriculture and livestock ministries, it is even more important that technical staff who are responsible for preparation and execution of development projects should be influenced to think in economic terms. If maximum use is to be made of scarce resources, decisions must be taken as much as possible on economic grounds. Preparation of projects must therefore be a joint effort of those on the one hand who are familiar with the technical problems involved and those on the other who are able to consider the costs and benefits in a wider framework than that of Government accounts.

Planning staff in the technical ministries are perhaps even more important at the implementation stage than during preparation of the plan. In developing countries—as in some others—implementing a development plan is often the weakest part of the process. Until the establishment of the Planning Bureau in 1963 there was in Uganda no centralised body responsible for the implementation of the Plan. However, the importance of implementation is remarked on in the Second Plan and it will be interesting to see how effective the Planning Ministry will be in this respect. The fact that the working parties included such a wide variety of expertise suggests that there should be a high degree of commitment amongst those responsible at a senior level for implementing the Plan, both within and outside the Government service. The success of the agricultural proposals in the Plan will depend to a large extent, however, on the effectiveness with which a sense of involvement can be carried over to the vast mass of the population.

An aspect of plan implementation which is of particular importance to agriculture is the provision of adequate recurrent finance. Much of the expenditure which stimulates agricultural growth is of a recurrent nature and appears in the Government's recurrent rather than its capital budget. The need to ensure that capital expenditure now will not result in an unacceptable recurrent burden in the future is obvious. What is perhaps not so obvious but equally vital is the need to ensure that the mere fact that an item of development expenditure appears in the recurrent budget should not lessen its chances of gaining Ministry of Finance approval when

the time comes for actual expenditure to be incurred. When there is a strict ceiling on the recurrent budget, there can be no doubt that this happens. The failure to expand the size of the extension service during the First Plan has already been commented on in this chapter. One solution would be to transfer all development items from the recurrent to the capital budget, but in a rapidly developing country the distinction between the two types of expenditure is largely an artificial one and a more appropriate solution would probably be to merge them into a single budget. In either case it is a subject in which the Planning Ministry should take a keen interest.

5—Overseas Aid

1 Britain

In the British aid programme a clear distinction is made between capital aid and technical assistance. It is convenient, therefore, to preserve this distinction in discussing British aid, but this is merely for convenience and is not to be taken as implying that the two should necessarily be separate.

Capital Aid

Apart from a small amount from the USA, Britain was the only source of official external capital aid to Uganda prior to independence. Up to March 1958 only £393,000 had been spent on Colonial Development and Welfare (CD&W) Schemes in the agricultural sector compared with £1,107,000 in Tanganyika and £5,486,000 in Kenya where the Swynnerton Plan for the intensification of African agriculture was well under way, but the buying out and resettlement of European-owned farms had not yet begun. Subsequently £67,200 was made available for District Farm Institutes, making a total CD&W expenditure on agriculture in Uganda of less than £½m, although a certain amount was also provided for related expenditures such as on roads and aerial photography. In addition, almost £3m was provided for the University, of which some £50,000 can be identified as being directly for agriculture. Grants for research in Uganda are not included in the figures above and accounted for £288,209 during the period 1946 to independence, agriculture probably accounting for about half of this.

Exchequer loans amounting to £2.75m were provided under Section 2 of the Colonial Development and Welfare Act for the First Development Plan and any unspent sums were carried over after independence. These sums and a development grant of £1.5m provided at independence were not earmarked for any specific purpose and could be used for imports from Britain or for local costs. Another feature of the independence settlement was a Commonwealth Assistance Loan of £2.4m which was tied to imports of goods and services from Britain. The difficulties of using the latter were so great that Britain had to alter the terms of the loan¹ in order that it could be utilised. One of the principal uses for the loan was importation of tractors for the Group Farming Scheme.

In 1964 Britain offered Uganda a further development loan of £6m which has subsequently been made interest-free. Like the CD&W funds, but unlike the other British loans and grants, this loan was tied to specific

¹See *Aid in Uganda—Programmes and Policies* for detailed terms and conditions of this and other loans and grants.

projects. It was intended to cover the period until the end of the First Plan, June 1966. In the event, very little of the £6m had actually been spent by that date and the projects to be financed became part of the Second Plan. Disbursements were so slow that in February 1967 the British Government agreed to an extensive review of the list of projects for which the loan was to be used. Both original and revised lists are shown in Table 11.

Of the £1.56m allocated to agriculture in the original loan, only £234,000 was for local costs, whereas almost £1.3m was for imports of tractors and heavy machinery. To a large extent, of course, this indicates the priorities of the Uganda Government, but it also illustrates the difficulty of using import-tied aid for agricultural development. In the revised allocation for agriculture the proportion for local costs is much larger. When the loan was revised £ $\frac{1}{2}$ m was switched to augment an earlier loan for compensation payments to retiring British civil servants, thus leaving £5 $\frac{1}{2}$ m for development. The projects listed in Table 11 total almost £1m more than this—which will allow for underimplementation. In particular the sisal and sugar projects have been postponed. Of the agricultural projects in the original loan only two were actually under way by the end of June 1966—mechanised farming and veterinary dispensaries.

Mechanised farming is one of the most interesting projects in Uganda today if only because it is the most contentious. The Government is obviously deeply committed to it—Dr. Obote has referred to it as ‘. . . one of the most dear schemes we have for the development of the economy of this country’.¹ The United States leaves group farms strictly alone and the Norwegians have only recently been talked into posting Peace Corps volunteers to the mechanisation programme again after their initial disillusionment. The British, on the other hand, are giving considerable support in terms both of capital equipment and personnel, although the two are supplied independently.

By the end of 1964, 350 British tractors and implements had been delivered against the Commonwealth Assistance Loan and subsequently 220 more were ordered against the £6m interest-free loan. In addition, under the revised loan Britain will supply equipment and implements for the tractor units and heavy equipment for bush-clearing and Rome ploughing, worth respectively £212,000 and £315,000. The latter will be used to open up new group farms and undertake the initial land preparation.

British capital assistance for mechanised farming has been provided, therefore, in three stages. At the first stage the nature of the Commonwealth Assistance Loan was such that the feasibility of the project was not considered. Before the second stage an investigation was conducted,

¹*Uganda Argus*, 14 March 1966.

but this appears to have concentrated more on whether the tractors could be kept running rather than the economics of their use. By the time the third stage was reached sufficient experience had been accumulated in Uganda to allow a complete reappraisal of the group farm project, but the mechanism whereby this could be used did not exist.

Table 11

British £6m Development Loan

£ thousands

					Original Loan		Revised Loan	
					Loan	Import content	Loan	Import content
<i>Agricultural</i>								
Coffee Research Station	...	...	...	...	79	19	79	19
Veterinary Dispensaries	...	...	...	...	101	12	101	12
Fisheries Training School	...	...	...	...	95	10	105	10
Sisal Development Scheme	...	...	...	...	416	416	416	416
Mechanised Farm Scheme (tractors)	...	...	...	...	350	350	350	350
Sugar Development Scheme	...	...	...	...	520	520	520	520
Groundnuts Grading Scheme	...	...	...	...	—	—	84	39
Pilot Irrigation Schemes	...	...	...	...	—	—	110	32
Equipment for Tractor Units	...	...	...	...	—	—	212	123
Flue-cured Tobacco Scheme	...	...	...	...	—	—	163	50
Bush Clearing and Rome Ploughing Units	...	...	...	...	—	—	315	315
Exotic Cattle	...	...	...	...	—	—	91	91
Sub-total	...	...	...	...	1,561	1,327	2,546	1,977
Kigezi Water Supply	...	...	...	...	173	107	173	107
Borehole Construction Units	...	...	...	...	425	425	360	360
Borehole Maintenance Units	...	...	...	...	—	—	120	120
Access Roads Construction Units	...	...	...	...	566	566	566	566
Contribution to Road Project (total cost £3.4m)	...	...	...	...	2,830	1,340	392	258
Entebbe Airport Improvements	...	...	...	...	355	85	561	200
Teleprinter Circuits	...	...	...	...	73	73	73	73
Film Processing Equipment	...	...	...	...	17	17	17	17
Kampala Primary School	...	...	...	...	—	—	85	20
Police Housing	...	...	...	...	—	—	200	95
Makerere University College	...	...	...	...	—	—	200	35
Printing Department Extension...	...	...	...	...	—	—	255	205
Housing at Institute of Public Administration	...	...	...	...	—	—	40	7
Uganda Technical College	...	...	...	...	—	—	57	15
Hospital Equipment	...	...	...	...	—	—	47	47
Government Vehicles	...	...	...	...	—	—	485	485
On-carriage Costs	...	...	...	...	—	—	300	—
Crown Agents Charges	...	...	...	...	—	—	16	16
Total	...	...	...	...	6,000	3,490	6,493	3,603

Due to postponement of some of these schemes the loan is shown as over-allocated.

Source: Ministry of Overseas Development.

The first group farms were started as the result of a ministerial edict to cut the red tape—as a result they show all the signs of having begun in a hurry. There was no pilot project; the programme began with 19 group farms in the first year. It began two years before a planning section was set up and selection of the sites was done in a haphazard way, usually by young and inexperienced District Agricultural Officers. The local people were generally suspicious of the Government's intentions and it was the worst land and thickest bush which was given. It is estimated that only 11 of the first 19 farms had suitable soils and only two of them were properly laid out. The initial size of holdings was too large so that farmers found that they could not pick all of their cotton. Group farms were started before the Department had its own bush-clearing unit and bush-clearing had to be done on contract. The high cost of transporting equipment to the site caused too much land to be cleared in the first instance so that there is now a bush-regeneration problem on land which was cleared early, but which has not yet come into use.

These problems were the result of the group farming scheme getting off to too hasty a start without adequate planning. Now that a Land Planning Unit has been set up these have mostly been sorted out. But of the 19 original farms only six continued as full group farms; the rest being considered as suitable only for 'consolidated tractor hire'. There are, however, other problems which remain. A crash course for the training of tractor drivers had to be initiated—there were only 380 tractors in the entire country before the scheme began and these were mostly on estates. The amount of time which each trainee spent actually driving a tractor was about enough for him to get his road licence and standards of operation were very low—the UN project at Kasese refused to continue using the tractor hire service and trained their own driver. Standards are now rising, though, because the better managers are training their drivers on the job and hence the pool of competent operators is growing. Also, a new school for training drivers and mechanics is to be set up with Russian assistance. Maintenance, surprisingly, does not seem to have presented too serious a problem, although there has been criticism that maintenance problems have been exacerbated by there being too many makes of tractor in use.

A few group farms are very successful—those with good management, a satisfactory location, and a good committee with members willing to co-operate. On them, yields of cotton have averaged as much as 1,000 lb. per acre compared with a national average of 300–400 lb.¹ and there have been similar increases in yields with other crops. On at least one group farm—possibly the best one—members cleared shs 2,000/- to 3,000/-

¹Preliminary results of the Agricultural Census indicate that 500 lb. per acre might be nearer to the national average. One of the implications of this is that yields on the poorer group farms have *not*, in fact, been raised significantly above the national average.

each last year, exclusive of the cost of hand labour. Even on the poorer ones there has been an increase in yield, but it is dubious if this is sufficient to justify the amount of money which the Government invests in them. Original bush-clearing and the construction of water supplies and roads are free, in addition to the continuing subsidy on tractor hire. As one disillusioned farm manager put it, 'the bad ones lose money for both the farmer and the Government, whereas the good ones just lose money for the Government'.

The only other agricultural project in the loan to have been started by the middle of 1966 was the one for veterinary dispensaries. The First Development Plan included estimates for eight veterinary dispensaries p.a. in each of three years at a cost of £3,000 each. They are very simple and consist of a laboratory, store, office, water supply, fencing, a permanent crush, and housing for the Veterinary Assistant in charge. Eight were scheduled for completion in 1964/5 but, owing to delays in negotiation of the loan agreement, authorisation for expenditure was only received by the Veterinary Department late in the financial year and an attempt was made to complete them in the remaining four months. They were put out to private contract and went up in a great hurry with the result that defects in their construction soon began to appear. A further 16 were started during 1965/6.

Both the Coffee Research Station and the Fisheries Training School were scheduled for construction in 1963/4 and have been waiting for finance since then. Work is due to begin on the Fisheries School in the 1966/7 financial year, but the Research Station continues to be delayed by difficulty in finding a suitable plot of land. A similar type of project which is still seeking finance is the Co-operative College. It is often supposed that it is easy to finance buildings, particularly for such prestigious institutions as schools and colleges. In practice, however, it does not necessarily work out this way. The import content of buildings is small and their recurrent implications probably frighten the local Treasury as much as overseas donors.

The new Coffee Research Station will be located in Bugisu and will be concerned exclusively with arabica. There is a small arabica coffee research station already in existence but it has long outgrown its present site and is at too low an altitude to be representative. It will continue to operate as an out-station of the new one. The establishment of the station has been planned for a long time and is consistent with the Government's policy of switching the emphasis from robusta to arabica.

Up to the time of writing there has been no formal institution for training people for the fishing industry. The Fisheries School is to provide a two-year course for personnel of the Fisheries Department plus courses for fishermen, marketers, filleters, factory managers, etc. During the time since estimates were first drawn up the estimated cost of the School has increased from £74,000 to £93,000, although it is the former sum for which

the UK was originally asked and which had been promised. When the loan was revised Britain agreed to meet the extra cost and also to finance some other modifications. It is, however, by no means clear how the Fisheries Department will manage to staff the School when it is built. They are hoping to obtain the services of a principal and two instructors from Canada, but nothing definite has yet been arranged.

The sisal and sugar development projects were both agreed in principle only. They are types of scheme for which it is rather more easy to find finance from overseas governments since they involve importation of heavy machinery for land preparation. It is, however, generally agreed by the technicians involved that this particular sort of equipment is better imported from the USA than from Britain. This is the exact counterpart of the situation described later where US vehicles are imported as part of an aid project, although British vehicles would be preferred. In neither case is the price of the article in question—but its suitability for conditions in Uganda. The sisal project is intended to be developed with the co-operation of local private enterprise and there is some doubt yet as to whether it will go ahead. The sugar project is a joint project between the Uganda and Indian Governments with the Indian Government taking an equity investment and putting in its share in the form of processing machinery, valued at £2m. The Uganda Government has, however, found difficulty in tying together the many ends of this project and it has been postponed.

The flue-cured tobacco scheme is to be located in Acholi and Lango and will be similar to the BAT master-growers' scheme in West Nile, which is described on page 30. Its success will depend to a large extent on the amount of supervision which can be given. The exotic cattle are 316 Jerseys, Friesians, and Aberdeen Angus, which are to be used in the development of the dairy industry. Most of them are in-calf heifers and they have been sent to Government livestock stations, where they will help to produce higher-quality stock for issue to farmers. The groundnuts grading scheme is intended to increase the total value of the groundnut crop by selecting the better nuts for export at a higher price. There will be two grading units, one in Busoga and one in West Nile.

The remaining agricultural project in the revised loan has developed out of a British technical assistance project. It is proposed in the Second Plan to establish four pilot irrigation schemes which were recommended by a British-financed survey of the feasibility of irrigation in Uganda. Initially Britain will finance two of these. One of them is to be on one of the oldest-established group farms at Labori. This might show the way to putting group farms on a sounder economic footing, as well as providing experimental data on irrigation at a lower cost than if unoccupied land were to be developed. An interesting feature of this project is that the loan will cover recurrent costs for two years as well as capital costs.

Technical Assistance

As well as being the most important provider of capital aid Britain is by far the most important donor of technical assistance. At 31 December 1966 there were 170¹ British aid personnel serving in a technical capacity in agriculture in Uganda as well as a number in administrative posts in the agricultural ministries. This figure compares with less than 50 supplied by all other countries. Another interesting comparison is with the number of British technical assistance personnel in education—there were 633¹ of them.

Almost all of the staff referred to above are supplied through the Overseas Service Aid Scheme (OSAS), whereby the Uganda Government employs them in established posts at a local salary rate and the British Government adds to it an 'overseas addition'. In addition, Britain pays certain allowances such as education allowances and shares the cost of passages for the officer and his family with the Uganda Government. This scheme has two very great advantages from Uganda's point of view—flexibility in operation and automaticity in recruitment. Because OSAS officers are appointed to posts in the Uganda Government service, they are subjected to the same rules and regulations as Ugandan employees and, in particular, can be posted wherever the need is greatest in accordance with their professional capabilities. If there is a sizable proportion of expatriates in a department, this amount of flexibility is essential to its efficient management, since there is always considerable fluidity in the staffing position. Recruitment is made simple, because of Britain's agreement in principle to fill any established post. All that is necessary, therefore, is to fill in an application in the knowledge that the post will be filled, provided that there is a suitable applicant. The fact that it is not necessary to go through the process of getting a post agreed before looking for someone to fill it speeds recruitment considerably.

Technical assistance personnel are also provided through the Special Commonwealth African Assistance Plan (SCAAP). Their numbers are, however, very few, there being only one SCAAP agricultural expert in Uganda as at 31 December 1966. SCAAP is the basic scheme whereby Britain provides advisory, as distinct from operational, personnel. Advisory personnel cannot be provided to fill established posts in the Uganda administration, but their salaries, passages, etc. are paid entirely by Britain, Uganda being required to provide only housing, transport, etc. SCAAP is also the instrument through which Britain makes consultancies available to Uganda. One of these, a survey of the feasibility of irrigation, has already been referred to above. Another was rather less directly concerned with agriculture, being a survey of feeder roads needed to open up the Mount Elgon area for development.

¹These figures are estimates provided by the Ministry of Overseas Development.

In addition to the assistance provided directly to Uganda, Britain also makes a considerable contribution at the regional level, by covering half the cost of the research organisations¹ of the East African Common Services Organisation (EACSO). This provision includes some 45 British agricultural scientists,² a very large proportion of the professional staffs of these organisations. In 1965/6 the cost to Britain of natural resources research, which includes Meteorological Research but does not include the East African Trypanosomiasis Research Organisation, was £231,000.

A number of students and trainees come to Britain to study agriculture. Compared, however, with students of other subjects their numbers are small. At 31 December 1965 there were four agriculture students from a total of 106 Uganda students financed by the British Government and seven trainees from a total of 53. Since Uganda is fairly well supplied with training facilities for agriculture, their fewness is not surprising.

Commonwealth Development Corporation

CDC has made a notable contribution to agricultural development in many parts of the Commonwealth. Its role in Uganda, however, has not as yet been large, particularly in agriculture, possibly because the part which CDC plays in other Commonwealth countries is filled so well in Uganda by the Uganda Development Corporation. CDC has invested in agriculture in Uganda directly through Agricultural Enterprises Limited and indirectly through the Development Finance Company of Uganda (DFCU).

The tea industry has been the principal beneficiary. CDC has made a loan of £460,000 to AEL for two of its subsidiaries: £360,000 to the Mwenge Tea Company for a factory and plantation development, and £100,000 to the Bugambe Plantation Company for a factory. The interest rate on these loans is $7\frac{1}{2}\%$ which is the same as the rate at which loans have been made for the same purpose by commercial banks. CDC has also undertaken a thorough examination of the possibilities for a large expansion in small-holder tea-growing and will participate in a project with the International Development Association based on its report. The Corporation is expected to lend £301,000 for field development to the Uganda Tea Growers' Corporation and has also undertaken in principle to contribute up to half of the finance required for each factory (subject to a maximum overall commitment of £900,000). The CDC is one of the founder members of DFCU, in which it has invested half a million pounds as well as providing management. DFCU has in turn invested

¹East African Agriculture and Forestry Research Organisation, East African Veterinary Research Organisation, Tropical Pesticides Research Institute, East African Marine Fisheries Organisation, East African Freshwater Fishery Research Organisation, and East African Trypanosomiasis Research Organisation.

²As at 31 December 1966.

£25,000 in AEL and £100,000 in AEL's subsidiary tea estate, Muzizi. This represents roughly 10% of the amount committed by DFGU by the end of 1966.

2 United States

The United States is the only donor of aid to Uganda which attempts to provide a neat package of capital assistance, expert personnel, and training facilities all for the one project. None the less, the success of many US aid projects depends upon the availability of OSAS staff from Britain. The US Agency for International Development (AID) concentrates its efforts on agriculture, education, and public administration, which it considers to be key sectors for economic development in Uganda. All the aid for agriculture to date from the USA has been in grant form except the loan for the Ankole Ranching Scheme and the \$2m loan to UDC. A list of agricultural projects financed to date by the USA is given in Table 12.

Table 12
US Aid to Agriculture

								\$ thousands
<i>Actual financing June 1953 to June 1966</i>								
Agricultural Education	...	...	...	...	...	...	...	1,126
Agricultural Extension	...	...	...	...	...	...	...	887
Agricultural Co-operatives	...	...	...	...	...	...	...	1,675
Livestock Development	...	...	...	...	...	...	...	1,019
Tsetse Eradication	...	...	...	...	...	...	...	382
Credit	...	...	...	...	...	...	546	
of which agriculture, say	...	...	...	...	...	...	...	200
Uganda Development Corporation	...	...	...	...	...	...	2,000	
of which agriculture, say	...	...	...	...	...	...	...	500
Total								5,889

Source: US AID Mission to Uganda.

Agricultural Credit

Aid to Uganda from the USA began in 1953 when £100,000 in sterling repaid by Britain to the United States was granted to Uganda for the creation of a revolving fund to provide short-term loans to increase agricultural and industrial productivity. Only 30% of this sum could be used for agriculture and it was hedged with other restrictions, one of which was that it could not be used for cotton production or processing, with the result that borrowers were very slow to take up the money. In 1958 some of the conditions were relaxed and loans were taken up more quickly. Subsequently the US fund was increased to £195,000, which together with the African Loans Fund of £150,000 was administered by the Uganda Credit and Savings Bank. The repayment position, however, quickly

deteriorated and in 1960 the scheme was replaced by the Progressive Farmers' Loans Scheme and a little later the Co-operative Credit Scheme.

A loan under the Progressive Farmers' Loans Scheme was a character loan made to a 'progressive' farmer, i.e. one who 'actively follows the advice and puts into practice the instructions given to him by the Department of Agriculture or the Department of Veterinary Services and Animal Industry, for the proper management of his farm'. In addition, the farmer was expected to offer such security as he was able in the form of crops, livestock, or chattels. A case study¹ of the Progressive Farmers' Loans Scheme indicates that the majority of progressive farmers' loans in the district studied were not productive. Of the loans made to the progressive farmers who were sampled only 10% were paid out in kind rather than in cash and 30% of the total were definitely not used for the purpose for which the loan was made.

The Department of Agriculture objected to policing loans on the grounds that this would prejudice their relationship with the farmer. The Uganda Credit and Savings Bank on the other hand had no staff available for the purpose and hence the loans were, in effect, virtually unsupervised. Loan applications were vetted by the District Agricultural Officer, but there were usually too many for him to give each one much attention. Recipients of loans often had difficulty in getting spares and repairs for the equipment which they bought with their loans, and the figure of 30% for misallocated funds given above takes no account of equipment which was bought and then not used. These difficulties appear to be mainly the result of lack of supervision. Where there was better supervision, for example in Teso, the Scheme was more successful. Because of shortage of funds, the Progressive Farmers' Loans Scheme was suspended in February 1964.

The Co-operative Credit Scheme has been much more successful. Under this scheme small seasonal loans are made for crop production. Loans are made only to co-operative society members and the society rather than the individual member is responsible for repayment. Since new advances to societies are conditional on repayment of the previous season's loan, the rate of default is low—well below 1%. Where possible, loans are made in kind rather than in cash. However, three-quarters of the loans are for labour costs and there is, of course, no assurance that any equipment which is bought will be properly used. Indications are, though, that these loans are having the desired effect on production. Loans are limited to five or six hundred shillings per member and in order to qualify members must hold one-tenth of the amount borrowed as shares in the society. In 1964/5 loans amounting to £285,000 were provided to small-scale farmers through some 296 societies. It is through

¹By Diana Hunt of Makerere University College—unpublished.

this scheme that production credit is made available to group farm members. These loans are excluded from the figures shown above, and amounted to £46,000 in 1964/5 through 28 societies.

Apart from the gifts to the loan fund there was no further aid for agriculture from the USA until the 1960s, when AID appointed a special representative for agriculture. It is not surprising to be told that British civil servants working in the Uganda administration at that time felt such an appointment unnecessary. Considering that US policy is not to support either cotton or coffee projects, AID's programme for agriculture in Uganda is surprisingly diverse. The main emphasis is on education and livestock.

Agricultural Education

AID has provided assistance for the training of three different types of personnel—co-operative society staff and members, middle-level staff of the Departments of Agriculture, Co-operative Development, and Veterinary Services and Animal Industry, and farmers themselves. The principal aid for co-operatives has been the provision of finance for the erection of 13 co-operative wings at District Farm Institutes (DFIs) and Rural Training Centres (RTCs). Each of the co-operative wings can accommodate 20 students and has a Co-operative Assistant in charge who is responsible to the principal of the DFI or RTC. Courses are given for society staff in management, book-keeping, etc. and to a lesser extent for the education of members. Courses have increased from 400 in 1963 to 3,500 in 1966.

Assistance is given for the training of certificate and diploma students at the Veterinary Training School at Old Entebbe, the Agricultural College at Arapai and the Agricultural and Co-operative Colleges at Bukalasa. The principal form this takes is the provision of a dozen staff members. These will be replaced in time by Ugandans who are now in training in the United States. In 1966 there were 12 Ugandan staff out of a total of 33. In addition, a certain amount of equipment has been provided, particularly audio-visual aids and, at Bukalasa, aids for teaching animal husbandry. Some of the latter equipment, for instance for dairying, has suffered from the trouble referred to later in connection with other US equipment that it is of a type which is unusual in Uganda. The students are unlikely to meet it again. Before the US-aided Agricultural College at Morogoro came into operation AID sponsored 26 Tanzanian students at Bukalasa.

One of the consequences for Uganda of accepting aid from a number of different countries is that ways of doing things which were inherited from the British are brought into question. Whereas considerable confusion can be caused by experts from different countries giving conflicting advice, there can be no doubt that in some cases an influx of new ideas is very beneficial. A case in point is AID's introduction of modern audio-

visual aid methods to agricultural extension work. To help with this three direct-hire technicians are provided: a national extension adviser, an agricultural information specialist, and a rural youth adviser. A new Audio-Visual Aids Centre has been completely equipped by AID and also eight mobile demonstration units provided. All the District Farm Institutes have been provided with film projectors, films, books, sets of slides, etc.

Tsetse Eradication

AID has provided assistance for tsetse clearing in both Ankole and Bunyoro. In Ankole they provided insecticide and vehicles to clear 600 square miles as a follow-up to a campaign which had already cleared 1,700 square miles. AID wanted to supply the insecticide already made-up, but the Veterinary Department insisted on it being made up to their own specification. AID therefore supplied crystalline dieldrin and xylol and the insecticide was made up locally.

The project was not without its difficulties. As is usual with aided projects, there was a considerable delay and spraying teams stood idle for 12 months. The vehicles provided were not of a make in general use in Uganda and although spares were provided these were often insufficient. This is a problem common to US projects in Uganda where British vehicles are the ones in general use and are standard in Government service. In one case, the Uganda agents refused to carry spares for a model which they did not normally carry, and on which, since it was imported free, they had not received their commission. One lorry stood idle for a year without a transfer box which had to come from the USA.

On the other hand, the heavy bush-clearing equipment has proved very reliable and the Uganda Government is delighted with the cheapness and efficiency of the bush-clearing operation. AID provided four D8s for Ankole and another four for Bunyoro. In Bunyoro a consolidation line is being cleared around another 600-square-mile section which is to be used for cattle rearing. However, no formal plans have been made for settling this consolidation line although, with 8,000 Rwanda refugees nearby, the Department feels that settlement will come naturally, and is satisfied with the rate at which this is happening!

The Bunyoro project is an example of related projects being financed from a number of aid sources, all in isolation from one another. US bush-clearing equipment is being operated by British staff. There is a group farm with British tractors in the consolidation belt, and there is also to be a sugar scheme with finance from Britain and India. Germany is financing the provision of valley tanks in the 600-square-mile section.

Livestock Development

US aid for livestock development covers two larger projects and a number of small ones. One of the larger ones, the Ankole Ranching Scheme, is one of the very few aided projects which has had the benefit of a proper

cost/benefit analysis. It also has benefited from pre-investment surveys by the Ankole land use team which has operated in the area for a number of years.

To follow up the Ankole tsetse-clearing project AID sent a team to evaluate the ranching project and also to make recommendations for research on beef breeding at Ruhengeri nearby. Agreement to the provision of aid for the latter was reached first, and \$85,000 was provided, \$63,000 for commodities and the rest for local costs. Commodities included vehicles and a crawler tractor, 250 miles of steel wire, and three years' supply of semen and artificial insemination equipment worth £2,000-3,000. The broad recommendations of the mission were accepted by the Uganda Government and Ruhengeri will concentrate on breeding experiments for the first few years, after which time the emphasis will shift to the provision of stock for the ranching scheme.

The ranching scheme took much longer to agree. The report of the survey team came out in June 1963 and an application was drafted by May 1964, but the agreement was not signed until early 1966. The Government had by this time made a start on the project, but had had to stop again until they were sure of US participation. The application was for 125 ranches at a total cost of \$4,657,730, but this has now been scaled down to 50. Under the terms of the agreement AID is to lend \$650,000 of which \$500,000 is for local costs. Uganda's counterpart contribution amounts to \$500,000. The object of the project is to settle ranchers on five square miles each. By strict rules for tenants, the principal of which are that tick control is to be established within two years and that calves are not to be separated from their mothers, it is hoped to improve standards of husbandry, and in particular, to cut calf mortality very considerably. The Government cleared the land of fly and is putting in roads and fencing and a valley tank on each ranch. The total cost to the Government of these operations, excluding tsetse clearing, is shs 20/- per acre. This will be charged to tenants at shs 1/- p.a., i.e. £160 per ranch.

Since the first rancher only arrived on the scheme in September 1966, it is too early to evaluate the results of the project. The costs, however, appear to be working out fairly well as anticipated and, if the project should not prove an economic success, this will not be the fault of inadequate scrutiny on the part of the donor.

The Veterinary Department considers the Ankole Ranching Scheme and the Buganda tick control project to be its two best examples of aided projects. The tick control project is less ambitious than the ranching scheme, but in the long-run it may prove more economically important. Farmers are dipping their cattle voluntarily—this is the great strength of the scheme—although in rather a haphazard way. The objective of the project is to organise this more efficiently by installing better equipment

so that legislation requiring compulsory dipping can be enforced. AID is providing a two-year supply of insecticide and pumps, etc., plus a veterinary officer. By controlling East Coast fever it is hoped to reduce calf mortality from its present 20–30% to only 5%. One *gombolola* (sub-county) has already been declared a tick control area and it is hoped to bring the whole of Kyagwe County under control. There is a serious weakness in the scheme, however, in that it started before a pricing policy was worked out. Farmers got free what once they had paid for, and this made things difficult elsewhere. Cattle owners in Ankole had agreed to a similar scheme until they heard that it was free in Buganda. There may well be problems when the free insecticide from AID runs out.

Assistance is being given to other aspects of livestock development as well. Vans have been provided to help in teaching hide and skin preparation in the field. Equipment for district veterinary offices, vehicles for work on contagious bovine pleuro-pneumonia (CBPP), a mobile laboratory now being used for serology work on CBPP in Karamoja, equipment for a serology laboratory, 25 Jersey heifers for cross-breeding, and a plane load of bulls for artificial insemination. Technicians have been provided for tissue culture (tick control work) and dairy herd improvement. The equipment for the serology laboratory was provided by AID at the suggestion of the tissue culture technician and the research laboratories had no difficulty in finding space for it. The equipment, however, took a year and a half to arrive, and by the time it did arrive the staff situation had changed and the Department cannot now operate it.

Uganda Development Corporation

AID offered a \$2m loan to UDC in 1962/3 for procurement of machinery and equipment in connection with industrial and agricultural enterprises. UDC found difficulty in utilising the loan and in April 1966 there was still \$½m outstanding which had to be spent by August.

Regional Projects

In addition to purely national projects there have been a number of regional ones. The old CCTA¹ joint project 16 for control of CBPP covers West Africa as well as East Africa. As the US contribution to the project, two scientists and a technician plus equipment have been provided to the East African Veterinary Research Organisation at Muguga in Kenya. Since 1957 the US Department of Agriculture has had staff at Muguga working on the diagnosis of diseases exotic to North America. It pays all salaries, gives them a budget of their own, and pays EAVRO \$20,000 a year for working facilities. AID also provides four scientists on secondment from the US Department of Agriculture to work on sorghum, millet, and

¹CCTA—Commission for Technical Co-operation in Africa.

maize at Serere and Kitale, as well as providing five technical assistants for EAAFRO at Muguga. Both the Veterinary and Agriculture Faculties of the University of East Africa have received support from AID.

3 West Germany

German aid to agriculture in Uganda is provided only for projects, but it is not import-tied.¹ Germany has given a capital loan of DM 40m—approximately £3.6m—and has also invested £0.5m in the DFCU (see page 72). Most of the DM 40m is for roads, only DM 2.1m being for agriculture. The principal agricultural project is the construction of 91 water storages in cattle-raising areas at a cost of DM 1.55m (£137,000). These are simply $\frac{3}{4}$ m-gallon holes in the ground surrounded by a fence with a hand-pump and a trough for cattle to drink from. The Water Development Department has considerable experience of this kind of work but has difficulty in finding recurrent finance to cover the salaries and running expenses of the men and equipment which it has at its disposal. Its application was based on the use of departmental staff and equipment and the cost was estimated at £1,500 per tank. However, the Germans insisted on the work being put out to international tender. The cost by contractor has worked out at £2,400 per tank, which means that the number of tanks has had to be reduced. The economic return from the tanks is expected to come from the increased cattle-carrying capacity of the area served. Experience elsewhere in Africa has shown, however, that improved water supplies without controlled grazing can result in degeneration of the grazing. The provision of these valley tanks does not appear to be closely linked with a positive policy for cattle management.

The remaining DM 0.65m (£57,000) is provided for construction of cattle quarantines. These are an essential feature of the marketing arrangements which are necessary to increase the off-take of animals from cattle-raising areas. The places where these quarantines are to be located were specified in the loan agreement. The Veterinary Department, however, did not have a copy of this agreement and as a result did not realise that by changing the sites it was disallowing reimbursement on certain items. It remains to be seen whether the German Government will allow this expenditure.

In addition to the capital assistance, two-year courses are being provided in Germany for practical men, including tractor drivers and agricultural mechanics. The courses appear to be well suited to the Ugandans' needs, but include four months of language training in German, a language which Ugandans are unlikely to need to use again. As yet Germany has provided hardly any experts for Uganda. The only ones in agriculture are one or two veterinarians.

¹See footnote page 115.

4 USSR

The USSR has offered a loan to Uganda of £5.6m tied to imports of goods and services. There is agreement in principle to invest in a textile factory, a fish cannery, a dairy plant, heavy tractors for road construction, a training centre for mechanical agriculture, and meat refrigeration installations.

The general agreement was signed at the beginning of 1965, but in mid-1966 no firm project agreements had been signed, although the Government had committed itself to the dairy plant. This commitment was made before any feasibility study had been done. In the middle of 1965 a large number of Russian technicians arrived in Uganda to prepare plans for the dairy. They announced that to be economic the dairy would need a daily through-put of 3,000 gallons. The survey team spent five months in Uganda, selecting a site and preparing plans. Mbale has now been chosen as the site and cost estimates have been prepared for a 2,000-gallon dairy. These estimates are very high indeed.

The first firm agreement for use of the Soviet loan is likely to be for the training centre for mechanical agriculture, a project which the Government considers very important. All the tractors used in the school will be supplied by the USSR although these will be the only Soviet tractors in use in Uganda. Uganda will, however, insist on the use of British implements for the sake of standardisation. The staff of the school will be Russian and each one will have an interpreter; the original proposal being for 25 instructors plus 25 interpreters. The salaries of instructors and interpreters will be paid from the loan. The buildings are to be designed in Russia, but their cost and also the costs of running the school are to be covered by Uganda.

The USSR has also sent experts to advise on the feasibility of the fish cannery and meat refrigeration installations. The Canadian adviser to the Fisheries Department advised a pilot project for canning haplochromis, a small sardine-like fresh-water fish. The Government, however, is keen to go ahead with a full-scale plant, although it might be that technical considerations, e.g. the need for a biological survey, will change their minds.

5 Yugoslavia

Yugoslavia offered a loan of £4m against viable projects early in 1965, the loan to be tied to imports of goods and services. As yet no projects have been agreed.

In addition, Yugoslavia has provided credit for the import of equipment for a new meat factory at Soroti. The Uganda Meat Packers, the company for which the factory is being built, is now a wholly-owned subsidiary of UDC and as such is subject to direction from the Government. An

agreement was on the point of being signed with US consultants, when the firm was directed by the Government to accept the Yugoslav offer. After a lot of negotiation the price was reduced by £60,000. It was originally intended that Yugoslavia should supply staff as well as equipment; there would have been 55 of them at a cost to Uganda of £250 per month per head plus air fares and housing. Yugoslavia is now only to be responsible for installation.

The loan will cover equipment worth £305,000 plus £30,000 freight, £60,000 for electrical equipment being excluded because of standardisation problems. The rate of interest is 3%. The price for the equipment is comparable to UK and US prices and hence the low rate of interest cannot be said to be subsidised by high prices.

This project is part of a plan to rationalise the Uganda meat industry. The original plan was to have a very sophisticated plant at Soroti which would allow switching at will between canning and freezing. This has now been abandoned as being too expensive and Soroti will now mainly process the poorer-quality meat. Uganda Meat Packers' Kampala factory, which produces chilled meat, is to be improved independently of Soroti at a cost of £50,000. The total through-put of both factories will be 100,000 head p.a. It is also planned to process blood and bones, which at present go to waste, for animal feed.

Yugoslavia has also offered credits for machinery for a tannery, but the original proposal was for a much larger tannery than Uganda thought to be economic. The proposed scale of the factory is now for 150,000 goat skins and 60,000 cow hides, of which 15,000 will be finished for the local market. The Yugoslavs are hoping that a local firm with world-wide connections will run the tannery and market the products. The market is for semi-tanned hides and for fully tanned goat skins. Uganda goat skins have a world reputation, but the low quality of the raw hides presents a serious problem.

Mechanics from Uganda have been trained in Yugoslavia.

6 China

China made a gift to Uganda of £1.07m (\$3m) half in cash in convertible currency and half for the import of goods and services. The gift of convertible currency was the most acceptable aid which Uganda has received since it was completely untied and could be used for any purpose at all which the Government wanted. The second half, however, was still unutilised 12 months later. Similarly, an interest-free loan of £4m also for the import of goods and services was unused. Provided that the Chinese have something to offer which Uganda wants—and, in the case of the loan, at a reasonable price—aid in this form which is not tied to projects is equivalent to untied aid, since foreign currency can be saved by switching

to importing consumer goods from China rather than some other source. In the absence of a state trading corporation in Uganda, however, this would probably involve considerable administrative problems and may account for Uganda's apparent inertia. The Chinese were to send a survey team to see what proposals could be made for utilisation.

7 Israel

There are three aspects to Israeli aid to Uganda—courses in Uganda, courses in Israel, and the provision of experts.

One-year up-grading courses from certificate to diploma have been specially organised for Ugandans in Israel. 23 students went in 1963 and a further 25 in 1965. Uganda contributes only the cost of travel. In addition places have been made available in agriculture and agricultural engineering at a technical high school, but suitable candidates are difficult to find since two 'A' levels are necessary. Six students are at present undertaking the course. Non-academic courses are also provided in Israel in poultry, fertilisers, fisheries, irrigation, and vegetable production. 50 or so have taken four to six-month courses since independence. 45 people have also taken a four-month course at the Institute of Labour Studies and Co-operatives in Israel.

In addition to courses in Israel, the Israeli Government has arranged courses in Uganda. As a result of its experience in receiving immigrants from backward rural communities into Israel, the Israeli Government feels itself particularly qualified in agricultural extension work. Four instructors have been provided, giving three courses for 30 people each in 1963 in agriculture, and one course for 60 people in 1965 in animal husbandry.

Experts have been provided to advise on co-operatives, poultry, and citrus production. The three co-operative experts have prepared a report on consumer co-operatives, but it is doubtful whether the Government will give much backing to consumer co-operatives since they require too much capital and management expertise. The development of citrus production is allocated a capital provision of £150,000 in the Second Plan. A feasibility survey was first of all made by an expert from Israel and then on the basis of his report a citrus-grower was sent to Uganda to establish a pilot project. The counterpart of this expert has been sent to Israel for a two-year course, and a further six are undertaking a specially arranged nine-month course. The expert has established a six-acre nursery to provide trees for a resettlement scheme and to act as a national nursery. The Government originally proposed a 2,500-acre state citrus orchard, but this was later reduced to 250 acres and the proposal is now for a resettlement scheme on 100 acres, each settler having two to three acres of citrus under irrigation. It must be considered at this stage as a pilot project. Detailed costings have been worked out, but these are based on

conditions and labour costs in Israel. The possibility of a large-scale expansion in citrus production is ruled out by the fact that Uganda is too far from the market to be able to market citrus externally and must rely on local demand.

8 Norway

As yet Norwegian assistance is limited to volunteers, but a request for capital assistance for the Forestry School near Masindi is under consideration.

At 1 February 1966, there were 10 volunteers working in the Agriculture and Forestry Departments, plus another four who were about to leave and whose replacements had arrived. Any of the volunteers with a farm background has a knowledge of tractors and four of the new in-take are going to the tractor hire service or to group farms. Another is already working as a mechanic for Special Development and a further volunteer is to teach tractor operation at Arapai Agricultural College.

An unusual feature of the Uganda programme of the Norwegian Peace Corps is the high proportion of graduates; there are two graduates in forestry and three in agriculture. This possibly accounts for the high regard with which Norwegian volunteers are held in Uganda. Two further factors contributing to the effectiveness of the programme are that the volunteers come for two years¹ and that the Norwegian Government has agreed to give OSAS-type terms automatically to any departing volunteer whom the Uganda Government wishes to retain.

At a regional level Norway provides a tree breeder, a forest entomologist, a soil chemist, and a plant physiologist to EAAFRO on OSAS-type terms.

9 Canada

Canadian assistance has so far been confined to the Fisheries and Forestry Departments, neither of which has received much from elsewhere.

A fish-processing expert and a master fisherman have had short assignments in Uganda and Canada has also supplied a boat worth £10,000 and fishing gear worth £40,000. The fishing boat was sent to Uganda without prior consultation with the Uganda Government about its design. The master fisherman reported back that the design could have been more suitable if they had consulted Uganda first. The boat is now being used with a crew trained by the Canadian for exploratory and experimental fishery.

Canada also supplied equipment for the Forestry Department: walky-talkies for fire prevention and logging vehicles. The latter are for the

¹The normal tour for British volunteers has now been increased from one to two years.

Department's own use and are principally to demonstrate to the industry that crawler tractors are not essential. The request for these vehicles was in the pipe-line for 2½ years.

The Canadian University Service Overseas (CUSO) is also supplying two people for the Veterinary Department working on research. They are graduates whose terms of service are similar to OSAS, and who serve two-year tours. There are also two Canadians working with EAAFRO.

10 Other Bilateral Donors

Technical assistance has also been provided by a number of other countries. Two Swedes and two Danes are working on OSAS-type terms in the Veterinary Department. France has supplied a marketing expert and an agricultural engineer and a cocoa pathologist are expected. Italy arranged a course for mechanics, but this was not successful and has been terminated; six months was found to be too short a time to learn the language as well as the technical aspects. Four-month co-operative courses have been arranged in both Sweden and Denmark. On a regional basis the Netherlands has supplied a pasture agronomist for EAAFRO on OSAS-type terms.

India is to make an equity investment of £2m of imported machinery in the Bunyoro sugar refinery, but details have not yet been released by the Government. India is also training gin-fitters and book-keepers for the co-operative movement.

11 United Nations Development Programme

The UN Development Programme (UNDP) was formed at the end of 1965 by the amalgamation of the UN Special Fund (UNSF) and the Expanded Programme of Technical Assistance (EPTA). The Special Fund component of the UNDP undertakes pre-investment projects, whilst EPTA, now known as the Technical Assistance component, carries out technical assistance missions. The UNDP requires substantial counter-part contributions from participant governments. In the case of pre-investment projects this amounts to not less than 30% and preferably 50%, plus a cash contribution of 15% of the cost of international experts for 'local costs'. In the case of technical assistance missions the 'local cost' contribution is 12½%.

To date, three agricultural pre-investment projects have been approved and Uganda is a participant in three more on a regional basis. One of the former, for aid to the beef cattle industry, is still in the process of preparation, and one of the latter, the Desert Locust project, has 37 participants and hence Uganda's part is only small. The other four projects are described below.

Irrigation Pilot Demonstration Project—Mubuku

The estimated cost to the Development Programme of this project is \$597,000, the counterpart contribution being \$559,000, plus \$58,300 for local costs of experts. The purpose of the project is 'to assess the technical feasibility of and economic return from the development of a substantial area for irrigated agriculture and to acquire, through a pilot demonstration, the management techniques applicable to large-scale agricultural settlements'.

It had provisionally been estimated that an area of some 12,000 to 15,000 acres in Toro Kingdom would be suitable for irrigation and five pilot 15-acre farms had been established in 1962 along with plots for agronomic trials. The project is to establish a 1,000-acre pilot scheme and design an irrigation system for a 15,000-acre area (12,000 under cultivation) from a total of 20,000 acres. The project agreement provides for examination of irrigation techniques, drainage problems, agronomy, the integration of animals into the scheme, land tenure and settlement, farm management, and the economic practicability of the project. There is provision for seven international experts for periods from 12 to 51 months.

The Government side of the project is the responsibility of the Toro Development Company, a specially established subsidiary of the Uganda Development Corporation. It seems a little inappropriate that the enterprise should have been entrusted to a commercial company when it is still at an experimental stage and the effects of this are already being felt as the manager considers that he has a responsibility to UDC to show a return from sales of produce, and this can only be at the expense of the experimental nature of the project. On the other hand, commercial management will be essential as soon as the project gets beyond the pilot stage. It is politically almost impossible to abandon a pilot project, if it proves non-viable, and yet, if the project continues on a small scale, the overheads can be ruinously expensive. If, however, the 1,000-acre scheme fails as a settlement the Company should be able to run it without loss as a commercial farm.

The project has two aspects, the pilot scheme and design of a larger irrigation network. It is perhaps a little early to comment, but it would appear that the emphasis is going to be on the latter to the detriment of the experimental work. For example, it has already been decided that holdings will be 15 acres each and the opportunity is lost for experimenting with different sizes. Even more disturbing, precedents are being created which will be very difficult to reverse at a later stage. For instance, each of the settlers on the pilot scheme is to have a house built for him and is also to be provided with a piped water supply. These amenities are being provided extremely cheaply for what they are, but none the less they represent a very heavy debt burden for a small-scale producer to pay off.

Karamoja Ground Water Supply

This project started in 1966 and is to last $2\frac{1}{2}$ years. It employs four international experts for periods of from 12 to 30 months who will undertake a preliminary survey of ground water resources in Karamoja to ascertain to what extent it is possible to develop water supplies from these sources. The total cost of the project is \$986,144, of which Uganda pays \$303,844 as counterpart expenditure and \$45,700 in local costs.

East African Livestock Development Survey

The East African Livestock Development Survey was a regional project with an equal contribution from each of the three East African governments of £18,000 and a contribution by the UNDP of \$210,000. The Survey completed its field work about the end of 1965 and then set out to prepare a regional livestock development plan for the whole of East Africa. The plan was to include recommendations in the following areas:— (a) specific projects for livestock production; (b) local and external market development; and (c) feasibility studies and formulation of 'directly bankable' schemes. The scheme as originally devised was much more ambitious than the one that was finally undertaken, with a number of sub-projects, but it had to be scaled down because of the inability of the East African governments to agree to a distribution of the sub-projects. All the livestock projects in the Second Development Plan have been scrutinised by the Survey and the Uganda Government is hoping that the evaluations prepared by the members of the survey team will be a decisive factor in securing foreign aid for the projects.

Lake Victoria Fisheries Research Project

This is another regional project and is to be implemented through the East African Freshwater Fishery Research Organisation at Jinja. It will involve a survey of off-shore haplochromis and economic as well as biological aspects will be investigated. Included in the investigation will be reconstitution of statistics of fish landed, the economics of fishing operations, and marketing problems. Six international experts are to be provided by the UNDP for periods varying from 24 to 63 months. The cost to the UNDP is \$763,400 and the counterpart contribution from the three governments is \$580,000 with \$64,000 for local costs of experts.

Technical Assistance Missions

Table 13 shows UNDP technical assistance missions for the biennia 1963/4 and 1965/6.

The type of post filled is not essentially different from those filled bilaterally. For each of the posts in the table one could find similar posts which have been filled from bilateral sources. However, countries make their applications long before the beginning of the biennium, hence the

Table 13

UNDP Agricultural Technical Assistance Missions 1963-1966

<i>Project Title</i>	<i>Field of Activity</i>	1963 <i>m/m*</i>	1964 <i>m/m</i>	1965 <i>m/m</i>	1966 <i>m/m</i>
Animal Production & Health	Entomologist	1/12	1/12		
Economic Statistics	Agricultural Statistics	1/12	1/12		
Rural Institutes & Services	Agricultural Credit Specialist	1/2			
Fisheries Development	Fish Biology	1/4			
Nutrition	Nutritionist	2/18			
Land, Water Development, and Rural Industries	Water Development	1/12			
Animal Production and Health	Animal Husbandry	1/12			
Agricultural Statistics	Agricultural Statistician			1/12	1/12
Tsetse Control (Entomology)	Entomologist for Tsetse Control			1/12	1/12
Fish Farming Development	Fish Pond Culture Specialist			1/12	1/12
Koki Lakes Survey	Hydrologist			1/12	
Koki Lakes Survey	Water Development Engineer			1/6	
Contagious Bovine	Animal Health Officer				1/12
Pleuro-pneumonia Control					
Contagious Bovine	Animal Health Officer			1/12	
Pleuro-pneumonia Control	(Laboratory Technologist)			1/12	1/12
Forest School	Director of the Forest School			1/6	1/12
Vegetable Production and Marketing	Horticulturalist				1/12
Forest Research	Silviculturalist				

* Number of persons/number of man months.

Source: UN Development Programme.

posts requested tend to be less urgent ones. The more urgent ones are filled bilaterally. The Development Programme gives no assurance that savings can be used, hence there is no incentive to replace an outdated post with one of higher priority.

12 UNICEF

It is the welfare of mothers and children with which the United Nations Children's Fund (UNICEF) is concerned, rather than development as such. It promotes its objectives, however, by looking at the problems in a broader context. It will, for example, try to stimulate the development of a dairy industry in a developing country, rather than simply distributing powdered milk to mothers and children. So far there has been only a little UNICEF activity in Uganda, which is surprising in view of the generally low level of nutrition in most parts of the country. UNICEF officers—the regional office for the 17-country region is in Kampala—are conscious of this and wish to do more, but suitable projects are not forthcoming, and UNICEF is not organised to formulate projects itself.

Food and Nutrition Project in Bukedi District

This project originated at a district level, and was aimed at improving local nutrition, particularly of children by school feeding, environmental sanitation, nutrition and health education, and development of school gardens and fish ponds. UNICEF supplied equipment worth \$400,000 and a nutritionist was provided by FAO under EPTA. UNICEF was very disappointed by the results of the project. The basic difficulty was lack of co-ordination between the various Government Departments involved, at a time—1961 and 1962—when there were considerable changes in staff at a local level. The project should have run for six years, but was terminated by the Government after a trial two-year term. A positive achievement, however, has been the establishment of a national Food and Nutrition Council.

School gardens should be useful in teaching nutrition to children, but they tend to be used for punishment and have precisely the opposite effect from the one which is desired. They are generally too small and lose much of their nutritional point, because of the difficulty of keeping small animals such as rabbits and chickens. Ten ponds were established at schools in the district, but they were often too far from the school and got neglected. They are still in use but their productivity is low. The fish produced are not eaten by the children at school as was intended, but taken home. In spite of this, fish ponds are well established in the district as a result of efforts by the Fisheries Department at an adult level. There are now over 8,000 fish ponds throughout the country, whereas in 1953 there were none.

University of East Africa

Historically, the stress of the extension service has tended to be on cash crops. The aim of this four-year project, therefore, is to go some way to remedying the imbalance by promoting training with a view to increasing production and consumption of food for adequate human nutrition. Lecturers in agricultural extension and rural sociology have already been appointed and it is hoped to appoint lecturers in food crop improvement and horticulture during 1966/7. The cost of the project is expected to be about \$170,000 and the University of East Africa has committed itself to continuing the posts at the end of the period.

Milk Conservation

The consumption of milk in Uganda is rising fast. Uganda Creameries Ltd. is now importing into Kampala 9,000 gallons of milk daily from its associate Kenya Co-operative Creameries in Eldoret. The Uganda Milk Processing Company, which is a joint venture of UDC and Uganda Creameries, has established a pasteurising plant of 1,500 gallons daily capacity, but is as yet only getting 300 gallons. Yet it is estimated that one-third of the milk from exotic stock in Buganda is wasted because it cannot get to the market. It is also estimated that 20,000 gallons of milk is sold daily in Kampala. The local milk is, however, unpasteurised, and much of it tends to be unhygienic. In order, therefore, to improve the supply of clean milk it is proposed to establish four collecting centres. UNICEF has allocated \$60,000 for this pilot project, which is somewhat on the lines of a UNICEF-supported rural dairies scheme in Kenya.

The Government has made a second application to UNICEF to follow up the pilot project with a further eight rural centres.

13 Freedom from Hunger Campaign

The Freedom from Hunger Campaign (FFHC) which was launched by the Director General of the Food and Agriculture Organisation of the UN in 1960, achieved its greatest response in Britain, which has a long tradition of voluntary organisations. All the FFHC projects in Uganda are supported by the UK committee of the Campaign, and all are concerned with agriculture or nutrition. Table 14 gives a list of these projects.

The advantages of FFHC over other larger donors are that it welcomes small projects, it need not confine itself to governmental projects, and it does not have to concern itself with balance of payments problems. The building of three District Farm Institutes shows how the interests of the donor and the broader development aims of the Government can be co-ordinated. Kigezi and Karamoja are particularly suitable. Kigezi is very densely populated, farmers' holdings are small and very fragmented, but the land is fertile. It is essential, therefore, to make the maximum use of the land. The Christian Rural Service Project is also operating in this district and provides extension workers for agriculture and other

Table 14
UK Freedom from Hunger Campaign Projects

<i>Project</i>				<i>Estimated Cost £</i>	
				<i>Capital</i>	<i>Recurrent (total)</i>
Acholi Farm Institute ... ..	...	...	...	31,434	
Karamoja Farm Institute ... ..	...	...	...	24,000	
Kigezi Farm Institute ... ..	...	...	...	31,434	
Mitalla Competition ... ..	...	...	...	2,000	
Gayaza Farm Diet Scheme ... ..	...	...	...	22,550	
Nutritional Education in the Outlying Districts ... ..	...	...	...	10,400	
Agricultural Extension Work among Women ... ..	...	...	...	1,500	11,592 (3 years)
Ankole Kigezi Agricultural Training Settlement ... ..	...	...	...	41,250	18,200 (6 years)
Nutrition Unit ... ..	...	...	...	22,250	
Christian Rural Service Project, Kigezi ... ..	...	...	...	1,600	15,000 (3 years)
Revision of Book 'Agriculture in Uganda' ... ..	...	...	...	6,600	

Source: UK FFHC Committee.

subjects, such as hygiene, plus a van with a tape recorder, projectors, etc. Karamoja on the other hand is a large arid area supporting a traditionally-minded pastoral people and virtually the only agriculture is the cultivation of small patches of sorghum. The population is very vulnerable to drought conditions. Karamoja and Kigezi DFIs are now completed, and Acholi is due to start in 1966/7. Investment in agricultural education is long-term and difficult to assess, but the DFIs have a high utilisation rate, even in Karamoja.

Although malnutrition is a serious problem in Uganda, nutritional projects tend to be small and have not yet attracted governmental donors. FFHC, on the other hand, supports a number of them. The principal method of attack is through dietary training in schools, clinics, and health centres and through agricultural extension. Doctors' salaries have also been provided and, in addition, an evaluation unit has been established to make a continuing assessment of the effectiveness of the work which is being undertaken.

The rest of the FFHC projects in Uganda are very small, except for the Buhweju County Settlement Scheme. This is a type of project which governmental donors could undertake. It was originally intended to settle Bakiga from Kigezi in virtually empty lands in Ankole, but this proved politically impossible and all the settlers are now Banyankore. The county is mountainous and communications are bad. The soil is acid and the weather is too cold for many of the crops which grow in Uganda. The Church of Uganda claim that the Government had given the county up as undevelopable and so they took it on as a challenge.

They wish to establish the socio-political point that young men can make a better livelihood in the rural areas than by drifting to the towns to become clerks. They invited a British agriculturalist to come from the Sudan where he was working at the time, and it is largely his inspiration which makes the project successful. All the finance is from Christian Aid, one of the constituent bodies of the UK FFHC, which will provide £65,000 spread over six years.

There will eventually be 200 settlers each with six acres, of which five will be tea. All members work as labourers for six months before being accepted and are paid shs 2/- a day during this period. They are mainly younger than 25 and the minimum age is 21. No subsistence crops are allowed. Until the tea comes into bearing the settlers are producing vegetables, strawberries, and eggs, and one has a herd of about 30 cows. Each one receives a loan of shs 5,000/- to establish the first three acres of tea, after which he should be able to manage the rest on his own. The loan is rigorously controlled and is provided in kind as far as possible. It will be repaid at 14¢ per lb. of green leaf tea and the planned repayment period is five years. All that is provided free is professional and managerial advice—the manager has a volunteer assistant who spends all his time on extension work.

The problem is whether the momentum generated will be sufficient to carry the scheme forward when the manager leaves at the end of six years. He is very aware of this and is planning for it. A co-operative has been formed of members plus outgrowers and marketing is already organised by the society, which hires transport from the management.

14 The Rockefeller Foundation

The Rockefeller Foundation's interest in East Africa centres on higher education and agricultural research. Assistance has been provided for both the Faculty of Agriculture at Makerere and the Veterinary Faculty at Nairobi, as well as more general assistance to the University. Grants for specific agricultural or veterinary education totalled \$40,000 in 1963 and \$114,635 in 1964. Aid for agricultural research has been principally for cereal breeding; wheat and maize in Kenya and sorghum at Serere in Uganda. Rockefeller are making available \$25,000 p.a. for the sorghum project. In 1963 they made a grant of \$10,000 to the Commonwealth Institute of Biological Control (CIBC) for pest control work at Kawanda. The present director of EAAFRO is provided by the Foundation, who have also made a grant to the University of Wisconsin to second an agriculturalist as well as giving \$15,000 for the library at Muguga. Two of the EAVRO staff are provided by Rockefeller.

The Foundation prefer to sponsor projects which are of international or regional interest, for example, the work on cereals. They are able to provide a continuity which is becoming increasingly rare in research in East Africa.

6—Comment

1 The Impact of Aid

The first question which this case study tries to answer is whether aid to Uganda has introduced a bias against agriculture. An hypothesis could be based on the argument that aid donors are preoccupied with large prestige projects, for which they are prepared to finance imports of capital equipment, and neglect agricultural development which consists of a large number of unassuming activities requiring a high proportion of local and recurrent expenditure. This is considered in the context of Uganda's First Plan.

To speak of a bias is only meaningful if one has in mind some idea of what a 'fair share' for agriculture is. It was remarked at the beginning of Chapter 1 that determination of the proportion of resources to be devoted to agriculture requires a detailed examination of the available options. The analysis provided by the Second Plan is the most sophisticated which has yet been produced for the Uganda economy. In the light of this, the proportion proposed for agriculture in the First Plan appears less than optimum. The Plan thus provides a check-list, but one which already shows something of a bias against agriculture.

Whether aid has caused a bias against agriculture can be assessed in two ways; by examining the rate of progress in implementing agricultural projects contained in the Plan, or by comparing the proportion of total aid spent on agriculture with the proportion of total expenditure planned for agriculture.

Taking expenditure as an indication of implementation—this appears naïve, but is the only practical method—it has been seen that in broad terms the agricultural projects in the Plan have been implemented, but for the majority at a slower rate than had been anticipated. The amount of aid promised by overseas donors for the First Plan is shown in Table 15. Of the £39·7m of aid committed, only about £17m had been disbursed by the end of the plan period. Of this some £9m can be identified with projects, of which agriculture accounts for a little over £2m, roughly the same proportion as agriculture's share in planned expenditure on Central Government account. It is reasonable to say, therefore, that during the First Plan foreign aid did not in itself create a bias against agriculture. It should be pointed out, however, that foreign finance accounted for only about two-fifths of Central Government expenditure in the First Plan, whereas it will be responsible for over half in the Second Plan.

The second question is whether aid has influenced priorities within the agricultural sector, and immediately there are difficulties. Although

the First Plan may be said to represent a set of priorities, it is not an ordered set. An ordering has only emerged as the Plan has been implemented. Departments are, in general, reluctant to put their projects in order of priority, and in view of the difficulty of economic assessment and lack of staff to make an attempt this is not surprising. The usual reaction is that 'all our projects are important'. The principal priorities tend to be generated at a political level and the agricultural departments tend to be looked on by the politicians as executive rather than advisory. Mechanisation and tsetse eradication are examples of politically determined priorities. Where aid for these is not forthcoming, they can usually attract local money.

Table 15

Capital Aid for Uganda's First Five-Year Development Plan

Commitments				£m		
<i>Source of Aid</i>		<i>Grants</i>	<i>Loans</i>	<i>Total</i>	<i>Part used for Agriculture</i>	
United Kingdom	... ..	3.5	5.2		?	
			5.5	14.2	1.6	
United States	... ..	1.1	1.9	3.0	0.4	
West Germany	... ..	—	3.6	3.6	0.2	
U.S.S.R.	... ..	—	5.6	5.6*	†	
India	... ..	—	2.0	2.0*	2.0	
China	... ..	1.0	4.0*	5.0	†	
Yugoslavia	... ..	—	4.0	4.0*	†	
Other	... ..	—	—	2.3	?	
Total	... ..			39.7		

*No disbursements before end of Plan period.

†Under negotiation.

Source: Uganda Government.

The Plan was already under way when it was published and, at least as far as aid is concerned, is a description of continuing projects as much as a request for finance for further projects. Roughly speaking, the pattern was as follows. The US contribution had already been largely decided. Other donors picked out projects attractive to them. Projects with a high political priority and most other projects were financed from the earlier British aid, which was not project-tied, or from local funds. And, finally, anything which was left over was financed from the British £6m loan.

In the case of the United States a positive influence has been unashamedly exercised. AID has searched out projects which in its view should receive high priority and these are the ones which it has financed. In addition, it has not been afraid to criticise policies of the Uganda Govern-

ment which it believes to be mistaken. In the early days when planning in Uganda was embryonic, rather than distorting priorities, AID's role can be seen as helping to determine them. However, as Uganda's planning machinery gains in efficiency the extent to which an aid agency should take it upon itself to influence priorities is more open to question. This is discussed in more detail in a later section of this chapter.

Evidence of distortion within agriculture can be sought amongst two groups of projects—those which have been implemented at a substantially faster rate than was initially planned and those which have been delayed or postponed. The first group consists of mechanisation, irrigation, and tsetse clearing. Each of these is not only a recipient of foreign aid—from Britain, the UN Development Programme, and the United States, respectively—but is also comparatively large and capital—i.e. import-intensive. There can be no question of the Uganda Government being 'forced' into these projects, but overseas aid did ensure a faster advance in these fields than would otherwise have been likely.

Projects in the second group also have characteristics in common with one another. None of them has a high political priority and all involve fairly heavy recurrent expenditure and have a high local cost content. All look at first glance likely candidates for aid and, in fact, three of them, the coffee research station, the fisheries school, and the veterinary dispensaries, are now to be financed from the British £6m loan, and the UNDP will probably provide aid for the co-operative college. The delay can probably be accounted for as much by the local Ministry of Finance's reluctance to take on additional recurrent financing as to disinclination on the part of the donors.

The Ministry of Finance plays an important role in decisions about the financing of individual projects in the Plan. If it is nervous about a project—usually one which involves a large recurrent commitment—it can always ask that finance be sought overseas. This need not, of course, be merely a defensive reaction. The known preference of aid donors for certain types of expenditure means that, whenever a request, for instance for funds for importing capital equipment, comes up, the first thought is of which donor will be prepared to supply it. This is simply an attempt to maximise total aid receipts, but the result is that essential items of capital equipment are often delayed for a considerable length of time whilst a donor is found and the goods despatched. It took two and a half years for the Forestry Department to obtain a certain piece of equipment which finally came as a gift from Canada. Delays can sometimes be expensive. The Veterinary Department had to keep a spraying team in the field for a year longer than planned, because of delays in the arrival of equipment from the United States. Of course, delays are most often caused by cumbersome procedures on both sides of the fence, but the particular problem of searching for a donor would disappear if all or the majority of donors were to commit their

aid in specific sums for specific periods. This would then discourage the belief that a recipient country can increase its aid allocation, provided only that a project can be made to look attractive enough to the donor.

What has just been said simply illustrates the fact that aid introduces a new element into the relations between the departments of a recipient government, just as it introduces a new element into international relations. There are thus quite subtle ways in which aid can affect priorities. In a similar way a department can use the prospect of aid as a lever on its own government to obtain funds or equipment which would not otherwise be high enough on the list, and a strong personality can even do the same in his department, if he can find a donor who will take an interest in a pet project. An example is provided by the Department of Co-operative Development, which received a gift of a number of vehicles from AID. The vehicles were of a type which had proved very unpopular with other departments, but officials of the Department admitted that if AID had not given them these vehicles they would have gone without, and any were better than none. The Finance or Planning Ministries will normally agree to this type of project going ahead if they feel that the aid would otherwise be lost. Only occasionally will a firm offer be turned down and a suggestion made that the funds be turned to some other purpose. The reason is, of course, that the Government can only be completely certain that it will receive the aid in some other form where the donor has committed a definite sum over a certain period.

A more serious distortion occurs when considerable local resources have to be diverted to complement the aid, particularly if the aided project involves a large recurrent commitment. A corresponding situation is where a technical assistance expert is offered on 'full aid' terms. Since he is not to fill a post, the Civil Service Commission is not concerned and since no additional allocation is required the Ministry of Finance does not object. However, there is always some strain on resources, such as transport, secretarial services, etc., and the acceptance of a large number of such personnel may involve the diversion of considerable resources within a department. The main responsibility for this situation rests, of course, on the recipient. However, when the recipient's administration is plainly over-burdened, there is a clear implication in this for the donors. Each request for aid must be considered in its total context and given the fullest possible scrutiny.

Consideration of the effectiveness of overseas aid for the First Plan presents even greater difficulties than the discussion of distortion of priorities. Evaluation at a macro-economic level is inhibited by the impossibility of knowing what progress would have been made in the absence of aid. On the other hand, evaluation of each project in turn is beyond the scope of this study, nor are there existing evaluations which could be collected together. There are a number of reasons why evaluations have

not been done. The first of these is that the benefits of much investment in agriculture are intangible or accrue only in the long term. Agricultural education, research, and extension services are examples. Secondly, Government accounts do not lend themselves to an identification of all the costs, although, with a little work, these can be assessed. Thirdly, the lack of basic statistics¹ of yields, labour inputs, etc. makes the estimation of costs and, more particularly, benefits somewhat vague. Finally, and most importantly, project aid to agriculture in Uganda on any scale is a comparatively recent phenomenon and hence, even for those projects which lend themselves to a quantitative analysis, actual costs and benefits have not yet had time to reveal themselves. Apart from the last point, what has been said above could apply equally well to evaluations of projects before they are undertaken and possibly explains why so few of the projects in the First Plan were subjected to a rigorous cost/benefit analysis.

One is left, therefore, with rather subjective views on the extent to which aid has been effective in promoting agricultural development. For this reason, the various aid programmes are sketched in much greater detail in Chapter 5 than would otherwise have been necessary. A broad picture of overseas aid to agriculture in Uganda should, however, emerge from Chapters 4 and 5, which can be described as follows. Aid has played a marginal role in agricultural development, but a crucial one. It has been put to the purposes for which it was provided and, in general, these purposes have been fairly well chosen and in accordance with the priorities of the Uganda Government. There has been little conscious effort to influence Uganda to adopt sound policies, but there has been some unconscious reinforcement of the less sound. Lack of finance from overseas has not prevented the Government from undertaking any activity to which it attached a high priority, but some of its lower priorities have been considerably delayed. This having been said, there are many small criticisms which can be made of the various donors' policies. The rest of this chapter is concerned with the way that aid to agriculture can be made more efficient.

An aspect of the impact of aid which must not be forgotten is that of aid to one country upon the development of another. It sometimes happens that aid to one country can be very detrimental to another. The most notorious example from Uganda is the effect of US shipments of cotton to India under PL 480. At one time India was Uganda's principal market for cotton. Prior to 1957 India took as much as 70% of Uganda's cotton, but with the introduction of PL 480 shipments in 1957 exports to India immediately fell to 20% of the total and have never really recovered since. Recently, exchange restrictions in India have closed the market completely and Uganda has had the greatest difficulty in disposing of her cotton.

¹In future Uganda's planners will be able to rely on the UN-assisted Census of Agriculture which has now been completed.

Nearer home, the effects on Uganda of aid to her East African neighbours, and vice versa, are more subtle and probably more important. A country as small as Uganda will only realise its full economic potential in co-operation with its neighbours. Yet the recent history of the East African common market between Uganda, Kenya, and Tanzania bears witness to the political difficulties involved. Few donors of aid appear to consider their policies on a regional rather than a purely country basis. It is true, of course, that aid is provided for the common East African institutions such as the research stations, but one wonders, for instance, to what extent donors of aid to sugar projects in Uganda, Kenya, and Tanzania have considered the complete East African situation. Aid donors cannot engender a political will for regionalism where none exists, but they can at least make sure that the projects which they sponsor make economic sense on a regional basis. In future, the wider Eastern African grouping which is being furthered by the Economic Commission for Africa will probably assume greater importance. Donors should consider their aid policies in a context at least as wide as this and should actively support any moves which are made towards greater regional co-operation.

2 Aid Tying and Local Costs

Almost all donors of capital aid to Uganda tie it to imports in one way or another, either simply to off-shore costs, as with the UNDP, or to procurement in a particular country, as with most of the bilateral donors.

Objections to procurement tying are usually based on arguments about the choice of markets. The recipient cannot buy in the cheapest market, if he is tied to buying from a particular source, and hence the total value of aid is reduced. This is, as yet, hardly an issue for Uganda, although estimates of the cost of the dairy proposed by the Russians are *very* much higher than if the machinery were to be imported from a Western country. This survey revealed only one instance where goods were imported from a tied source which could have been bought more cheaply in the free market, and the sum involved was negligible in the context of total aid. The donor might, however, be perfectly competitive on prices, but be very uncompetitive in terms of delivery dates. British suppliers are frequently criticised on this score.

A more serious problem than that of price is the suitability of equipment from a tied source. As yet this has mainly affected aid from the United States and examples have been given in Chapter 5. The problem is not usually that the equipment is not suited to the physical conditions of Uganda, although this has happened, but rather that it is of a type uncommon in Uganda. If a piece of equipment is the only one of its type in the country, there will be obvious difficulties in keeping it running satisfactorily. There will be no agents appointed, spares will have to be imported

specially, and there will be no experience in the country of its operation and maintenance. It seems particularly ridiculous for a training establishment to import equipment which might never again be seen by the students who use it. But there is more than one instance of this happening or about to happen. The proposed Soviet school for mechanised agriculture is a striking example. Tractor mechanics at the school are to be trained exclusively on Soviet equipment, but the tractors on which they will work when they leave the school will all be British or German. As yet, the difficulties caused by importing unusual equipment have not been serious, but if large quantities of Russian, Yugoslav, and Chinese machinery are to be imported, then the problems will multiply very rapidly.

The problem of aid tying for Uganda is one which applies equally well to aid tied to off-shore costs as to procurement in a particular market. That is the problem of local costs. In theory,¹ if a recipient country has under-utilised local resources, and can find foreign exchange to finance secondary imports, money can be created for local expenditures. However, African countries, in general, follow conservative monetary policies and in this they have the support of the international financial community. The point is made very clearly in the Second Plan. 'Basically, it is sound commonsense and sound economics to bring these idle resources into use by increased Government development spending financed by expanding the money supply. But balance of payments considerations often limit this possibility. The bringing into use of these idle resources will require some imported equipment or materials, and the extra income generated will have a marked import propensity . . . In addition, over-expansion of the money supply, especially in the early years of a new national currency, carries the risk of undermining confidence in the currency. A currency in which there is little confidence discourages capital inflows so that the net effect of the whole operation on development would be negative' (page 29).

That Uganda has difficulty in utilising aid which is tied to imports has already been made clear in Chapter 5. The terms of the Commonwealth Assistance Loan had to be changed, loans from the USSR, China, and Yugoslavia have not been used, and a loan from the United States to UDC was only used with the greatest difficulty. That the effects of tying have not been more serious is due to the fact that in the initial phases of the Plan both British and American aid were less heavily tied than they have subsequently become. In the US case aid tying has been considerably reduced by PL 480 and special letter of credit procedures. The former involved the generation of local currency by the sale of surplus US wheat imported under the Food for Peace (Public Law 480) programme, which was used to finance the local cost element of US-aided projects. According

¹For a further discussion see 'The Tying of Aid and the Problems of Local Costs' by Juliet Clifford, *The Journal of Development Studies*, January 1966.

to the latter procedure the value of selected imports from the USA could be obtained in freely convertible dollars to finance the local costs of additional US-aided projects.¹ Of the £8.7m provided by Britain at and before independence less than 30% was not available for local costs and there was some relaxation even of this restriction. Of the latest loan, however, as much as 66% is tied to imports from Britain.

The problem of tying is of particular importance to agriculture because so many agricultural projects depend upon a large proportion of local costs for their implementation. This is borne out by the fact that the last agricultural projects in the First Plan to find finance all involved fairly substantial local costs.

3 Technical Assistance: Experts

Experts are usually classified as being advisory or operational. For example, OPEX (operational and executive) technical assistance missions from the UNDP and British OSAS personnel are operational, whereas the ordinary UNDP technical assistance missions and SCAAP personnel are advisory. In theory, advisers are not allowed to accept an executive role and are sometimes, as in the case of the UNDP, specifically barred by the terms of their contract from doing so. Uganda's need at this stage for genuine advisory personnel is very limited.² They can only function effectively when there is a strong executive able to formulate the needs, provide supporting services, and carry out their recommendations. Advisers themselves often realise that the true need is for personnel to take decisions and see that they are carried out, and hence interpret their terms of reference in the broadest sense in order to undertake this executive function.

Advisers are most useful when they come to advise on a specific problem such as the feasibility of a fish-canning project or whether and how Uganda should set up a dairy board. Those whose terms of reference are too broad feel that they have not given full value if they do not make very radical proposals. Their recommendations then tend to be out of line with the country's resources and out of sympathy with the tradition in which these resources are being exploited. Collection of the statistics proposed by one FAO adviser, for instance, would have kept 50 men in continuous full-time employment. If these recommendations are not accepted and acted upon, the advisers become very frustrated.

One might ask then why the Government accepts advisory personnel for posts which are really operational. The answer to this is that they are cheaper. The presumption of the donors is that an operational, executive type of post will already be an established one and that funds for it will have been earmarked accordingly. Hence, there is a convention that

¹For a more detailed explanation see *Aid in Uganda—Programmes and Policies*.

²This is reflected in the British technical assistance figures for Uganda. There are seldom more than one or two SCAAP personnel working in agriculture.

technical assistance is provided for operational posts only to the extent of supplementing the local salary. Advisers, on the other hand, have their entire salary paid by the donor. This does not mean, however, that they involve the recipient in no cost. In the case of each UNDP expert, for instance, Uganda has to pay a 12½% 'contribution to local costs' which comes to over £1,000 a year. In addition, supporting costs have often to be found to cover such things as housing, transport, office accommodation, secretarial assistance, medical facilities, etc., and these can amount to a considerable sum.

The convention of not paying the full salary for operational personnel disregards the need for *new* executive posts. The logic behind it appears to be that the need for such posts will continue long after the technical assistance personnel have left and that establishment of a post will ensure a local replacement. UNICEF has solved this problem simply by getting the employing agency—in this case the University—to sign an agreement that the posts will be continued. Even this is not without its dangers, because if the local agency at some subsequent stage finds itself seriously short of funds, it might well find that it has to drop other more important posts or activities in order to meet its obligations. This need not arise if the donor, recognising the long-term nature of Uganda's aid needs, is prepared to finance the post even when filled by a local officer.

Apart from a few volunteers, Uganda is recruiting staff for agriculture from overseas at two basic levels; highly skilled personnel such as research scientists, veterinarians, etc. at one level, and diplomats for the rapidly expanding mechanisation programme at the other.

The shortage of highly skilled personnel, particularly research staff, is a serious one. Research institutions have been singularly unsuccessful in attracting Africans of the right calibre. The result is that when posts fall vacant an attempt has to be made to fill them from overseas. This is done with varying degrees of success. In April 1966 EAVRO had only 7 posts filled out of an establishment of 18 scientists. There were, in addition, a number of full aid personnel, but these were mainly working on specific problems unrelated to the main-stream of EAVRO's work. The Animal Health Research Institute in Old Entebbe had no chief research officer, no senior pathologist, and two vacancies out of five posts of veterinary research officer. EAAFRO, on the other hand, has been remarkably successful in retaining staff and as the result of a vigorous recruiting campaign is, in fact, over-established if one counts all the staff on full aid.

There has been a steady draining away of experienced personnel and the lack of trained locals means that there is a serious danger of a critical situation.¹ However, although the needs are most obvious and dramatic

¹It had already become critical for EAVRO. The organisation has subsequently become fully staffed, a tribute to the emergency action taken by aid donors, particularly the British Ministry of Overseas Development.

in research, they are not necessarily the only ones. Often no attempt is made to replace a retiring expatriate by someone else from overseas simply because he is irreplaceable. It is usually not their technical competence which makes such people invaluable as much as their experience and managerial know-how; the very qualities which make development possible.

The first place which is looked to for filling vacancies from abroad is Britain. This is hardly surprising, since there is a tradition of indenting on London for staff and OSAS is administratively easy to operate. There is no problem of negotiating terms before recruitment can begin; an application form is simply filled in. Although there are complaints of administrative inefficiency on the part of ODM, or more particularly its predecessor DTC, there can be no doubt that Britain is the easiest and quickest place to get staff from. The main responsibility for looking after Uganda's future needs for technical assistance personnel will obviously be Britain's.

However, the fact that OSAS is administratively simple does not necessarily mean that it is the right or only way to provide technical assistance personnel for agriculture in Uganda. One might question on the one hand whether it meets Uganda's requirements and on the other whether it meets the needs of the personnel it employs so that there is an adequate supply of them. It is suggested in the final section of this chapter that Uganda's needs would be met more adequately by providing a certain number of staff at least on full aid terms. However, on the present terms of service, even the present demand for qualified personnel cannot be met.

The first priority is to retain experienced personnel. Already a vast reservoir of experience has been allowed to run dangerously low. Even if the flow could be stemmed now, there would still be a need for new staff from overseas. The contribution which the new people could make, however, would be considerably enhanced by having a nucleus of more experienced people to work with. The greatest need, therefore, is for the Ministry of Overseas Development to take as many as possible of the key personnel into a career service.

The British Government's belated creation of a corps of specialists to serve overseas is certainly a step in the right direction, but the numbers are lamentably small. There are initially to be only 100 posts compared with a total of over 10,000 personnel in OSAS, and only 15 of them are agricultural. With such a small number of posts there is a fear amongst serving officers that they might be used to fill unpopular posts overseas which the Ministry cannot otherwise fill. There is also a danger that the Ministry will be tempted to use them for short-term assignments only, when the great need for agricultural experts is to keep them in one place for as long as possible.

One of the problems is that we do not know what the complex of reasons is why most people decide to retire. Many reasons are given and many of

them a donor can do nothing about, for example, the feeling of physical insecurity caused by the political situation. There are others, however, that the donor can be directly responsible for, such as career security, or which he can influence, such as job security. It would be very valuable, therefore, if the Ministry of Overseas Development could carry out a survey of officers serving under OSAS and particularly those who have recently resigned to try to find out on a more systematic basis what their problems are and why they leave. The real reasons are often not stated or even conscious. The Ministry would then be in a position to introduce more flexible terms of service so that different options are open to people whose problems are different. It might be that this would involve scrapping the entire OSAS system. One of the possibilities which has been suggested, which would be particularly attractive to research scientists, is that officers who have served overseas for a number of tours might be entitled to a sabbatical year.

In addition to the corps of specialists the Ministry of Overseas Development has offered funds to establish 400 supernumerary posts—202 of them in agriculture—in universities and other institutions in Britain in order that staff may be released for service overseas. Research will be the most obvious beneficiary. This scheme is an imaginative one, but its effects are likely to be in the longer run rather than in the immediate future. Its interest is not so much in providing a framework for continuation of the work of those experienced in tropical agriculture, as in creating a climate in which service overseas is a natural part of a professional career and giving British institutions an interest in developing countries. Where the work overseas is closely related to work at the home station the scheme will obviously be at its most useful, especially if provision is made for a 'home-based' officer to maintain a full and useful contact with his home institution.

Even when research stations can manage to maintain their staff numbers by vigorous recruitment overseas they are still left with the problem of continuity. For research to be effective it is essential that ideas and experience are passed on from one generation of research workers to another. The value of the secondment scheme would be increased, therefore, if scientists could be seconded for longer periods than the normal two-year tour, say five years. In addition, however, continuity would be much more assured if groups of scientists rather than individuals were to be supplied to any particular East African institution. AID accomplish this by contracting with a university or other institution to supply a certain number of staff over a number of years. This sort of arrangement lends itself well to the Ministry's supernumerary posts scheme and has, in fact, already been started in a small way.

In addition to high-level staff, Uganda is recruiting newly graduated diplomats from Britain to help out with the mechanisation programme.

It is unusual to recruit at this level from overseas, and is politically difficult without some crash project such as this. The diplomats come straight from agricultural college, without special briefing or training either in Britain or Uganda, to group farms and the tractor hire service. The job of group farm manager would be difficult enough even for an agricultural officer with considerable experience in the country, because in fact he is not really a manager at all, but adviser to the group farm committee. None of the managers can speak the language of the people they are working with and they all came without any knowledge of tropical agriculture. Remarkably, one or two have been extremely successful and will obviously be a tremendous asset if they come back for a further tour, since the group farming programme is new and no one else in the country has any experience of it. It seems unlikely, however, that many of them will return for a further tour, since they have probably got as much as they can in terms of experience from their first job. Increasing the differential between the salary paid for the first and subsequent tours might be effective in persuading them to return for further tours.

The managers of the earliest group farms started work with no special training at all. Those who are now being recruited work three or four weeks with another manager. However, many of the latter are disillusioned as a result of being involved in the programme in its more difficult days, and hence the benefits of this form of briefing are doubtful. There seems to be an obvious need for some more formal training for agriculturalists, and not only the group farm managers, coming to Africa for the first time. Ideally this would be done by the recipient country and is, in fact, something which they think of from time to time but is obviously not going to be high on their list of priorities. It is in the interests of the donors to ensure that their technical assistance personnel are as well trained as possible. If, as is proposed later, other developed countries take a greater share of the burden of providing agriculturalists for Uganda and other Commonwealth African countries, Britain could offer them the benefit of her considerable experience by establishing a school for the orientation of all new staff, not merely those from Britain. It should go without saying that such a school should be located in Africa where conditions are as near as possible to the ones which will be met in practice. Whilst the intensive training which colonial agricultural officers received is no doubt inappropriate in the present circumstances, none the less there is a need for some sort of training period for new staff. It is estimated that for certain categories it is a year—half a normal tour—before they become really useful to Uganda.

There are more than three times as many technical assistance personnel from Britain serving in agriculture in Uganda as there are from the rest of the world. The proportion in the EACSO agricultural organisations is not so great, perhaps half as many again British as non-British. None the less,

Britain is not an agricultural country and her resources of agricultural expertise are limited. In fact, she cannot find qualified personnel to fill all the requests which are received. In 1966, for example, 187 agriculturalists were recruited for developing countries, but 217 vacancies were still unfilled at the end of this year. Britain should attempt, therefore, in the Development Assistance Committee of OECD to persuade other donors to consider what they can do to increase the numbers of technical assistance personnel in agriculture in Africa.

In particular, the other rich members of the Commonwealth might be considered to have a greater responsibility towards Commonwealth Africa than other donors. However, they tend to specialise on a geographical basis—Australia and New Zealand in Oceania and Canada in India and Pakistan—and their programmes in Africa are very small. Whilst this is very sensible from a number of points of view it does mean, since it is in Africa that agriculturalists are needed, that they automatically exclude themselves—or very nearly so—from a field of assistance which they are probably better equipped to provide than most aid donors. They should be invited to consider, therefore, how they can increase their aid to agriculture in Africa. Each of them has special knowledge which could be put to the greatest use in Africa. Canada has already given a little assistance to forestry and fisheries in Uganda, but there is considerable scope for more. New Zealand could give invaluable help to Uganda's nascent dairy industry and Australia has experience in many relevant fields, ranching and irrigation being only two of them.

The survey of OSAS staff referred to earlier in this section should also set out to discover what happens to experienced officers when they retire from the service of African governments. It would probably find that many of them go to Australia, New Zealand, and South Africa rather than returning to Britain. The Australian and New Zealand Governments, therefore, have an equal responsibility with Britain for trying to get them to stay in Africa for as long as they are needed. A possible way of making an effective career service would be by inviting Australia, New Zealand, and Canada to participate. Such a scheme might have the advantage from their point of view of ultimately diverting to their shores personnel who would otherwise have gone to South Africa.

Uganda has had relatively little difficulty in absorbing technical experts from different countries into her agricultural services. There are 'good and bad alike no matter where they come from'. Technically there is very little to choose between people of the same age and experience from different countries. Most bilateral experts coming to Uganda for the first time have no tropical experience. There is, however, very often a difference in attitude. An expert who is one of two hundred from a country sees himself as a cog in a wheel, whereas if he is one of only one or two he might see himself as the wheel. Such people come to Uganda expecting to change the whole

structure of agriculture overnight, without experience or appreciation of the sociological problems involved. When they meet resistance, disillusion and frustration set in. What is needed, therefore, is an orientation course organised on an international basis. The need, of course, extends to more than agricultural personnel, but if an orientation course could be organised in conjunction with a course on tropical agriculture so much the better.

4 Technical Assistance: Training

Training in agriculture both overseas and in Uganda is provided for Ugandans by a number of countries. It takes several different forms. Israel provides special courses for groups, the USA includes training as a feature of many of its projects, whereas Britain offers courses to individuals.

The basic issue is how much of the training should be done in Uganda and how much overseas. In this respect the experience of the Israelis is particularly interesting, because they have provided courses for groups of people in both Israel and Uganda. On cost grounds alone, it would appear best to keep as many people as possible in Uganda, if there are sufficiently large numbers to make local courses worthwhile. It seems rather surprising, therefore, that an agricultural diploma course should have been set up specially for Ugandans in Israel, taking them away from their local conditions at great cost.¹ The Israeli argument is that in Israel the Uganda students were able to benefit from contact with a number of experts who could not be induced to come to Uganda. It is doubtful, however, if this gain is worth the drawback of being unable to demonstrate by local example.

Special courses have also been arranged in Uganda with Israeli instructors. In this case, although the students were in their own environment, the instructors were new to it. It seems probable that they could have been more beneficially used as an addition to the staff of existing institutions, in the same way as US and British personnel; their teaching would then have benefited from contact with instructors with more experience of local conditions. There was a case in Kenya where the first six participants in a project to train women for teaching in Farmers' Training Centres were sent to the United States. The rest were trained at Egerton Agricultural College in Kenya at a fraction of the cost. The general impression is that the latter, trained at less expense, are also much more successful than those who went to the United States. Since this is a question which is of interest to other donors, it would be helpful in due course if the Israeli Government were to undertake an objective evaluation of the comparative

¹Where a training programme is designed to produce a single injection of new staff, it is probably cheaper to send them overseas, if shortage of places in the agricultural colleges in Uganda involves capital expenditure in the form of new buildings, etc.

effectiveness of the staff who were trained in Uganda and in Israel.

Courses have been arranged in West Germany, Yugoslavia, and Italy for the training of agricultural mechanics. Again it seems likely that it would have been cheaper and more efficient to have seconded staff instead to Uganda, particularly since students have to spend time on learning a new language. The Italian course lasted for only six months and the language had to be mastered first. It is not surprising that this course has now been dropped.

On the other hand, students going overseas gain much experience which is not purely technical. Educational experts in East Africa often comment on the need to broaden the background of their students. The Forestry Department used to send its diploma students to the Forest of Dean school for a year, but now undertakes the entire course itself. The cost of training in Uganda is less, although not to Uganda, since the Forest of Dean course was paid for by Britain. But there is some loss in that the students are not able to match themselves against others from elsewhere.

It is obvious that a country as small as Uganda cannot fill all her training needs internally. For some of them, however, there appears to be no provision overseas either. The Colonial Fisheries Officers' Course, until it was discontinued, provided training for fisheries officers going from Britain to the colonies. It was a practical course and not the sort of training which a university gives. Uganda has only one or two candidates a year for such a course and cannot, therefore, provide the training herself. It seems likely that other developing countries also feel this need, and if so a training school on an international basis would be worthwhile. Whilst this might be a suitable UNDP project, experience of other multilateral training institutes has not been altogether happy. It would probably be more efficient for Britain to resuscitate the colonial officers' course.

AID's policy is to make training part of a total aid package. By integrating the various forms of assistance into a unified programme, AID attempts to ensure the most efficient use of each of them. It does, however, seem that they are a little too keen sometimes to send people to the United States for only a short time at considerable expense. Although the political pay-off from visits of three or four months might be good, it is doubtful if the participants gain enough from them to justify the cost.

In most ex-dependent countries when posts are being localised there is often a strong presumption that the paper qualifications for the job are sufficient, although the applicant might be totally inexperienced. In Uganda, however, there has not been undue haste to Africanise the top technical posts and when Africans have taken them over they have often had a better chance to gain experience than is common in some other African countries. None the less, where such experience has been gained it has usually been by, for instance, filling the post of Deputy to a Commissioner rather than by doubling up in the post to be taken over. Where the

Uganda Government is paying the local salary of an expatriate it simply cannot afford to provide him with a supernumerary as understudy. This is one respect in which OSAS has been a total failure. It has made no provision for an overlap to allow a local officer satisfactory familiarisation with a job before he takes it over from a departing expatriate. In many cases, of course, even if a post were freed for a supernumerary, shortage of staff would not allow it to be filled. However, in future the staffing situation should be easier and, if the Uganda Government were relieved of the burden of paying an expatriate's salary for the overlap period, it should be possible to provide a counterpart.

It might be felt that it is now too late to institute some such system, but there is one field in which on-the-job training is essential and where the process of localisation has only just begun. That is research. Even a skilled research worker requires time to familiarise himself with the work of the man he is taking over from. A very simple way for Britain—or any other donor who provides technical assistance personnel on the same terms—to arrange for an overlap would be to undertake to pay the entire salary of any OSAS officer during the six months of his retirement notice, provided that a counterpart is provided. This might, however, lead to administrative difficulties in the recipient country and it might be just as effective simply to provide a number of floating posts on the understanding that these are to be filled by counterpart personnel.

5 Multilateral Aid

In Uganda, as in some other developing countries, a preference is expressed for multilateral as against bilateral aid on the grounds that it is free from political strings. How effective is multilateral aid in promoting the development of agriculture? If it is no less efficient than bilateral aid, there will be good grounds, from the recipient's point of view, for diverting more resources to multilateral aid. Multilateral aid is not, however, a single entity. There are a number of different institutions which provide it and they are very different in character.

The World Bank's¹ policy in the past has tended to result in a neglect of agriculture. On the one hand, its requirement that projects should be economically viable weights the scales against those whose returns are hard to quantify and, on the other, the provision of only the import content of a project tends to exclude those with a high local cost content.

¹World Bank is used here for the International Bank for Reconstruction and Development (IBRD) and its associates, the International Development Association (IDA), and the International Finance Corporation (IFC). IDA is the arm of the Bank which lends to certain countries, including Uganda, on very soft terms. The IFC, which invests in indigenous enterprise, is as yet of little relevance to Uganda, although it has invested in textiles.

In general, agricultural projects fall into both of these categories. The latter policy has, however, now been modified. In fact, it has been for some time in East Africa where agricultural credit projects in Kenya and Tanganyika and tea and settlement schemes in Kenya have been supported. The Bank is now striving consciously to increase its investments in agriculture and education. As part of this redirection of interest an Agricultural Development Service has been set up for East Africa. Its members will provide management in addition to helping to identify projects and preparing evaluations.

As yet, the Bank has not invested directly in agriculture in Uganda, although obviously investment in infrastructure has benefited agriculture. It will, however, now lend £1,214,000 to the Uganda Government, of which £903,000 will be on-lent to the Uganda Tea Growers' Corporation (UTGC). The Bank will participate with CDC in this project which is somewhat similar to the very successful one run by the Kenya Tea Development Authority. The remainder of the loan will be used by the Government to provide an extension service to the small-holder tea growers at no charge to the UTGC. There is also a prospect of a World Bank loan for agricultural credit. Both will be soft loans through IDA.

The British Government has a stated policy of channelling more of its aid through multilateral agencies. In so far as this means through IDA, it is to be welcomed, provided that the Agricultural Development Service is vigorous in searching out agricultural projects. It means, though, that Britain must be prepared to concentrate its remaining aid on smaller projects, since there would otherwise be a danger of over-concentration on large projects.

The World Bank has always insisted on undertaking only those projects which have been subjected to proper project appraisal. It is noted elsewhere in this chapter how few aided projects have had the benefit of a rigorous cost/benefit analysis. The UN Special Fund was established to undertake the necessary pre-investment activities, such as surveys, pilot projects, project evaluation, and even to help with research and training. The Special Fund has now been amalgamated with EPTA to form the UN Development Programme. It remains to be seen what the effects of the merger will be on the two components of the Programme. As yet they appear to be preserving their identities, although it is the policy of the Development Programme to close the gap between them. In the process there are a number of improvements which can be made to both components.

The first improvement which could be made would be for the UNDP to provide a proportion of the entire cost of a pre-investment project—which could either be fixed or negotiated for each case—rather than financing certain types of expenditure. This would give an incentive to keep the cost down rather than padding the project. The UNSF rules were

that it would provide international experts and any equipment which had to be imported, but the local government had to raise the rest. This meant that when a project was devised for presentation to the Fund an unreal balance was struck between those items which the local government must provide and those which the UNSF was asked to provide. This defect becomes most evident in training schemes. Uganda is, for instance, in the process of applying for assistance for a co-operative college. What is principally required is a building and finance for the recurrent costs of the college, but unless the rules are changed none of these can be provided by the UNDP. Instead what will probably happen is that the college will be packed with 'free' international experts, thus upsetting the balance between international staff and those who are possibly less expert but who have more experience in the country. And since Uganda pays 15% of the total cost of each expert towards 'local costs', they can hardly be said to be free. It is also likely that part of the college will be given over to research merely because 'the Special Fund won't look at it otherwise'.

Secondly, the UNDP could be more flexible in its requirements for counterpart staff for some posts. In general, the policy is to have a local understudy for each international expert in a Special Fund project, although not for technical assistance experts. Whilst it is very important to do everything possible to ensure that there are local people to carry on once the expert has left—and most bilateral donors do not take this seriously enough—it is also necessary to realise that in some instances the local personnel are simply not available. Often in East Africa, counterparts are senior expatriates. This means that the time of extremely busy senior personnel is tied up without increasing the country's stock of experience.

Thirdly, the UNDP could undertake smaller pre-investment surveys. In the past the UNSF only considered projects costing a million dollars or more. There are few agricultural projects in Uganda which merit a pre-investment investigation on this scale. There would then no longer be a temptation to inflate projects to make them large enough for consideration by the UNDP. There should be no reason why part of the costs of a single consultant cannot be paid.

An obstacle in the way of the merging of the two components of the UNDP is that, whereas Special Fund assistance was granted on the merits of the project, EPTA posts were allocated to recipients in two-year tranches. The fact that there was a ceiling on EPTA funds probably meant that they were more carefully used. It would probably be impossibly complicated to consider every single technical assistance request one by one, but there would be advantages in making the system more flexible. Needs do not fall into neat two-year blocks, nor can they be seen so far ahead. If allocations were made more frequently—and there is no need for the length of an expert's assignment to correspond with the

allocation period—and if the recipient were free to reallocate posts which could not be filled, the system would work more efficiently. In the past recipients have been inhibited from reorganising an outdated country programme by the danger that deleted posts would be lost to them.

A feature of UNDP pre-investment projects is the project agreement which sets out, usually in very precise terms, what the objectives of the project are. This is of particular importance for pilot projects, which departments are often tempted to use as the thin end of a wedge to establish pet projects with the object merely of getting something on the ground rather than of obtaining information. It is essential in any investigation to set out with the questions to be answered clearly in mind; the project agreement makes these explicit and hence increases the likelihood of efficient execution.

For the execution of its agricultural projects the UN Development Programme depends upon the Food and Agriculture Organisation (FAO) which acts directly or through consultants. Consultants have a number of advantages, not least of which is that they can supply personnel to work as a team who, as a team, have a professional reputation to lose. They can act more speedily than FAO can on its own, since they do not have the same problem of assembling a team. Also, if a particular expert does not get on with the local people, he can be removed without creating an international incident. In view of the difficulty it experiences in recruiting staff, it is surprising that the British Ministry of Overseas Development does not make more use of consultants, particularly since so few of the projects which it is offered for consideration have been subjected to a full feasibility study.

FAO really requires a study of its own. Its role, at least in Uganda, tends to be that of an agent—usually of the UNDP—rather than a principal. Hence it is its administrative efficiency which is relevant here rather than more weighty policy matters. In this respect FAO apparently leaves a lot to be desired, particularly in the selection of experts. When a developing country asks FAO for help in recruiting experts, particularly for fields in which it has no experience itself, it expects the international agency to act as rather more than a post office and take some part in the decision-making process. It cannot assess the technical competence of an expert on the basis of a one-page biography, and expects to rely on the vast experience which FAO has at its command. It would perhaps be more helpful, therefore, if in selecting candidates FAO were to put forward a number of names with a discussion of their respective capabilities, rather than proposing a single name without comment, as at present.

UNICEF has probably shown itself as the most flexible in approach of the multilateral organisations operating in Uganda, although as yet its contribution has only been relatively small. Although UNICEF, in general, supplies only know-how and commodities for the projects in which it

takes an interest, it has, on occasion, been ready to provide local and even recurrent costs. The same pragmatic view has been taken in the provision of technical assistance. Usually technical assistance for UNICEF projects is provided by a UNDP technical assistance mission through FAO, or some other Specialised Agency, but UNICEF does sometimes engage in direct technical assistance. When it does so, it is prepared if necessary to finance supporting costs as well as salaries. What is even more important is that it will provide funds for an institution, e.g. the University, to hire staff on the same terms of service as its other expatriates. This makes for a lower cost, more cordial relations amongst the staff, and simpler administration than if the UNICEF staff had the status of international experts.

6 Co-operation and Co-ordination

There has, as yet, been remarkably little co-operation between donors of aid to Uganda. Bunyoro has been mentioned already as an area in which various donors have related projects, but where no attempt is made to co-ordinate them. Ugandans, however, do not necessarily want the donors to co-operate. Whatever its motives might be, aid is a form of political relationship and many Ugandans are naturally enough sensitive about it. There are some who argue that the only genuine aid is that which is completely untied, for example, the Chinese gift of convertible currency; all the rest is simply an extension of the donor country's trade policy. Those who are suspicious of the motives of the aid givers see donor co-operation as an alliance of the strong against the weak. It is important, therefore, that co-operation between the aid givers should be firmly set in a context of co-operation with the recipient.

A framework for such co-operation is under discussion at the moment. The World Bank has proposed the establishment of a consultative group for the whole of East Africa. Such a group will have the advantage of bringing together not only the donors of aid, but the three East African governments as well. The establishment can only result in a more harmonious utilisation of aid and consequently a more harmonious development of East Africa.

The consultative group can, however, only operate at a level of broad general policy. There is also a need for co-operation in the detailed formulation and execution of each donor's programme. If a British agricultural aid representative—and possibly also a German one—were to be appointed, as is proposed in the section of this chapter on Administration, they could, together with the US representative and members of the World Bank's Agricultural Development Service, form an agricultural aid team. The ties between these personnel and the Uganda Government would be formal and strong, whereas the donor links could well be informal. The Uganda Government could facilitate the smooth functioning of this informal aid team by providing the members with offices near together.

They would be seen then as less a part of their own government's diplomatic representation and more part of a technical assistance operation to aid Uganda. The team could be augmented by non-specialists from the smaller donors.

The principal *raison d'être* of the team would be to ensure that the programmes of the various donors are complementary. This in itself would be a worthwhile function, but there are also specific fields where more positive co-operation would be valuable. IDA and CDC are to co-operate in financing the tea scheme, and there is no reason why other donors should not undertake smaller projects than this as joint ventures. Co-operation could mitigate some of the disadvantages of tying aid to imports from the donor country. If, for instance, Britain were to supply vehicles for a US project whilst AID supplied heavy tractors to a British project, both projects would gain in efficiency. Similarly, multilateral donors—who are not troubled with balance of payments problems¹—could provide local costs for projects whilst bilateral donors covered the import content.

Technical assistance is a field in which co-operation would be particularly valuable. The sort of high-level manpower which Uganda requires, for the research services especially, is in short supply the world over. Recruitment would be made easier if requests could be routed through some sort of clearing house such as the agricultural aid team could provide. This same group could also work with the Uganda Government's Foreign Scholarship Committee to act as a clearing house for scholarships to study agriculture overseas. Possibly even more important, however, is the need to harmonise terms and conditions of service. There is a bewildering variety of these and they put a very great strain on Uganda's administrative machinery. Some two or three years ago OECD organised a conference in Nairobi to draw up draft terms of service for advisory and executive personnel from the OECD countries to East Africa. A draft was produced of terms of service which would be acceptable to the three East African countries, and were, in fact, very similar to the British terms. The Conference was never followed through, however, and only the Norwegian Government acted on the draft. If the draft could be revived and agreed by donors of technical assistance to the East African countries, it would make things considerably easier for the overburdened local administration.

Another field in which standardisation would be valuable is in the preparation of aid applications. These are sometimes written up half a dozen different times in half a dozen different ways at the request of various different donors. It is particularly frustrating for overworked staff to achieve no result, if the application has been prepared time and time again. This could be avoided by donors agreeing to a standard format for applications for aid. Possibly the World Bank could give a lead in this respect.

¹Although some of them have difficulty in using inconvertible currencies.

The standard format should require the completion of a proper feasibility study, although this would not be of the same form, of course, for every type of project.

7 Administration

Very few of the aided projects discussed in Chapter 5 had a full-scale project appraisal. For others experts visited for a few days, but they were seldom in Uganda long enough to get the feel of the country, or even to penetrate the official façade.

The need for feasibility surveys is obvious. It is not merely a question of a yes/no answer as to whether to finance a project or not, but of looking for snags with a view to avoiding problems later on and of making sure that ends are properly tied up. One might ask, for instance, whether Germany was satisfied that the valley tanks which it was financing could be adequately maintained; or AID that tsetse clearing would be followed up by appropriate land use; or Britain that there would be staff for the Fisheries School. An essential feature of AID's project for tick control in Buganda, the pricing policy, had still to be worked out when the project was well on the way to completion.

It is not enough for the donors merely to take the advice of the Uganda Government department concerned. These do not have enough planning staff to give a full answer, and technical staff tend to take a somewhat partial view. Nor, since development projects are often in what are for them entirely new fields, do the departments always realise what technical and executive assistance is needed. Of course, donors need not necessarily undertake a feasibility survey themselves, but they do need to satisfy themselves, not only that a feasibility study has been made, but that it has been adequately done. An obvious first step would be to strengthen the planning process in Uganda, not so much in the Planning Ministry, but in the technical ministries.

Of course, not every request for aid requires a full feasibility study, but it does require a close scrutiny by someone with a detailed knowledge of the agricultural problems and potential of the country. AID has staff with this knowledge. None of the other donors, including Britain, has. The British argument against a more closely administered aid programme is that as the ex-colonial power she must particularly beware of becoming too involved in the internal affairs of Uganda. However, by providing aid in the first place Britain is involving herself in Uganda's affairs. It seems to many in Uganda, including British technical assistance staff, that Britain does not care how her aid money is spent. Ugandans cannot be blamed then for deducing that British aid is given for purely political motives; precisely the opposite conclusion to the one intended.

The principal reason for this apparent insouciance is the separation of

capital aid and technical assistance referred to later in this section. Another reason is the shortage of staff dealing with aid in the British High Commission. The two or three officers who are assigned to aid do not have the time for the scrutiny referred to above, let alone for getting out into the countryside to gain the detailed knowledge of agriculture which can make the scrutiny really effective. There are signs, however, that the British attitude is changing, and agricultural advisers have now been appointed in both Nairobi and Lagos. A similar appointment should be made in Kampala—and, of course, other capitals. With the appointment of an agricultural aid specialist¹ to Kampala Britain would, for the first time, be able to undertake a coherent policy on aid to agriculture, rather than doing a bit here and there as at present. This requires not only an interest in the feasibility of certain projects, but a concern for the Uganda Government's policy over the whole field of agricultural development. Even, however, narrowing the scope to those related to British-aided projects, there are many policy aspects in which Britain should take an active and influential interest, if she is genuinely concerned for the effectiveness of her aid. The speed at which new group farms are being established and the rate at which the charges made by the tractor hire service are subsidised are only two of the issues related to the provision of British tractors to which serious consideration should be given.

The first duty of an agricultural aid specialist would be to establish a close relationship with the technical departments of the Uganda Government. With the experience which he would then gain, Britain could be in a much better position to finance a larger number of smaller projects, and this is often what is most important in agricultural development. It is interesting to note that the £7½m loan to Tanzania which was suspended when diplomatic relations were broken off was to have been assigned to over one hundred projects—most of them in rural areas. It is doubtful, though, how effective this would have turned out without a more adequate field representation. A further advantage of having adequate aid staff in the recipient country is that they are able to carry on a continuing evaluation of their country's aid programme. By keeping an eye on their projects the aid staff are in a position to detect when things are going wrong and to make modifications, if possible.

A continuing watch over projects is particularly valuable in view of the strain on Uganda's administrative machinery. For instance, the Ministry of Veterinary Services and Animal Industry did not receive a copy of the agreement with the Germans for the provision of cattle quarantines. As a result, certain expenditure was *ultra vires* and not reimbursable. Had there

¹The effectiveness of an agricultural aid specialist would be increased, of course, if he were a member of a team. See *Aid in Uganda—Programmes and Policies* and also *Aid Management Overseas* by Tom Soper, ODI, 1967.

been close continuing contact between the Veterinary Department and the Germany Embassy this problem need not have arisen. A similar situation was only narrowly averted by the Water Development Department, which had not seen the British agreement.

Since the Americans have specialist staff in Uganda, it might be worthwhile examining their experience in a little more detail. Probably the most successful influence which AID has had on agricultural policy is to have caused a complete reappraisal of the methods used in agricultural extension and farmer education. They have then supported the new policy with technicians, buildings, training, visual aids equipment, and mobile vans. A more far-reaching influence, however, might in future be exercised in the field of agricultural education. Doubts have been raised in Chapter 3 about the Government's policy in training middle-level agricultural staff. These doubts appear to be shared to some extent by AID, and it will be interesting to see how successful they are in influencing the Government into modifying its policy.

There have been points of friction, however. AID objected to some of the notables of Ankole being accepted as tenants on the Ankole Ranching Scheme. Depending on one's point of view, this can be interpreted either as a very proper insistence on administrative propriety or as a lamentable failure to understand local political problems. The compromise solution reached—AID financing only 50 of the 70 ranchers—suggests a local AID staff alive to the political realities both in Ankole and in Washington. They do not, however, always seem conscious of administrative subtleties. The Department of Agriculture was persuaded to pay productivity bonuses to staff operating bush-clearing equipment. These bonuses were not paid to other staff operating similar equipment elsewhere, and the Department got into trouble with the Auditor-General over the arrangement.

The question of the sort of influence which donors bring to bear is of the greatest importance; for many Ugandans are only too prone to see aid as merely a political exercise. It is striking how donors—both at the level of government policy and at expert level—bring their pre-conceptions with them. An example is provided by German aid for the provision of valley tanks. Despite the fact that the Water Development Department in Uganda is more experienced in this sort of work than any private firm, the contract had to be put out to private tender.¹ If they are to increase their influence, donors must be prepared to modify their political, economic, and technological assumptions.

The difference between a donor who gives 'unpleasant' or 'bad' advice and an expert doing the same is that the latter can be simply ignored, but a donor can put on pressure. If the donor has a man on the spot with a

¹For a discussion of German aid policies, and also of the extent to which German aid is in effect tied, see *German Aid* by John White, ODI, 1965.

thorough knowledge of the agricultural problems of the country, he is more likely to be able to see the point of view of the Uganda Government. But if greater 'involvement' means a greater variety of advice and conflicting 'pressure', the appointment of special agricultural aid personnel will achieve precisely the opposite effect to the one desired. It is essential, therefore, that there be co-ordination between the donors. Perhaps the proposed consultative group can provide a formal framework for this, but informal constant contact between the donors' representatives is probably much more important in practical terms.

The British fear of interference can be seen in the rigid division which is made between capital and technical aid with the result that British projects are not readily identified as such. Whilst this means that prestige projects are avoided, the provision of capital on its own does sometimes lead to problems. There is a danger that some of the capital projects in the £6m loan could founder for lack of skilled staff to run them. For example, Britain is to provide borehole drilling units but there is no assurance that when the units arrive there will be drillers to operate them. Uganda could, of course, apply for OSAS engineers, but these might well not be available. If the British Government were to undertake to provide staff as part of a package deal, it could make sure that those already in Uganda stayed on, or could give a high priority to finding replacements. If it were not reasonably certain that drillers would be available, the capital could then be put to some other use.

There is no reason why a single country should supply all the elements of a project, but there is need to co-ordinate. The Fisheries Department is hoping to staff the British-aided Fisheries Training School with staff from Canada. It is by no means certain, though, whether Canada will be able to provide them. The point is that Britain should have found out about this before construction started. None of this is to be taken to imply that Britain should provide all her technical assistance personnel as part of capital aid projects; that would destroy the flexibility which is the great advantage which OSAS has for Uganda. It does mean, however, that capital aid projects should be examined very carefully before they are agreed to and, if shortage of staff is likely to be a serious problem, Britain should be prepared to supply the necessary staff as part of the project. It may mean that capital projects can be undertaken which would otherwise have been quite out of the question.

8 Future Needs

The target figure for Central Government expenditure in the Second Plan is £90m, but even in the most difficult circumstances it is hoped to reach £72m. Table 16 shows how it is proposed to finance this, as well as development spending in the parastatal and private sector.

Table 16
Financing Development Spending

				<i>Foreign</i>	<i>£ m Local</i>	<i>Total</i>
1	Central Government, of which ...	...	...	50	40	90
	(a) Taxation ...	...	...	—	30	30
	(b) Borrowing (including foreign grants.)	...	...	50	10	60
2	Parastatal ...	...	...	20	40	60
3	Private ...	...	...	15	75	90
Total:				85	155	240

Source: Second Development Plan.

'The proportion of foreign support for the public sector in these targets is higher than has previously been achieved. In the First Five-Year Plan just over two-fifths of Central Government development spending was foreign-financed, compared with the new target of more than one-half. This level of foreign aid will be possible only if there is considerable goodwill forthcoming from foreign donors plus effective organization of public sector projects at the Uganda end to translate that goodwill into a flow of aid.'¹

The fact that a larger proportion is looked for from overseas does not mean necessarily that the burden is being shifted from local to foreign sources of finance, but is a mere reflection of the ambitious nature of the Plan. In spite of the heavy reliance on overseas finance, a very considerable domestic effort is assumed. Less than half the increase in production will be devoted to private consumption needs.

It is beyond the scope of this study to suggest how donors of aid to agriculture might spend the aid which they provide to Uganda during the period of the Second Plan. The criticisms of the Plan in Chapter 4 should give some indication of the questions which need to be asked before detailed decisions can be made. Nevertheless, the broad fields where aid will be required can be sketched and inferences made about the various forms which aid will need to take.

The agricultural projects in the Plan are not given in sufficient detail to allow an estimate to be made of the amount of imported equipment which will be needed, but it is unlikely that it will be proportionately very high. Some idea can be gained from Table 11 where estimates have been made for the import content of the British £6m loan. It should be pointed out, however, that apart from the pilot irrigation schemes, only the capital cost of a project will be provided, and that for a number of them, notably those involving mechanisation, only part of the capital cost will be provided.

¹Second Development Plan, page 25.

Certain agricultural inputs are already produced locally. Phosphatic fertiliser and PVC and asbestos pipes are produced in Tororo, and insecticides are made up there. Handtools and fishing nets are also produced in Uganda. The principal requirements for imports will probably be for vehicles, heavy tractors, processing machinery, and nitrogenous fertiliser, although there are plans to produce this in Uganda. Others might include certain chemicals and pharmaceuticals, grading machinery, pumps, sprays, pipes, etc.

The fact that there is to be a relatively greater reliance on foreign aid in the Second Plan means that the form aid takes will have a greater influence on the way agriculture develops. Admittedly, there is no evidence of a bias against agriculture during the operation of the First Plan, but there was a shift towards more capital-intensive projects as the Plan was revised. Local money will be scarcer in the Second Plan and already Uganda is finding the greatest difficulty in using tied aid. The problem will become greater rather than less as the scale of operations is stepped up. The danger is not so much that agriculture as a whole will suffer—although this is a possibility—but that the provision of aid will emphasise the lack of balance which is already manifest in the agricultural sector of the Plan. Extrapolating from present trends, the following appears to be a not unlikely course of events. Much of the aid which is actually disbursed will be for capital goods. Other sums will be offered, but will remain unused because of the difficulty of finding appropriate items of imported equipment. A very large proportion of the available local resources will be diverted in support of the aid-provided capital equipment.¹

It would be unrealistic to propose to donors that they should altogether cease tying their aid, but a considerable improvement can be made by increasing the proportion of aid which is not tied. It should also be realised that some recipients are at a much greater disadvantage than others in this respect and there should be flexibility enough in aid programmes to take account of this. The World Bank modified its policy in East Africa and other donors could do the same.

During the last year of the First Plan—1965/6—the Government found itself in serious financial difficulties and almost all items of development expenditure were frozen from July until November. Even when funds were released they were often much less than had been estimated for. The exceptions to this were, of course, projects financed from abroad. It is obvious that if cuts have to be made certain types of expenditure are more vulnerable than others. These are often the most directly productive ones—the agricultural equipment subsidy and swamp reclamation in

¹Although, for instance, mechanised farming is considered here as 'capital-intensive', tractors and bull-dozers still have to be run. In 1964/5, for example, expenditure for mechanical cultivation expansion was as follows: equipment £85,326; housing, workshops, furniture, etc. £85,665; recurrent expenditure £390,138.

Kigezi were both badly hit last year. The pattern of development expenditure in that year was thus badly distorted. If there is a danger of this sort of situation recurring—and it seems very likely—it is imperative that donors take the greatest care in the selection of their projects.

In a time of financial stress the easiest items to sacrifice are recurrent items of development expenditure. In view of the fact that the Ministry of Finance is also very naturally loath to take on any new recurrent development commitments even when the financial weather is good, there is a clear need for aid givers to be prepared to cover more in the way of recurrent costs than they do.¹ The value of increasing the proportion of aid which is not tied to imports would be increased considerably if a greater part of the untied portion could be used for recurrent costs. There is a problem in that donors will want to assure themselves that, if they carry the recurrent burden of a project for a year or two, the Government will be able to take it over in due course. One might remark, however, that there is similarly no assurance that a piece of capital equipment will be adequately used. What is required in both cases is a long-term agreement with the recipient gradually taking over a proportionately larger share of the recurrent costs.

Managerial competence is probably in even shorter supply in Uganda than technical skill. Expatriates with managerial ability are often not in posts which require high technical qualifications and they are seldom replaced by staff from overseas when they retire. It is unlikely that there will be an adequate supply of local personnel to take their place in the next few years. Donors of aid must be prepared, therefore, to supply managerial expertise in conjunction with their financial aid. To a certain extent the United States already does this, although the managers tend to be designated as technical advisers. The British separation of capital and technical assistance has already been commented on. The provision of a 'package deal' is probably even more important in providing management for a project than in making sure of technical competence for its operation, although of course the two often run very closely together.

Britain already has an instrument to hand in the CDC; a large measure of the Corporation's success in East Africa can be attributed to its willingness to provide managers. However, the terms on which CDC obtains its own finance inhibit it from putting up risk capital. The Corporation's own capital structure makes it extremely difficult to make equity investments and, in fact, the loans which it has made to tea estates in Uganda have been on virtually identical terms with loans from the commercial banks. It is true that CDC may now waive interest payments for the first seven years of certain investments and this will be the case with its investment

¹A very welcome step in this direction has now been taken by Britain. Recurrent costs of the pilot irrigation schemes will be covered for two years.

in the Uganda Tea Growers' Corporation. None the less, if CDC were to be less dependent on loan finance itself, it could play a much more enterprising role in agricultural development. There is no doubt that it is well equipped to do this. The Kenya Tea Development Authority and the Uganda Tea Growers' Corporation are both imaginative projects in which the Corporation is playing a leading role, and the approach is one which might well extended to other crops.

Uganda's shortage of skilled manpower extends beyond the need for managers. The demand for expatriates depends, however, on the terms on which they are made available, and hence does not necessarily reflect the true need. There must be many cases where an expatriate would not only be useful but welcome if his full true costs were paid. An example is provided by the extension service. During the next few years there will be very many new young AAOs entering the extension service. It would obviously be extremely valuable if a number of AOs or AAOs could be brought in from overseas to lend a stiffening to the service whilst they found their feet. But this is only likely to be politically acceptable on the basis of full aid. The existence of the Peace Corps can be said to be a recognition of this need. Insofar as they have a skill to offer, volunteers can be very useful and some of those who have served in Uganda agriculture, particularly graduates, have proved very effective. None the less, experience is at an even greater premium than knowledge, although not necessarily experience of tropical conditions, and what is needed are people with a year or two's experience, if possible.

A word needs to be said in this final section about food aid. It has already been noted in Chapter 1 that Uganda does not find basic difficulty in feeding herself, although malnutrition is a serious problem. The problem of malnutrition is not inability to produce the right sort of food, but ignorance of the need to do so. This will be remedied eventually by education. In the meantime school meal programmes—as proposed by the Castle Education Commission—can be effective in increasing the vitality and receptivity of schoolchildren. Massive amounts of food aid could be absorbed in such a scheme, but it would be much preferable to invest in local agriculture in order to provide food—and of a more acceptable kind—for school meals. UNICEF does something like this by investing in dairy equipment and arranging for the loan to be repaid in the form of skim milk distributed to mothers and children. As the world's stockpile of surplus food runs down, possibly some similar arrangement can be made for feeding the large number of refugees in Uganda who are being kept alive by food aid.¹

¹The most recent agreement is one signed in February 1967 to supply World Food Programme food aid to some 30,000 refugees, who will be employed in bush-clearing, tsetse eradication, building access roads, etc.

As production gets more efficient in Uganda problems of storage, grading, transportation, and marketing will become relatively more important. There are a number of organisations in Britain run by the Ministry of Overseas Development which provide invaluable help for developing countries in some of these fields. For instance, the Tropical Stored Products Centre has a great deal of expertise on the problems of storing tropical products, and is prepared to second its staff overseas on fairly long tours as well as dealing with problems at its Slough headquarters. There will be increasing scope in the future for these organisations to make a useful contribution to Uganda's development. They have, however, in the past depended for a large part of their effectiveness on the personal relationships between their directors and the directors of departments in the colonies. It is important, therefore, in the new situation that their work be known as widely as possible in order that developing countries are made aware of the amount of assistance which is available. With the marketing prospects so poor for so many agricultural products, the Ministry should give as much attention as possible to the search for new uses for tropical products. This field of activity is the responsibility of the Tropical Products Institute (TPI). Uganda is also likely to need considerable help in marketing—also TPI's concern—during the next five years, both in market research and in establishing her marketing boards. An expansion of this side of TPI's work could also be very valuable to developing countries.

This survey has been able to do no more than hint at the very many problems of rural development which face a country such as Uganda. Problems of resource allocation, efficient use of scarce manpower, effective institutions for agricultural credit, improvements in the extension service, land reform—these are only a few. That Uganda is making a valiant effort to deal with them should be obvious from a reading of the preceding pages. They are problems which *can* only be solved by Uganda. But help from overseas will probably be a crucial part of the process.

7—Summary of Conclusions

Of the issues considered in this study, three stand out clearly from the rest. They are the importance of technical assistance and the twin problems for the Uganda Government of local and recurrent costs. A number of recommendations concerning these and other issues have been made in Chapter 6 and are summarised below. Although some of these are relevant only to British aid, many are of more general application and a few addressed to other specific donors.

1. Those donors who tie their aid to imports should be prepared to modify their policies in order to give as high a proportion as possible for local costs. Their programmes should be sufficiently flexible to allow a higher proportion of local costs to those recipients for whom this is a special problem (page 118).
2. Donors whose aid is procurement tied should attempt to mitigate its disadvantages by co-operation with other donors (page 112).
3. From the untied portion of their aid donors should be prepared to finance recurrent costs. By agreement, these can be phased out over a long period (page 119).
4. Donors should make their capital aid available in specific sums for a specific period. Each request for aid should be considered in the light of an overall policy towards agriculture and given the closest scrutiny (pages 94, 95 and 114).
5. Donors, and in particular Britain, should consider what steps can be taken to harmonise their capital and technical assistance. Policies should be flexible enough to allow an aid package of components from different donors (pages 116 and 119).
6. Donors should avoid giving aid to any developing country which is seriously detrimental to the interests of another. They should direct their aid towards furthering regional co-operation, wherever there is an opportunity (page 97).
7. Donors should be prepared to finance smaller projects (page 114).
8. Whilst food aid is essential in an emergency, in Uganda it is of limited use otherwise. It is preferable to invest in local production (page 120).
9. The British Government should reconsider the terms on which CDC is financed in order to give it greater flexibility and allow a more enterprising policy in the initiation of agricultural projects (page 119).
10. Britain should appoint a specialist officer in the High Commission to deal with aid to agriculture. His tour of duty should be sufficiently long for him to become thoroughly familiar with the agricultural problems and potential of the country. He should co-operate with other donors' specialist officers in an informal agricultural aid team (pages 111 and 114).

11. Donors should be prepared to cover the entire cost of their technical assistance personnel where established posts do not exist (page 120).
12. Donors who provide technical assistance on OSAS-type terms should be prepared to finance the entire cost of a post for a long enough period to allow a counterpart to be trained (page 107).
13. Britain should press other donors to consider how they can increase the supply of agricultural experts for Africa (page 104).
14. Britain should increase the size of her corps of specialists very considerably. Australia, Canada, and New Zealand should be invited to join in providing a career for agriculturalists in developing countries (pages 101 and 104).
15. A survey should be conducted to ascertain the reasons why OSAS staff retire. More flexible terms of service should be introduced to cater for the needs of different categories of staff (page 102).
16. Britain should establish a training school in Africa for agricultural staff coming to Africa for the first time. Places should be made available at the school for nationals of other donor countries (pages 103 and 105).
17. Britain should make the work of the home-based research institutes such as the Tropical Products Institute and the Tropical Stored Products Centre more widely known and should expand her activities in the fields of marketing and the search for new uses for tropical products (page 121).
18. Donors should agree a standard format for aid applications. They should also revive the OECD draft standard terms of service for technical assistance personnel serving in East Africa (page 112).
19. In its pre-investment activities, the UN Development Programme should be prepared to:—
 - (a) undertake smaller projects, (b) cover a proportion of the costs of a project rather than the off-shore element, and (c) be more flexible in its requirements for counterpart staff (page 108).
20. The UN Development Programme should introduce greater flexibility into the technical assistance component of its operations by allocating funds more frequently and allowing them to be reallocated with greater ease (page 109).
21. FAO should consider how it can be more helpful in recruiting staff for developing countries (page 110).

APPENDIX:

Uganda and its Agriculture— A Background Sketch

Geography

Uganda is a country of some 91,000 square miles—about the size of Britain—lying across the Equator close to the heart of Africa. It is bounded to the north by the Sudan, to the west by the Congo (Kinshasa), to the south-west by Rwanda, to the south by Tanganyika and Lake Victoria, and to the east by Kenya. The nearest sea-port is Mombasa, some 650 miles from Kampala on the Kenya coast, which is connected to Uganda both by rail and road. Entebbe is directly connected by international air routes to Britain and other countries.

The country can be described very crudely as consisting of a plateau 4,000 feet above sea level, bounded by mountains to the north-east and the Western Rift Valley to the west, falling to 2,000 feet where the Nile leaves Uganda in the north and becoming broken mountainous country, between 5,000 and 8,000 feet, in Kigezi and Ankole in the south-west. About a fifth of the area of the country is swamp or open water, including the territorial waters of Lake Victoria, and forest reserves cover some 6% of the total land area.

Uganda is administered through four regions which are each divided into districts. Buganda region is made up of Mengo, Masaka, and Mubende districts; Eastern region of Teso, Bugisu, Bukedi, Busoga, Sebei, Mbale (township), and Karamoja; Western region of Kigezi, Ankole, Toro, and Bunyoro; and Northern region of West Nile, Madi, Acholi, and Lango. The further subdivisions of each district have different names in different parts of the country, but the *Luganda*¹ names are in common use: *saza* (county), *gombolola* (sub-county), *muluka*, and *mutala*. In addition, the four kingdoms of Buganda, Ankole, Toro, and Bunyoro have retained a federal status and are responsible for administration in certain fields laid down in the constitution. Local government is organised at a district level.

It was estimated in 1966 that less than 6% of Uganda's population were living in towns. The largest town is Kampala which at the last census in 1959 had a population of 47,000. It was followed by Jinja (30,000),

¹*Luganda* is the language of the *Baganda* (*Muganda* in the singular) who live in Buganda. For ease of indexing the prefix is often dropped, e.g. *Ganda*. The name *Uganda* is simply the Swahili form of *Buganda*, which was all at one time that Uganda consisted of.

Mbale (14,000), Kabale (11,000), and Entebbe (11,000). However, by 1966 Kampala and Jinja together with their peri-urban areas were estimated to have a population of 227,000, giving a total urban population of 445,000. Entebbe is the capital, but parliament and many government offices are in Kampala, some 20 miles away. Kampala is the commercial and business centre of Uganda, but Jinja, with the Owen Falls hydro-electric station, is the chief manufacturing town. Extractive industries are located near Kasese and Tororo.

Tororo is the junction of the main railway line from the coast. A line runs from there through Jinja and Kampala to Kasese, and there is another link to Pakwach on the Albert Nile through Soroti, Lira, and Gulu. Uganda has a very good main road system, although many of them are not bitumenised. In many parts of the country, however, development is hindered by lack of feeder roads.

Climate

Rainfall in Uganda is mainly determined by convergence zones where air currents meet. The most important of these is the inter-tropical convergence zone (ITCZ) between the south-east monsoon and a more northerly current. There is a bi-modal distribution of rainfall in southern and central Uganda, accounted for by the northward and southward passage of the ITCZ as it migrates with the sun. Northern parts of the country have a single rainy season extending from April to October. In the eastern part of the area with two rainy seasons the first rains (March-May) are more reliable than the second (September-November), but towards the west the second rains assume the major importance. This pattern is, of course, only a very rough description and is considerably modified in the west by a moist westerly current from the Atlantic and near Lake Victoria by the influence of the lake. In most of Uganda, the rainfall is fairly reliable. There is a 95% probability of at least 30 inches of rainfall in a year, except in Karamoja, an area to the north of Lake Albert, one to the west of Lake Kyoga, and a large area running from Mubende to the Tanganyika border on the western side of Lake Victoria. The distribution of rainfall means that in most parts of the country two crops can be grown in a year on the same plot of land.

The principal determinant of variability in temperature in Uganda is altitude. The hottest part is in the north-west, the lowest part of the country, with a mean annual maximum of 90°F and minimum of 68°F, whereas the coldest inhabited parts are among the mountains of Kigezi and Ankole and on the slopes of Mount Elgon where the mean annual maximum is 74°F and the minimum 50°F. Just as the littoral rainfall is more evenly distributed so is the temperature more equable in the neighbourhood of Lake Victoria. Daily temperature ranges increase as one travels away from the lake.

The People

In 1965 the population of Uganda was estimated to be a little over seven and a half million, consisting of 7,452,000 Africans, 9,000 Europeans, and 90,000 others, mainly Asian. The bulk of the non-African population are engaged in non-agricultural occupations, particularly commerce, although the management of estate production is almost entirely in the hands of non-Africans. On the other hand, the overwhelming proportion of the African population are engaged in agricultural activities.

In general the people of Uganda belong to one of three ethnic groups, Bantu, Nilotic, and Nilo-Hamitic. The Bantu people live in the southern part of Uganda in Buganda, Busoga, Toro, Bunyoro, Bugisu, Ankole, and Kigezi. The main tribes—and percentages of the total population—are Baganda (16), Basoga (8), Banyankore (8), Bakiga (7), Banyaruanda (6), Bagisu (5), Batoro (3), Banyoro (3), Bagwere (2), and Bakonjo (2). Certain of these tribes have been subject to considerable Hamitic incursions, resulting in the case of the Banyankore, for instance, in the dichotomy of the tribe into a small Hamitic pastoral aristocracy, the Bahima, and a larger Bantoid peasantry, the Bairu. The Nilotic peoples are the Langi (6), Acholi (4), and Alur (2) in Lango, Acholi, and West Nile. Other tribes in West Nile, the Lugbara (4) and Madi (1), are related to Sudanese tribes. The main Nilo-Hamitic tribes are the Iteso (8) and the Karamojong (2) family of tribes in Teso and Karamoja.

Agriculture

Uganda's tribal background is of great relevance to agricultural practice. The first division which can be made is between cultivators and pastoralists, the Hamitic and Nilo-Hamitic tribes being the pastoral ones. In the south and west the Bahima are the traditional cattlemen, either owning their own cattle as in Ankole or acting as herdsmen for owners from other tribes. The Nilo-Hamitic Karamojong are still very largely pastoralist and their cultivation often consists of no more than a patch of sorghum. The Iteso, on the other hand, have been settled cultivators for the past hundred years. None the less, they maintain their love of cattle and there is a greater population of cattle in Teso than in any other district, even Karamoja.

A further division can be made between tribes whose main food crops are planted and those who sow them. Throughout the Nilotic and Nilo-Hamitic areas seed agriculture is dominant, whilst the Bantu tribes rely mainly on planted food crops. On the map this division coincides very roughly with the main ecological classification into elephant grass and short grass zones. The northern boundary of the elephant grass zone runs from the middle of Bunyoro through western and central Mengo to

southern Busoga. The principal staple food crops are sufficiently dominant to allow a classification¹ of peasant agriculture on this basis.

Finger millet is the staple food crop in Acholi, Lango, Teso, and Bukedi, and cotton is the main cash crop. Cattle are also important except in the northern and southern extremities where there is tsetse fly. Of the subordinate crops, sorghum is more important towards the east, cassava in the north-west, bananas in the south, and sweet potatoes in the south-west. The cultivation of pulses and oil crops tends to make this one of the areas of Uganda with the best potential dietary balance.

The banana zone runs from southern Busoga to the central counties of Kigezi with a break in the dry, tsetse-infested country south of Mubende and there is a further area around Mount Elgon. In most of this area bananas account for more than 40% of food crop acreage. Sweet potatoes are the second most important food crop and beans are grown over most of the area, but give place to groundnuts in Busoga. Maize is grown in the east and millet in the west. There are appreciable numbers of cattle throughout the area, although the density of population is greater in the south-west. The main cash crop in this region is coffee: robusta in Buganda and arabica on Mount Elgon and increasingly in the south-west. The main subordinate crops on Mount Elgon are maize, finger millet, and beans.

Between the finger millet and banana zones there is an intermediate area running from north Mengo to central Busoga. In this no single crop takes up 30% of the acreage devoted to food crops. This zone is also taken to include Sebei to the north of Mount Elgon where maize cultivation assumes importance.

Whilst cassava is important as a famine reserve crop in most parts of the country, in certain areas it becomes the dominant food crop. This dominance is most marked in West Nile and Madi, but it is also important in Bunyoro, Toro, and part of Kigezi. In these latter areas, however, cultivation of cassava is closely followed by bananas, finger millet, sweet potatoes, maize, and beans. In some counties new plantings of cassava are exceeded by the acreage under one or other of these crops. The lakes of the Western Rift Valley are the richest fishing grounds in Uganda and fish makes an important contribution to an otherwise protein-deficient diet in some parts of this region.

The sorghum zone consists of Karamoja and the southern counties of Kigezi. The Karamojong are not at heart cultivators and sorghum is virtually the only crop cultivated. They consider themselves as basically stock owners and there is a high proportion of both cattle and sheep compared with the number of humans. In southern Kigezi sweet potatoes and pulses follow sorghum in terms of acreage cultivated.

¹See D. N. McMaster, *A Subsistence Crop Geography of Uganda*, Geographical Publications Limited, 1962.

This description of the pattern of peasant agricultural production is, of course, only very rough. It is hoped, however, that it will be a useful guide to those who are unfamiliar with Uganda.

Glossary of Abbreviations

AA	Agricultural Assistant
AAO	Assistant Agricultural Officer
AEL	Agricultural Enterprises Limited
AID	Agency for International Development
AO	Agricultural Officer
BAT	British-American Tobacco Company Limited
CBPP	Contagious Bovine Pleuro-pneumonia
CCTA	Commission for Technical Co-operation in Africa
CDC	Commonwealth Development Corporation
CD&W	Colonial Development and Welfare
CIBC	Commonwealth Institute of Biological Control
CUSO	Canadian University Service Overseas
DFCU	Development Finance Company of Uganda
DFI	District Farm Institute
DTG	Department of Technical Co-operation
EEAFRO	East African Agriculture and Forestry Research Organisation
EACSO	East African Common Services Organisation
EAFFRO	East African Freshwater Fishery Research Organisation
EATRO	East African Trypanosomiasis Research Organisation
EAVRO	East African Veterinary Research Organisation
ECA	Economic Commission for Africa
EPТА	Expanded Programme of Technical Assistance
FA	Field Assistant
FAO	Food and Agriculture Organisation
FFHC	Freedom from Hunger Campaign
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IFC	International Finance Corporation
KTDA	Kenya Tea Development Authority
ODM	Ministry of Overseas Development
OECD	Organisation for Economic Co-operation and Development
OPEX	Operational and Executive
OSAS	Overseas Service Aid Scheme
PAF	Price Assistance Fund
PL 480	Public Law 480 (Food for Peace)
RTC	Rural Training Centre
SCAAP	Special Commonwealth African Assistance Plan
TPI	Tropical Products Institute
TPRI	Tropical Pesticides Research Institute
TSPC	Tropical Stored Products Centre
UDC	Uganda Development Corporation
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
UNSF	United Nations Special Fund
UTGC	Uganda Tea Growers' Corporation

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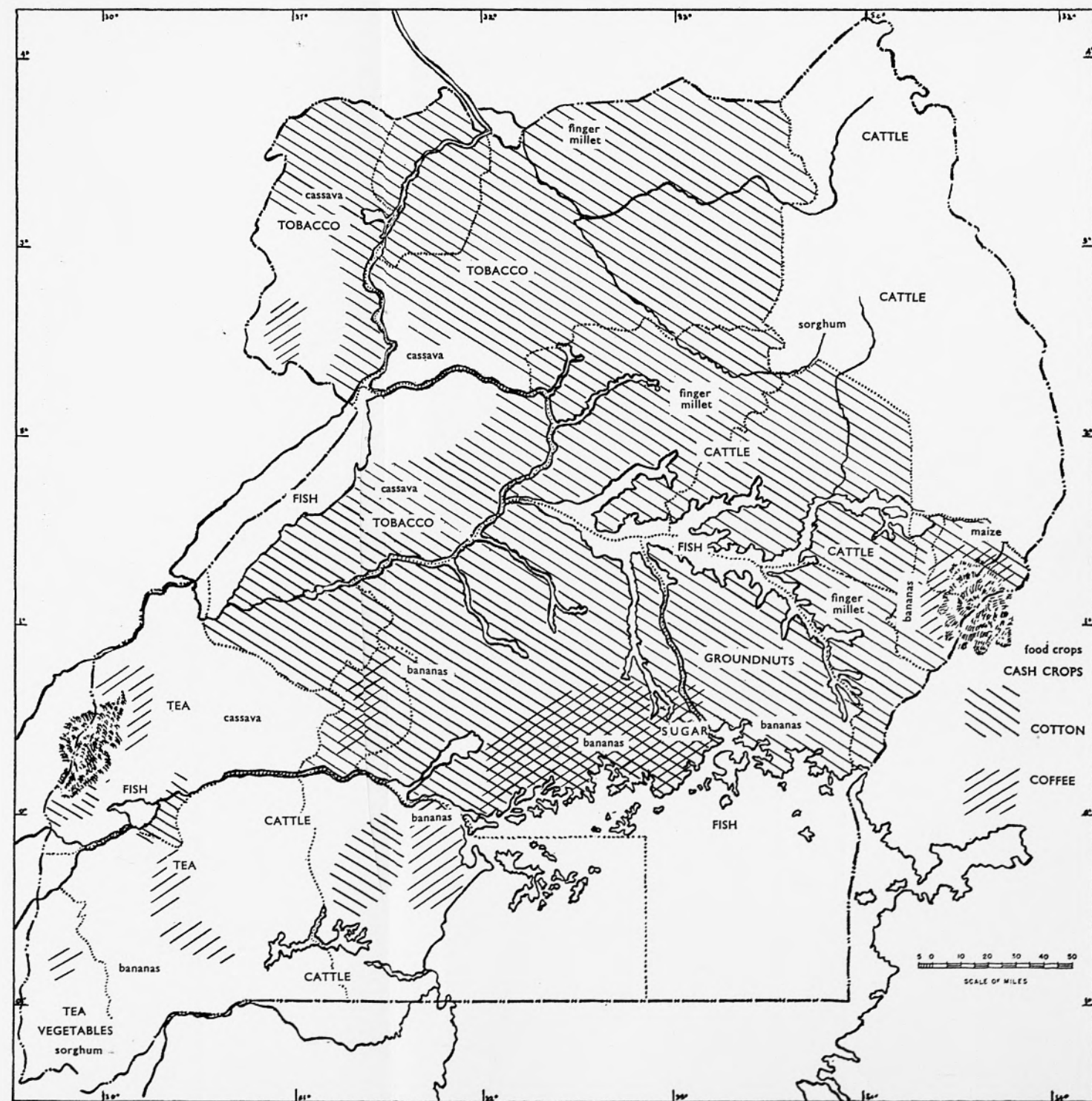
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MAJOR TRIBES



MAIN FOOD AND CASH CROPS





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The Overseas Development Institute is an independent non-government body aiming to ensure wise action in the field of overseas development. It was set up in 1960 and it is financed by grants from the Ford Foundation and British foundations, and by donations from British industrial and commercial enterprises. Its policies are determined by its Council. The Director is William Clark.

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New ODI Publications

Handbook on the Trade of Developing Countries (to be published in 1967)

Since the first United Nations Conference on Trade and Development (UNCTAD) held in 1964 there has been growing discussion of the relationship between trade and aid and the relative contribution of these to development.

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The handbook is intended as a guide to the next UNCTAD conference to be held in 1968. The authors are Michael Zammit Cutajar and Alison Franks.

Aid Programming (to be published in 1967)

This study is concerned with the contribution donors can make to maximise the effectiveness of the aid they provide. First, three pre-conditions for a good bilateral aid programme are put forward: a clear and consistent donor policy; close donor/recipient co-operation; and co-ordination of various donors' efforts. Second, the problem of planning and implementing country aid programmes is examined in detail by means of a case study. Special attention is paid to the role of permanent overseas aid missions and the considerations which should guide donors in selecting projects and aid forms, techniques, and terms appropriate to the development needs of recipients.

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