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DEPT. OF RURAL ECONOMY AND EXTENSION

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SOME TECHNICAL AND ECONOMIC  
ASPECTS OF HORTICULTURAL PRODUCTION  
IN UGANDA - A PROPOSED  
THESIS OUTLINE

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Agriculture in Uganda accounts for more than half of gross domestic product and for 80 - 90% of overseas export earnings. Perhaps even more important is the dependence that as much as 90% of the population had on this sector for their income. This situation is likely to remain so far at least another generation and probably longer. Within the sector, coffee and cotton account for 70% of export earnings. However, the price for these two commodities are uncertain on world markets and it is undesirable that Uganda should rely so heavily on them in the future.

The Government are alive to this problem and state in the second 5 year plan<sup>1)</sup> that for a rapid advance in the agricultural sector there must be both considerable diversification and structural change, and an overall expansion in output. The aim of the diversification programme in the Plan is primarily to reduce dependence on coffee a relative decline in the importance of cotton is also planned. The diversification will therefore be concerned with increasing the absolute value of these two crops by increasing output of cotton and improving the quality of coffee. It will also be increasingly concerned with increasing rapidly the output of other crops and animal products.

It is planned to increase the unit value of the coffee crop by:-

1. Increasing the output of higher value arabica coffee relative to robusta;
2. Improving the quality of robusta produced;
3. Encouraging robusta farmers to grow alternative crops, thus reducing acreage and hence production.

This encouragement will take the form of a credit fund for the production of alternative crop which will be tied to the uprooting of an equivalent acreage of robusta.

It can be seen then that the need to diversify is urgent. However, in order that resources can be efficiently channeled into new ventures, it is obviously essential to know in detail the economic and technical potential of any proposed new crops. The number of such is legion but as the writer's own training is in horticulture it is the horticultural crop that the study will be concerned.

Horticulture is a difficult thing to define, no two dictionaries being alike. It is generally stated to be 'garden culture' or the culture of garden crops and plants, implying cultivation within rather restricted areas. However, no-one has been able to say just how restricted should be a garden and how extensive a field. The distinction then cannot be based on the size of the units of area used. By far the most satisfactory concept would seem to be that based on economic principles, a useful definition being that used by Folley (2)

"High investment crop production, such crops being intended for human use without prior conversion into a different type of product."

By high investment crop production is meant the intensive use of the resources of land, labour, capital and management to produce the crop i.e. a large outlay is required before returns can be expected.

The specification that such crops need not be processed before consumption unfortunately excludes plants suitable for the extraction of medicinal compounds and of essential oils, although their production requires essentially horticultural techniques. Because of their very high value and low bulk such products are potentially very important and exciting to a land-locked country like Uganda

A less rigid definition will therefore be used:-

High investment crop production using resources intensively to obtain a high quality and high value product. However, it should be noted that because of lack of time, not all crops that fit within this definition will be included in the study.

From the production point of view Uganda would seem to have large areas of land suitable for horticultural crops together with a varied and favourable climate and a range of soil types well suited to a wide selection of such crops.

However, this seeming potential is virtually untapped and Uganda remains without a clear Horticultural Policy and no systematic development programme for horticultural crops whilst 1960-1966 the value of exports from Kenya of fruit and vegetables had increased from £1,22,000 to £2,065,000. Whilst sendings from Uganda were not considered sufficiently significant to list separately in annual trading figures. (3)

During the same period Kenya had almost doubled its value of exports of horticultural produce to Uganda from £111,000 to £209,000.

For the season October 1966 to June 1967 a meagre 557 tons of high quality vegetables were air-freighted from Uganda, this representing the combined produce of just five growers. Why is it that Kenya has forged ahead and left Uganda so far behind? It is impossible to believe that the relatively small climatic differences which exist between the two countries can be the determining factor. Whilst its neighbour Kenya romps ahead with not only export to Europe but also with shipment to Uganda itself Between (1960-1966)

The answer is not a simple one.

In part, Knowledge of such crops in Uganda is insufficient but where information has been obtained it often remains un-available.

"Much information still lies hidden for future workers to find. Much has already been found, but it has been lying in different papers, indifferent places and in people's heads. A book in which it is gathered together is greatly needed." (4)

It is therefore proposed to look at those horticultural crops which have had some research carried out on them in Uganda. However, unlike the Horticultural Handbook of Kenya, from which the above quotation was taken, this will not result in a grower's handbook, although there is a great need for such a document in Uganda.

A very good pamphlet on vegetable growing in Uganda has been produced however, by A. Mill, Kawanda Research Station (unpublished) but this needs extending to include fruit.

The study will seek to review current information on potentially valuable horticultural crops and it is anticipated that this will help in formulating a definite Horticultural Policy for Uganda. Such a policy will have two major aspects:-

- 1) Production for home consumption which will aim at revenue retention by import substitution. This will not only raise the income of those growers involved but will also make available for further growth resources which are at the moment being taken from the country.

It is unlikely however that this will have a great impact on the ~~encouragement~~ economy as a whole.

- 2) Production for world markets which will gain much needed export earnings. It is in this direction that emphasis must lie if a high growth rate is to be achieved in Uganda.

Production policy for these two markets will not be the same. The former will involve relatively low value, bulky food crops whilst the latter will be essentially concerned with high value, high quality products of small bulk which may or may not be further processed before export.

Crops will therefore be categorised into those with great medium or little economic potential as regards:-

- a) Home consumption;
- b) Markets within E. Africa
- c) World markets;

and an attempt will be made to assess the reasons for lack of promotion of the crops considered. This will include such considerations as:-

- i) Whether sufficient information is available on the technical production and whether this production is unsatisfactory;
- ii) Whether any attempt has been made to overcome such difficulties, for example, by breeding varieties for Uganda conditions;

- iii) Marketing difficulties and prospects;
- iv) Present possibilities for processing and future expectations.

Much of the information will be gained from reviewing unpublished documents and will involve obtaining government permission to consult its files.

Another source of information will be the Department of Agriculture Research Station, Sub-Stations, Experimental Stations and District Farm Institutes. Much interesting work was undertaken at the beginning of the century when many new plant introductions were made and trials enthusiastically laid down. However, since then many new varieties have been produced and crops which were then cited as unsuitable, in new variety, may well succeed.

Not all experimental work has been formally recorded and much useful information may be obtained from personal interviews with the people who have undertaken this work. Such people will include District Agricultural Officers and other staff who have been in the field some time; food factories needs merchants, firms dealing in agricultural chemicals and equipment; marketing organisations; commercial growers and farmers and perhaps even amateur gardeners.

It is anticipated that useful information can also be gathered from the Tropical Products Institute, especially on marketing aspects.

A subsidiary aspect of the study will be to take a critical look at the horticultural industry in Kenya in order to compare it with that in Uganda. Small differences in ecological features which exist between the two countries should in no way debar Uganda from growth of a horticultural industry similar to that found in Kenya, and reasons for this lag will be sought together with suggested remedies.

A possible further subsidiary project is the extension of the study and its incorporation in a minor crop Handbook, probably in conjunction with other members of the Faculty.

#### Footnotes

1. Work for Progress: Uganda's Seasonal Five-Year Plan 1966 - 1971.
2. R.W.W. Folley Commercial Horticulture in the British Economy Wye College Publication 1960
3. Statistical Abstracts' Statistics Division Ministry of Planning and Community Development.
4. Horticultural section of the Kenya Dept. of Agriculture: Horticultural Handbook.

#### References:

- Anne Martin. The marketing of minor crops in Uganda.
- A.F. Scherer: Fruit and Vegetable Processing in Uganda Project Identification for Processing Industry.
- C L.A. Lealey: Drugs, Spices and Essential Oils.

Three papers given at the crop and Livestock Processing in Uganda Conference at Makerere University College, 1967.

Horticultural Section of Kawanda Annual report, 1967.

A provisional list of some horticultural  
crops to be considered in the study

A. FRUITS

Litchi  
Mangosteen  
Loquat  
Soursop  
Guava  
Passionfruits  
Avocados  
Pawpaws  
Chinese gooseberry  
Cape gooseberry  
Sweet Bananas  
Macadamia Nut  
Cashew nut  
Strawberry  
Citrus spp.  
Pineapples  
Dates  
Melons

B. VEGETABLES

i) Indian  
Minor grams and pulses  
Cucurbits - Karella etc.  
ii) European  
Tomatoes  
Eggplant  
Courgette  
Cabbage  
Chauliflower  
Lettuce  
Carrot  
Turnip  
Beet root  
Solanum Potatoes

C. ESSENTIAL OILS AND

SPICES

Palmarosa  
Lemon grass  
Vetiveria  
Vanilla  
Ginger  
Turmeric  
Cardamom  
Cinnamom  
Bayrum  
Pimento  
Patchoule  
Geranium  
Mentha  
Rosemary  
Camphor  
Cloves  
Ylang-Ylang  
Peppers a) True  
          b) False  
          c) Birdseye

D. Medicinal

Yams (for Diosgenin)  
Ipecacuanha  
Veratrum  
Ouboisie  
Nux-Vomica  
Quinine  
Balsnites  
Senna

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