

⑥ MAKERERE INSTITUTE OF SOCIAL RESEARCH

(831)

⑤ Rural Development Research Project.

RDR No. 103

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August 18th, 1970

AGRICULTURAL STATISTICS FOR DEVELOPMENT  
PLANNING IN UGANDA



Note: Rural Development Research papers are written as a basis for discussion in the Makerere RDR Seminars. They are not publications and are subject to revision.

August 14th, 1970.

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"The absence of knowledge concerning the elementary facts imposes severe limitations upon all attempts to foster economic development whether in agriculture or in other spheres".

The East African Royal Commission Report  
1953-1955, H.M.S.O., London, 1961, p.264.

The relationship between statistics and planning is a subject of interest to economists throughout the world. Very few planners and economists can progress very far without coming into contact with statistics. Almost every aspect of natural phenomena and of human and other activity is now subjected to measurement in terms of statistics. For accurate planning there is no good substitute for statistics. The Working Parties of the 2nd Five - Year Development Plan were greatly hampered in their deliberations by lack of sufficient and accurate agricultural statistics.<sup>1</sup> Dudley Seers has pointed out that lack of statistics is one of the reasons why many visiting economists and experts working for foreign governments under inter-terrestrial technical assistance programme usually fail.<sup>2</sup> Recently an assessment of the performance of the Second Five - Year Development Plan was attempted by the Working Party on Agriculture and Forestry. A comprehensive analysis of the actual development in the agricultural sector, its economic structure, and the achievements in implementing the target was done.<sup>3</sup> But it has been clearly mentioned in the report that the current major problem facing the existing 'embryonic' Planning Unit of the Ministry of Agriculture is shortage of reliable data.

The author disagrees with Gibbon's view that "Statistics are exotic, they are not African. There is no felt need for data on subsistence crop....." This paper briefly reports on the present state of agricultural statistics for planning, in Uganda.

Uganda, like many African developing countries, is largely dependent on an agricultural economy. Cotton and Coffee together contribute approximately 70 to 80 percent of the agricultural sector

The population of Uganda is about 9.5 million and more than 90 percent of this population is rural, so that agriculture is both a source of employment and a means of getting a livelihood. Nearly all the agriculture is based on subsistence farming and of the entire area under cultivation, only a small proportion is included in large estates, i.e. sugar, tea, and coffee run by private companies and the subsidiaries of the Uganda Development Corporation. Agricultural statistics comprise a very wide field. It is often not easy to demarcate between agricultural and non-agricultural statistics because sectoral statistics are often directly or indirectly interrelated.

For a long time in the past, statistics relating to acreage and production of both and food crops have been collected by the Department of Agriculture. The usual channel of information have been chiefs, Agricultural and Field Assistants in the Service of the Department and Assistant Agricultural Officers who are professionally trained staff of the Department responsible for certain agricultural areas. In submitting acreage returns, chiefs often tended to give highly inflated figures so as to create a favourable impression of their services.

As time went on, the need to obtain information based on objective methods of investigation became more and more apparent. In 1961, the statistical unit was transferred from the East African High Commission to the Uganda Government as a branch of the Ministry of Economic Development and Planning. Henceforth, the Statistics Branch, as it was called vigorously began probing into the possibilities of improving the collection of agricultural statistics. As the first attempt of the Statistic Branch, in 1962, an Agro-economic survey entitled "A survey of Buganda Coffee Farmers" was launched. Its purpose was to study expenditure and income patterns of Buganda farmers.

\*Recently taken over 60% of the shares by the Government. See: "1970, Labour Day Speech," in The Republic of Uganda, The Common Man's Charter, By Dr. A.M. Obote, Government Printer, Entebbe, P.41.

(i) Basic Data on Yield, Acreage, holder, and holding for the whole country:

In the same year, a programme was drawn up for country wide census survey of agriculture to be jointly conducted by the F.A.O. of the United Nations and the Uganda Government. The survey was a major effort to improve agricultural statistics in Uganda, at an estimated cost of £600,000. Prior to this Four Year Survey of Agriculture was undertaken, very little information was available on the peasant farms. The information collected included on statistics of yields, acreage, areas of agricultural holdings together with the collection of information on holder (age, tribe, occupation, location); the holding (number of blocks, management, land tenure system); the farm population (number of people living on the holding classified by sex and amount of work done on the hldings); labour employed; and a count livestock by age and sex.<sup>5</sup> The census established a bench-mark on agricultural data and it is by far the most authoritative source of data. After the end of the Census, it was decided to continue conducting annual agricultural census surveys for the purpose of estimating the acreage, yields and plant densities of selected cash and food crops.<sup>6</sup> All annual crops, beans, maize, sim-sim, cotton, etc., are covered. Coffee and bananas were excluded from the follow-up survey partly because it was assumed for the permanent crop (perennials) increase in their acreages are relatively small and partly because their inclusion in the survey would require extra field staff to carry out the acreage measurement. It is recommended that this follow-up work should continue and if possible to extend its work to cover more crops including coffee and banana.

The information collected through the Agricultural Statistician (statistics branch) is based on sampling theory of surveys, and since it is scientifically collected, the information is more reliable than the chiefs' estimates. It is noted that the statistics collected by the two departments on a similar item often differ widely. (See table I). It is also clearly evident that there is

duplication of work, in collection of some data. It is thought that, for proper allocation of resources, the two different departments should be amalgamated to produce better statistics.

(ii) Population data:

Uganda has been taking population censuses every ten years. The early censuses were taken in 1911, 1921, 1931 and 1948. Recently the results of 1959 and 1969 censuses are also available. Data on total population, marital status, age, and sex at parish level are covered on 100 percent census. A ten percent random sample of rural population was also taken to collect additional information on birthplace, education, and so on. Collection of information on employment status, occupation and industry were tried out and in it proved unsatisfactory. There was evidence to suggest that the inclusion of these questions had an adverse effect on the quality of the other basic information collected because the enumerators did not understand the definitions involved. (There were over 30,000 enumerators required for the 1969 census. Vigorous training for the enumerators can be very costly enterprise.) These questions were omitted. Accurate data on births, deaths, marriages, divorce and so on for the majority of the population are lacking. No records of natural increases are kept in Uganda, except on non-African population. Recently a Bill making it compulsory to register all births and deaths occurring in Uganda was given its First Reading in the National Assembly.<sup>7</sup> Population forecasting is not very accurate. For instance, population forecasting was done, based on the total population figures which were as follows:

| Census Year | Population |  |
|-------------|------------|--|
| 1948        | 4,917,555  | } Estimated growth rate 2.8 percent per year |
| 1959        | 6,449,559  |  |
| 1969        | 9,526,237  | } Growth rate 4 percent per year.            |

It was estimated that inter-censal population growth was about 2.8 percent per year for the years 1948-1959. But when the figures for 1969 census were available, it was found out that growth rate for 1959-1969 came to about 4 percent per year. Under-enumeration of the previous censuses and a large number of unrecorded influx of refugees and other people from the neighbouring countries partly explain for this unreliability of the figures. On data collection, it is suggested that for planning purpose, more emphasis should be put on socio-economic data like income-level, employment, farm-productivity and so on. Alternate method of collecting these information may be tried, if the questionnaires become "too heavy" and if reliability of other demographic statistics is affected. For reliable growth-rate, censuses should be held every five years if resources are available. (The estimated cost of the last census, 1969 was £250,000). More data should also be collected on internal and external migrations. The data can also be very useful for future population planning programme.

A possibility of establishing a U.N. Sub-saharah African Demographic Centre at Makerere was discussed with the U.N. Demographic Mission on 8-14th April, 1969. This could be run together with the proposed U.N. Economic and Statistical Training Institute at Makerere. If the plan is realized, than better data and assistance would be forthcoming from the Centre.

(iii) Trade Statistics:

Data on foreign trade are quite up-to-date. Fairly accurate trade statistics exist because the commodities cross national borders and records are kept by the Department of Customs and Excise. The information is published in the Annual Trade Reports of the Department. Statistics for minor crops like groundnut, beans, sis-sis, etc. are not accurate as quite

a substantial amount of the crop is consumed locally. Trade data coverage on food crop needs to be strengthened. Price - statistics collected are also very inadequate. (It is noted that of the price statistics collected on agricultural produce from some 16 towns, data for only four centres of Uganda - Kampala, Toro, Soroti and Iganga - are published).

(iv) Food consumption data:

It is not known how much foodstuff is produced, or how much is locally consumed. The farmers do not keep any records. Farmers often grow crops in mixture with other crops. Often beans, groundnut, maize and even cotton are all planted on a plot of land. Plots are also irregular and sometimes scattered. This makes it difficult to estimate crop-production. It is also difficult to measure yields or consumption for crop like cassava, where farmers go on consuming 'the roots' little by little, and even a part of it might be sold. Data on yield per-acre, especially for food crops are badly lacking.

(v) Data on Agricultural inputs:

Despite the importance attached to fertilizer as an important input to increase productivity, consumption remains low and restricted to a few cash crops mainly sugar, tobacco, tea and Arabica coffee. Important fertilizer trials in Uganda are going on. The data would be most useful for advising farmers on efficient fertilizer use for profitable crop production as well as for formulating national fertilizer policy. In future, trials on cassava, sweet potatoes, cereals and other crops not included in the present trials should be carried out.

Adequate information is not available on total man-hours spent by farmers in different activities. It is difficult and expensive to get such information at farm-level. Farm

Management Surveys on sample basis and in different districts should be carried out to collect the information.

A thorough study should have been made and relevant data on the economic and financial benefits of a tractor in comparison with the ox-plough should have been collected before planning large scale tractor farming in Uganda. More information on likely patterns of tractor use and the value of alternate pursuits for labour released should be collected. Available data on mechanization, under the Special Development Section at Namalare are of very poor quality.

Agricultural credit data should be collected in the line of effective contribution it can make towards more profitable peasant farming.

It should be investigated, if it is possible to combine the collection of the inputs data with the next Agricultural census to be undertaken in 1972.

(vi) Environmental Data:

Hydrological data collection commenced rather late, but the coverage is quite wide. Data forthcoming would be useful later on. It is noted that there is a vast irrigation potential in Uganda, particularly in reclaiming swamps and in pumping water from the lakes. (Out of Total 91,076 sq. miles of Uganda, about 23,255 sq. miles consists of water areas). Uganda's increasing population may require a partial change over from drier land to be irrigated in the future, if food requirements are to be met.

Coverage of rainfall data is better than in many African countries. For planning purpose rainfall data must be available for atleast a 30 year period. Temperature and othe climate data for atleast 15 years are needed. A series of data on:



daily, monthly and yearly rainfall, temperature, humidity and sunshine are available in Uganda. They are almost complete for over a period of 30 years. There are over 390 rainfall stations collecting data on rainfall and temperature. Continued research on rainfall reliability should also be given a priority, as pattern rainfall do change over a time and the need for up-to-date forecasting increases. The soil and vegetation surveys give valuable information, though they have often been termed economically unjustifiable. The reconnaissance surveys should be followed up by the acquisition of further knowledge regarding properties of soils in relation to the growth of plants and in relation to the use of fertilizers.

Data is not a 'free good'. Costs involved in data collection are enormous in terms of resources available. Every possible effort to improve the statistical position should be made. The policy of building up an accurate supply of statistics, as quickly as possible with available resources should be adopted. Perhaps, the newly formed National Research Council, should undertake a scheme for organization and collection of statistics required for national planning. This work may be carried out in coordination with the Statistics Branch and with the University research and also by setting up advisory committees. In future, with the improvement in whatever coverage is in existence, and with more basic data, more sophisticated planning could be carried out. Where new data are to be collected, it is important to underline the special characteristics of the region, and to collect data with the type of break-down necessary for planning.

The gap between the time of collection and that of publication should be kept as short as possible. It is hoped that this paper may of interest for further statistical development.

Table I

Comparison of Census Sweetpotato Acreage with  
Department of Agriculture Estimates

| District      | Total Acreage<br>in 1963 Census<br>(Acres) | Departmental<br>Estimates in<br>1963 (Acres) |
|---------------|--|--|
| Mengo         | 37,000                                     | 97,900                                       |
| Busoga        | 13,000                                     | 50,900                                       |
| Teso          | 22,000                                     | 68,100                                       |
| Kigezi        | 57,000                                     | 78,900                                       |
| Ankole        | 10,000                                     | 27,600                                       |
| Bunyoro       | 12,000                                     | 13,500                                       |
| Lango         | 1,200                                      | 62,700                                       |
| Acholi        | 15,000                                     | 48,800                                       |
| Total Uganda* | 211,000                                    | 285,000                                      |

\* Excludes Toro and Karamoja figures, as it was  
disturbed area in 1963.

Source: Uganda Government, 1967,  
Report of Uganda Census  
of Agriculture.

Vol.III, p.117.

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