Agricultural Statistics in Ceylon

1. Importance of Agriculture in the Economy of Ceylon

STATISTICS in our island is not a sphere in which we can claim a proud position even among the countries of South-East Asia. Quantitatively statistical data in our island are meagre and cover only a small part of a few sectors of our economic and social life. Qualitatively they are more deplorable than their scantiness. Trustworthy records are rare and the need for precision and accuracy is scarcely felt. Even the scanty data we have are mostly antiquated and little effort is made to make them up-to-date.

In no other field, perhaps, are the inadequacy, inaccuracy and meagreness of statistical data so marked as in agriculture. Yet agriculture contributes the major part of our national income and gives succour to the biggest section of our population. According to Dr. Das Gupta's estimate of our national income[1] our export trade, which consists mainly of our agricultural products, together with the products retained for our domestic consumption, accounted for 67 per cent. of our national income in 1937. The latest occupational statistics we have are for the year 1921, which gives the percentage of population depending on agriculture as slightly less than 65. The population census reports of 1921, 1931 and 1946 give the percentages of rural and estate population as 87·1, 86·8 and 84·8 respectively. Most of these people may be regarded as directly or indirectly dependent on agriculture. Thus we may say that agriculture today supports more than four-fifths of our population. In view of this preponderating importance of agriculture in our economy, the lack of statistical data relating to agriculture is surprising indeed.

2. History of Agricultural Statistics in Ceylon

The oldest statistical records of Ceylon's agriculture are to be found in the Ceylon Blue-Book. Up to the year 1922, the Blue-Book contained an imposing array of statistical tables relating to wage-rates of agricultural workers in different districts, acreage, output and prices of various agricultural crops and the number of livestock. Very little credence, however, was placed on these tables. The village headmen merely guessed the figures and filled in the returns from which these tables were compiled. The accuracy of these tables, therefore, varied with the imaginative power of these village potentates. As early as 1864, the Ferguson's Handbook and Directory commented on the reliability of the Blue-Book figures as follows :—

"There is a sad want of uniformity in preparing these statements. One Agent omits what another includes . . . That Government statistics

1. Social Security Commission Report.

should still be in so imperfect a condition in Ceylon is little to the credit of the Colony, which now compares unfavourably even with the continental India in such matters. Compared with the careful records kept by the Australian colonies and New Zealand, ours are wretched indeed. Let us hope that ere long an extension of the functions and operations of the Registrar-General's Department may enable us to wipe away the stigma".[2] Eighty-five years have gone by since this passage was written, yet the " stigma " remains just as it was before.

The same Directory wrote in 1876-78, " The returns of the native headmen of local grain production carry condemnation on their very face ; they are utterly unreliable."[3] In 1908, while reporting on rice cultivation in his province, the Government Agent of the Western Province wrote as follows : " The Blue-Book returns . . . are compiled by the Vidane Arachchies and are not absolutely accurate though for the most part probably near the mark ". Strangely enough in the next page he quotes an example of contradictory figures in the Blue-Book and concludes, " Some inaccuracy in the Blue-Book Returns for 1907 for this Korale is, I fear, to be suspected". [4]

By 1920, the figures compiled by the Vidane Arachchies were so much discredited that L. J. B. Turner, the first Director of Statistics and Census, stopped publishing these figures, and conducted an agricultural census in 1921 and again in 1924. The reports of these census operations were not published, but figures were quoted in the Blue-Book and in other official publications. Since 1923 the acreage figures obtained from the 1921 and 1924 censuses were repeated in the Blue-Book year after year and all other information regarding Ceylon's agriculture were dropped. In a Sessional Paper in 1928,[5] Turner wrote, " It seems probable that any decrease in inaccuracy can only be obtained at considerable cost and it has to be established that the expenditure would be justified by the extent to which the figures are used and by the importance of an improvement in their accuracy ". Turner's comment was a sad reflection on the government's attitude towards our agriculture, which was—as it is today—the main prop of our economy.

In 1946, along with the population census, a production census was also undertaken. Figures relating to acreage have been published so far. It is hoped that in the final report more detailed information on the lines suggested in this article, would be available.

It is interesting to note that the first attempt to take an agricultural census in Ceylon was made by Sir Ponnambalam Arunachalam in the year 1901, seven years before England thought of taking such a census. The attempt did not meet with success, for, at that stage of statistical knowledge

2. P. 309.
3. P. 502.
4. Sessional Paper VI, 1908, p. 1.
5 No. XXVII, p. 8.

and general backwardness, collection of accurate and complete data was not easy. However, the deep insight into the fundamental problem of our economy, that has been overshadowing all other problems since then, and the farsightedness that he displayed in taking such a census at such an early date, when even population censuses were regarded by many as useless luxury, is surprising indeed. The succeeding census officer did not think it necessary to carry on Sir Ponnambalam's unfinished work. As a matter of fact, the full significance of the role of agricultural statistics was never realised in the same way as Sir Ponnambalam did, till about half-a-century later.

The statistics of bigger rubber and tea estates are available in the Ferguson's Directory from very early periods. These figures are believed to be reliable. Nothing is, however, known of the small and middle producers of these commodities. The statistics relating to coconut plantation are extremely inadequate. Of paddy and other crops very little is known except the acreage figures in 1921 and in 1946. The surveys of paddy cultivation conducted during the eighties of the last century in connection with the commutation of the Grain Tax, provide accurate data relating to acreage, size of plots, average prices and yield of paddy of a number of districts during those years. With the abolition of the Grain Tax this important source of statistical data relating to paddy cultivation was stopped.

The position regarding price-statistics of agricultural products is not so bad as in other cases. This is because the principal agricultural products of our island happen to be the principal items of exports also. Export prices of rubber, tea and other agricultural products are collected by the Commerce Department and are published every month in the *Ceylon Trade Journal*. The Commerce Department and also the Statistics Department construct indices of export prices ; but there is no index number of agricultural prices as such, nor do we have any index number showing the price changes of articles purchased by the farmers.

3. Scope of Agricultural Statistics

The paucity and inaccuracy of statistical data relating to agriculture is widely admitted, though little effort is being made to improve them. If we are to plan a rapid development of agriculture with any chance of success, it is necessary, first of all, that we should gather more comprehensive statistical information.

Statistical data relating to agriculture are not of much practical value unless they give us a measure of (A) our agricultural wealth; and (B) the volume and value of net agricultural output every year.

A. Measurement of agricultural resources: The purpose of an agricultural census should be to obtain as exhaustive and accurate data relating to our agricultural resources, potential and active, and human, animal

and material, as possible. It is desirable that the census should be quinquennial rather than decennial. The agricultural census of 1921 and 1924 and the published part of the census of 1946 give acreage under different crops only. "It is difficult to see what there is of value to be gained by a census which confines itself merely to the areas devoted to crops and the number of live-stock".[6] The total stock of our agricultural statistics today does not go beyond. It is necessary, therefore, that we should try to compile from the 1946 census returns and the next censuses data relating to the following :—

(*a*) The land :

(i) The total area of cultivated, uncultivated and cultivable waste lands and forests in each locality. The distinction between uncultivable and cultivable waste land is important because it helps us to determine the potential land resources of our country. It is not easy, however, to distinguish the two and, unless carefully defined, it may give rise to confusion and lead to erroneous results. Reasons for non-cultivation, such as, want of water-supply, high cost of reclamation, soil erosion, fragmentation, etc., should be obtained as far as possible.

(ii) The acreage under different crops. In case of fruit-trees the number of trees should be given.

(iii) The size of holdings. Efforts should be made to obtain a frequency distribution of the size of plots. This will enable us to estimate the extent of fragmentation of soil, which is an important factor in causing agricultural inefficiency in all Eastern countries.

(iv) The ownership of land. Frequency distributions of the numbers of landowners, both cultivating and non-cultivating and tenants possessing and cultivating holdings of different size are important for studying the ratio of concentration of land.

Agricultural labourers, landless peasants and small peasants deserve a closer scrutiny, because they form the majority of our population. Unfortunately a census cannot cover the entire field and has to be kept limited to an enumeration of numbers only in each class. Separate sample surveys from time to time are, however, useful for the purpose.

(v) The average yield of crops per acre in each locality.

(*b*) The number and age-distribution of each breed of cattle and other live-stock should be obtained. If we know the average milk and meat yield of each breed at different ages, then we can utilise the above information to obtain estimates of total milk and meat

6. Journal of the Royal Statistical Society, 1925, p. 209.

production of the country. The number of poultry and pigs should also be collected.

(*c*) Information relating to the motive-power used in the farms and plantations, the value and number of machines, tractors, other implements, buildings and sheds are also useful, though collection of correct statistics in such matters is extremely difficult and only rough approximations can be obtained.

(B) Measurement of net income from agriculture :

Measurement of net output of agriculture requires the estimation of the value of gross agricultural output from which the various cost-items, needed to produce that output, but purchased from other production processes, are to be debited. Information regarding gross output of each branch of agricultural production and for each locality can be obtained only when an efficient crop reporting service is organised. In U.S.A. a regular crop reporting service is maintained whose function is to estimate the probable yield of crops from time to time and to issue the crop forecasts. In Britain crop-reporters, appointed at each parish, report crop conditions, which along with the returns that each farmer has to send in July every year, are utilised to obtain the estimates of the yield of each production processes in agriculture.

The yield of each branch of agriculture, as reported by the crop-reporters, is then converted to its money equivalent to obtain the gross output value. From this gross output value of each production process if we deduct the value of seeds, fodder, depreciation of capital stock and cattle, manure, irrigation and the value of other materials and services purchased from other production units, then we will obtain the net output of the particular branch of agriculture. The total of the net output values of all the branches will give us the estimate of net agricultural output in that year.

4. Crop Reporting Organisation in Ceylon

In U.S.A. the crop reporting service has been carried to a high level of perfection, because of the important role that the crop forecasts play in controlling the future market in agricultural produce. In Ceylon no such future market exists and, therefore, a crop-forecasting organisation is not urgently called for. It is necessary, however, to build up an organisation of reliable crop-reporters in every locality, who would collect correct information at every harvest. The Agricultural Department is the most competent authority to set up such an organisation ; for the officers of that Department are in direct contact with the most intelligent and experienced farmers and planters, who could be trusted to supply the necessary information.

In addition to the crop-reporters, the farmers and the planters should be made to return schedules, drawn up for the purpose, at specified intervals.

In India, crop-cutting experiments are performed to determine the average yield. This is done as a check on the illiterate village watchman's report on average yield. Such experiments deserve consideration in Ceylon also.

5. Sample Surveys

The quinquennial or decennial censuses will provide us with the bench-marks, from which the annual crop-reporting organisation can work onwards till the next census. In addition to these two sources of agricultural statistics, occasional sample surveys can be organised to provide additional information about agriculture and village life and to obtain a check on the crop-reporting service. In U.S.A. the technique of utilising a "master-sample" for the purpose of sample survey has been developed successfully. Aerial photographs and various other mechanical devices are also employed for the purpose. In Ceylon a number of village surveys have been taken, e.g. Dr. Das Gupta's village surveys, but they have been taken independently, and not as a part of the general plan of obtaining agricultural statistics.

With the necessary political power in our own hands, an unending vista of opportunity has been opened before us. And with the agricultural crisis deepening and threatening that opportunity, it is hoped the Ministry of Agriculture and the Statistics and Census Department will rise to the occasion and build up the basis of scientific agricultural planning.

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