

AGRICULTURAL CENSUS IN INDIA

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HISTORICAL BACKGROUND

The decennial World Census of Agriculture sponsored by the Food and Agriculture Organisation of the United Nations is the entire project consisting of a series of National Agricultural Censuses taken all over the world in or around the same year within a world framework. The first step towards a World Census of Agriculture was initiated in 1924 by the International Institute of Agriculture, Rome which persuaded member-countries to carry out a general agricultural census on a comparable uniform pattern prepared by the Institute. The object was to obtain from these various countries internationally comparable information on the structure of agriculture through holdingwise enumeration of crop areas and live-stock in one operation. Sixty-three countries and territories participated in the first census in 1930 and of these, only forty-six took it by holdings and the rest indicated aggregates at various levels of geographical areas. The intention of the Institute was to repeat the Census at an interval of ten years ; but due to the Second World War, the 1940 Census could not either be undertaken or if undertaken, could not be completed. The next World Census of Agriculture was carried out around the year 1950 under the guidance of the Food and Agriculture Organisation of the United Nations which had replaced the International Institute of Agriculture in 1945 and had taken over the responsibilities of the Institute. One hundred and six countries and territories participated in this Census. The Third World Census of Agriculture was carried out in 1960. It was more comprehensive and coverage was also more than the 1950 Census. The Fourth World Agricultural Census is due around 1970 and the FAO has suggested that depending upon the preparedness of the countries, the reference for the Census could be fixed by individual countries and this reference year was to be as close to the year 1970 as possible. Some countries have already completed the Census and others are at various stages in the process of carrying out the Census.

2. AGRICULTURAL CENSUS IN INDIA—1950-60

In India, both in the 1950 and 1960 Censuses, data required by the World Agricultural Census was collected through sample surveys carried out by the National Sample Survey Organisation and these gave estimates for the country as a whole and for States. These estimates were of limited value for micro-level planning, say, for a District or lower regional levels.

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Mainly due to lack of sufficiently comprehensive data, agricultural planning in our country has hitherto been on an over-all programme basis and that too for relatively larger administrative units. As more and more emphasis is now being laid on district and block level planning envisaging detailed programmes and targets for districts and blocks, elaborate data at the level of these administrative and planning units are necessary for realistic planning and successful implementation of programmes and attainments of targets.

3. 1970 CENSUS

With a view to examine the scope and methodology of 1950 Census of Agriculture in India, a Technical Committee on Coordination of Agricultural Statistics was set up in the Ministry of Food and Agriculture in 1949. In view of the imperative need for detailed data on the structure of agricultural holdings for planning purposes and for the purpose of placing agricultural statistics on sound footing, this Committee recommended that the Census should be undertaken on a complete enumeration basis. Due to various reasons in 1950 and 1960, the data required was collected only through sample surveys by the National Sample Survey Organisation and not by the method of complete enumeration. This sample survey method gave estimates at the all-India level and for States.

In the context of the new strategy for agricultural development which the Government of India launched in 1966-67, a knowledge of detailed structure and characteristics of agricultural holdings has become imperative for effective and efficient planning and implementation of the same. For the above purpose, we are interested in operational holdings as distinct from ownership holdings. An operational holding is defined as all land which is used wholly or partly for agricultural production and is operated as one technical unit by one person alone or with others without regard to title, legal form, site or location. Since the operational holding is the fundamental unit of decision-making in agriculture and consequently for development of programmes aimed at improving the lot of individual cultivators, a Census of operational holdings providing data on their number, tenure relationships, size, type of farming and farming practices assumes special importance.

4. METHOD OF APPROACH

In view of this, Government of India has decided to carry out Agricultural Census on a complete enumeration basis for the first time in the country. This is one of the biggest ventures in agricultural statistics involving collection of data pertaining to nearly 60 million holdings in the country. Unlike other countries, we have in India a fairly comprehensive system for collection and maintenance of agricultural statistics through the land records maintained by the revenue machinery. The current agricultural statistics, however, relate to individual fields (survey numbers or sub-survey numbers) and are aggregated at various geographical levels like village, Revenue Inspection Circle, Taluka/Tehsil, District, etc. What is required in our

present Agricultural Census, however, is collection of data relating to each holding which is the basic unit of decision-making as explained earlier. In view of the availability of these data in the village land record, it has been decided that in case of essential items like (1) number and size distribution of holdings, (2) area under crops, (3) land utilisation, (4) irrigation and (5) tenure and tenancy, the existing available data, survey-numberwise, should be recompiled holdingwise. In 14 States, Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Jammu and Kashmir, Madhya Pradesh, Mysore, Maharashtra, Punjab, Rajasthan, Himachal Pradesh, Uttar Pradesh and Tamil Nadu and three Union Territories, Delhi, Pondicherry and Tripura, where detailed land records exist, the method of retabulation is being adopted. In other areas, *viz.*, Kerala, Orissa, West Bengal, Meghalaya, Nagaland and the Union Territories of NEFA, Goa, Diu and Daman and Andaman and Nicobar Islands where detailed land records do not exist and where the system of crop enumeration on field-to-field basis is not in vogue, special sample surveys for the purpose of Agricultural Census are being organised. Apart from the above two approaches being adopted, the National Sample Survey Organisation in their Twentysixth Round commencing from July, 1971, is conducting a survey of agricultural holdings which, *inter-alia*, would provide holdingwise detailed data on use of fertilisers, pesticides, area under high-yielding varieties and other varieties of crops, livestock, agricultural machinery and implements, etc.

5. REFERENCE YEAR

Agricultural Census in India is being conducted with agricultural year July, 1970 to June, 1971 as the reference year and the data are being collected with reference to each operational holding.

6. ORGANISATION AND TIME SCHEDULE

The field work relating to Census would be done by the field staff of the Revenue and Land Records Departments of the various State/Union Territory Governments which have their agencies in all the villages. Their work would be supervised by the coordinated efforts of all supervisory officers of the Revenue, Land Records, Agriculture and Statistical Departments. In each State, a nucleus Census Unit has been set up under the overall control of State Agricultural Census Authority to be notified by the State Governments. At the all-India level, there is an Agricultural Census Unit headed by the Agricultural Census Commissioner and Ex-Officio Additional Secretary to the Government of India.

Over 100,000 village accountants are involved in collecting the required data. The field work has been completed by the end of December, 1971 in most of the States and in the remaining States it would be completed by end of March, 1972. The provisional data would be available by the middle of 1972 and firm data by the end of 1973. The data would be tabulated either manually or through mechanical process according to the facilities available in the States.

Some of the important uses to which Census data can be put are briefly enumerated below :—

7. USES OF CENSUS DATA

7.1. High-Yielding Varieties Programme

In order to enable planning and execution of this programme, it is important to know which types of farmers have adopted the High-Yielding Varieties Programme ; whether the innovators come entirely from the bigger and medium farm groups or whether the small farmers also have taken up the programme, whether the farmers put the entire area of their holding under these varieties or they have put only a part of the areas ; whether they have put the entire irrigated area under the high-yielding varieties or only a part thereof. Once answers to these questions are obtained, this information could be used in planning the programme for the future. For this purpose, it is necessary to have holdingwise data on the number of holdings of each size, together with the data regarding area under foodgrains and total cultivated area with further breakdown regarding irrigated and unirrigated areas.

7.2. Multiple-cropping Programme

The measures include replacement of the existing long-duration varieties of crops by those of short-duration which depends upon the extent to which irrigated facilities for the second crop are assured and more intensive use of these facilities is made. It is necessary to draw up suitable crop rotations for broad soil types within each local areas, taking into account the facilities available by way of irrigation, etc. Here again before detailed targets are fixed for each area and programmes are drawn up, information regarding the existing pattern of cropping and intensity of cropping, classified according to different sizes of holdings, is necessary.

7.3. Irrigation Programmes

The relationship between irrigation and size of holding needs close study. At present, in many areas, irrigation even from canals is not perennial and protective irrigation is provided for one crop only. With the popularisation of the minor irrigation programmes like those for installation of tubewells, pumpsets, etc., which provide greater manoeuvrability of supply of water and assure more frequent and intensive use of water, programmes for intensive cultivation are receiving a fillip. It is necessary to see what types of crops are grown at present under irrigated conditions in different sizes of holdings, whether the growth of commercial-versus-foodgrains crops bears any relationship to the size of the holding, and whether the differences in types of irrigation, sources and combination thereof, to supplement each other, make much material difference in the intensity and pattern of cropping on holdings of different sizes. Unless the present practices and patterns are studied carefully in relation to farm sizes, it will be difficult to lay down detailed programmes at the field level.

7.4. Fertilisers

To come to meaningful decisions regarding production, distribution, marketing and credit in respect of fertilisers, information regarding the size and characteristics of holdings on which chemical fertilisers are at present in use and the progress and problems of adoption of fertilisers on holdings of different sizes, is necessary.

7.5. Agricultural Credit

For Planning agricultural credit programmes, it is necessary to have information regarding the requirements of funds for different purposes of the different types of holdings. Although these requirements could be worked out on per acre basis taking into account total expenditure, the extent to which these funds are provided by the farmer from his own resources depends upon the characteristics of the holding. The bigger farmers are able to invest more in land but can also meet a greater proportion of their requirements from their own funds. Thus, holdingwise information will help considerably in the implementation of credit programmes.

Similarly, this Agricultural Census data would be essential in formulating correct policies and programmes under Agricultural Machinery and implements, Special Area Programmes, strengthening and streamlining of extension services and effective planning in respect of schemes like the Small Farmers Development Agency and Marginal Farmers and Agricultural Labourers and tribal projects.

Agricultural Census results also provide useful source of material for national income statistics and for making further refinements therein.

8. AGRICULTURAL CENSUS IN U.S.A. AND JAPAN

To underline the importance of Agricultural census in relation to a country's agricultural economy, we may note that both the U.S.A. and Japan, two of the world's most industrially advanced and also agriculturally prosperous nations, carry out a quinquennial agricultural census by a complete enumeration of all agricultural holdings. The U.S.A., in fact, started with a decennial agricultural census as early as 1840 and switched over to quinquennial census from 1920, as, with increasing scientific application to agriculture, growing mechanisation and rising production, the demand for more frequent agricultural data became pressing.

9. OPERATIONAL ASPECTS

In a vast country like India, Agricultural Census on complete enumeration basis is a gigantic task. Nearly 100,000 village level functionaries are involved in collecting data in respect of an estimated 60 million holdings distributed in over 5 lakhs villages. This data has also to be collected from more than one record at village level. To be accurate and realistic, this data must necessarily be brought up to date by special efforts. All the village functionaries and the supervisory staff

at various higher levels who are involved in this operation have to be trained in the concepts and should be aware of the objectives of the Agricultural Census. The State Governments are taking special steps to make the village records up to date, so that they indicate the correct factual position. As any incorrect understanding of the concepts involved would vitiate the data collected and tabulated, the need for a comprehensive training programme at various levels cannot be over-emphasized. Being the first operation of its kind, both the Government of India and the State Governments and Union Territories are making special efforts to ensure that both the up-to-dating of records and the training programmes are implemented successfully. Unlike, say the population census, there is no tradition yet built up for this operation. In addition to making this operation successful, it is necessary to consider the steps to be taken to ensure that periodical operations of this kind are made easy by creating the necessary infrastructure in the country at various levels to ensure accuracy, speed and efficiency. With the experience gained in the present operation, we should be in a position to introduce further refinements and collection of extra data, if necessary. This can be done by improving the present forms at village level to become more comprehensive. This will also obviate the need to supplement retabulated data with sample surveys in respect of several other characteristics necessary, but not available in village records at present. The present cells for Agricultural Census both at the Centre and the States will have to continue on a nucleus basis in the future, to ensure continuity and to take preparatory steps in the period intervening two censuses. We must also consider whether the periodical Agricultural Census should be given a statutory basis as in some other countries. We must synchronise the Agricultural Census operations with the Five-Year Plans in such a way that the data is available one year in advance of the formulation of the Five-Year Plans of the country.