

SYMPOSIUM ON 1960 WORLD AGRICULTURAL CENSUS*

DR. S. S. Zarkovich, F.A.O., Rome, initiated the Symposium. He started with an account of the efforts that the F.A.O. was making in promoting the idea of a world census of agriculture to be taken around 1960 and to ensure an increased participation of countries in the census so that, if possible, no territory was left out from the census. Some of the highlights of this campaign were according to him : (1) finalisation of the programme of the 1960 world agricultural census through detailed consultations with census experts and statisticians, (ii) organisation of regional conferences with the object of taking into account the peculiarities in the agriculture of various areas and preparing regional programmes, (iii) placing the idea of the 1960 world census of agriculture on the agenda of various international meetings and conferences where resolutions were adopted recommending to the countries involved to participate in this census, and (iv) establishing an elaborate programme of technical assistance aimed at helping countries in a number of ways in carrying out their respective census work, such as making experts available training local staff at various levels by organising international and national training centres and seminars, establishing moving teams of experts who would visit from time to time the countries and advise them on the work to be done, making possible centralised processing of data for groups of countries, preparing publications containing discussion of the more complex methodological problems, etc.

Enumerating the advantages of such international activities he said that these activities would not only contribute substantially in meeting the continuously increasing needs for data on agriculture, but through the establishment of a census programme which is agreed upon internationally by experts, adopting common definitions and concepts and suggesting tabulation plans, it would be possible to make available all past experience for the benefit of those countries which did not have a chance to develop their own way. The international character of

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the census campaign is thus an efficient method of accelerating progress in the census work.

Coming to the programme itself Dr. Zarkovich said that the programme has been given in two parts as in 1950. The first, called the short list, is composed of basic and essential items in any census of agriculture. Each country participating in this census is supposed to secure as the minimum the information on items included in the short list. The second part, called the expanded list, contains a large variety of items that can be added on to the census programme according to the needs and resources of the participating countries.

Discussing the basic units on which the data have to be collected, he said that the census continues to be conceived of as a holdingwise survey which means, firstly that the data on items included in the programme pertain to individual agricultural holdings and, secondly that the holdings remain the basis of tabulation so that the tables prepared present a holdingwise picture of the structure of agriculture. Although not the only and necessarily the best method under every condition, such an approach corresponds to the tradition of many countries, and under favourable circumstances, represents the easiest and the most convenient way of obtaining data. On the other hand, this approach has a point in itself. Holdings are the active force of agriculture and a knowledge of various aspects of holdings is the best way of understanding potentialities, limitations, trends and problems of a country's agriculture. From this point of view a holdingwise census is far superior to any other approach.

Supporting the need for adopting the complete enumeration method for collecting the data following the principles laid down before he said that the 1960 programme also conceives of the agricultural census as a complete enumeration operation. This principle was adopted not because it suits the practices of more advanced countries, but it was accepted on consideration of both present-day and perspective needs for data on agriculture. In this respect one cannot neglect the increasing interest in data presented by small administrative and other units, due to a growing need for planning development programmes, conducting various studies in connection with policy decisions, etc. A complete enumeration census is the best that statistics can offer today to meet such needs, and the programme of the 1960 Census has been prepared in a way which makes it possible to achieve this aim wherever possible.

Assessing the advantages likely to be obtained from adopting sampling techniques as an aid for census operation and as a suitable

substitute to complete enumeration Dr. Zarkovich made the following remarks:

There is a major innovation in the 1960 Census programme as compared to earlier attempts. The present experience in statistical work all over the world and the progress achieved in the theory have been used to develop a new philosophy of the census based on the results achieved by the application of sampling methods. As is known, the use of sampling methods makes it possible to take a sample census as a substitute for the complete enumeration census where the latter is either impossible due to unfavourable conditions or unnecessary with respect to uses of census data. Sampling can be used also to broaden the census programme or prepare additional tabulation plans. Sampling methods have further use for checking completeness of enumeration and accuracy of data collected. In addition, sampling methods can be used with the aim of rationalising census work in a number of ways. In this respect sampling may be mentioned as a means of selecting methods which are likely to meet efficiently the programme agreed upon, preparation of advanced estimates to increase practical usefulness of the census, the use of objective methods as an alternative way of obtaining data in cases which are unfavourable for interviewing, collecting information on changes by observing a relatively small sample, etc.

In the field of population censuses, census results are being used in most of the modern states for electoral purposes. Such a use of census data requires complete enumeration and presentation of results by small units, such as villages, so that larger units of the size desired can be obtained by grouping smaller ones. In the field of agriculture there is no similar use of statistical information which would unquestionably call for a complete enumeration. In countries where detailed planning and development programming is not being carried out, a public use of, and interest in, a villagewise statistical picture of agriculture is probably negligible. In more developed countries, however, where such uses are being made, they are mostly related to a small number of basic items such as number of agricultural holdings, areas, number of livestock, agricultural population and the like. If it is so, it follows that a considerable portion of the programme of a modern census of agriculture can be dealt with on a sample basis even in those countries where complete enumeration will be embarked upon in response to the existing needs. However, if the needs do not justify the complete enumeration of any item, which is very likely over large areas of the globe, the usefulness of sampling is further emphasised.

The second aspect of agricultural census is the rather heavy programme. The number of items on the programme of some recent agricultural censuses runs into several hundred. This fact makes sampling indispensable. By putting a bulk of items on the programme of a supplementary sample survey, taken simultaneously with the complete enumeration for basic items, one can achieve a considerable saving in both collection and processing of data. In Dr. Zarkovich's view the use of sampling methods for the purpose of broadening the scope of both the census programmes and tabulation plans is probably more vital in agricultural censuses than in any other census. For instance, compared with the population census generally, the items on the programme of an agricultural census do not occupy the same place in the life of agricultural holdings as some items of population characteristics in a population census. Owners of holdings are interested in areas they have under various crops, the types of vegetables grown, prices they get for their products, quantities they produce, consume, sell, etc. None of these facts, however, has a determinant influence on how their life is being ordered, nor do these facts themselves have a kind of lasting interest as is the case with population characteristics.

Furthermore, it should be understood that the respondents are very often interested in their respective agricultural activities in a way which is different from what censuses look for in the primary questionnaire. They often fail to answer questions on quantities produced because in their daily life they are not interested in how much they produce but in how long they can live on what they have produced; questions on areas are not satisfactorily answered in many cases because area units do not represent terms of thinking for a good part of the agricultural population; on questions relating to consumption they will have in their mind an idea of the diet they have to adopt without being able to quantify. In many parts of the world the life of an agricultural holding goes on without being disturbed by the absence of the knowledge of abstract units for measuring areas, weights, volume and distances. These are reasons which limit the possibilities of agricultural censuses for securing sufficiently accurate data as compared to other censuses. This is the reason why in some cases a sample census of agriculture is the only solution even if complete censuses can be easily taken in other fields. By keeping these facts in mind one can easily understand that overcoming specific difficulties of an agricultural census might require a highly trained field staff, a long time in eliciting a correct answer, comparison of various data with the aim of checking their consistency, etc. That is what led to the appearance of objective methods

in agricultural statistics, which are being used now-a-days in a large part of the globe. If the existence of the unbreakable ties between objective methods and sampling is not forgotten it would be clear that sampling methods are *conditio sine quanon* agricultural statistics.

On the question of utilising available experience from the past as guiding principles of the work to be done in future, he said that present-day statistics is rather poor in experience that might be considered as a safe guidance in planning agricultural census operations. First of all agricultural censuses in the proper sense of the word were not taken at all in many countries. In those countries, however, where some work was done in the past, it has been observed as a result of many recent studies that an adequate solution to a number of problems remains to be found. In agricultural censuses we are thus facing an era of studies and experimentation with a view to discovering a more efficient way of doing things. It means an overall critical examination of assumptions, concepts, definitions, accuracy that can be achieved, rational justifiability of various methods and techniques, etc. In this connection our conclusion is again that there is no substitute for sampling.

Finally Dr. Zarkovich said that the programme of the 1960 world agricultural census had to be prepared in such a way that it could also satisfy the maximum requirements through holdingwise complete enumeration and presentation of data for small areas. But the potentiality of the modern achievements in sampling methodology was not lost sight of at the same time. The meaning and concepts of these achievements have been clarified in the introduction to the programme. The picture of the census depicted there is what makes the present programme radically different from earlier attempts. There one can find not only a recognition for a number of developments that have already taken place in the classical concept of the census, such as combining several methods for purposes of obtaining data, splitting up the census operations into a number of more or less distinct phases taken at convenient points of time, the use of various units for securing information on particular items, etc., but also an encouragement for further working and thinking along similar lines in the hope that more rational census procedures and better census techniques adopted to prevailing conditions and needs can be achieved in all the countries. It is believed that this emphasis on new achievements, in both the theory and practice of sampling, will find its reflection in the 1960 Census where, in addition to the participation of countries, the methodology is also expected to make a considerable advance compared to the 1950 Census.

Dr. K. S. Rao of the Directorate of Economics and Statistics, Ministry of Food and Agriculture, supported a complete census of selected minimum number of items for the 1960 world agricultural census, as this would lead to important uses of agricultural statistics for economic planning. He said that in the technical address of Dr. Sukhatme delivered on the occasion of the Twelfth Annual Meeting of the Society and the opening speech of Dr. S. R. Sen at the symposium on planning held on the same occasion, the need for planning from below and for connecting national aggregates with targets at the farm, village, regional and State levels has been stressed. The necessary information for planning at various levels can be obtained only if a census of a minimum number of items is undertaken in India on the occasion of the 1960 world agricultural census. The concepts and definitions should specifically suit this need. The requirements of special problems can, of course, be met by sampling with the frame obtained from the census data. By sampling from a given frame, the stratification adopted will commit economic analysis to only certain types of aggregations imposed by the sampling frame. The unsuitability of any one single sampling frame for various types of economic questions to be answered in connection with planning has become increasingly evident after economic analysis has been carried out on data collected through sample surveys. From this point of view also, a complete census of a certain number of items is to be preferred to a sample survey. It does not seem reasonable to say that since the needs of economic analysis are not known a sample survey should suffice and the census enumeration could be postponed to a stage when the statistical assistance for all the development blocks comes into existence. Even for the day-to-day work of the Community Development Administration, data up to the village level at least are necessary.

Dr. Uttam Chand of the Central Statistical Organisation emphasised the need for a critical examination of the concepts and definitions recommended by the F.A.O. in the light of experience gained in India on the basis of the eighth round of the National Sample Survey on land holdings. This, he hoped, would be looked into by the inter-departmental committee set up by the Government of India in connection with the programme of the agricultural census. In particular he raised the question of evolving a satisfactory method for allocation of area under mixed cropping to component crops so that a uniform method could be recommended for adoption in the country. He further pointed out that in view of the current land reforms relating to ceiling on holdings, it might be considered whether information on ownership holdings need

be collected at all. Furthermore, if the agricultural census was to be geared to the needs of planning for filling up gaps in our existing knowledge of statistical data in the field of agriculture, the work programme of census should be planned and organised in such a manner that the report thereon was made available within a year of the completion of the field-work.

Dr. P. V. Sukhatme, F.A.O., Rome, made his remarks under three headings :

- (a) the F.A.O. Programme for the 1960 World Census of Agriculture;
- (b) the application of the F.A.O. Programme to India; and
- (c) the projected population censuses of India.

Referring to the first he observed that the F.A.O. Programme for the 1960 Census was much more flexible than that for the 1950 Census. As an example he said that the 1950 Programme visualized complete enumeration holding by holding for all holdings within a country, in keeping with the traditions of the economically more developed countries in the West. The only reference to sampling in that programme related to the use of the objective methods for the estimation of production. The 1960 Programme, while still visualising a complete enumeration holding by holding as the method of conducting the census, recognizes that many underdeveloped countries and, especially those attempting the census for the first time, may not find it necessary or feasible to attempt a complete census. For this reason it urges countries to take a sample census rather than not attempt any census at all. Again, unlike the 1950 Programme only six tables are required to be furnished to F.A.O. classified by size of holdings. The classification by size of holdings in respect of the other tables under the 1960 Programme is optional. This has been done in recognition of the fact that size classification may not have the same significance under conditions in the Far East that it has in Europe and also to enable the countries to use units other than the holding for the collection of statistics relating to several other sections of the programme, whenever the use of such units appeared more desirable than that of a holding. On the other hand, Dr. Sukhatme mentioned that one of the basic objects of a census was to correlate the data on agricultural structure by size of holding and other characteristics thereof. This purpose is lost if countries were to use different units for the enumeration of different census items. It was important, he said, to draw a clear distinction between census statistics and current statistics. While a census is conducted by the method of interview with the holder supplemented by objective and other checks where feasible, the collection of current

statistics visualised supplementing or even replacing this method by other appropriate methods including the use of objective measurements in order to make available reliable estimates for the country and its principal regions. The census was the one opportunity coming once in 10 years to make a comprehensive enquiry into the economic and social structure of agriculture. For this reason, Dr. Sukhatme hoped that countries would attempt to take a census by interview, using holding as a unit of enumeration, even if such a census was attempted on only a sample of holdings instead of on a complete enumeration basis. As another example of flexibility, he mentioned that the 1960 Programme provided for the formulation of regional programmes within the framework of the world programme. This was done in recognition of the fact that a single common definition was not feasible under the varying conditions in different countries of the world with respect to all items on the common programme. For example, the concept of holding as applied under the conditions in the West was not wholly applicable to the conditions in the East and it might be desirable to use a modified concept of census such as a census of agricultural households instead of holdings as is done in Japan. Dr. Sukhatme welcomed the many comments made by Shri V. R. Rao in this connection but said that it was now too late to take these into consideration. F.A.O. had already provided an opportunity to the countries in the region to examine its programme and to formulate it in the light of the needs and conditions, in the region. Dr. Sukhatme added that it would now be necessary to wait for another decade before further changes could be introduced in the F.A.O. Programme. He expressed the hope that an attempt be made to use the F.A.O. Programme as a basis for conducting agricultural censuses in the region, for only then would comparable statistics be available.

On the question as to whether an agricultural census of India should be conducted on a complete enumeration basis or on a sampling basis he was guided primarily by India's needs. He felt that the available statistics in the country were neither adequate for ascertaining whether agricultural production was increasing as planned nor for formulating realistic targets. Thus the targets set out in the plan for the various programmes were fulfilled in the sense that these programmes made headway, but not in the sense of accomplishing production targets for individual crops. The fulfilment of the programme for irrigation did not, for example, mean that irrigation facilities were used in the manner envisaged under the plan to influence production of individual crops. As is now known, much of the irrigation potential was not even

used. The approach followed in the first two plans was to make available to the cultivators the different agricultural programmes and to rouse their enthusiasm to use these programmes. This was not, however, the same thing as making fuller and rational use of the programme and facilities provided under the plan. As the greatest attention was being paid in the country to the development of agriculture, Dr. Sukhatme felt that it was of utmost importance to ensure full and rational use of the programmes. The essence of a planned effort required that the various programmes would be made available to the farmers in right amounts and in proper time to enable them collectively to fulfil the production targets. This is not easy to accomplish in agriculture where the number of producing units is large without laying down in the plan clear techniques for implementing the production targets. But, for this to be done, Dr. Sukhatme observed that it would be necessary to have (i) detailed information to build up realistic targets for various national extension blocks, (ii) data on the number of farms classified by farm type for each extension block, (iii) specific proposals on planning techniques appropriate for each farm type and (iv) a breakdown of the production targets for each planning unit by farm type using (ii) and (iii). It was only then the targets for individual planning units could be effectively geared to the actual conditions and resources of the farmers. This, however, necessitated a change of approach to the collection of agricultural statistics in a manner consistent with the requirements of detailed and realistic planning and its implementation for each of the various planning units. Dr. Sukhatme observed that nothing short of a comprehensive census of farms in line with F.A.O. 1960 World Census of Agriculture was likely to meet this need.

In regard to feasibility, he said that the difficulties of complete enumeration, at any rate with respect to basic items of the census of agriculture, under conditions in India were very much exaggerated. He did not want to deal with this matter further as he had already dealt with it in his technical address on the inaugural day of the Annual Meeting. In any case, he questioned whether it would be wise to think in terms of a sample survey aimed at providing statistics for each extension block which he understood was the proposal of Shri V. R. Rao. If statistics are required at the national extension block level, the sensible method to use was the method of complete enumeration. Already even in a relatively moderate sized sample survey such as the National Sample Survey of India there were great delays in the tabulation of the material. He shuddered to think what would happen if the scale of the sample survey was extended to provide estimates for individual blocks.

Whatever the intention of the Government of India with regard to agricultural census he was happy that the Census Commissioner had already taken a step forward in including within the scope of the population census some of the questions of vital interest to agriculture. The land held by a household would, for the first time, be included in the questionnaire for the population census. This would make it possible in the population census to relate the data on farm population and the population engaged in cultivation to the size and other characteristics of the agricultural holdings. F.A.O. had repeatedly brought to the attention of the countries the need for investigating the feasibility of including this question in the population census and he was happy to see that India meant to include it in the forthcoming census of population. He was fully aware of the great difficulties of getting accurate information on the amount of land held but he hoped that these difficulties would be taken care of in preparing the questionnaires and in suitably instructing the enumerators. In any case, he wished to remind the audience that the information would not be used so much for measurement of the area of land held under different tenures as for studying the social and economic relations of those engaged in farming.

He also complimented the Census Commissioner on another bold step which he had taken. It is well known that the data on population dependent on agriculture as obtained from an agricultural census are usually incomplete because the data necessarily exclude landless labourers and their dependents living outside agricultural holdings. This group is adequately covered in a population census where agricultural population is defined as gainfully employed and their dependents. This definition in a population census would, however, exclude from agricultural population the not inconsiderable number of people living on and operating small holdings but whose main occupation is outside agriculture. The inclusion in the population census of a question on principal and secondary occupation would largely identify this group. The Census Commissioner of India has gone a step further. The instructions to enumerators for the 1961 Population Census state that in view of the importance of agriculture in India if a person is engaged in any kind of cultivation his main work should be taken as the one that relates to cultivation. This would make a population census a complete source of information on population dependent on agriculture. The only difficulty about this instruction was that it may lead to inflated estimates of employment in agriculture compared to other occupations. Dr. Sukhatme was also happy to see the many questions on social status of those engaged in agriculture included in the draft questionnaire of the 1961 Population Census.

Shri R. S. Koshal of the F.A.O., Cairo, expressed some views on the programme for the 1960 World Census of Agriculture in relation to the social background of census. He pointed out that in countries such as those of Europe and North America which have long tradition of agricultural census, information on all the census items can be obtained by the method of complete enumeration with holdings as a unit of enumeration. Furthermore, as the enumerators are qualified and trained and people are conscious of the usefulness of census, the interview method or mailed questionnaires can be used for the collection of information on all census items.

Shri Koshal said that the social background in the underdeveloped countries is quite different. On account of low state of literacy and almost complete lack of interest in statistics and census methodology in particular, holding will not be a suitable unit for obtaining information on all the census items. A new approach is thus to be found in such countries to obtain reliable information on essential items such as area and yields of crops, livestock numbers and products, needed for development plans. The principles of area sampling and objective measurements can be used for the estimation of area and yield of crops. Here also the countries will have to be divided into two classes, *viz.*, those where the land is cadastrally surveyed and maps of individual villages or their subdivisions are available, and others in which only a list of villages exists. In the former, a complete enumeration of area under crops can be easily obtained with an area segment as the ultimate unit, while in the latter, only a sample census with area segment as unit can be attempted. In both types of countries the yield rates of crops have to be estimated by sample surveys with fields or plots as units in which measurements of sample crops are taken. Information on livestock numbers should be obtained by objective ascertainment by households within each village by trained enumerators. Even the information on size and tenure of the holdings can be more accurately obtained in countries where land is cadastrally surveyed by classifying in terms of farmers, fields within the area segment used as the unit of enumeration.

The Chairman, Shri A. Mitra, said in his concluding remarks that from what the previous speakers had said the symposium seemed to be swinging between the two extremes, *viz.*, (i) complete count of all holdings and (ii) a small count of only a fraction of all holdings. According to him these two views roughly represent two slogans: "There is no substitute for a complete census" and "there is no substitute for a sample agricultural census", and a worthwhile attempt may be made to respect the excellence of either procedure. In support of a sample

agricultural census he remarked that in a country like India the concept of households pervades even the field of agriculture more effectively than that of the holdings. Indian agriculture does not turn round the concept of the farm. In the vast majority of villages, the population does not live on the farm but in well-defined villages away from the fields. A total count of all agricultural households or holdings and total tabulation of all results are bound to be expensive and dilatory. Full results cannot be obtained until about four years after the census, by which time they will have already become out of date in the face of rapidly changing land reform proposals. It is thus possible to argue that a total count in an agricultural census reduces itself mainly to academic interest and survives its usefulness as a handmaiden of planning. For the purposes of the Planning Commission it may be feasible to take a well-thought-out sample census throughout the country to be followed by intensive investigation of certain characteristics that require more probing. This will cost much less money than a complete count, will be swift, will yield to rapid tabulation and throw up dimensional figures that will effectively serve the Third Plan. Such a sample census, followed by small, searching regional surveys for particular characteristics, may also serve the requirements of the Ministry of Food and Agriculture, which also works for the country as a whole.

In support of the other view, *viz.*, the complete count, he said that there is, however, the other side of the matter. There are the States, Districts and finally National Extension Service Blocks in the village. An administrative performance may succeed in creating an unforeseen demand: that demand, non-existent a few years ago, may create a situation in which it must be fulfilled, and for the fulfilment of which a nationwide activity becomes imperative. He clarified this statement through the following illustration. One of the greatest achievements, and possibly the most significant at that, of the 1951 Population Census was the publication of the Village Directory. This Directory published the name and number of every village together with its area, population, males and females, number of literates, number of occupied houses, the population divided into the eight main livelihood classes and several other details. These Village Directories were published in the form of separate books for every one of the 300 and odd Districts of India. Such a book had never existed before. Consequently there had not been any demand for such a book before 1951. But no sooner had the Census Commissioner got this work executed throughout the length and breadth of the land, than these books were eagerly snapped up by administrators, scholars, politicians and legislators. The biggest consumers of these

books were the Community Development and National Extension Service Blocks. The Directories became indispensable to legislators. Thereafter the demand for village information has grown so steadily that the persons in charge of 1961 Population Census cannot even think of abandoning the Village Directory in 1961.

Similarly, if it is possible to produce statistics on agriculture for the village, added up to the National Extension Service Block and then to the District, it is possible to imagine that such statistics would be in very great demand which will grow as time passes.

He then concluded on this point of controversy by saying that there will thus always be a two-way demand : (i) condensed, dimensionally significant statistics on agriculture from the end of the Planning Commission and the Ministry of Food and Agriculture ; (ii) detailed accurate information of groups of households and holdings from the end of the villages, the District and the State. He felt that it is best to acknowledge that both of these demands will have to be satisfied at some point of time or other. If expediency, economy and shortage of trained statistical staff prescribe that for the time being it should be enough to satisfy the demands of the Planning Commission and the Ministry of Food and Agriculture, perhaps it will be a matter of practical wisdom to go in for a sample survey. But, it will be harmful to shut our eyes to the genuine demand for detailed and accurate statistics at the level of the village, the District and the State because if this demand continues to be ignored it will strike at the very roots of the concept of planning from below. In spite of the scepticism with which the phrase "planning from below" is greeted generally in common parlance, this concept is acquiring greater and greater strength with the advance of responsible Government and decentralised administration.

The only conclusion therefore seems to be that there can be no such battle as complete count *versus* sample count. It is best to acknowledge that there should be a complete count at the earliest possible convenience, if necessary by phasing it in time and space. But there may also be a quick sample count presently to yield figures of significant dimensions to the Planning Commission. Such a sample count, however, will remain mainly indicative of trends and can never replace the vital need of village statistics of agriculture, possible only through a complete count. Besides, it is best to acknowledge that only a complete count can provide an adequate frame for the undertaking of a proper sample. This frame does not yet exist.

At this stage he made the following suggestions:

The table forms suggested by the F.A.O. are not complicated. One of the most unfortunate things that an underdeveloped country suffers from is the preponderance of a vast amount of administrative statistics of all kinds of which no adequate use is made. The administrative system in underdeveloped countries produces more statistics than it can use. This probably applies to agricultural statistics in India. In each State each village revenue official has to keep a number of registers containing very detailed and diverse information which are hardly ever used. With the rationalisation of land reforms all over the country, these registers can also be rationalised and made uniform throughout the country. This is a task which brooks no delay. This work of laying down uniform table headings for a minimum number of village records should be undertaken by some Central Institution. By its very nature, the Central Statistical Organisation may well be this co-ordinating authority which can in consultation with the Ministry of Food and Agriculture, the Ministry of Community Development and if necessary the Planning Commission devise a set of standard village record forms which should yield the information wanted by the F.A.O. as an annual by-product requiring very little fresh tabulation, but possibly compilation at several levels. Such a procedure can obviate the expense of a complete agricultural census, the utility of which in all its details may not always be so obvious.

Even then, in spite of the rationalisation and standardisation of village record forms, there will still continue to be a large gap between the recorded owner, tenant or even tiller and the actual tiller. This is inevitable on account of the pressure of the population on the land and the paucity of investment on its improvement in the village ; in fact the only investment on land today is the steadily increasing population subsisting on it. This investment far exceeds the investment in manures, irrigation and other benefits. To wipe out this gap between the record and the reality, a direct investigation in the form of a census cannot be avoided. He said that Dr. Sukhatme had made generous references to the efforts of the forthcoming population census to secure a cross-section of the reality as to who is on the land and working it, but he was not sure how far the population census will succeed in obtaining a snap-shot of this situation though it will certainly be a worthwhile attempt. An effort made in this direction in 1951 in West Bengal State did not go entirely waste.

On this common ground, Shri Mitra said that the persons in charge of the population census are very anxious to be of any use whatsoever to the authorities in charge of the agricultural census and are mos

willing to undertake any small investigation that may be required of them. Finally he considered the kind of invitation to him to preside over the present symposium as a recognition of the part that the population census has played for the last 90 years in presenting useful information to the country.

Amongst others who participated in the symposium were Dr. V. R. Rao, Shri D. Y. Lele and Shri R. S. Koshal.