PRESIDENTIAL ADDRESS*

Friends,

I am very happy to associate myself with the Indian Society of Agricultural Statistics as its President and to have been able to be present at this 19th Annual Conference of the Society. Agricultural Statisticians must play an increasingly important role in our agricultural development and I would like to take this opportunity to make a few remarks concerning certain important statistical tasks that need to be completed urgently.

While special priority for agricultural development has been the keynote of the Fourth Five Year Plan, the extreme urgency of achieving self-sufficiency in agriculture has been underlined by the present emergency. Our entire agricultural policy and the Fourth Five Year Plan for agriculture have to be oriented towards this goal. For its speedy attainment, adequate technological and institutional inputs have to be mobilised and deployed in a manner which will yield maximum returns. Our planning towards this end has to be comprehensive and detailed and based on reliable technological and economic information, if it is to be effective and yield the desired results. A suitable agricultural policy in regard to prices, subsidies, procurement, etc. directed towards a proper implementation of the plan and for making modifications in the various programmes in quick response to the effects of unforeseen circumstances and factors is also necessary. In brief, information is to planning and policy formation what physical inputs are to agricultural production. This information has to be accurate and, for policy formation particularly, up-to-date. It is not possible for me to cover in the course of my remarks the whole field of information needed for this twin purpose but I shall confine myself to a few points that I wish to make, with examples of certain key items like statistics of land and its use, irrigation, production of agricultural commodities and marketing and prices of agricultural produce.

Land is the basic and, at the same time, the most scarce of our agricultural resources. Accurate and timely statistics accounting

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for all of our land and its various uses is an obviously essential requirement. The possibility of putting our land to optimum use for growing crops, forests, pastures, and grazing for animals depends upon this information. This information has to be collected and compiled field by field and village by village if it is to lend itself to operational needs. The alternative method of sample survey, useful as it is in a variety of fields, cannot serve this purpose. For, sample survey does not provide exact data and for small regions not sufficiently accurate data, except at a disproportionately high cost, on items which do not occur quite commonly or which are distributed unevenly. As an example, I have in my mind the question of bringing into cultivation areas which are not cultivated at present but are capable of being cultivated. Although we seem to be cultivating practically all cultivable area, there are apparently some 87 million acres of land distributed among different uncultivated categories such as current fallow, old fallow, cultivable waste, area not available for cultivation etc., which are spread all over the country. It is necessary to determine how much of this area can be really brought under the plough with reasonable investment and this can be done only through a complete survey of all such areas. A partial attempt at this survey was made but was confined to locating compact blocks of 250 acres of cultivable land or more. A comprehensive effort which will include smaller uncultivated areas of land is necessary. I understand that as a beginning some surveys are being carried out in respect of waste lands in smaller blocks also, in selected districts. Statistics of irrigated areas is another key item relevant to our agricultural development. The irrigated area constitutes only 20 per cent or less of the cultivated area and is widely scattered. Here again, a complete annual survey to provide statistics of irrigated area is necessary in order to assess the progress that we are making in extending irrigation and its impact on agricultural production.

We also require a complete survey in order to secure accurate and detailed statistics of crop acreages each season. A field by field enumeration is essential to provide not only reliable data for the so-called minor crops like tobacco, jute, sugarcane etc., which cover a relatively small area but are of great importance to our economy, but also for important major crops like rice, millets, wheat etc. Statistics by complete enumeration rather than by sample survey are to be preferred for the latter crops because these statistics are a component of the production statistics which are derived by

multiplying crop area by yield per acre. Since yield per acre has necessarily to be determined by sample crop-cutting surveys and is, therefore, subject to a sampling error, the sampling error of the production statistics would be further inflated if the figure for area was also subject to a sampling error by being estimated from sample survey. It is of utmost importance that we estimate our agricultural production with maximum possible accuracy as it is only the marginal surplus or deficit for a few million tonnes that is always under discussion and our production statistics should enable us to detect these differences with confidence. I may mention here that three of our States, Kerala, West Bengal and Orissa are currently determining their crop acreages by sample surveys, and we have suggested to them that they should switch over to a complete enumeration of area as early as they find it feasible. I am glad to add that Orissa, which is one of our most productive states, has agreed to change over to complete enumeration soon.

Thanks to the pioneering work of Indian Statisticians, sample survey has found nationwide application in India in crop-cutting surveys which are the means of estimation of yield rate of practically all our foodgrains and some of our important commercial crops. Consequently, we have now reliable statewise data on this vital item. It is necessary to extend this method to crops and regions which have not been covered yet. At present, the yield data from crop cutting surveys are available at best at the district level. With blocks as units of development, it is important to have this key indicator of agricultural progress at the block level on a few major crops. Investigations are in progress to evolve a feasible method for this purpose. Forecasts of crop areas and yields are important to policy makers for keeping a watch on the agricultural situation in order to provide for timely remedial action. These forecasts can be based on early observations on crop condition and prospects both in regard to areas planted and likely yield as also on weather conditions prevailing over the season. There is a system of crop forecasts in the country but much work is needed in order to improve the reliability and timeliness of the forecasts.

Statistics of movement of agricultural commodities through markets and their prices at various stages and periods of the year are important indicators of the factors influencing the availability of agricultural produce to the consumers and other users. Data on prices and market arrivals of certain foodgrains are being collected,

but much improvement is necessary for securing representative data for different regions with accuracy and speed.

For most of the statistics I have mentioned above, we have inherited even from pre-British days a unique apparatus in the shape of land records based on cadastral surveys and a village revenue agency known by different names like Patwari, Karnam etc. in different parts of the country. This agency has provided us annually with statistics of land use and crop acreages by field to field enumeration as a part of its normal function and method has stood the test of time. Criticisms have been levelled against the accuracy of these statistics but these have been shown to be mostly unfounded. Since independence, this agency has been under steadily growing pressure from various Government Departments to supply a wide range of rural statistics and has consequently not been able to perform its basic functions satisfactorily. It was hoped that with the abolition of zamindari in the old permanently settled areas this agency will be established in the villages in these areas and provide more accurate area statistics. Only Bihar State has taken action in this direction so far and, as I mentioned earlier, Orissa is planning to do it. Even in areas which have been cadastrally surveyed and in which the village revenue agency exists, which accounts for 80 per cent of the total area in the country, very little has been done to strengthen and modernise this agency in order to make it capable of meeting the multifarious demands made upon it by other government agencies. Recommendations have been made from time to time to bring the old cadastral maps up-to-date, increase the number of village revenue officials so that the area under their charge is brought to a manageable proportion, increase the suprvisory staff and improve the method of supervision and speed up the processing of the data. Not much action has been taken by the States to gi effect to these recommendations on the plea of lack of funds. Re economy will, however, lie in strengthening the village revenue agenc adequately in order to enable it to discharge its responsibility fo agricultural statistics rather than think of ad-hoc or other arrange- ments. Employing a special field staff for agricultural statistic alone is too costly to be a practicable proposition, while using othe agencies like village level workers and agricultural assistants would not be acceptable as this will seriously impinge upon their develop- mental activities. Besides, they possess neither the expertise nor the facility for collecting agricultural statistics and will thus have to depend upon the village revenue officials for help. This will mean

an unnecessary duplication of efforts. The Agricultural Department which ought to be primarily concerned with agricultural statistics can be involved by being given the responsibility for compiling agricultural statistics for the State on the basis of the data submitted by the primary reporting agency and by participating in the supervision of the field work by a suitable arrangement with the latter.

A serious drawback in the present methods of compiling and publishing agricultural statistics is that there is so much delay that these statistics are of little use in current policy formation. Even in publishing crop forecasts, the old discipline of adhering strictly to the prescribed time-table is no longer there and most of the forecasts are published after some delay. This state of affairs needs to be set right if our planning and policy making in agriculture are to be based on accurate and timely information. In the present days of machine tabulation and the electronic computers there is no excuse for delays in compilation. With competent staff at headquarters for computation and adequate staff in the field for timely reporting it should be feasible to streamline the whole process and maintain a steady flow of reliable and timely data. I would ask Agricultural Statisticians assembled here to address themselves seriously to this task and evolve suitable plans for their respective States and for the Centre towards this end. With its deep involvement in shaping the agricultural policy of the country, the Central Government has offered liberal assistance for this purpose and I would invite the States to make full use of this assistance. Since we are fortunate in possessing the essential framework it should be relatively easy to gear our statistical system to the needs of our agricultural planning by improving its efficiency. It is a challenge to our Agricultural Statisticians which I feel confident they will meet.