

INAUGURAL ADDRESS*

Friends,

I welcome this opportunity to be here amongst you to inaugurate the Silver Jubilee Session of the Indian Society of Agricultural Statistics. I need hardly emphasise the great service your Society has done during the twenty-five years of its extremely useful existence. The Annual Conferences, Symposia and Seminars that you conduct, the journal that you publish and the valuable publications that you have brought out, have been of immense help in promoting research and practical application of statistics in the field of agriculture and allied sciences. The very fact that your Society enjoyed the patronage and guidance of the late Dr. Rajendra Prasad, one of the greatest scholars and original thinkers, bears testimony to the place your organisation holds in the field of application of scientific knowledge to various disciplines.

In the course of the last quarter of a century, substantial progress has been made in improving our agricultural statistics which constitute the main basis for formulating our agricultural development plans and policies. The Society has played a prominent role in bringing about this improvement. It is heartening to learn that your journal has stimulated research both within and outside India in the field of statistics and their application to various disciplines. Regrettably, scientific literature in Hindi is quite inadequate. It is therefore gratifying to find that your journal has a Hindi supplement.

In formulating and assessing developmental plans, the statisticians have a major role to play. I am, therefore, glad that this Conference provides a forum for fruitful exchange of ideas which is essential for furtherance of knowledge and strengthening the statistical basis necessary for future programmes. I notice that you are discussing in this Session problems such as Measurement of Impact of the Green Revolution, Designs for Agricultural Experiments and Computerisation of their analysis and Nutritional Allowances.

*Speech of Shri G.S. Pathak, Vice-President of India, at the inauguration of the Silver Jubilee Session of the Indian Society of Agricultural Statistics at New Delhi on 24th March, 1972, at 4.00 P.M.

I may, therefore, make a few suggestions regarding the future activities of the society for the consideration of all gathered here today.

In formulating programmes for development of crop production, it is necessary to know the impact of various measures of improvement not merely on research farms but by conducting experiments on cultivators' fields under actual farming conditions. In fact as early as 1955, the distinguished President of your Society, the late Dr. Rajendra Prasad referred in his inaugural address to the need for organising such "Trials on Cultivators' Fields". These trials not only help to establish optimum farming practices under field conditions, but also eliminate the risks involved in directly transferring the results of experiments conducted in Research Stations under ideal conditions to farmers' fields where the conditions are very different. I am told that ever since such trials have been conducted and that a great deal of valuable information has been obtained from them. I feel that the need for conducting such experiments is all the more urgent now in the context of the programmes for extension of the high-yielding varieties to new crops and to new areas. I, therefore, suggest that similar trials should be organised on an extensive scale and should in fact be integrated with the regular activities of the research and extension agencies of the various States.

India is at present passing through a crucial phase of development, particularly in the agricultural sector. The mood of despondency arising from continuously growing deficits has given place to one of cautious optimism resulting from the near achievement of the goal of self-reliance. Very soon we may be dealing with problems of surpluses. Such development certainly calls for adjustments in various related fields. The statistical methodology which was evolved and was adequate for the study of the problems of traditional type of agriculture needs to be reviewed in the context of the data requirements of the new developments in agriculture. Similarly, the techniques of agricultural experimentation might also need re-examination. With the expansion in the scope as well as number of experiments, the research workers might be facing dearth of land and other resources. At the same time with the introduction of high yielding varieties, variability among the experimental units might have been reduced. It is, therefore, worthwhile to investigate if smaller experimental units can be used, thereby saving some land and other resources to accommodate more experiments. I think it will be useful to encourage and popularise such investigations.

I am told that there have been, in recent years, great advances in theoretical statistics. But the practical application is lagging behind, and it appears that only conventional types of methodology are being normally used for collection and interpretation of statistical data. I need hardly emphasise the need for making increasing use of the latest developments in the science of statistics to meet the new kinds of problems that arise in any given situation. Perhaps some of the assumptions required for the application of certain techniques may not hold good in particular situations. For example, the usual assumption in interpreting data collected at any point of time is the "static" one—*viz.*, the conditions under which they are collected remain constant over time. But in the context of the rapidly developing agriculture in our country, a more appropriate assumption would be that the data collected at any point of time refer to just one stage in the process of agricultural growth. In such cases, instead of ignoring the assumptions, it is desirable to search for alternative methodology which takes into account the dynamic nature of the situation. It may even be necessary to conduct research to evolve suitable methodology for this purpose. Perhaps your Society can play a useful role in examining the conventional methodology and recent findings with a view to their proper exploitation.

I would also suggest that your Society might bring out suitable publications for popularising recent techniques illustrating them with suitable examples taken from the the field of agriculture. Such publications will not only help agricultural research but also various other activities. It will further enrich the science of statistics itself.

It is true that statistical awareness amongst some sections of the people has increased. Considerable amounts of statistical data are being collected these days. Much of these is however in the form of ancillary information collected along with the main series of data. Perhaps such ancillary data are not always analysed and interpreted immediately. It is, therefore, necessary that there should be a central place where all these data can be stored and made available to various users of Statistics by building a 'data bank'. I understand that perspective planning in our country, particularly in agriculture, is being handicapped due to lack of adequate statistical information. At the same time I believe lots of data remain unutilised because of lack of easy accessibility and absence of facilities for interpretation of such data. The creation of a 'data bank' might solve some of these problems. Proper indexing of these data and circulation might not be a difficult task, as powerful computers are available in India these days and their services can be utilised for the management and

organisation of the 'data bank'. A Society like yours can assist in the building up of such a data bank by extracting useful information on various aspects of agriculture from time to time.

I may draw your attention to some of the more glaring lacunae in the current agricultural statistics. Although the position regarding the availability of data might be relatively satisfactory for principal crops, there are wide gaps in statistics relating to livestock, fishery and forestry. Even in regard to crop statistics, the position is not equally satisfactory in all the areas of the country. Special attention has to be paid to the collection of reliable data in these sectors. I am told that methodological problems are involved in developing suitable techniques of data collection in some of these fields. Your Society might take the initiative in drawing attention to these gaps and providing answers to some of the problems posed.

The application of statistical methodology requires vigorous discipline. It is necessary to organise *ad-hoc* and refresher training courses for the research workers at different levels. I believe that in this sphere too Scientific Societies like yours should take the initiative, hold seminars and symposia and even organise such training courses and increase statistical consciousness among persons working in different fields.

I am glad to know that your Society is having a small Unit which undertakes research in problems of current interest. I hope that this type of activity will expand in the coming years and that this unit will develop into a full-fledged Research Section, contributing to the solution of as yet unresolved problems. Your Society may also consider the feasibility of undertaking consultancy service to cater to the needs of private sector organisations.

All of us must join hands to improve our living standards both in matters of diet and general socio-economic conditions. The task of collection of relevant data on these aspects presents a challenge to our statisticians which I have no doubt you can meet successfully. We should not forget that our agriculture has not only to meet the current demands more adequately but also to keep pace with the growth of our population.

Your Society has rendered signal service in improving the agricultural statistics in the country. I wish your Conference all success and I hope that your deliberations will be fruitful.

JAI HIND