

## REVIEW OF ACTIVITIES OF THE INDIAN SOCIETY OF AGRICULTURAL STATISTICS FOR THE YEAR 1988

The Indian Society of Agricultural Statistics, a scientific body, was founded on 3rd January, 1947 for promoting and undertaking research in Statistics and for its application to Agriculture, Animal Husbandry, Forestry, Fishery, Agricultural Economics and other allied fields. The Society was fortunate to have Late Dr. Rajendra Prasad, the then Minister of Food and Agriculture, Government of India, as its Founder President. He continued to guide the Society for 16 years. The Society had also the privilege of having as its Presidents Shri S. K. Patil, Shri C. Subramaniam, Shri Jagjivan Ram, Dr. M. S. Swaminathan, Dr. O. P. Gautam and Shri Buta Singh. They took keen interest in the activities of the Society and were a great source of inspiration. The Society has attained its present status due to the untiring efforts and guidance of its Presidents in the past and present and particularly of the eminent statisticians Prof. P. V. Sukhatme and Late Dr. V. G. Panse.

The Society organises annually a Conference in different parts of the country as per invitations received from State Governments, Universities and other Research Organisations. It provides a wider platform for exchange of ideas. During each Annual Conference, the Society organises two symposia keeping in view current national interest as well as problems of interest in the region where the Conference is organised. The Society brings out a Journal, one volume consisting of three issues per year, which serves as a media for disseminating research findings on Agricultural Statistics and allied fields. Ad-hoc publications and Bulletins are also brought out to help the research workers and students in the field of Agricultural Statistics. It has set up a Research Unit to undertake research on specific problems of current interest in accordance with the guidance provided by a Research Direction Committee. In order to perpetuate the memory of the Founder President Late Dr. Rajendra Prasad, a lecture is organised during the Conference. The Society has

organised 24 lectures in the series so far and the Memorial Lecture being organised during this Conference would be 25th in the series.

The membership of the Society, which is drawn from all parts of India as well as from abroad, during the year was :

Permanent Institutional Members	22
Life Members	290
Institutional Members	4
Ordinary Members	117
Student Members	12

In addition to regular members, the Society has a number of institutional subscribers to its Journal in India and abroad. The number of subscribers during the years was :

Indian	150
Foreign	40

Thus, the total number of members and subscribers during the year was 635.

One of the important activities of the Society, as mentioned earlier, is the publication of its Journal. It has brought out 40 Volumes till 1988 and has maintained its time schedule. The Hindi Supplement continues to be a special feature of the Journal. The high standard of the Journal has been maintained due to sincere efforts of the Editorial Board and of the referees. The Society is thankful to them for their keen interest in the activities of the Society-particularly in the publication of its Journal.

The 3rd Revised edition of the book "Sampling Theory of Surveys with Applications" by P. V. Sukhatme, B. V. Sukhatme, Shashikala Sukhatme and C. Asok was brought out during 1984. This book is in great demand by the students and research workers. Another important publication "Statistical Methods in Animal Sciences" by V. N. Amble brought out by the Society is extremely useful for the research workers in Animal Sciences.

Two ad-hoc publications namely, "Contributions in Statistics and Agricultural Sciences" and "Impact of P. V. Sukhatme on Agricultural

Statistics and Nutrition" were brought out by the Society which contain a number of invited articles from India and abroad.

The Research Unit of the Society continued to be engaged in the work relating to Crop Insurance as per request from the General Insurance Corporation of India. A Crop Insurance programme has to be actuarially sound if it has to act as a major tool of agricultural development and not just a marginal activity. The parameters involved in working out the actuarial premium rates are (i) year to year variability in the average annual yields and (ii) the level of coverage. The premium rates are directly proportional to both these parameters. In the Comprehensive Crop Insurance Scheme (1985) the premium rates have, however, been fixed at 2 per cent for paddy, wheat and millets and one per cent for pulses and oilseeds. On studying the extent of variability for different crops, it has been observed that a large proportion of the total variability in premium rates as much as 70 to 96 per cent, is accounted for between crop strata within States. This indicates that differential rates of premium for different notified areas would be more meaningful. In addition, the Society has initiated another important study mentioned in brief as follows :

High Yielding Varieties Programme (H.Y.V.P.) has been an important vehicle in the country for increasing yield. In the post-independence period, the rate of growth of agricultural production has undergone a sizable increase over that achieved before independence. This growth however, has been accompanied by an increase in the instability of agricultural output. This raises the question of whether there is a causal link between growth and variability of agricultural output. The existence of this link was first hypothesized by Sen (1967) early in the post independence period when growth was largely based on area expansion and subsequently discussed by Rao (1975) in the context of growth based on productivity in the 1960's. Sen's explanation largely rested on the hypothesis that variability increased as cultivation was extended to marginal lands where production was more susceptible to the fluctuation of weather and as the use of fertilisers increased sharply. Rao (1975) took the line that since variability in yields per hectare tended to be far greater than that of area, productivity based growth had contributed to greater variability in output. The Society has therefore undertaken a study on "Statistical basis for studying instability in Foodgrains Production during Pre- and Post-Green Revolution Period". In the first instance this study has been undertaken in Madhya Pradesh.

It has been found that HYV Programme has induced changes in the variability of rice productivity in Madhya Pradesh State. Further, it was noticed that the changes have been brought about by reducing the varia-

bility in most of the districts. 29 districts of the State were having C.V. more than 20% in the pre-green revolution period and out of these 12 districts reduced the coefficient of variation less than 20% in the post-green revolution period. On the other hand, during pre-green revolution period, there were 9 districts with C.V. value less than 20% and out of this 3 districts have shifted to high C.V. group ( $> 20\%$ ) during the post-green revolution period. The analysis in respect of wheat crop has indicated that H.Y.V. programme has induced changes in the variability of wheat productivity in the State. It was further observed that the changes have been brought about by increasing the variability in most of the districts. Out of 42 districts, 20 districts were having low C.V. ( $\leq 20\%$ ) in the pre-green revolution period and out of this 12 districts (60% districts) have shifted to high C.V. group ( $> 20\%$ ) during the post-green revolution period. 22 districts in the State were having High C.V. values during the pre-green revolution period and out of this, 7 districts have shifted to low C.V. group during the post-green revolution period. This comparative study on the changes in the variability of rice and wheat productivity indicated that the H.Y.V. programme had been effective in reducing the variability of rice productivity. Contrary to this, the variability in wheat productivity had increased during H.Y.V. programme in most of the districts.

Computers are making significant impact in almost every activity of our country. In the field of development, planning and decision making, computers have become almost inevitable. It is, therefore, essential that every body should know what a computer does, how it works and what are the essential requisites and what the limitations are. Keeping this in view, an in-service training programme on "Computer Appreciation" was organised by the Society from 19th to 24th December, 1988 at Indian Agricultural Statistics Research Institute, New Delhi. Nineteen Senior Officers of Indian Statistical Service from various departments of Central Government participated in the training programme. The training was inaugurated on 19th December, 1988 by me as Director, I.A.S.R.I., New Delhi. Shri M. G. Sardana, Director General, Central Statistical Organisation addressed the participants in the valedictory function on 24th December, 1988 and distributed the certificates. The faculty was drawn from I.A.S.R.I. and other organisations having specialists in different fields of computer applications. The facilities were provided by the I.A.S.R.I. This training was sponsored by Central Statistical Organisation and they provided necessary financial assistance to conduct the course. The Society is thankful to C.S.O. for sponsoring the course and providing financial assistance.

The Society has initiated a programme for honouring eminent scientists

who have contributed significantly in the field of Statistics and its applications to Agriculture and allied fields. A title of "*Sankhyiki Bhushan*" will be awarded to the persons. This year, three persons have been chosen for the award and their names will be announced during this Conference. The Society has also revived the scheme of giving prizes for the best papers published in the Journal once in two years. The prizes are to be awarded one each in the fields of Sampling, Design of Experiments, Statistical Genetics, Statistical Theory and Methodology and in applied papers. The names of the authors selected for award for the publications during 1987 and 1988 are proposed to be announced during the Conference. The Society is thankful to the referees who helped for judging the papers for award.

The problem of finance for scientific activities and printing of its Journal and other ad-hoc publications could be solved to a certain extent through grants-in-aid received from the Ministry of Agriculture, Government of India, Indian Council of Agricultural Research and Government of Maharashtra. The Society wishes to acknowledge gratefully the financial assistance received from them during the year under report.

The Society continues to be a Member of the International Statistical Institute and also of the Indian Association for Social Science Institutions. It is also affiliated to the Federation of Indian Societies of Agricultural Sciences Technology (FISAST).

The last (41st) Annual Conference of the Society was held at Rajahmundry from 17th to 19th December, 1987 as per invitation received from Central Tobacco Research Institute, Rajahmundry. The Conference was to be inaugurated by the Minister of Agriculture of Andhra Pradesh but due to some unavoidable reasons, he could not be available for the inauguration. The Conference was inaugurated by Dr. T. D. Prasada Rao, General Manager (Oilseeds), I.T.C./ILTD, Hyderabad on 17th December, 1987. The Society is thankful to him for inaugurating the Conference at a very short notice. Dr. M. S. Chari, Director, Central Tobacco Research Institute, Rajahmundry welcomed the delegates. Prof. Prem Narain, Secretary, of the Society presented the report of the Activities of 8 al Address "Standard.

ization and Quality Control in Agricultural Sector—An Integrated Approach" was given by Dr. B. N. Singh, Sessional President. The "Dr. Rajendra Prasad Memorial Lecture" was delivered by Prof. B. L. Deekshatulu, Director, National Remote Sensing Agency, Hyderabad. The topic of his lecture was "Land Transformation and the Role of Remote Sensing as a Technique for Mapping and Monitoring". There were two symposia organised at the Conference. The symposium on "Small Area Statistics" was presided over by Dr. M. N. Murthy, Honorary Director,

Applied Statistics Centre, Madras and the convenors of the symposium were Dr. O. P. Kathuria and Dr. A. K. Srivastava, I.A.S.R.I., New Delhi. The second symposium on "Statistical Aspects of Stability of Crop Yields" was presided over by Dr. T. D. Prasada Rao, General Manager, Seed Unit, I.L.T.D. Division, I.T.C. Limited, Hyderabad and the convenors were Dr. D. V. Subba Rao, Scientists S-2, C.T.R.I., Rajahmundry and Shri S. C. Rai, Senior Scientist, I.A.S.R.I., New Delhi. The detailed summaries of the papers presented at the symposia as well as the recommendations made have been printed in the Journal (Volume 40, No. 1, 1988). As many as 31 technical papers were presented at the Conference. The paper reading sessions were organised by conducting two concurrent sessions on two consecutive days. These sessions were presided over by Dr. K. C. George and Prof. S. G. Prabhu Ajgaonkar.

The Society has conveyed its grateful thanks to the Director, C.T.R.I., Rajahmundry for organising the last Conference and also to the Chairpersons of various sessions as well as to those who spared their valuable time in making the Conference a great success at Rajahmundry.

The Society provided financial assistance to deserving research workers and students to enable them to attend the Society's Conference at Rajahmundry for presenting their papers.

The railway authorities, as in the past, gave travel concessions to the members of the Society and delegates to the 41st Annual Conference to enable them to attend the Conference at Rajahmundry. The Society records its grateful thanks to the railway authorities.

The accounts of the Society for the year ending 31st March, 1988 were audited by a professional auditor appointed by the Society and these are being presented at the General Body Meeting.

The work of the Society during the year was made possible through the active help of the members of the executive Council of the Society, the Editorial Board, and the Research Direction Committee. The burden of the entire Secretariat of the Society has been willingly borne by my colleagues, Dr. Shivtar Singh, Shri S. C. Rai and Dr. Padam Singh. In the end I wish to thank the staff of the Society for their devoted work.

PREM NARAIN  
*Secretary*  
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