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Workshops, Conferences, Meetings, Seminars and Annual Day Organized

Conferences/Workshops

The XV National Conference of Agricultural Research Statisticians of the ICAR Institutes, Project Directorates, State Agricultural Universities and Central/State Departments of Agriculture, Animal Husbandry and Fisheries was organised by the Institute at Birsa Agricultural University (BAU), Ranchi (Jharkhand) from 03-04 December 2007. The theme of the Conference was "National Priorities in Agricultural Statistics and Computer Application". There were four Technical Sessions followed by a Plenary Session. The details of the technical sessions are as follows:

Technical Session-I	:	Action Taken on the Recommendations made during the Last Conference
Technical Session-II	:	Priorities in Agricultural Statistics Research: Current Status and Future Challenges
Technical Session-III	:	Priorities in Computer Application in Agricultural Research
Technical Session-IV	:	Priorities for Teaching in Agricultural Statistics and Computer Applications
Plenary Session	:	Presentation of Reports by Rapporteurs of different Sessions and Summary of Recommendations

The Conference was inaugurated by Dr. N.K. Tyagi, Member, Agricultural Scientists' Recruitment Board. Dr. N.N. Singh, Vice Chancellor, Birsa Agricultural University, Ranchi presided over the Inaugural Function. Key Note Address was delivered by Prof. S.D. Sharma, Director, Indian Agricultural Statistics Research Institute. Dr. B.N. Singh, Director Research, Birsa Agricultural University, Ranchi delivered Welcome Address. Dr. K. Sinha, Professor and Head, Department of Agricultural Statistics delivered the Vote of Thanks. Dr. Nawab Ali, Deputy Director General (Engg.), I.C.A.R. was the Chief Guest at the Plenary Session and gave his valuable guidance, advice and support in finalising the recommendations of the Conference. The

Conference was attended by more than 60 Statisticians/ Scientists/ Research Workers of various organisations spread all over the country.

Inaugural Function of XV National Conference of Agricultural Research Statisticians

Workshop

A dissemination workshop on Outliers in Designed Experiments was organized on 26 July 2007 at IASRI, New Delhi. The workshop was inaugurated by Dr. N.N. Goswami, former Vice-Chancellor, Chandra Sekhar Azad University of Agriculture and Technology, Kanpur. Dr. V.K. Gupta National Professor gave a brief outline on outliers and their presence in the experimental data. He also gave the motivation for taking up the project. Dr. Rajender Parsad, National Fellow made a presentation on Diagnostics in Designed Experiments. Dr. L.M. Bhar gave comprehensive presentation on the findings of the project. Both the technical sessions were chaired by Professor Aloke Dey, Indian Statistical Institute, New Delhi. An exposure of Design Resources Server was also given to the participants by Dr. Rajender Parsad and Dr. V.K. Gupta. Dr. Rajendra Prasad, Former ICAR-National Professor chaired the session on Design Resources Server. Several recommendations were made during this workshop. The proceedings are being published separately.

A view of Dissemination Workshop on 'Outliers in Designed Experiments'

- A two days workshop on 'Implementation of Intelligent Reporting System (IRS)' was organized by M/s. CGS, Hyderabad at IASRI, New Delhi during 10-11 September 2007 for Nodal Officers of Permisnet project. One hundred and twenty delegates attended the training.

  A meeting with Senior Plant Breeders of AICRP-RM was organized on 03 October 2007 to finalize the designs for the initial varietal trials and criteria of promotion of entries. The meeting was chaired by Dr. S.D. Sharma, Director, I.A.S.R.I., New Delhi. Dr. V.D. Patil, ADG (O & P) and Dr. Arvind Kumar, Director, NRC-RM, Bharatpur also participated in this meeting. Dr. Rajender Parsad made a presentation on Statistical Issues in Rapeseed-Mustard Varietal Trials. Based on the analysis of data generated from a-designs, he showed that the coefficient of variation reduced in 13 trials out of 24 trials. After long deliberations, following decisions were taken:

  - The promotion of entries in initial varietal trials should be done on the basis of combined analysis of data and at 10% level of significance and for advanced varietal trials at 5% level of significance and not on the basis of 10% higher yields than the best performing check.
  - If within a zone location´genotype interaction is significant, then promotion should be for a subset of locations.
  - All IVTs with 30 or more entries should be conducted using a-designs only. The randomized layout will be provided by I.A.S.R.I. for all the 22 centres.

  A meeting with Professor Bikas K. Sinha, Member, National Statistical Commission was organized under the guidance of Dr. V.K. Gupta, ICAR-National Professor on 31October 2007

at I.A.S.R.I., New Delhi. During this meeting, following presentations were made:

Speaker	Title
Krishan Lal	Trend Free Nested Balanced Incomplete Block Designs with Applications in Designs for Diallel Cross Experiments
R. Srivastava	Robustness of Designs for Biological Assays
Lal Mohan Bhar	Robust Methods of Analysis of Experimental Data
Susheel Sarkar	Computer Added Search for Linear Trend-free Factorial Experiments
Cini Varghese	Some Aspects of Change Over Designs
B.K. Sinha	Some Thoughts on Experiments with Mixtures and Optimal Designs under Covariates in the model

From this meeting, following points were emerged:

- The conditions should be obtained for a nested block design to be trend free both at block and sub-block level. For doing this, two polynomials, one for block and another for sub-block positions may be defined. Efforts may also be made when the trend is different in different blocks/sub-blocks.
- The conditions for robustness of block designs for biological assays against missing blocks may be obtained. The possibility of obtaining/ identifying robust designs against any two blocks missing may be explored.
- For a BIB design in b blocks. In the beginning of the experiment it is known that resources/ funding is available only for b*<b blocks and funding/resources for remaining b-b* blocks is expected with probability a. For this situation, develop an algorithm for identification of b* blocks out of b blocks such that the efficiency per observation is maximized. b* may be just enough to have the design connected
- While handling outliers in the experimental data, whether the trend in residuals/studentized residuals and Cook-statistic is same or different may be explored. When we make use of robust methods of estimation, expressions for the variance for the estimated treatment contrasts may be obtained after application of robust methods of estimation. Whether the tests of significance in case of robust estimation remain approximately valid in case of designed experiments like in case of regression needs to be investigated. The problem of outliers in case of change over designs/ designs for bioequivalence trials may also be attempted.
- The possibility of obtaining error functions in the context of change over designs may be explored.
- An Awareness Workshop on NISAGENET was organised at IASRI, New Delhi during 19-20 December 2007

A view of Awareness Workshop on 'NISAGENET'

- A discussion seminar on Experiments with Mixtures Theoretical Advances and Applications was jointly organised under the leadership of Dr. VK Gupta, National Professor at IASRI, New Delhi on 17-18 March, 2008. In this discussion Seminar presentations on Optimality Aspects of Mixture Experiments: New Directions were made by Professor Bikas K. Sinha, Member National Statistical Commission and Professor, Indian Statistical Institute, Kolkata, Dr. NK Mandal and Dr. Manisha Pal from Calcutta University, Kolkata and Dr. Premadhish Das, Kalyani University, Kalyani. Dr. Rajender Parsad made a presentation on Experiments with Mixtures: Some Applications. Dr. Krishan Lal Kalra presented some results on Experiments with Mixtures.

- A dissemination workshop on Fractional Factorials with Special Emphasis on Experiments with Scarce Resources jointly under the leadership of Dr. V.K. Gupta, National Professor at IASRI, New Delhi on 18 March, 2008. During this workshop following presentations were made:

A Dissemination Workshop on 'Fractional Factorials with Special Emphasis on Experiments'

Concepts, Applications and Evaluation criteria of Supersaturated designs Orthogonal Arrays and their Applications (V.K. Gupta*, Rajender Parsad and L.M. Bhar, V.K. Gupta* and Rajender Parsad)

Construction of Supersaturated designs for Asymmetrical Factorials (V.K. Gupta, Rajender Parsad, L.M. Bhar* and Basudev Kole)

A presentation during Dissemination Workshop on 'Fractional Factorials with Special Emphasis on Experiments'

Columnwise Co-ordinateExchange Algorithm for Generation of Two-levelsSupersaturated designsLinear Trend Free Designsfor 2-level Fractional Factorial Experiments (V.K. Gupta, Rajender Parsad*, L.M. Bhar and Basudev Kole, Krishan Lal)

*denotes the author who presented the paper

- A dissemination workshop on Design Resources Server on 26 March, 2008 at IASRI, New Delhi was organized by Dr. Rajender Parsad, National Fellow Research Unit jointly with Dr. V.K. Gupta, National Professor Research Unit. The workshop was inaugurated by the Dr. S.P. Tiwari, DDG (Education). Dr. B.S. Bisht, ADG (HRD-I) and Dr. H.S. Gaur, Dean and Joint Director (Education), IARI, New Delhi also participated along with other delegates. The participants of the workshop included the experimenters from IISS, Bhopal; ANGRAU, Hyderabad; NDRI, Karnal, NBPGR,

Dissemination Workshop on 'Design Resources Server' is in progress

New Delhi; Divisions of Soil Science, Agronomy, Post Harvest Technology, Agricultural Chemicals, Agronomy and Genetics of IARI, New Delhi. During the Introductory Session, Dr. Rajender Parsad made a presentation on Genesis and Main Features of Design Resources Server. Dr. S.P. Tiwari was quite appreciative of the efforts made and said that such workshops should be organized in different regions of the country. The practicing

statisticians and experimenters should use this server rigorously and send their comments for further improvements. subsequently two Technical Sessions, in which indepth discussions were made on the Design Resources Server. The Technical Sessions were chaired by Dr. B.M. Prasanna, National Fellow, IARI, New Delhi and Dr. R.C. Agrawal, Principal Scientist, NBPGR, New Delhi. The concluding session was chaired by Dr. S.D. Sharma, Director, IASRI, New Delhi. All the participants were highly impressed with the efforts made. After long deliberations, following points were emerged for wider dissemination and further improvement in the server:

1. Dissemination workshops should be conducted in different regions of the country.
2. Faculty Seminars may be delivered at IARI, New Delhi.
3. Efforts should be made to make one presentation in Design Resources Server in the foundation course of Agricultural Research Scientists at NAARM, Hyderabad.
4. The Server may be publicized through ICAR News and Reporter and by providing a link on ICAR Home Page and other ICAR institutes.
5. E-mails may be sent to all organizations in National Agricultural Research System.
6. A letter may be sent to all SAUs and ICAR Institutes through DDG (Education).

Suggestions for Improvements in the Server

1. The material on Server may be divided into two parts. Part I would be primarily useful to scientists in NARS in particular and to stakeholders throughout the globe in general. Part II would be useful for statisticians undertaking research in Design of Experiments. The scientists, however, can use either of the parts or parts of their choice. Part I would include E-learning and E-advisory, Network of scientists, Analysis of data, Designs for single factor experiments, Designs with nested classifications, Designs for multiple factor experiments including fractional factorials, Designs for bioassays, Multi-response experiments, Regression designs like response surface designs, experiments with mixtures, etc. Part II would mainly comprise of methods of construction of the above said designs, catalogues of the designs along with their efficiency and bibliography on several topics. It would also have online generation of Hadamard matrices, Orthogonal arrays, Fractional factorials, Supersaturated designs, Mutually orthogonal Latin squares, Micro-array experiments and Computer experiments.
2. A disclaimer may be put on the Design Resources Server.
3. Pages of the Design Resources Server may be given a Water Mark.
4. Proper citation of Design Resources Server may also be included.
5. Name of the Server may be changed to Experimental Design Resources Server.
6. A mechanism should be developed for moderation of Discussion Board.
7. Reports for all the designs for which randomized layouts are provided by the Server should be made available automatically. These reports should include parameters of the design selected by the user, randomized layout of the design and EXCEL worksheet containing columns of design parameters for all the classifications so that user can enter the data generated.
8. In the analysis of data there should be some provision made for conversion factors and data entry as per field work book records.
9. Titles and abstracts of all the theses on Design of Experiments of IASRI may be provided on the Server.
10. The material on two Electronic books may be clubbed into one avoiding similarity and duplicacy.
11. On every page, date on which last updated may be provided.
12. Efforts should be made to explore the possibility of giving an IP address to the design resources server and also putting it exclusively on a separate server and a mechanism be developed for its maintenance

Seminars

Salient outcomes from the completed research projects undertaken in different aspects of Agricultural Statistics and Computer Application were presented in the seminars organized regularly at the Institute. Open seminars were also organized for new research projects proposals. Outline of Research Work (ORW) seminars, Course seminars and Thesis seminars were delivered by the students of M.Sc. and Ph.D. Agricultural Statistics

and M.Sc. Computer Application.

During the period under report, a total of 82 seminar talks were delivered. Out of these, 52 were student seminars, 21 by scientists of the Institute and 09 by guest speakers as follows.

- Dr. S. Mauria, ADG(IPR & Policy), ICAR on IPR issues and Indian Agriculture on 10 October 2007.
- Dr. A.K. Choubey, NIC, New Delhi on Meta Data Management on 21 November 2007.
- Dr. Ramesh Singh, NIC, New Delhi on Network security and recovery system on 21 November 2007.
- Dr. Navneet Goyal, BITS, Pilani on Spatio-Temporal Data Warehouse on 28 November 2007.
- Dr. Sesha Sai, Head (Agriculture), NRSA, Hyderabad on Integration of Remote Sensing and GIS on 01 December 2007.
- Two seminars on A Random Period for Describing Gene Expression of a Cell-cycle Gene and on Order Restricted Inference for Ordered Gene by Dr. Shyamal Peddada, Biostatistics Branch, NIEHS Alexander NC-27709 on 13 December 2007.
- Two seminars by Prof. J.N. Srivastava, CNS Research Professor (Emeritus) Colorado State University on Clinical Trials and on How Consciousness Arises in Logic Fields on 13 and 26 December 2007 respectively.

Annual Day Celebrations

The Annual Day of the Institute was celebrated on 02 July 2007 in which Dr. JSP Yadav, Former Chairman, ASRB was the Chief Guest. Dr. Nawab Ali, DDG (Engg.), was the Guest of Honour, Dr. PV Dehadrai, Former DDG (Fisheries),ICAR delivered the Nehru Memorial Lecture entitled, “Modernity of Indian Aquaculture”.

Nehru Memorial Gold Medal for the year 2003–06 was awarded to Km. Nisha Jha, M.Sc. (CA), student and for the year 2004–06 was awarded to Sh. Ranjit Kumar Paul, M.Sc. (Ag. Stat.), student .

Welcome of the Chief Guest during ‘The Annual Day Function’