



13

Workshops, Conferences, Meetings, Seminars and Annual Day Organized

Workshops organised as part of Golden Jubilee celebrations of the Institute

- A workshop was organised on Design of Experiments on 29 April 2009. Dr. Rajender Parsad was the Convener and Dr. Krishan Lal was the Co-convener of the workshop. The workshop was inaugurated by Dr. AK Singh, DDG (NRM) and Dr. MM Pandey, DDG (Engg.), Indian Council of Agricultural Research (ICAR) was the Guest of Honour for the Inaugural session. Dr. A. Subba Rao, Director, IISS Bhopal; Dr. AK Dixit, Head, Division of Agricultural Chemicals, IARI, New Delhi; Dr. Madhuban Gopal, National Fellow, Division of Agricultural Chemicals, IARI, participated in the workshop along with other eminent statisticians and experimenters from ICAR Institutes and SAUs. Dr. HS Gaur, Dean and Joint Director, Education, IARI, New Delhi Chaired the Valedictory session and delivered the Valedictory Address. Following recommendations were emerged:

1. The utility of efficient and appropriate designs for the objectives of the study should be disseminated in a language that can be easily understood by the experimenters so that they can take advantage of the research in design of experiments, which in turn would help them in better understanding and then adoption. This would help them make agricultural research globally competitive.
2. Travel workshops should be organized as an outreach activity of the Institute, at different ICAR Institutes and SAUs for a better dissemination of research in Design of Experiments.
3. The participants appreciated the efforts put in developing the Web Resources for E-learning and E-dissemination and advisory, particularly the Design Resources Server and suggested that the rigorous efforts should be put in to make Design Resources Server to reach to every scientist in NARS, particularly through mobile workshops.

4. Brainstorming sessions and one-two days workshops should be organized on thematic areas cutting across the various Subject Matter Division (SMDs) of ICAR so as to improve the quality of agricultural research.
5. The participants appreciated the efforts made in developing several information systems. It was suggested that with the help of various DDGs of different SMDs of ICAR, efforts should be made for continuously updating the systems online so as to harness the benefits of these efforts. It was also suggested that weather data and soil data may be superimposed on these information systems and develop specific recommendations as per the specifications. The recommendations should not be broad based and should be realistic.
6. The innovative research findings should be properly publicized by reporting in ICAR Newsletter and ICAR Reporter, etc.



Inaugural function of Workshop on 'Design of Experiments'

- A Workshop was organised on Applications of small area estimation techniques on 18 May 2009. Dr. UC Sud was the Convener and Dr. Hukum Chandra was the Co-Convener of the workshop. Dr. Padam Singh, Former Member National Statistical Commission, Government of India was the Chairman of the inaugural session. Dr. Pranob Sen, Secretary, (Ministry of Statistics and Programme Implementation) and Chief Statistician of India was the Chief Guest and Dr. MM Pandey, DDG Engineering, ICAR was the Guest of Honour for the workshop. The following recommendations emerged on the basis of deliberations in the workshop:

1. The small area estimates are being applied without understanding the estimates or their limitations, so it is always advisable to take care of this point before using the estimates. There should be debate between statisticians producing the estimates and people generating the auxiliary data.
2. For the benefit of SAE practitioners the material of this workshop should be uploaded on IASRI website.
3. IASRI is a leading Institute in the country for conducting research in the area of SAE. IASRI should make efforts so that the SAE techniques are applied by the implementing agencies more frequently.
4. Institute should conduct such trainings/ workshops for some discipline specific group more frequently.
5. Research efforts are needed to generate estimates at small area level for derived parameters.
6. There is a need to make a bridge between, IASRI, National Sample Survey Organization (NSSO), Central Statistical Organization (CSO) and Registrar General of India (RGI) etc. so that researched data producer and data users can come together.



Inaugural function of Workshop on 'Application of Small Area Estimation Techniques'

- A Workshop on Expert systems in agriculture was organized on 12 June 2009. Agricultural scientists in NARS who are the domain experts and the computer scientists involved in developing expert systems attended the workshop. Dr. Sudeep was the Convener for the workshop. Dr. Kiran D. Kokate,

DDG (Extension), ICAR inaugurated the workshop. He emphasized on the use of knowledge driven systems in general and expert systems in particular for knowledge dissemination to the farmers. He cited many examples wherein expert systems are used by farmers for solving their problems. Dr. PK Malhotra presented the attempts made by IASRI in this area. Dr. Sudeep presented the major objectives of the workshop and demonstrated the Java based Expert Systems at IASRI. The team from IIT, Kanpur demonstrated the Agropedia portal developed under the NAIP project and discussed its various functionalities. Mr. KK Chaturvedi discussed the functionalities of Expert System on Wheat Crop Management. Dr. Rajni Jain and Mrs. Alka Arora presented the use of data mining approach to build rules for solving problems in agriculture. Other participants from DRR Hyderabad, CPRI Shimla, VPKAS Almora also explained their work in the area of expert systems.

Following are the recommendations from the workshop:

- Web based Expert Systems have a potential to become the effective extension tools for knowledge dissemination from scientists to farmers.
- In order to increase its usage by farmers this technology should be publicized among the farmers.
- Organizations within ICAR and outside should join hands to provide farmer centered contents for the expert systems.
- IASRI being the central institute can provide the expert system technology to other domain



Dr. Kiran Kokate receiving the memento from Dr. VK Bhatia at the inaugural function of the Workshop on 'Expert Systems in Agriculture

institutes for developing expert systems in their respective domains.

- A Workshop on Remote sensing and GIS for decision support in agriculture was organised on 18 June 2009. Dr. Anil Rai was the Convener of the workshop. Dr. AK Singh, DDG (NRM), ICAR inaugurated the workshop.



Inaugural function of Workshop on 'Remote Sensing and GIS for Decision Support in Agriculture'

- A Workshop on Statistical and computational issues in Genomics was organized on 22 June 2009. A total of 22 participants cutting across different disciplines in Agriculture from ICAR Institutes and SAUs have participated in the workshop. Dr. AR Rao was the Convener of this workshop. Dr. MM Pandey, DDG (Engineering), ICAR inaugurated the workshop.



Inaugural function of Workshop on 'Statistical and Computational Issues in Genomics'

Workshops organised under Research Projects

- A training cum workshop for the project "Strengthening, Refining and Implementation of

Expert System on Wheat Crop Management” was organized in collaboration with Directorate of Wheat Research(DWR), Karnal; Indian Agricultural Research Institute (IARI), New Delhi and National Center for Integrated Pest Management, New Delhi at DWR, Karnal during 12-13 May 2009. Altogether 80 people including extension specialists, farmers, extension workers, officials from Department of Agriculture and KVKs, Scientists from DWR, NDRI and specialists from CCSHAU participated in the workshop. The workshop details were highlighted in six Hindi Newspapers.

- Brainstorming session on Future Technological Needs in Genetics and Plant Breeding for Sustainable Agriculture was organised on 15 May 2009 under V-Page project at Division of Genetics and Plant Breeding, IARI, New Delhi. Dr. Ramasubramanian V acted as as Coordinator for the workshop.
- A workshop on Remote sensing and GIS for accelerated growth of agricultural research and development was organised on 29 July 2009 at Indian Institute of Remote sensing Deheradun under V-PAGE project. Dr. Anil Rai acted as as Coordinator for the workshop.
- Personnel Management Information System Network (PERMISnet-II) was implemented for ICAR. Launching workshop of the system was organized on 22 July 2009 at NASC Complex. Workshop was attended by 192 personnel, which include personnel from Council, nodal officers from ICAR institutes and IASRI personnel. System was released by Sh. Anil Kumar Upadhyay, Special Secretary (DARE) &



A view of launch of PERMISnet II

Secretary, ICAR. Overview of the system was presented in the workshop. PERMISnet-II is enhanced version of PERMISnet, and is developed using .NET framework. System has been designed and developed with different access rights for different types of users, which include managers at Council level, nodal officers at institutes, individual personnel and general users. System contains information on personal and professional parameters of ICAR employees along with details on cadre strength and institutional parameters.

- A one day workshop on Evaluation of Rationalization of Minor Irrigation Statistics Scheme was Organised at NAAS, NASC Complex, New Delhi on 17 November 2009. Dr. UC Sud was the Convener of the workshop.



A view of Workshop on 'Evaluation of Rationalization of Minor Irrigation Statistics Scheme'

Travel Workshops organised as Outreach Activity of the Institute

- Three travel workshops on Experimental Designs were organized in collaboration with ANGRAU, Hyderabad for sensitizing the scientists and students of ANGRAU on the Advances in Design of Experiments and Analysis of Experimental Data. Dr. Rajender Parsad from IASRI co-ordinated these travel workshops. The first workshop was organized at ANGRAU, Hyderabad during 16-17 June 2009. This workshop was attended by 93 participants. The second workshop was organized at RARS, Tirupati during 05-06 October 2009 and attended by 92 participants. The third workshop was organized at RARS, Ankapalle on January 06, 2010. Sixty

participants from North Coastal Zone, West Godavari Zone and High Altitude Zone attended this workshop. During these workshops, views of the participants were also taken on statistical problems encountered by them during their experimentation. The major issues that came up were:

- (i) How to compare two watersheds of 100ha each with untreated and treated water sheds?
- (ii) How to compare 2 treatments like organic farming and existing farming practices using non-replicated field scale experiments with large plot size?
- (iii) How to design experiments for drip and sprinkler irrigation systems?
- (iv) How to handle large variation in both directions of experimental plots due to soil depth, elevation under rainfed conditions?
- (v) How to analyze the data from on-farm trials conducted over years?
- (v) How to take samples for estimation of yield per hectare from large plots in experiments on cultivator's fields?
- (vi) How to handle large variation in both directions of experimental plots due to soil depth, elevation under rainfed conditions? and
- (vii) How to handle the variability within plots?



A view of Travel Workshop on 'Design of Experiments'

The participants also felt that in future programmes, separate homogeneous groups according to the disciplines should be formed and examples from disciplines pertaining to that group should be included for a given group. The travel workshops were widely covered in news papers.

- संस्थान द्वारा “भारत में फसल आकलन सर्वेक्षण” विषय पर दिनांक 07 नवम्बर, 2009 को एक-दिवसीय कार्यशाला का आयोजन किया गया। इस कार्यशाला के आयोजन में डा. उमेश चन्द्र सूद ने संयोजक तथा डा. कृष्ण कान्त त्यागी ने सह-संयोजक के रूप में कार्य किया। यह कार्यशाला दो तकनीकी सत्रों में आयोजित की गई:

तकनीकी सत्र-1

- (i) भारत में फसल आकलन सर्वेक्षण-दृष्टिपात
- (ii) फसल आकलन सर्वेक्षण-आंकड़ों की गुणवत्ता
- (iii) फसल उत्पादन आकलन-वर्तमान परिदृश्य

तकनीकी सत्र-2

- (i) फसल कटाई प्रयोग की विधि
- (ii) सुदूर संवेदन पद्धति एवं भौगोलिक सूचना तंत्र द्वारा फसल क्षेत्रफल का आकलन
- (iii) फसल आकलन सर्वेक्षण - उत्तर प्रदेश राज्य के अनुभव
- (iv) लघु क्षेत्र स्तर पर फसल उपज आकलन



भारत में फसल आकलन सर्वेक्षण

कार्यशाला की मुख्य अनुशांसाएँ

- (1) फसल पैदावार के आकलन के लिए राज्य सरकारों द्वारा आयोजित फसल कटाई परीक्षणों (सी.सी.ई.) की संख्या बढ़ रही है, जिससे आँकड़ों की गुणवत्ता पर विपरीत प्रभाव पड़ रहा है। अतः फसल कटाई परीक्षणों (सी.सी.ई.) की संख्या को कम करने के प्रयास करने चाहिए। इसके लिए जिला स्तर से कम स्तर पर अर्थात् सामुदायिक विकास खंड/ग्राम पंचायत स्तर पर लघु क्षेत्र आकलन तकनीकों का प्रयोग किया जाना चाहिए।
- (2) कृषि मंत्रालय द्वारा फसल उत्पादन के लिए अपनाई जाने वाली विधि के स्थान पर उचित सांख्यिकीय तकनीकों का प्रयोग करके एक उद्देश्यात्मक विधि का प्रयोग करने की आवश्यकता है।

- (3) फसल कटाई सर्वेक्षण के संचालन के अन्तर्गत, अनाज के उत्पादन के साथ-साथ फसल अवशेषों के उत्पादन को भी मापा जाना चाहिए एवं
- (4) पहाड़ी/उत्तर पूर्वी पहाड़ी राज्यों में, जहाँ ज्यादातर क्षेत्र दुर्गम हैं, वहाँ भौगोलिक सूचना तंत्र (जी.आई.एस.) उपकरणों के साथ सूदूर संवेदन तकनीकों का प्रयोग करके फसल क्षेत्र आकलन किये जाने चाहिएँ।

Other Symposia/Workshops

- A half day session of lectures and visit to library and GIS & Remote Sensing Lab was organised on 23 April 2009 for 4 faculty members of Vietnam University of Foreign Trade as part of the training programme organized by Indian Institute of Foreign Trade, New Delhi. The lectures were delivered on Crop Acreage and Production Estimation, Overview of Sampling Techniques and Determination of Sample Size.
- Brainstorming Sessions on Establishment of Centre of Agricultural Bioinformatics were organised:
 - Under the Chairmanship of Dr. HP Singh, DDG (Horticulture), Dr. MM Pandey, DDG (Engineering) and Dr. KD Kokate, DDG (Extension), ICAR and other experts in the field of biotechnology and bioinformatics also participated on 26 August 2009 at IASRI, New Delhi.
 - Under the Chairmanship of Dr. Mangala Rai, Secretary, DARE & Director General, ICAR, with other experts in the field of biotechnology and bioinformatics New Delhi on 22 September 2009 at NASC, New Delhi.



Dr. Mangala Rai, Secretary, DARE and Director General, ICAR addressing the participants of Brain Storming Session on 'Establishment of Centre of Agricultural Bioinformatics'

- Symposium on Statistical and Informatics Perspectives of Climate Change was organised during 63rd Annual Conference of ISAS at Rajendra Agricultural University, Samastipur, Bihar during 03-05 December 2009 Dr. PK Malhotra was the Convener for the Symposium.
- Symposium on Statistical and Computational Genomics was organised on 03 December 2009 during 63rd Annual Conference of Indian Society of Agricultural Statistics held at Department of Statistics, Mathematics and Computer Application, Rajendra Agricultural University, Samastipur, Pusa, Bihar. Dr. Rajender Parsad and Dr. BM Prasanna were the Conveners for the Symposium.
- During International Conference on Statistics, Probability, Operations Research, Computer Science and Allied Areas held at Andhra University, Visakhapatnam from 04-08 January 2010, following sessions of Special Invited Talks were organized.
 - Design of Experiments (Conveners: Dr. Rajender Parsad and Dr. Sudhir Gupta)
 - Small Area Estimation (Convener: Dr. Hukum Chandra and Co-Convener: Dr. UC Sud)
 - Recent Advances in Sample Surveys (Convener: Dr. U.C. Sud and Co-Convener: Dr. Hukum Chandra)
 - Statistical Modelling (Convener: Dr. Prajneshu and Co-Convener: Dr. Himadri Ghosh)
 - Recent Advances in Statistical Genetics (Convener: Dr. VK Bhatia and Co-Convener: Dr. AK Paul)
- A symposium on Statistics for Studying the Impact of Climate Change was organized on 25 February 2010 during XII Annual Conference of Society for Statistics, Computer and Applications at Department of Statistics, Siksha Bhavana, Visva Bharati during 23-25 February 2010. Dr. Rajender Parsad and Dr. Kashinath Chatterjee were the Conveners for the Symposium.
- A workshop on Orthogonal arrays and mixture experiments was organized during 15-17 March 2010 by Dr. VK Gupta, ICAR National Professor jointly with Dr. Rajender Parsad. The main speakers were from IASRI, New Delhi and the discussants were from Indian Statistical Institute, Kolkata; Indian Statistical Institute, Delhi; Kolkata University, Kalyani University and IARI, New Delhi. The basic purpose



A view of Workshop on
'Orthogonal Arrays and Mixture Experiments'

of the workshop was to bring leading statisticians and stake holders together so as to enable to disseminate the recent research findings on orthogonal arrays and mixture experiments into the research in agricultural sciences so as to help to improve the quality of agricultural research. It also aimed to create a school of researchers who can undertake basic research in Design of Experiments and their applications in agricultural sciences so as to improve the status of experimentation in agricultural research.

The introductory session was chaired by Shri SK Das, Director General, CSO, New Delhi. Dr. VK Bhatia, Director, IASRI, Dr. Bikas Sinha, Professor, ISI, Kolkata and Former Member, National Statistical Commission, Dr. Alope Dey, INSA Senior Scientist, New Delhi gave their introductory remarks. Dr. VK Gupta talked about the purpose and coverage of the workshop.

It was unanimously felt by all the participants that such workshops are quite useful and should be organized regularly. These workshops are helpful in developing the subject and the capabilities of the scientists. The main advantages of such disseminations are that there is a judicious mix of theory and application, particularly applications in agriculture. It was also felt that the scope of the workshop may be enlarged by including more statisticians active in the topic of research.

- A Hindi workshop on 'Karyalaya ke karya main sanganak ka prayog' was also organized on 29 March 2010 for Technical/Administrative staff of the Institute.



Dr. Murari Singh receiving the Memento from
Dr. Prajneshu at the Golden Jubilee Seminar

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 94 seminar talks were delivered. Out of these, 67 were student seminars, 18 by scientists of the Institute and 09 by guest speakers as follows:

Guest Seminars as a part of the celebrations for the Golden Jubilee Year of the Institute

- Dr. VK Sharma, Emeritus Scientist, ICAR. Prediction in seemingly unrelated regression models on 27 May 2009.
- Dr. Murari Singh, Professor Department of Mathematics and Statistics Concordia University, Canada. Spatial-Temporal error structured for lentil yield in supplemental irrigation trials on 16 June 2009.
- Dr. KC Raut, Former Scientist, IASRI, New Delhi. My experiences in IASRI on 30 June 2009.

Other Guest Seminars

- Dr. RC Agarwal, Principal Scientist NBPGR. Indian IT act 2000 and cyber security on 20 May 2009.
- Dr. PK Gupta, Emeritus Professor, Ch. Charan, Singh University, Meerut. Advances in quantitative genetics on 23 November 2009.

- Prof. Prem Narain, Former Director, IASRI. Quantitative genetics in modern era on 30 November 2009.
- Dr. Ramanna V. Davuluri, Director, Computational Biology, The Vista Cancer Centre, The Vista Institute, (USA). Bio-informatics & computational biology in post genomics era on 18 January 2010.
- Dr. Sat Gupta, Professor of Statistics, North Carolina, (USA). Usefulness of two steps optimal randomised response model on 20 January 2010.
- Dr. Bikas Sinha, Former Member, National Statistical Commission. Data integration techniques on 17 March 2010.

ANNUAL DAY CELEBRATIONS

The Annual Day of the Institute was celebrated on 02 July 2009 in which Dr. Madan Mohan Pandey, DDG (Engg.), ICAR was the Chief Guest. Dr. Anil Kumar Singh, DDG (NRM), ICAR delivered the Nehru Memorial Lecture entitled Bridging the Statistical Divide.



A view of tree plantation by Dr. AK Singh DDG (NRM), ICAR at Annual Day Function

Annual Report of the Institute and PAYBITAX Package Ver 1.0 were released on the Annual Day. As a part of Golden Jubilee Celebrations of the Institute a publication entitled *IASRI... an Era of Excellence* consisting of messages from leaders in Agricultural Science, Statistical Science and other well wishers along with 17 articles on various topics was also released by the Chief Guest.

Nehru Memorial Gold Medal for the year 2005-08 was awarded to Sh. Sanjay Kumar Prasad, M.Sc. (Agricultural Statistics) student.



Chief Guest awarding Nehru Memorial Gold Medal to the best student of M.Sc. (Agricultural Statistics)

Study Visit

- One day Study Visit was organized on 13 October 2009 at Institute on Functions and Activities of Institute for the participants of 63rd regular course of International Statistical Education Centre (ISEC), Kolkata on Official Statistics and Related Methodology conducted by National Academy of Statistical Administration (NASA) from 05 October to 13 November 2009.



Dr. VK Bhatia, Director addressing the participants of 63rd Course of ISEC during their Study Visit to the Institute

The participants were from seven countries. Dr. Seema Jaggi was facilitator for this visit.