

# IASRI NEWS

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INDIAN AGRICULTURAL STATISTICS RESEARCH INSTITUTE ( ICAR ), LIBRARY AVENUE, PUSA, NEW DELHI- 110 012



## From Director's Desk . . . . .

This Newsletter highlights some of the salient research and training achievements made and other significant activities performed during the period under report.

Design Resources Server has been strengthened by adding new link namely "SAS Online Doc:9.1.3" to the already created link "Important Links" on Design Resources Server ([www.iasri.res.in/design](http://www.iasri.res.in/design)).

Under the study "Weather based models for forecasting potato yield" Complex polynomial (C.P.) models, using GMDH technique, are developed by taking both weighted and unweighted indices.

One new project entitled "Intranet solutions for P.G. school, IARI" has been initiated.

A Central Statistical Organisation sponsored training programme on "Data Analysis with Statistical Tools" was organised for the 28<sup>th</sup> batch of ISS probationers of Indian Statistical Services.

A workshop of "Broad Subject Matter Areas (BSMA) Committee of the Discipline of Statistical Sciences" was also organised during the period.

The Institute also provided consultancy services to various research studies/projects in NARS.

The Institute participated in number of meetings / conferences / symposia / workshops etc. It is hoped that the contents of this document would be informative and useful for scientists in NARS. Any suggestions for improving the contents of the newsletter further, would be highly appreciated.

  
(SD SHARMA)

## IN THIS ISSUE

- Research Achievements
- New Projects/Schemes
- Human Resource Development
- Panorama of Activities
- Participation
- Computing Facilities
- Seminars Delivered
- Publications
- Personnel

### निदेशक की कलम से...

समाचार पत्र के इस अंक में प्रतिवेदनाधीन अवधि के दौरान प्रमुख अनुसंधान एवं प्रशिक्षण सम्बन्धी उपलब्धियों और संस्थान की अन्य महत्वपूर्ण गतिविधियों पर प्रकाश डाला गया है।

डिजाइन रिसोर्सेज सर्वर ([www.iasri.res.in/design](http://www.iasri.res.in/design)) पर पहले से सृजित लिंक “इम्पोर्टेंट लिंक्स” में “एस.ए.एस. ऑन लाइन डॉक : 9.1.3” नामक नया लिंक जोड़कर डिजाइन रिसोर्सेज सर्वर को सुदृढ़ बनाया गया है। “आलू की उपज के पूर्वानुमान हेतु मौसम आधारित मॉडल” नामक अध्ययन के तहत जी.एम.डी. एच. तकनीक के उपयोग द्वारा, भारत एवं अन्तर्गत दोनों सूचकों को लेते हुए, कॉम्प्लेक्स पॉलीनॉमियल (सी.पी.) मॉडल विकसित किये गये हैं।

“पी.जी. स्कूल, भा.क.अ.सं. हेतु इन्टरनेट सोल्यूशन्स” नामक एक नयी परियोजना आरम्भ की गयी है।

भारतीय सांख्यिकीय सेवा के आई.एस.एस. प्रोबेशनर्स के 28वें बैच के लिए “डाटा एनालिसिस विद स्टैटिस्टिकल टूल्स” पर केन्द्रीय सांख्यिकीय संगठन द्वारा प्रायोजित प्रशिक्षण कार्यक्रम आयोजित किया गया। प्रतिवेदनाधीन अवधि के दौरान “ब्रोड सबजेक्ट मैटर एरियाज (बी.एस.एम.ए.) स्टैटिस्टिकल साइंस समिति” की कार्यशाला भी आयोजित की गयी।

संस्थान द्वारा एन.ए.आर.एस. में विभिन्न अनुसंधान अध्ययनों/परियोजनाओं के लिए परामर्श सम्बन्धी सेवाएँ उपलब्ध करायी गयीं।

संस्थान द्वारा अनेक बैठकों/सम्मेलनों/संगोष्ठियों/कार्यशालाओं इत्यादि में सहभागिता की गयी। आशा है कि इस अंक की विषयवस्तु नार्स के वैज्ञानिकों के लिए सूचनाप्रद एवं उपयोगी होगी। समाचार पत्र की विषयवस्तु में सुधार लाने हेतु आपके सुझावों का स्वागत है।



( सुखदेव शर्मा )

## RESEARCH ACHIEVEMENTS

- Design Resources Server already hosted on <http://www.iasri.res.in/design/> has been strengthened by adding the new link namely SAS Online DOC:9.1.3 and courses on Statistics and Experimental Designs from University of South California to the link “Important Links” in the Design Resources Server.

The server has been registered under google analytics. Based on the hits (May 26, 2008 to June 29, 2008), there are 711 page views and 575 unique page views. It has been browsed from 93 cities of 29 countries spread over 5 continents namely Asia, Africa, North America, South America and Europe.

Site map of the Design Resources server was prepared and linked to the site.

A module on online analysis of data generated from augmented designs has been prepared and uploaded on the Design Resources Server.

- Under the project “Weather based models for forecasting potato yield”, for development of models, both weighted and unweighted indices are computed. Weather Indices (W.I.) based regression models are developed by taking combinations of linear and square indices with yield/detrended yield. Complex Polynomial (C.P.) models, using GMDH technique, are developed by taking both weighted and unweighted indices. Out of 25 districts, W.I. based regression models for 10 districts and C.P. models for 4 districts have been developed.
- Under the project “Stochastic process modeling and forecasting through discrete non-linear time series approach” wavelet based on locally stationary wavelet processes for one step ahead forecasting is being carried out. The approach introduced the wavelet spectrum in a local version of the well known spectrum which leads to solve generalized time dependent Yule-Walker equation and use it for forecasting.

## NEW PROJECTS/SCHEMES

The project entitled "Intranet solutions for P.G. school IARI" has been approved by IRC and initiated from 01 June 2008.

## HUMAN RESOURCE DEVELOPMENT

A specially designed training programme on "Data Analysis with Statistical Tools" was organised for the 28<sup>th</sup> Batch of ISS Probationers of Indian Statistical Services during 02-27 June 2008. Fourteen Probationers attended the training programme. The topics Statistical Methods, Experimental Designs, Sample Surveys, Biometrics and Spatial Statistics etc., were covered. The practicals were done using statistical softwares, mainly SAS, SPSS etc. Course material in the form of Reference Manuals were provided to all the participants. The training programme was sponsored by Central Statistical Organisation (CSO). Dr. VK Bhatia, Professor, Agricultural Statistics was the Course Director for the training programme.

## PANORAMA OF ACTIVITIES

- संस्थान राजभाषा कार्यान्वयन समिति की बैठक दिनांक 21 अप्रैल, 2008 को निदेशक महोदय की अध्यक्षता में हुई जिसमें राजभाषा विभाग द्वारा जारी वार्षिक कार्यक्रम की प्रत्येक मद पर विस्तार से चर्चा हुई।



- Two meetings of "Broad Subject Matter Areas (BSMA) Committee of the Discipline of Statistical Sciences" were organised at the Institute to



develop curricula and syllabi for Statistical Sciences on 28 April 2008 and during 26-27 May 2008 under the Chairmanship of Dr. VK Gupta, National Professor, ICAR.

- Workshop of "Broad Subject Matter Areas (BSMA)", to discuss curricula and syllabi for Statistical Sciences, was organised at the Institute on 28 May 2008.
- Meeting of the Canteen Management Committee of the Institute was held on 26 May 2008.
- Meeting of the Grievance Committee of the Institute was held on 11 June 2008 under the Chairmanship of Director, IASRI.

## हिन्दी कार्यशाला

- दिनांक 26 से 28 मई, 2008 के दौरान संस्थान के कर्मियों के लिए एक "हिन्दी टंकण प्रशिक्षण कार्यशाला" का आयोजन किया गया। कार्यशाला का उद्घाटन 26 मई, 2008 को संस्थान के निदेशक महोदय द्वारा किया गया। कार्यशाला में केन्द्रीय हिन्दी प्रशिक्षण संस्थान के सहायक निदेशक, सर्वश्री चमन सिंह रावत, राकेश कुमार वर्मा तथा दिनेश चन्द्र द्वारा प्रतिभागियों को कम्प्यूटर पर प्रशिक्षण दिया गया। कार्यशाला में 15 प्रतिभागियों ने सहभागिता की। कार्यशाला के समापन के अवसर पर प्रतिभागियों को प्रमाण-पत्र वितरित किये गये।



## PARTICIPATION OF INSTITUTE

Various Scientists and Technical Personnel of the Institute participated in:

- Meeting with Chairman, Board of Revenue, Rajasthan was held to discuss about the project "Small area crop estimation methodology for crop yield estimates at Gram Panchayat level" being undertaken in Ajmer district of Rajasthan.

- Research Advisory Committee (RAC) meeting of PDCSR, Modipuram on 17 April 2008.

### **Conference/Workshop/Symposia/ Training etc.**

Various Scientists and Technical Personnel of the Institute participated in:

- Training workshop on “Technology Foresight Methodologies in Agricultural Innovation System” organized by School of Social Sciences, JNU, New Delhi during 31 March to 10 April 2008.
- “Global Agro-Industry Forum”, organized jointly by Ministry of Agriculture, Government of India; Food and Agriculture Organisation, United Industrial Development Organisation (UNIDO) and International Fund for Agricultural Development (IFAD) at Vigyan Bhavan, New Delhi during 09-10 April 2008.
- “2011 Census – First Data User Conference” at Vigyan Bhavan, New Delhi during 24-25 April 2008.
- Dr. D Jha Memorial Lecture on 02 May 2008 held at NCAP.
- Two days national seminar on “Improvement of Bovine Fertility through use of Reproductive Biotechnology at Farmers’ Door” at GBPUAT, Pantnagar organized by Department of Animal Reproduction, Gynecology & Obstetrics, College of Veterinary & Animal Sciences, GBPUAT, Pantnagar during 05-06 May 2008.
- Inaugural session of the SLTP meeting (Kharif & Rabi programmes) held at ANGRAU, Rajendranagar, Hyderabad on 07 May 2008 and presented the Agricultural Field Experiments Information System (AFEIS) to the participating scientists.
- Annual IRC of the National Research Centre on Camel, Bikaner as an Outside Expert in Statistics on 09 May 2008.
- ITTO sponsored workshop on Forestry Products Statistics in India during 13-16 May 2008 organised by the Ministry of Environment and Forest at New Delhi. Also Co-Chaired one of the Technical Session and acted as a Member of Core Group constituted for discussions on various items as decided in the workshop.

- Convocation of National Academy of Veterinary Sciences in collaboration with SKUAST, Jammu at SKUAT, Jammu during 16-17 May 2008.
- National workshop on “Spices Statistics” at Calicut during 22-23 May 2008. Also Chaired one of the Technical Session and acted as a member of the panel for discussions.
- Foundation Day and Annual General Body Meeting of the National Academy of Agricultural Sciences during 04-05 June 2008 at NASC Complex, New Delhi.
- Four days national seminar on “Production, Processing, Marketing and Export of Litchi for Economic Prosperity” during 08-11 June 2008 at National Research Centre for Litchi, Muzaffarpur (Bihar).
- Training on “Computable General Equilibrium Modeling” under NAIP project “Visioning Policy Analysis and Gender (V-PAGE)” - Sub-Programme-III : Policy, Analysis & Market Intelligence at Indira Gandhi Institute of Development Research, Mumbai during 17-26 June 2008.
- National symposium on “Quality Protein Maize for Human Nutritional Security and Development of Poultry Sector in India” on 3 May 2008 at NASC Auditorium, New Delhi.

### **Sports**

Institute participated in ICAR Zone-II (Central Zone) Sports Meet 2007-08 held during 07-11 April 2008 at IARI, New Delhi. The Institute’s participants achieved prestigious positions: Champion Trophy in Kabaddi, and Table Tennis (Team Events-Men). In individual events, Institute had Winner and Runner-up positions in Chess (Men) and Runner-up positions in Table Tennis (Women Singles & Doubles) and Carrom (Men).



## COMPUTING FACILITIES

### Wide Area Network

- Internet services have been provided to the users and the website of IASRI is being updated regularly. This site has been visited 36371 times since 01 April 2008 and 593678 times since 05 September 2003.

### SEMINARS DELIVERED

- Seminars in different areas of Agricultural Statistics and Computer Application were delivered.

These seminars include presentation of salient findings of the completed research projects by the scientists, thesis/ORW/course seminars of students of M.Sc. and Ph.D. (Agricultural Statistics) and M.Sc. (Computer Application).

#### The details of Seminars Delivered

Category	Type of seminar	Number
Student	Course	04
	Thesis	01
Scientist		02
Total		07

- A Seminar on Design Resources Server was delivered at ICARDA, Syria on 22 June 2007.

## PUBLICATIONS

### Research Papers Published

- Agrawal, Ranjana and Mehta, SC (2007). Weather based forecasting of crop yields, pests and diseases - IASRI models. *J. Ind. Soc. Agril. Statist.*, **61(2)**, 255-263.
- Dahiya, Shashi, Chowdhury, RK, Mathur, DS (2006). A web enabled networking of National Seed Project (Crops). *Ann. Agril. Res.*, **27(2)**, 203-204.
- Gupta, VK, Parsad, Rajender, Bhar LM and Kole, Basudev (2008). Supersaturated designs for asymmetrical factorial experiments. *J. Statist. Theo. Prac.*, **2(1)**, 95-108.
- Pateria, Dinesh Kumar, Jaggi, Seema, Varghese, Cini and Das, MN (2007). A series of incomplete non-circular block designs for competition effects. *Statist. Appl.*, **5(1-2)**, 5-14.
- राजेन्द्र प्रसाद एवं विनोद कुमार गुप्ता (2008)। एल्फा अभिकल्पनाएँ। सांख्यिकी विमर्श (3), भारतीय कृषि सांख्यिकी अनुसंधान संस्थान, नई दिल्ली, 47-50।
- Sarkar, Ananta, Parsad, Rajender, Rathore, Abhishek and Gupta, VK (2007). Efficient block designs for microarray experiments. *J. Ind. Soc. Agril. Statist.*, **61(2)**, 227-248.
- Sarkar, Susheel Kumar and Lal, Krishan (2008). Profile analysis for animal growth data. *Ind. J. Anim. Sci.*, **78**, 401-405.
- Singh, Gyan, Kaur, Rajinder and Kumar, Anil (2008). Sustainable production management for rice-wheat cropping system. *J. Farm. Sys. Res. Dev.*, **14(1)**, 56-59.
- Singh, RK and Prajneshu (2008). Artificial neural network methodology for modeling and forecasting maize crop yield. *Agril. Eco. Res. Rev.*, **21**, 5-10.
- Singh, Surindra, Bhar, LM and Paul, AK (2008). Growth pattern of crossbred cattle under homoscedastic and heteroscedastic error variance conditions. *Ind. J. Anim. Sci.*, **78(5)**, 560-564.
- Singh, Surindra, Paul, AK and Bhar, LM (2008). Growth pattern in double and triple crosses cattle at Dehradun farm. *Ind. J. Anim. Sci.*, **78(6)**, 661-662.
- Srivastava, AK, Sud, UC and Chandra, H (2007). Small area estimation – An application to National Sample Survey data. *J. Ind. Soc. Agril. Statist.*, **61(2)**, 249-254.
- Sud, UC, Pal, Prasenjit and Sethi, IC (2007). Estimating population mean square through predictive approach when auxiliary character is estimated. *J. Ind. Soc. Agril. Statist.*, **61(3)**, 364-368.

### Research Papers Presented

Singh, Jagbir and Bathla, HVL (2008). A note on employment and unemployment situation in India - NSS 61<sup>st</sup> round in the National Seminar on NSS 61<sup>st</sup> Round Survey Results 29 and 30 October 2007, 164-168, National Sample Survey Organisation, Ministry of Statistics and Programme Implementation, Government of India.

### Research Papers Accepted for Publication

- Chandra, Hukum and Ray, Chambers. Multipurpose weighting for small area estimation. *J. Offi. Statist.*
- Mandal, BN, Parsad, Rajender, Gupta, VK and Sud, UC. A family of distance balanced sampling plans. *J. Statist. Plann. Inf.*
- Mandal, BN, Parsad, Rajender, Gupta, VK and Sud, UC. Nested stratified sampling. *Model Assisted Statist. Appl.*, IOS Press, Netherlands.
- Prabhakaran, VT and Rao, AR. A new approach to the estimation of variance of sample heritability from full-sib analysis. *J. Ind. Soc. Agril. Statist.*
- Ramasubramanian, V (2008). Role of statistics and information technology in bio-informatics, *Current Biotic.*

### CONSULTANCY

- One Scientist of the Institute has been invited as Consultant Biometrician at International Center for Agricultural Research in Dry Areas, Aleppo Syria for a period of three months.
- Dr. AK Mangal was provided guidance concerning the estimation procedure for certain parameters relating to the “DST Project on Animal Diseases and Veterinary Care Systems” of Centre for Economic and Social Research, Delhi, on 28 April 2008.
- Dr. Arun K Joshi, Professor, Department of Genetics and Plant Breeding, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi was advised on the analysis of data pertaining to an experiment conducted for mapping of resistance to spot blotch disease



A view of Valedictory Function of training program “Data Analysis with Statistical Tools”

### Saleable Technologies

- Statistical Package for Factorial Experiments (SPFE 1.0)
- Statistical Package for Agricultural Research (SPAR 2.0)
- Statistical Package for Augmented Designs (SPAD)
- Statistical Package for Block Designs (SPBD 1.0)
- Statistical Package for Animal Breeding (SPAB)



A view of “Broad Subject Matter Areas (BSMA)” Committee’s Workshop in the Discipline of Statistical Sciences

caused by *Bipolaris sorokiniana* in spring wheat.

## PERSONNEL

### Congratulations on your Promotion

- Sh. Ram Naresh, T.O. (T-6), w.e.f. 01.01.2002
- Sh. Davender Kumar, T.O. (T-6), w.e.f. 01.01.2003
- Sh. Devi Parsad Sharma, T.O. (T-6), w.e.f. 01.01.2003
- Sh. Sheoraj Singh, T.O. (T-6), w.e.f. 01.01.2003
- Sh. C.P. Singh, T.O. (T-6), w.e.f. 01.01.2003
- Sh. Shri Pal Singh, T.O. (T-6), w.e.f. 01.01.2004
- Sh. Naresh Chand, T.O. (T-6), w.e.f. 01.01.2004
- Sh. Panna Lal Gupta, T.O. (T-6), w.e.f. 01.01.2004
- Sh. V.K. Mishra, T.O. (T-7-8), w.e.f. 01.01.2004
- Smt. Shubh Lata Paul, T.O. (T-7-8), w.e.f. 01.01.2004
- Sh. Vijay Pal Singh, T.O. (T-6), w.e.f. 01.01.2005
- Sh. Arun Partap Singh, T.O. (T-6), w.e.f. 01.01.2005

- Sh. Partap Singh, T.O. (T-6), w.e.f. 01.01.2005
- Sh. Parmod Kumar, T.O. (T-6), w.e.f. 01.01.2005
- Sh. Anil Kumar, T.O. (T-6), w.e.f. 01.01.2005
- Sh. R.S. Tomar, T.O. (T-6), w.e.f. 01.01.2005
- Sh. B.P. Maurya, T.O. (T-5), w.e.f. 01.01.2005
- Smt. Manjeet Kaur, T.O. (T-6), w.e.f. 01.06.2005
- Sh. Shiv Singh, T.O. (T-3), w.e.f. 01.09.2006
- Sh. R.A. Joshi, T.O. (T-6), w.e.f. 05.05.2006
- Sh. Rajender Singh-II, T.O. (T-6), w.e.f. 17.03.2005
- Smt. Neelam Chandra, T.O. (T-6), w.e.f. 27.03.2006

### Wish you Happy Retired Life

- Sh. Subhash Chand, Sr. PA, w.e.f. 30.04.2008.
- Smt. Angoori Devi, SSGr.-IV, w.e.f. 31.05.2008.
- Sh. G.S. Dwivedi, AAO, w.e.f. 30.06.2008.

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Prof. SD Sharma  
Director, IASRI (ICAR)  
Library Avenue, Pusa, New Delhi-110 012 (INDIA)  
**E-mail:** director@iasri.res.in  
**Website:** www.iasri.res.in  
**Phone:** 011-25841479  
**Fax:** 011-25841564