- Research Achievements
- Human Resource Development
- Awards and Recognition
- Panorama of Activities
- Publications
- Lectures Delivered
- Participation
- Consultancy/Advisory Services
- Personnel

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.

Microsatellite database and primer generation tool for pigeonpea (PIPEMicroDB) genome has been developed and is available at http://cabindb.iasri.res.in/pigeonpea/. This is first database of pigeonpea marker in world with 123387 STRs extracted in silico from pigeonpea genome. This tool enables researchers to select STRs at desired interval over selected chromosome.

Methodology for estimation of area under agroforesry based on Remote sensing and Geographic Information System (GIS) using high resolution satellite data was developed under the study National Initiative on Climate Resilient Agriculture (NICRA)-Agroforestry Component. The project aims to enhance resilience of Indian agriculture to climate change and climate vulnerability through strategic research and technology demonstration.

Three training programmes which include one under NAIP on Forecast Modelling in Crops Using Weather and Geo-informatics, one Summer School on Forecast Modelling in Crops and 21 days training programme on Statistical Models for Forecasting in Agriculture sponosred by Centre of Advanced Faculty Training, ICAR were organised. 65 participants attended these training programmes. One workshop for the Nodal Officers of NISAGENET and one Partner's meet of NAIP project NABG was also organised.

Scientists of the Institute received various Awards and Recognitions. Dr. VK Bhatia received Bharat Ratna Dr. C Subramaniam Award for Outstanding Teachers in Agriculture and Allied Sciences 2011, Dr. UC Sud was nominated by the Ministry of Statistics and Programme Implementation as Non-official Member, Dr Hukum Chandra elected as Member of International Statistical Institute, Netherlands and Dr. N. Okendro Singh have been awarded for reviewing a research article for Indian Journal of Fisheries.

Scientists of the Institute visited various countries on different assignments.

03 new projects including one consultancy mode were initiated. Scientists of the Institute published 27 research papers, 02 books, 05 popular articles, one technical bulletin and one e-book and 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.

(VK Bhatia)

RESEARCH ACHIEVEMENTS

- **Microsatellite database and primer generation tool for pigeonpea genome (PIPEMicroDB)**

  Molecular markers play significant role through selection of desirable traits, such as high yield, resistance to a particular disease and other traits, that will benefit the crop in long term. PIgeonPEa Microsatellite DataBase (PIPEMicroDB) with a novelty of an automated primer designing tool for pigeonpea genome, is based on chromosome wise as well as location wise search of primers and is available at http://cabindb.iasri.res.in/pigeonpea/. This is first database of pigeonpea marker in world with 123387 STRs extracted in silico from pigeonpea genome. This tool enables researchers to select STRs at desired interval over selected chromosome. Further, one can use individual STRs of a targeted region over a chromosome to narrow down location of gene of interest or linked QTL. This markers' search based on characteristics and location of STRs is expected to be beneficial for researchers for their crop improvement programs of pigeon pea. These markers will be of immense use in marker assisted selection which would help to overcome approximately 50% loss in pigeonpea productivity due to biotic and abiotic stress in India as well as many parts of the world. This will further pave way towards food security in terms of per capita protein requirement/ availability to Indian population. This will also have a positive impact on Indian economy by decreasing import of pulse. In both ways it will fetch rural sustainability and livelihood of nation.

- **National Initiative on Climate Resilient Agriculture (NICRA)-Agroforestry Component**

  The project aims to enhance resilience of Indian agriculture to climate change and climate vulnerability through strategic research and technology demonstration. The strategic research is being carried out involving 21 Institutes of ICAR out of which 7 are core institutes and 14 Institutes are identified for thematic research across crops and agro-climatic zones. Indian Agricultural Statistics Research Institute (IASRI), New Delhi was a collaborative Institute of National Research Centre for Agroforestry (NRCAF), Jhansi. For estimation of area under agroforestry using Remote Sensing and GIS techniques, two districts namely, Ludhiana from Punjab and Vaishali from Bihar State were identified. High resolution satellite imageries (LISS IV), digitized district maps with village boundaries and toposheets of the two districts were procured. Geometric correction of the satellite imageries was carried out with the help of scanned and geo-referenced Survey of India (SOI) toposheets. Digital image processing of the satellite data was done using ERDAS Imagine software. Extensive ground truthing for image analysis was done in 20 villages of 7 blocks of Ludhiana district and in 22 villages of 8 blocks of Vaishali district. The

satellite imageries were first classified using unsupervised classification method in ERDAS Imagine software and then Supervised classification method using maximum likelihood classifier. Another approach of classification i.e. masking of each layer and then mosaicing was also used. Land use cover map was generated for both the districts. The total number of classes obtained in Ludhiana and Vaishali districts is nine and five respectively. Area under agroforestry for Ludhiana and Vaishali districts were obtained as 6039.80 hectares and 217.86 hectares respectively. Accuracy assessment was also done and overall classification accuracy for Ludhiana district was found to be 94.28%. Area estimated is a product of number of pixels classified under agroforestry and resolution of the pixels (5x5 sq.m.). Assuming one tree per pixel under agroforestry, the number of trees estimated in Ludhiana and Vaishali are 24,17,400 and 87,144 respectively. The estimated area under forestry and agriculture classes were compared with the estimates published in Forest Survey of India (FSI) report 2009 and Ministry of Agriculture, Govt. of India. It was observed that the estimates obtained using the proposed methodology was in agreement with these published figures. A road map on methodology/techniques for mapping agroforestry area at national level in the next Five Year Plan was finalized.

HUMAN RESOURCE DEVELOPMENT
Training Programmes Organised

S.No.	Title	Venue	Date	Sponsored by	No. of Participants
**Details of Training Programmes Organised**					
**National (03: 65 Participants)**					
**National Agricultural Innovation Project (01: 15 Participants)**					
1.	Forecast Modelling in Crops Using Weather and Geo-informatics Course Director: KN Singh Course Co-Directors: Anshu Bhardwaj & Amrender Kumar	IASRI, New Delhi	22 August to 04 September 2012	NAIP, ICAR	15
**Education Division of ICAR (02: 50 Participants)**					
2.	Summer School on Forecast Modelling in Crops Course Director: KN Singh Course Co-Directors: N. Okendro Singh & DR Singh	IASRI, New Delhi	17 July to 06 August 2012	Education Division, ICAR	25
3.	CAFT programme on Statistical Models for Forecasting in Agriculture Course Cordinator: Ramasubramanian V. Co-Course Coordinator: Mir Asif Iquebal	IASRI, New Delhi	11 September to 01 October 2012	Education Division, ICAR	25

Conferences/ Symposia/ Workshops Organised

S. No.	Title	Venue	Date
**Details of Conferences/ Symposia/ Workshops Organised**			
1.	Partner's meet of NAIP project Establishment of National Agricultural Bioinformatics Grid	IASRI, New Delhi	19-21 July 2012.
2.	National Workshop for the Nodal Officers of NISAGENET Resource Person: RC Goyal & Pal Singh	Sher-e-Kashmir University of Agricultural Sciences and Technology, Jammu, J&K.	12-13 September 2012

AWARDS AND RECOGNITION

- **Dr. VK Bhatia** received Bharat Ratna Dr. C Subramaniam Award for Outstanding Teachers in Agriculture and Allied Sciences 2011 for excellent teaching in the field of Social Sciences on 16 July 2012 at the Foundation Day of the Indian Council of Agricultural Research.

- **Dr. UC Sud** was nominated by the Ministry of Statistics and Programme Implementation as Non-official Member for Constitution of working Group for formulating methodology for the 70th Round of NSS.
- **Dr Hukum Chandra** elected as Member of International Statistical Institute, Netherlands.
- **Dr. N. Okendro Singh** have been awarded for reviewing a research article (with ID No. 17763) entitled Analysis of meristic characters among the populations of Japanese threadfin bream, Nemipterus japonicus (Bloch, 1791) along Indian coast, for Indian Journal of Fisheries.

VISIT ABROAD

- Dr. VK Bhatia visited Bangkok, Thailand to attend second meeting of the Steering Group of Agricultural Statistics held during 18-20 July 2012.
- Dr. Rajender Parsad visited Tsukuba, Japan during 02-04 July 2012 for attending Session on Design of Experiments of 2nd Institute of Mathematical Statistics Asia Pacific RIM Meeting and presented an invited talk on Efficient Row-Column Designs for 2-colour single factor microarray experiments.
- Dr. Prawin Arya visited Iowa State University of Science and Technology, Division of Agricultural & Biosystems Engineering, Davidson Hall, Ames, IA 50011 during 15 June to 12 September 2012.
- Dr. Prajneshu visited Islamabad, Pakistan during 02-03 September 2012 to participate in 13th International Pure Mathematics Conference 2012 and delivered an invited talk entitled Some Parametric Nonlinear Time-Series Models and their Applications in Agriculture.

PANORAMA OF ACTIVITIES

Annual Day Organised

- The Institute celebrated its 53rd Annual Day on 02 July 2012. Dr. Padam Singh, Former Member, National Statistical Commission, Govt. of India and Head EPOS Health Consultants (India) Pvt. Ltd. presided over the function and Dr. Gurbachan Singh, Chairman, Agricultural Scientists Recruitment Board, ICAR, New Delhi delivered the Nehru Memorial Lecture on "Food and Nutrition Security". Nehru Memorial Gold Medal for the year 2009-11 was awarded to Sh. Samarendra Das, M.Sc. (Agricultural Statistics) student and Ms. Satma M.C., M.Sc. (Computer Application) student. The Annual Report of the Institute for the year 2011-12 was also released on this occasion.

Hindi Pakhwara

- संस्थान में 01 से 14 सितम्बर 2012 के दौरान हिन्दी पखवाड़े का आयोजन किया गया । दिनांक 01 सितम्बर, 2012 को हिन्दी पखवाड़े का उद्घाटन संसदीय राजभाषा समिति की दूसरी उप-समिति के अवर सचिव, डॉ श्री प्रकाश शुक्ल जी द्वारा किया गया । हिन्दी पखवाड़े के उद्घाटन के अवसर पर काव्य पाठ का आयोजन किया गया । हिन्दी पखवाड़े के दौरान शिक्षक दिवस, डॉ. दरोगा सिंह स्मृति व्याख्यान के साथ-साथ वैज्ञानिक प्रभागों में हिन्दी में सर्वाधिक वैज्ञानिक कार्य करने के लिए प्रभागीय चल-शील्ड, प्रश्न-मंच, अन्ताक्षरी, हिन्दी वर्तनी प्रतियोगिता, हिन्दीतर कर्मियों के लिए हिन्दी श्रुतलेख एवं शब्दार्थ लेखन प्रतियोगिता आयोजित की गयी । सभी प्रतियोगिताओं में छात्रों सहित संस्थान के विभिन्न वर्गों के कर्मियों ने बढ़-चढ़कर सहभागिता की । संस्थान में 05 सितम्बर, 2012 को शिक्षक दिवस का आयोजन किया गया जिसमें संस्थान के पूर्व निदेशक डॉ. सुदर्शन कुमार रहेजा जी एवं डॉ. बाल बी.पी.एस. गोयल जी को सम्मानित किया गया । संस्थान में प्रत्येक वर्ष हिन्दी दिवस के अवसर पर डॉ. दरोगा सिंह स्मृति व्याख्यान का आयोजन किया जाता है । इस वर्ष यह व्याख्यान आई.एन.एस.ए. के वरिष्ठ वैज्ञानिक, डॉ. आलोक डे जी द्वारा दिया गया । इस समारोह के मुख्य अतिथि भा.कृ.अनु.परिषद् के राष्ट्रीय प्रोफेसर, डॉ. विनोद कुमार गुप्ता जी थे। दिनांक 14 सितम्बर, 2012 को हिन्दी पखवाड़े का समापन समारोह हुआ । इस अवसर पर संस्थान की वार्षिक रिपोर्ट के हिन्दी संस्करण का विमोचन किया गया तथा हिन्दी पखवाड़े के दौरान आयोजित विभिन्न प्रतियोगिताओं के सफल प्रतियोगियों को पुरस्कृत करने के साथ-साथ गत वर्ष के दौरान संस्थान में आयोजित कार्यशालाओं के वक्ताओं एवं प्रशिक्षुओं को भी सम्मानित किया गया ।

Seminars Delivered

Seminars in different areas of Agricultural Statistics, Computer Application and Bioinformatics 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), M.Sc. (Computer Application) and M.Sc. (Bioinformatics) and Guest seminars.

During the period one general seminar was delivered by Mr. Biswajit Nayak, Stat Soft India, the title of the seminar was A demo on ANN and SVM through Statistica Software.

The Details of Seminars Delivered

Category	Type of seminar	Number
Scientist	Project Completed	03
	New Proposal	02
	Project Progress	01
	Foreign Visit	01
Student	Course	07
	ORW	08
	Thesis	03
General		01
Total		**26**

New Projects / Schemes / Programmes

The following new projects were initiated during the period:

- Parallelized work-flows for gene prediction, phylogenetic analysis and primer designing (w.e.f. 28-08-2012)
- Commodity price forecast based on time series data (w.e.f. 18-09-2012)

Under Consultancy Mode

- Impact assessment of agro forestry model in Vaishali district of Bihar State (w.e.f.10.09.2012)

PUBLICATIONS

Research Papers

1. Aarthi, LR, Kumar, Shiv, Negi, Digvijay Singh and Singh, Dharam Raj (2012). Prevailing standards and dimensions governing sanitary and phyto-sanitary compliance in Indian black pepper. *Agril. Eco. Res. Rev.*, **25(1)**, 69-78.

2. Agrawal, Ranjana, Chandrahas, Aditya, Kaustav. Use of discriminant function analysis for forecasting crop yield. *Mausam*, **63, 3(July 2012),** 455-458.

3. Ahmad, T, Rai, A and Sahoo, PM (2012). Comparison of bootstrap techniques for estimation of ratio in complex surveys. *Inter. J. Agril. Statist. Sci.*, **8(1),** 355-365.

4. Ahmad, T, Sahoo, PM and Rai, A (2012). Managing agricultural resources. *Geospatial Today*, **11(6)**, 22-25.

5. Bhardwaj, SP, Kumar, Ashok and Singh, KN (2012). Econometric study of asymmetry in price transmission from wholesale to retail trade of sugar. *Economic Affairs*, **57(2)**, 137-146. ISSN: 0424-2513 Online ISSN:0976-4666.

6. Choudhary, AK, Iquebal, MA and Nadarajan, N (2012). Protogyny is an attractive option over emasculation for hybridization in pigeonpea. *SABRAO J. Breed. Genet.*, **44(1)**, 138-148.

7. Gharde, Yogita. Rai, Anil, Chandra, Hukum (2012). Hierarchical bayes small area approach for spatial data. *J. Ind. Soc. Agril. Statist.*, **66(2)**, 259-268.

8. Gupta, VK and Parsad, Rajender (2012). Use of incomplete block designs in agricultural experiments. *Ind. J. Agro.*, **57(2)**, 107-116.

9. Kaur, Charanjit, Walia, Suresh, Nagal, Shweta, Walia, Shweta, Singh, Jashbir, Singh, Braj Bhusan, Saha, Supradip, Singh, Balraj, Kalia, Pritam, Jaggi, Seema and Sarika (2012). Functional quality and antioxidant composition of selected tomato (*Solanum lycopersicon L*) cultivars grown in northern India. *Food Science & Technology - Lebensmittel-Wissenschaft & Tech.* (Published online with DOI: http://dx.doi.org/10.1016/j.lwt.2012.06.013)

10. Kumar, Manoj, Ahmad, Taqueer, Rai, Anil, Sahoo, PM (2012). Sensitivity analysis of various indicators of composite index. *J. Ind. Soc. Agril. Statist.*, **66(2)**, 335-342.

11. Kumar, Vinod, Kumar, Amrender and Chattopadhyay, Chirantan (2012). Design and implementation of web-based aphid (*Lipaphis erysimi*) forecast system for oilseed Brassicas. *Ind. J. Agril. Sci.*, **82 (7)**, 608-614.

12. Paul, AK, Singh, Surendra, Singh, KN, Kumar, Ashok and Singh, N. Okendro (2012). Modeling for body growth of crossbred piglets, *Ind. J. Anim. Sci.*, **82(9)**, 1098-1099.

13. Paul, RK and Bhar, L (2012). Robust analysis of block designs: A new objective function. *Int. J. Agril. Statist. Sci.*, **8(1)**, 243-250.

14. Prajneshu (2012). Nonlinear time-series models and their applications. *J. Ind. Soc. Agril. Statist.,* **66(2)**, 243-250.

15. Ratna, Prabha, Singh, Dhananjaya P, Gupta, Shailendra K, Farooqi, Samir and Rai, Anil (2012). Synonymous codon usage in Thermosynechococcus elongatus (cyanobacteria) identifies the factors shaping codon usage variation, *Bioinformation,* **8(13)**, 622-628.

16. Sahoo, PM, Rai, A, Ahmad, T, Singh, R and Handique, BK (2012). Estimation of acreage under paddy crop in Jaintia Hills district of Meghalaya using Remote sensing and GIS. *Int. J. Agril. Statist. Sci.*, **8(1),** 193-202.

17. Salvati, N, Chandra, H and Chambers R (2012). Model based direct estimation of small area distributions. *Australian & New Zealand J. Statist.*, **54(1)**, 103-123.

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18. Sarika, Iquebal, MA and Rai, Anil (2012). Biotic stress resistance in agriculture through antimicrobial peptides. *Peptides*, **36(2)**, 322-330.

19. Satpati, Subrata Kumar, Gupta, VK, Parsad, Rajender and Aggarwal, ML (2012). Computer generated change over designs for correlated observations. *Comm. Statist.: Theo. & Meth.,* **41**, 3786-3798.

20. Shrivastava, A, Babbar, A, Prakash, V, Tripathi, N and Iquebal, MA (2012). Genetic and molecular diversity analysis for improvement of chickpea (*Cicer arietinum* L.) genotypes grown under rice fallow. *J. Food Legume*, **25**(**2**), 147-150.

21. Singh, Jarnail, Singh, Vijay, Mann, Anita, Singh, JK, A, Jerome, Sarkar, SK, Duhan JS and Yadav, PS (2012). Buffalo umbilical cord blood collection and hematological comparison with peripheral blood of new born calf and its dam. *Ind. J. Anim. Sci.*, **82(8)**, 84-86.

22. Singh, Man, Lathwal, SS, Singh, Yajuvendra, Kumar, Anil, Gupta,, AK, Mohanty, TK, Raja, TV, Gupta, RK, Sharma, V, Chandra, G, Kumar, M (2012) Association of lameness with per cent body weight distribution and shifting to individual limbs of static Karan Fries crossbred cows. *Ind. J. Anim. Sci.***, 82(9)**, 1016-1021.

23. Singh, N, Sahu, TK, Rao, AR and Mohapatra, T (2012). shRNAPred (Version 1.0): An open source and standalone software for short hairpin RNA (shRNA) prediction. *Bioinformation*, **8**(**13**), 629-633.

24. Sisodia, BVS and Chandra, H (2012). Estimation of crop production at smaller geographical level in India. *J. Ind. Soc. Agril. Statist.*, **66(2)**, 313-319.

25. Sud, UC, Chandra, H, and Srivastava, AK (2012). Crop yield estimation at district level using improvement of crop statistics scheme data - An application of small area estimation technique. *J. Ind. Soc. Agril. Statist.*, **66(2)**, 321-326

26. Varghese, Cini and Jaggi, Seema (2011). Control balanced crossover designs involving incomplete sequences of treatments. *J. Mod. App. Statist. Meth.*, **10(2)**, 632-638.

27. Varghese, Cini and Jaggi, Seema (2011). Mating designs using generalized incomplete Trojan-type designs. *J. Statist. and Application.,* **6(3-4)**, 85-93.

Books

- Gupta, VK, Mandal, BN and Parsad, Rajender (2012). Combinatorics in sample surveys vis-a-vis controlled selection. *LAP Lambert Academic Publishin, GmbH & Co. KG, Verlag, Germany.*

- Chandra, H (2012). Improved direct estimators for small areas. *LAP Lambert Academic Publishing GmbH & Co. KG, Verlag, Germany.*

Popular Articles

- Ahmad, T, Bathla, HVL, Rai, A and Sahoo, PM (2012). Estimation of area and production of fruits and vegetables in maharashtra state. *Proceedings of XI Biennial Conference of the International Biometric Society on Computational Statistics and Bio-Sciences held at Pondicherry University during 08- 09 March 2012. Eds. Subramani, J., Bonfring Publication,* 129-136.

- Bhowmik, Arpan, Jaggi, Seema, Varghese, Cini and Varghese, Eldho. Linear trend free block design balanced for interference effects. *Proceedings of XI Biennial Conference of the International Biometric Society on Computational Statistics and Bio-Sciences held at Pondicherry University during 08- 09 March 2012. Eds. Subramani, J., Bonfring Publication, 0*7-11.

- Chandra, H, Sud, UC and Gharde, Y (2012). Small area crop yield estimation using spatial dependence in area level random effect model. *Proceedings of XI Biennial Conference of the International Biometric Society on Computational Statistics and Bio-Sciences held at Pondicherry University during 08- 09 March 2012. Eds. Subramani, J., Bonfring Publication,* 34-43.

- Varghese, Eldho, Jaggi, Seema and Varghese, Cini. Neighbour balanced block design with proportional neighbour effects. *Proceedings of XI Biennial Conference of the International Biometric Society on Computational Statistics and Bio-Sciences held at Pondicherry University during 08- 09 March 2012. Eds. Subramani, J., Bonfring Publication,* 23-25.

- Chaturvedi, KK and Singh, VB (2012). Determining bug severity using machine learning techniques. *Proceedings of 6th CSI-IEEE International Conference on Software Engineering (CONSEG-2012) held at DAVV Indore (MP) during 05-07 September 2012, 378-387.*

Technical Bulletin

- A Bulletin on Indian NARS Statistical Computing Portal (2012). NAIP Consortium on Strengthening Statistical Computing for NARS, IASRI, New Delhi

E-Book

- Sud, UC, Chandra, H and Aditya, K (2012). Techniques of estimation and forecasting of crop production in India. E-book, Indian Agricultural Statistics Research Institute, New Delhi. Availabe at http://www.iasri.res.in/ebook/TEFCPI_sampling/index.htm.

INVITED LECTURES DELIVERED

- Training on Geospatial Technologies and its Applications at HPKV, Palampur during 30 June - 02 July 2012.
  - Bharadwaj, Anshu. i.) Geoinformatics in Precision Agriculture: Statistical Aspect and ii.) Spatial Data Mining

- Workshop on Statistical Data Mining using MATLAB at Maharaja Agrasen Institute of Technology, New Delhi during 26-27 July 2012.
  - Sharma, Anu. Overview of Data Mining.
  - Mishra, DC. Statistical Data Mining using MATLAB.
  - Kumar, Sanjeev. Classification techniques and SVM using MATLAB and R.

- Training programme on Field Survey, Data Acquisition and Analysis held at NCAP New Delhi during 21-27 July 2012.
  - Parsad, Rajender. SAS: Statistical Procedures.

- Training Programme for ISS probationers at NASA, Greater Noida, UP on 02 July, 2012.
  - Sud, UC. Agriculture in India and emerging techniques for generation of agriculture statistics.

- CAFT Training programme on Agricultural Research Planning and Impact Assessment organized at Division of Agricultural Economics, IARI, New Delhi during 17 August - 06 September 2012.
  - Ramasubramanian V. Technology forecasting models in agriculture.
  - Parsad, Rajender. SAS for Statistical Procedures.

- Training Programme on Agriculture Statistics including Animal Husbandry and Horticulture, Crop Area Estimation and Use of GIS Technology for the participants from SAARC Member States during 27-31 August 2012, at National Academy of Statistical Administration, M/o S&PI, Govt of India, Greater Noida, UP.
  - Sud, UC. Agriculture in India and emerging techniques for generation of agriculture statistics.
  - Chandra, Hukum. i) Overview of R software and practical exercise and ii) Survey data analysis using R software.
  - Ahmad, Tauqueer. Crop area estimation using GIS and Remote sensing technology.

- Institute of Bioresources and Sustainable Development (IBSD) (DBT Institute), Imphal, Manipur on 06 September 2012.
  - Kumar, Dinesh. Applications of bioinformatics tools on bio-resource management.

- Training programme on Research Methodology for Social Sciences organized by Council for Social Development, New Delhi during 03-15 September 2012.
  - Ahmad, Tauqueer. Overview of geographic information system.
  - Jaggi, Seema. i) Correlation and Regression Analysis, ii) SPSS: An Overview, iii) Testing of Hypothesis and iv) ANOVA
  - Varghese, Cini. (i) Introduction to basic statistics; (ii) Non-parametric methods and (iii) Practical: Statistical analysis using SPSS

- Training programme for the participants from Madhya Pradesh organized by NASA, Greater Noida, UP, during 10-14 September 2012.
  - Sud, UC. Small area estimation procedure and its uses in agriculture.

- Training programme on Basic Statistics, Sampling Techniques and Local Level Planning organized by NASA, Greater Noida, UP, for the participants from CSO, Sri Lanka during 17-21 September 2012.
  - Sud, UC. i) Statistic, estimators (Least square, Maximum Likelihood and BLUE), ii) properties of estimators with introduction to ratio and iii) regression estimators

- Workshop on Biostatistical Aspects of Randomized Clinical Trials (RCT) and Medical Ethics, organized at Govt. Medical College Hospital, Chandigarh on 21 September 2012.
  - Tyagi, KK. Sampling methods and sequential sampling plans relevant with RCT.

PAPERS PRESENTED

- In Session on Design of Experiments of 2nd Institute of Mathematical Statistics Asia Pacific RIM Meeting held at Tsukuba, Japan during 02-04 July 2012.
  - Parsad, Rajender*, Dash, Sukanta and Gupta, VK. Efficient row-column designs for 2-colour single factor microarray experiments. (Invited Talk)

- 1st International Conference on Mathematics and Mathematical Sciences at Molecular Marg, Lodhi Road, New Delhi (INDIA) during 07-08 July 2012.
  - Panwar, Sanjeev*. Growth rates of rice yield through non-linear models.
  - Anil Kumar and Sanjeev Panwar*. Identification of best crop sequence for getting maximum and consistent net returns and energy equivalents.

- International Conference on Advances in Electronics, Electrical and Computer Science EEC'2012 at Dehradun, Uttra Khand during 07- 09 July 2012.
  - Dahiya, Shashi*, Goyal, RC, Arora, Alka, Pal, Soumen, Singh, Pal, Grover, Rajni.B and Gupta, PL. An online management and decision making resource for agricultural education in India.
  - Bharadwaj, Anshu* and Minz, Sona Zharia. Hybrid approach to classification using SVM and decision tree.

- National Conference on New Trends in Bioinformatics at IIT, Delhi during 30-31 July 2012.
  - Dash, Manoswini, Challam, Clarissa, Sahu, TK, Ghosh, Tapu, Tyagi, Wricha, Rai, Mayank and Rao, AR*. Identification and analysis of SNPs in DREB genes of rice cultivars grown in NE-hill region. (Poster paper presented)
  - Chilana, Poonam, Sharma, Anu*, Arora, Vasu, Rao, Ekta and Rai, Anil. Computational identification of putative miRNAs and their characterization in Heliothis virescens. (Poster paper presented)

- 22nd Colombian Symposium in Statistics at Bucaramanga, Colombia during 17-21 July 2012. Chandra, Hukum. Applications of small area estimation.(2 - days short course)
  - Chandra, H and Sud, UC (2012). Small area estimation under geographically weighted area level model.

- National Conference on Agro-Informatics and Precision Agriculture - 2012 organized at IIIT, Hyderabad during 01-03 August 2012.
    - Dahia Shashi. Agricultural knowledge management using an e platform. (Oral presentation)
    - Sudeep. Agridaksh - A tool for developing online expert system. (Oral presentation)
    - Bharadwaj Anshu. Geo-informatics in precision agriculture - Statistical aspect. (Oral presentation)
- 13th International Pure Mathematics Conference 2012 organised at Islamabad, Pakistan during 02-03 September 2012.
    - Prajneshu. Some Parametric Nonlinear Time-Series Models and their Applications in Agriculture.(Invited Talk)
- 6th CSI-IEEE International Conference on Software Engineering (CONSEG-2012) held at DAVV Indore (MP) during 05-07 September 2012.
    - Chaturvedi, KK* and Singh, VB. Determining bug severity using machine learning techniques.
- National Workshop on Improvement of Agricultural Statistics organized by Directorate of Economics and Statistics, Ministry of Agriculture, Govt. of India at NASC Complex, New Delhi during 19-20 September 2012.
    - Chandra, Hukum* and Sud, UC (2012). Disaggregate level crop yield estimation using small area estimation techniques. (invited Talk)
    - Ahmad, T*, Bhatia, VK, Sud, UC, Rai, A and Sahoo, PM (2012). An alternative sampling methodology for estimation of Cotton production.

PARTICIPATION

Conferences / Workshops / Seminars / Symposia etc

- Management Development Programme in Agricultural Research at NAARM, Hyderabad during 02-07 July 2012. (Dr UC Sud)
- Working Group for the Construction of Index Numbers of Area, Production and Yield of Crops on 03 July 2012 at Krishi Bhawan, New Delhi/. (Dr VK Bhatia)
- National Workshop on Standardization of Methodology for Estimating Cost of Milk Production in India at NDRI, Karnal on 06 July 2012. (Dr KK Tyagi and Dr Hukum Chandra)
- Ist International Conference on Mathematics and Mathematical Sciences, Molecular Marg, Lodhi Road, New Delhi during 07-08 July 2012.(Dr Anil Kumar)
- Training Programme on Knowledge Management and Knowledge Sharing in Organisation held at IIPA, New Delhi during 23-29 July 2012.(Dr. Prajneshu)
- Valedictory function of the training programme on Field Survey, Electronic Compilation and Analysis of Data at NCAP, New Delhi on 28 July 2012 (Dr. VK Bhatia as Chief Guest)
- 51st All India Wheat and Barley's Worker's Meet at Jaipur during 23-27 August 2012 (Sh. SN Islam)
- Training/meeting/ workshop on Harvest and Post Harvest Losses during 03-04 September 2012 at MPUAS, Jaipur. (Dr. Anil Rai)
- National workshop on Improvement of Agricultural Statistics organized during 19-20 September 2012 by Directorate of Economics & Statistics, Ministry of Agriculture, Govt. of India. (Dr UC Sud, Dr KK Tyagi, Dr Tauqueer Ahmad and Dr Hukum Chandra)
- All India Training of Trainers (AITOT) for the 70th round of NSS, to discuss the sampling design, schedules of enquiry and procedures for data collection, etc. at Indian Institute of Mass Communication, Aruna Asaf Ali Marg, New JNU Campus, New Delhi during 27-29 September 2012. (Dr UC Sud)

Meetings

- The 2nd Institute of Mathematical Statistics Asia Pacific Rim Meeting held at Tsukuba, Japan on 02 July 2012. (Dr Rajender Parsad)
- Meeting of Executive Committee of Swadeshi Science Movement, Delhi at NPL, New Delhi on 03 July 2012. (Dr Susheela Kaul)
- ASRB Data Center evaluation meetings on 03 July 2012 at ASRB. New Delhi (Dr. Sudeep)
- Meetings related to establishment of Institute on ICT in Agriculture, with Dr. Sam Pitroda, DG, ICAR, DG, NIC, DDG (Ag. Engg.) and other officials of NIC and Planning Commission at NIC, New Delhi on 06 July, 02 August and 06 August 2012. (Dr. Anil Rai and Dr. VK Bhatia)
- Board of Studies joint meeting (Agricultural Statistics, Computer Applications and Bioinformatics) on 10 July 2012.
- Academic Council Meeting on July 12, 2012 at IARI, New Delhi
- Meeting of Technical Committee for FASAL Programme on 20 July 2012 at Krishi Bhawan, New Delhi. (Dr. KN Singh and Dr. Ranjana Agrawal)
- Joint review meeting of the three mega projects of ICAR: National Agricultural Bioinformatics Grid, Bioprospecting of Genes and Allele Mining for Abiotic Stress Tolerance and Phenomics of moisture deficit and low temperature stress tolerance in rice chaired by Dr. Mangala Rai, Ex DG, ICAR on 21 July 2012 at IASRI, New Delhi (Dr. VK Bhatia and Scientists of CABin)
- Meeting of Executive Council of Farming Systems Research and Development Association on 24 July 2012 at PDESR, Modipuram (Dr. Anil Kumar as a Joint Secretary)
- A roundtable discussion on Generating responses to an uncertain monsoon on 01 August 2012 at Observer Research Foundation, New Delhi. (Dr. KN Singh and Dr. Amrender Kumar)
- Meeting with Dr. GPS Raghava, Scientist & Head Bioinformatics Centre, Institute of Microbial Technology, Chandigarh regarding web server training during 05-10 August 2012. (Dr. Sarika and Dr. Dinesh Kumar)
- Meetings with HPC and Bioinformatics group of C-DAC, Pune on 21 September 2012 to discuss the work plan of NABG (Dr. Anil Rai, Dr. Dinesh Kumar and Sh. SB Lal)
- Meeting with World Bank on 19 September 2012 regarding MIS/FMS project. (Dr. Alka Arora and Dr. Sudeep)

CONSULTANCY /ADVISORY SERVICES PROVIDED

- Mr. Manoj Kumar, Scientist, CIAE, Bhopal was advised on the application of artificial neural networks for detecting pattern in the mechanization status of Soybean-Wheat cropping pattern for different farm operation in Bhopal Region.
- Ms. Meena Vidhani, Ph.D. student of Department of Physical Planning, School of Planning and Architecture, New Delhi to examine the prosperity of six newly developed towns (Kalyani, Bidhan Nagar, Mariamalai nagar, Noida Gurgaon and Navi Mumbai) on the basis of seven factors affecting the performance of new towns.

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 125988 times since 01 April 2012 and 1168305 times since 05 September 2003.

PERSONNEL

Congratulations on your Appointment

Name	Designation	Effective Date
Sh. Kapil Kumar Rana	Assistant	24.07.2012
Sh. Rohit Rastogi	Assistant	31.07.2012
Sh. Adarsh	Assistant	21.09.2012

Congratulations on your Promotion

Financial Upgradation

Name	Designation	Effective Date
Smt. Alka Arora	Sr. Scientist (37400-67000+9000)	14.01.2010
Dr. N. Okendro Singh	Scientist (15600-39100+7000)	08.08.2009
Dr. Prachi Misra Sahoo	Scientist (15600-39100+8000)	09.08.2009
Sh. Amrender Kumar	Scientist (15600-39100+8000)	29.10.2010
Dr. Dharam Raj Singh	Scientist (15600-39100+8000)	22.01.2009
Sh. Shashi Bhushan Lal	Scientist (15600-39100+8000)	28.01.2009
Smt. Shashi Dahiya	Scientist (15600-39100+8000)	25.08.2009
Md. Samir Farooqi	Scientist (15600-39100+8000)	28.09.2009
Sh. Pal Singh	Scientist (15600-39100+8000)	29.10.2010
Sh. KK Chaturvedi	Scientist (15600-39100+8000)	16.11.2010
Smt. Anu Sharma	Scientist (15600-39100+8000)	18.11.2010
Sh. SN Islam	Scientist (15600-39100+8000)	29.11.2010
Sh. Ram Naresh Singh Yadav	T-3	25.04.2010
Sh. Ram Sahay	T-6	01.07.2011
Sh. Sunil Bhatia	T-4	15.11.2011
Sh. Roop Singh	T-2	28.12.2011
Smt. Gursharan Kaur	T-6	01.01.2012
Sh. Manoj Kumar	T-5	15.01.2012
Sh. SK Singh	T-9	03.02.2012
Sh. Ratan Singh	T-4	29.04.2012

Under MACP Scheme after completing 30 years of service Sh. Raghuver Dutt, Assistant was awarded Financial Upgradation.
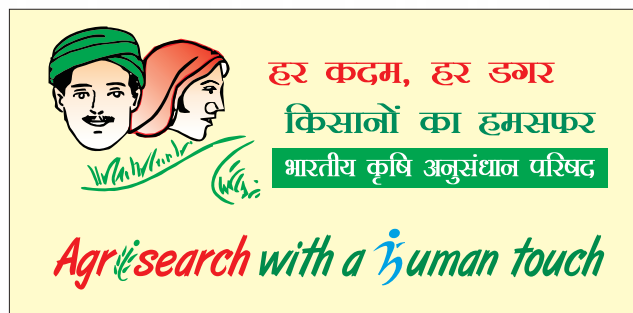
Wish you happy Retired Life

Name	Designation	Effective Date
Dr. Ashok Kumar	Principal Scientist	31.07.2012
Sh. Rajender Kumar	T-7-8	31.07.2012
Sh. Jagar Nath Yadav	SSS	31.07.2012
Sh. DK Sehgal	Scientist	31.08.2012
Sh. VK Mishra	T-9	31.08.2012
Smt. Shubh Lata Pal	T-7-8	31.08.2012
Smt. Sudershna Sood	SSS	31.08.2012
Smt. Renu Datta	T-5	30.09.2012
Smt. Sudershan Chadda	T-5	30.09.2012

Any Other

Dr. Seema Jaggi, Senior Scientist has been appointed as Incharge, PME Cell w.e.f. 27 August 2012.

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 2.0)
- Software for Survey Data Analysis (SSDA 1.0)

हर कदम, हर डगर
किसानों का हमसफर
भारतीय कृषि अनुसंधान परिषद

Agri search with a human touch

naresh@iasri.res.in