



Papers Presented and Participation of the Institute at the Conferences/Workshops, etc.

PAPERS PRESENTED

- **42nd Annual Sorghum Group Meeting held at GB Pant University of Agriculture and Technology, Pantnagar during 28-30 April 2012**
 - Parsad, Rajender. Statistical issues in designing of experiments and analysis of experimental data for multi environment trials (Invited talk).
- **Global Conference on Horticulture for Food Nutrition and Livelihood Options held at Bhubaneswar, Orissa during 28-31 May 2012**
 - Salvi, MB, Agrawal, Ranjana*, Salvi, BR, Mishra, AK, Pandey, G and Chandra, Rakesh. Forewarning powdery mildew of mango (*Mangifera indica* L.) caused by *Oidium mangiferae* Berthet.
- **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)
- **14th Annual Conference of Society of Statistics and Computer Application and 1st International Conference on Mathematics and Mathematical Sciences at Molecular Marg, Lodhi Road, New Delhi during 07-08 July 2012**
 - Panwar, Sanjeev*, Kumar, Anil, Singh, KN and Sivaramane, N. Growth rates of rice yield through non-linear models.
 - Kumar, Anil and Panwar, Sanjeev*. 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, Uttarakhand 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 Zharis. Hybrid approach to classification using SVM and decision tree.
- **22nd Colombian Symposium in Statistics at Bucaramanga, Colombia during 17-21 July 2012**
 - Chandra, H* and Sud, UC. Small area estimation under geographically weighted area level model. (Invited talk)
- **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 presentation)
 - Chilana, Poonam, Sharma, Anu*, Arora, Vasu, Rao, Ekta and Rai, Anil. Computational identification of putative miRNAs and their

- characterization in *Heliothis virescens*. (poster presentation)
- **National Conference on Agro-Informatics and Precision Agriculture-2012 organized at IIIT, Hyderabad during 01-03 August 2012**
 - Dahiya, Shashi. Agricultural knowledge management using an e-platform.
 - Sudeep. Agridaksh - A tool for developing online expert system.
 - Bharadwaj, Anshu. Geo-informatics in precision agriculture - Statistical aspect.
 - **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. Disaggregate level crop yield estimation using small area estimation techniques. (Invited talk)
 - Ahmad, T*, Bhatia, VK, Sud, UC, Rai, A and Sahoo, PM. An alternative sampling methodology for estimation of cotton production.
 - **VI International Conference on Legume Genetics and Genomics held at Hyderabad during 02-07 October 2012**
 - Singh, Nishtha, Sahu, Tanmaya K, Singh, UP, Gaikwad, Kishore, Singh, NK and Rao, AR*. Computational analysis of Heat Shock Proteins (HSPs) to understand the molecular mechanism of heat stress tolerance in legumes and other plant species. (Oral and poster presentation).
 - **20th Annual Conference and Silver Jubilee of the Agricultural Economics Research Association (AERA) India held at Division of Agricultural Economics, Indian Agricultural Research Institute, New Delhi during 09-11 October 2012**
 - Jaggi, Seema. Statistics: Tool for agricultural policy research. (Invited talk)
 - Bhardwaj, SP. Study of performance measures of univariate time series methods for price forecasting- An empirical study of gram price forecast.
 - Arun, G, Singh, Dharam Raj*, Kumar, Shiv and Kumar, Anil. Canal irrigation management through water users associations and its impact on efficiency, equity and reliability in water use in Tamil Nadu.
 - **National Conference on Managing Threatening Diseases of Horticultural, Medicinal, Aromatic and Field Crops in Relation to Changing Climatic Situation at IISR Lucknow during 03-05 November 2012**
 - Agrawal, Ranjana*, Dalvi, MB, Ray, SK, Sharma, Hemant, Pandey, G, Chandra, Rakesh and Misra, AK. Forewarning powdery mildew in Mango. (Theme paper)
 - **XXX Workshop of AICRP on Integrated Farming Systems during 16-19 November 2012 at ICAR Research Complex for Goa**
 - Kumar, Anil*, Varghese, Eldho and Parsad, Rajender. Progress of the project of OSR experiments and the layout plan randomization procedure for climate change experiment.
 - **National Conference on NexGen Biotechnology: Amalgamating Science and Technology organized at Kurukshetra University during 23-24 November 2012**
 - Iquebal, MA, Sarika, Arora, V, Verma, N, Rai, A and Kumar, Dinesh*. World's first whole genome based microsatellite DNA marker database of tomato: TomSatDB.
 - **6th International Conference on Quality, Reliability, Infocomm Technology and Industrial Technology Management (ICQRITIM 2012) at University of Delhi, Delhi during 26-28 November 2012**
 - Chaturvedi, KK*, Kapur, PK, Singh VB and Anand, Samir. Predicting software change complexity using entropy based measures.
 - **3rd International Agronomy Congress on Agricultural Diversification, Climate Change Management and Livelihoods organized at IARI, New Delhi during 26-30 November 2012**



- Kumar, Anil*, Kumar, Pramod, Singh, Gyan, Panwar, Sanjeev and Choudhary, Vipin Kumar. Application of multivariate analysis for economic evaluation of cycles of different crop rotations.
- **12th International Conference of Hybrid Intelligent Systems (HIS) at MIT College of Engineering, Pune during 05-06 December 2012**
 - Sudeep. Decision support system for research project duplication detection.
- **National Symposium on Space Technology for Food & Environment Security' & Annual Convention of Indian Society of Remote Sensing & Indian Society of Geomatics at IARI, New Delhi during 05-07 December 2012**
 - Sahoo, PM*, Ahmad, T, Singh, KN and Rai, A. Generation of cloud free satellite images using geospatial technology.
- **International Consultative Meeting on Seribiotechnology 2012 (ICMS 2012) at DBT Institute IBSD at IITG, Imphal Manipur during 05-07 December 2012**
 - Kumar, Dinesh. Global mapping of Intellectual property of silk genome and its products challenges and issues for India. (Invited lead paper)
- **International Symposium on Bioengineering in 2012 at IIT, Guwahati on 10 December 2012**
 - Kumar, Dinesh. Bioinformatics tools for genome annotations. (Invited talk)
- **66th Annual Conference of ISAS as International Conference on Statistics and Informatics in Agricultural Research at IASRI, New Delhi during 18-20 December 2012**

Invited Papers

- Agrawal, Ranjana and Kumar, Amrender*. Models for forecasting crop yields, pests and diseases: IASRI approaches.
- Chandra, Hukum*, Gharde, Yogita and Jain, VK. Small area prediction under unit level model using estimated auxiliary data.
- Devakumar, C* and Gupta, VK. Pedagogical issues in statistics education.
- Gaur, HS* and Parsad, Rajender. Policy issues for HRD in agricultural statistics and informatics.

- Ghosh, Himadri. Some stochastic volatility models and their applications.
- Kaul, Sushila. Data requirement for study of women in Indian agriculture.
- Prajneshu. Human resource development (HRD) in agricultural statistics: Current status and challenges
- Rai, Anil. National agricultural bioinformatics grid.
- Sud, UC*, Chandra, Hukum and Gupta, VK. On calibration approach based product estimator.

Contributed Papers

- Aditya, Kaustav*, Sud, UC and Chandra, Hukum. Estimation of domain total for unknown domain size in the presence of nonresponse.
- Ahmad, Tauqueer*, Bathla, HVL, Rai, Anil, Sahoo, Prachi Misra, Gupta, AK and Jain, VK. Statistical evaluation of methodology for estimation of cotton production in India.
- Ahuja, Sangeeta. Statistical package for agricultural research - Version 3.0 (SPAR 3.0).
- Alam, Wasi*, Paul, AK, Singh, NO and Singh, Pal. Maximum likelihood and uniformly minimum variance unbiased estimation of $P(Y < X)$ for Gompertz distribution.
- Arora, Alka*, Malhotra, PK, Goyal, RC and Sudeep. Approach for duplication detection in research project documents.
- Arya, Prawin, Sivaramane, N, Singh, DR* and Kumar, Anil. Vertical Integration of value-chain in edible oils markets in India
- Bharadwaj, Anshu*, Islam, SN and Singh, DR. OLAP cubes construction of 61st round NSSO data using multidimensional modeling
- Bhowmik, Arpan*, Jaggi, Seema, Varghese, Cini and Varghese, Eldho. Trend resistant second order neighbour balanced block designs.
- Biswas, Ankur*, Rai, Anil and Ahmad, Tauqueer. Spatial estimation procedure for agricultural surveys.
- Chandra, H. Some innovative approaches for small area estimation. (Dr. DN Lal Memorial Lecture).
- Chaturvedi, KK*, Rai, Anil and V, Ramasubramanian. Decision support system for insurance products for agriculture.

- Dahiya, Shashi*, Bharadwaj, Anshu, Narwal, Sneha and Bajpai, Shalini. Online software for decision tree classification using simple CART.
- Dasgupta, Pratyush* and Bhar, Lal Mohan. Robustness of balanced incomplete block designs for multi-response experiments against missing data.
- Dash, Sukanta*, Parsad, Rajender and Gupta, VK. Row-Column designs for 2^n factorial 2-colour microarray experiments for estimations of main effects and two factor interactions for orthogonal parameterization.
- Datta, Anindita*, Jaggi, Seema, Varghese, Cini and Varghese, Eldho. Some series of row-column designs with multiple units per cell.
- Farooqi, Samir*, Sanjukta, RK, Mishra, DC, Singh, DP, Rai, Anil, Chaturvedi, KK and Sharma, Naveen. Gene expression analysis and synonymous codon usage patterns in *Rhizobium etli*.
- Gautam, Y*, Sudeep, Singh, Pal and Shirur, M. On-line decision support system for mushroom cultivation.
- Gupta, AK*, Chandra, Hukum and Sud, UC. Estimation of meat production in north east hilly region.
- Gurung, Bishal*, Ghosh, Himadri and Prajneshu. Fitting exponential autoregressive nonlinear time-series model using Extended Kalman Filtering technique.
- Iquebal, MA*, Prajneshu and Sarika. Nonlinear support vector regression technique for modelling and forecasting maize crop yield.
- Islam, Shahnawazul*, Chaturvedi, KK, Farooqi, Samir, Sabir, Naved, Sharma, Kirti, Agarwal, Hari Om, Sharma, JP, Sharma, RK, Shoran, Jag, Sharma, AK, Singh, Randhir and Gupta, RK. Expert system for the identification and control of weeds in wheat crop.
- Jaggi, Seema*, Varghese, Cini, Varghese, Eldho and Sharma, Anu. Web generation of experimental designs balanced for indirect effects of treatments.
- Jain, VK* and Gupta, AK. Harvest and post harvest losses of food grain crops.
- Kaul, Sushila. International trade in Indian agriculture and its impact on Indian economy.
- Khanduri, OP. Information system for designed experiments.
- Kumar, Amrender*, Singh, KN, Chattopadhyay, C and Vennila, S. Trend analysis of climate variables and their effects on pests of pigeonpea.
- Kumar, Anil* and Chaturvedi, Ajit. Bayesian estimation procedures for the reliability function and $P(X>Y)$ of inverse weibull distribution.
- Kumar, Prakash*, Lal, Krishan, Parsad, Rajender and Gupta, VK. Construction of balanced confounded symmetrical factorial nested row column designs.
- Kumar, Raju*, Wahi, SD and Sud, UC. Estimation of population ratio using calibration approach.
- Kumar, Suresh, Singh, DR*, Kumar, Shiv and Kumar, Anil. Estimation of farm level efficiencies in wheat cultivation under sprinkle irrigation in Rajasthan: An application of data envelopment analysis.
- Kumari, Vandita*, Agrawal, Ranjana and Kumar, Amrender. Use of ordinal logistic regression in crop yield forecasting.
- Lal, Krishan*, Parsad, Rajender, Gupta, VK and Bhar, LM. Robust designs of two-way elimination of heterogeneity with t -family of error distribution.
- Lal, SB*, Sharma, Anu, Chandra, Hukum and Rai, Anil. Web based software for survey data analysis (SSDA2).
- Mandal, BN*, Parsad, Rajender and Gupta, VK. Construction of binary incomplete block designs with specified concurrence matrix through multi-step linear integer programming approach.
- Mazumder, Chiranjit*, Jha, Girish K, Bharadwaj, Anshu and Kumari, Jyoti. Nonlinear principal component based fuzzy clustering: A case study of lentil genotypes.
- Meher, Prabina Kumar*, Sahu, Tanmaya Kumar and Rao, AR. Prediction of donor (5') splice sites based on di-nucleotide dependency difference using random forest (RF): A *de novo* approach.
- Mishra, DC*, Farooqi, Samir, Sanjukta, RK, Kumar, Sanjeev, Rai, Anil and Sharma, Naveen. Comparative study on gene classification using synonymous codon usage.
- Panwar, Sanjeev*, Singh, KN, Kumar, Anil and Sivaramane, N. Forecasting of growth rates of



- wheat yield of Uttar Pradesh through nonlinear growth models.
- Paul, AK*, Raman, Rohan and Wah, SD. The performance of linear discriminant function under both multivariate normal and non-normal situations.
 - Paul, AK*, Raman, RK and Wah, SD. Empirical comparison of the performance of linear discriminant function under multivariate non-normal and normal data.
 - Paul, Manju Mary*, Rai, Anil and Kumar, Sanjeev. Classification of cereal proteins related to abiotic stress based on their structural composition using support vector machine.
 - Raman, Rohan Kumar*, Sud, UC, Chandra, Hukum and Gupta, VK. On calibration approach based ratio estimation with sub-sampling the nonrespondents.
 - Ranganath, HK*, Prajneshu and Ghosh, Himadri. Linear regression models for symbolic interval-valued data.
 - Ray, Mrinmoy*, V, Ramasubramanian, Kumar, Amrender and Ramasundaram, P. Time-series intervention modelling for forecasting cotton yield in India.
 - Sadhu, Sandip Kumar*, V, Ramasubramanian, Rai, Anil and Kumar, Adarsh. Decision tree based models for classification in agricultural ergonomics.
 - Sahoo, PM*, Ahmad, T, Singh, KN and Gupta, AK. Prediction of missing information in satellite images using GIS.
 - Sahu, Tanmaya Kumar*, Bajetha, Garima, Rao, AR and Rai, Anil. Cattle genomic resource information system (C-GRIS): A comprehensive portal for conservation of cattle genetic resources.
 - Sarika*, Iquebal, MA, Rai, Anil and Kumar, Dinesh. *In-silico* identification of salt stress genes of grape.
 - Sarkar, Kader Ali*, Jaggi, Seema, Bhowmik, Arpan, Varghese, Eldho and Varghese, Cini. Series of trend resistant balanced bipartite block designs.
 - Sarkar, Susheel Kumar*, Lal, Krishan and Gupta, VK. Construction of linear trend-free multi-level factorial experiments.
 - Sharma, Anu*, Varghese, Cini and Jaggi, Seema. WS-PBIBD: A web solution for partially balanced incomplete block designs.
 - Sharma, NK. Fertilizer response ratios for rice-rice and rice-wheat crop sequences on farmers field based on initial soil test values.
 - Sharma, Richa* and Hanagal, David D. Modeling heterogeneity in diabetic retinopathy data by inverse Gaussian distribution using Bayesian approach.
 - Shekhar, Shashi* and Bhar, Lalmohan. Incomplete block designs for parallel line assays.
 - Shekhar, Shashi and Bhar, Lalmohan*. Incomplete block designs for asymmetric parallel line assays.
 - Singh, N Okendro*, Bhar, LM, Singh, KN, Singh, N Gopimohon and Paul, AK. A method of reparameterization for aphid population growth model.
 - Singh, Nishtha*, Sahu, Tanmaya Kumar, Wah, SD and Rao, AR. Epigenetic database of agriculturally important species.
 - Singh, Pal* and Sudeep. E-learning solution: Management system PG School, IARI.
 - Sivaramane, N*, Mathur, VC, Singh, DR and Jha, Girish. Competitiveness and dynamics of India's rice exports from India.
 - Srivastava, Sudhir*, Varghese, Cini, Jaggi, Seema and Varghese, Eldho. Augmented partial diallel cross plans involving two sets of parental lines.
 - V, Ramasubramanian* and Bishop, Peter C. Applications of technology forecasting methods for cotton in India.
 - Varghese, Cini*, Jaggi, Seema and Sarkar, Kallol. A series of incomplete factorial row-column designs.
 - Varghese, Eldho*, Jaggi, Seema and Varghese, Cini. Row-column designs balanced for neighbour effects.
- **26th National Conference on Agricultural Marketing held at Gokhale Institute of Politics and Economics, Pune during 20-22 December 2012**
 - Bhardwaj, SP. Price stability is the main agenda of agricultural price policy.
 - Praveen, KV, Kumar, Shiv, Singh, Dharam Raj, Arya*, Prawin, Chaudhary, Khyaliram and Kumar Anil. A study on economic behaviour, perception

and attitude of households towards traditional and modern food retailing formats in Kochi.

- **8th International Triennial Calcutta Symposium on Probability and Statistics, Calcutta during 27-30 December 2012**
 - Chandra, H*, Sud, UC, Chambers, R and Salvati, N. Spatial nonstationarity in small area estimation. (Invited talk).
 - Gharde, Y and Chandra, H*. Hierarchical bayes small area estimation approach for spatial data.
 - Ghosh, H*, Gurung, Bishal and Prajneshu. Modelling and forecasting of asymmetric stochastic volatility model with mean.
- **International Conference on Recent Advances in Mathematical Statistics and its Applications in Applied Sciences organized at Guwahati University, Assam during 31 December 2012 - 20 January 2013**
 - Ghosh, H. An improved fuzzy time series method of forecasting.
 - Paul, RK. Modelling and forecasting of Indian monsoon rainfall by wavelet methodology.
- **International Conference on Statistics, Science, and Society: New Challenges and Opportunities (IISA 2013), organized by International Indian Statistical Association, Chennai, India during 02-05 January 2013**
 - Chandra, H*, Chambers, R, Salvati, N and Sud, UC (2013). Spatial Nonstationarity in small area estimation. (Invited talk)
- **100th Indian Science Congress organized at Calcutta University, Kolkata during 03-07 January 2013**
 - Datta, Anindita, Jaggi, Seema, Varghese, Cini* and Varghese, Eldho. Structurally incomplete row-column designs with multiple units per cell.
 - Ghosh, H* and Prajneshu. Genetic algorithm for fitting SETARMA nonlinear time series modelling and development of out-of-sample forecasts.
 - Murali, S, Sahu, TK, Jahageerder, S, Behra, BK, Rao, AR*. In silico characterization of splice sites of zebra fish.
 - Paul, AK*, Das, S and Wah, SD. Comparative performance of different imputation techniques against missing observations for different classification procedures.
- Rao, AR*, Dash, M, Behra, BK, Sharma, AP. Statistical and computational approaches in animal and fish genomics.
- Singh, N, Rao, AR*, Thelma, BK. Identification of genome wide SNPs associated with ulcerative colitis using machine learning approaches.
- Varghese, Cini* and Kumar, Arvind. Row-column designs for investigational products vs. control comparisons in veterinary trials.
- Varghese, Eldho. MERC designs for diallel cross experiments with specific combining abilities [Paper presented in the Young Scientist Award programme in the section of Mathematical Sciences (Including Statistics)]
- **International Symposium on Genomics in Aquaculture at Central Institute of Freshwater Aquaculture, Bhubaneswar during 22-23 January 2013**
 - Iquebal, MA, Sarika and Kumar, Dinesh*. Next generation sequencing and its challenges. (Lead paper)
- **10th Symposium of Biotechnological Approach for Plant Protection: Constraints and Opportunities at Goa during 27-29 January 2013**
 - Islam, SN. Expert System: An IT based approach in IPM (Invited talk)
- **International Conference on Reliability, Infocom Technologies and Optimization (ICRITO 2013) held at Amity University, Noida, UP (India) during 29-31 January 2013**
 - Chaturvedi, KK*, Singh, VB and Khatri, SK. A study of bug prediction using Mozilla.
- **International Conference on Bio-resource and Stress Management organized at Science City, Kolkata during 06-09 February 2013**
 - Mishra, Dwijesh. Identification of co-regulated genes of chick-pea under abiotic stress.
- **15th Annual Conference on Statistics and Informatics in Agricultural Research of Society of Statistics, Computer and Applications organized at Banasthali Vidyapith, Banasthali during 24-26 February 2013**
 - Chandra, H*, Gharde, Y and Jain, VK. Small area estimation using estimated population level auxiliary data. (Invited talk).



- Dasgupta, Pratyush, Bhar, Lalmohan* and Gupta, VK- Robustness of BIB designs for multi-response experiments against the loss of observations. (Invited talk)
 - Dash, Sukant. Efficient block designs for mixed level factorial micro-array experiments based on baseline parameterization.
 - Parsad, Rajender* and Gupta, VK. Agricultural statistics in the welfare of the society. (Invited talk).
 - Paul, RK. Determination of trend in rainfall for different agro-climatic zones in India using wavelet techniques.
 - Sadhu, Sandip Kumar and V, Ramasubramanian*. Decision tree based models for classification in agricultural ergonomics.
 - Sarkar, Susheel Kumar*, Lal, Krishan and Gupta, VK. Construction of cost efficient multi-level factorial experiments.
 - Sud, UC*, Chandra, H and Gupta, VK. Calibration approach based regression type estimator for inverse relationship between study and auxiliary variable. (Invited talk).
 - Varghese, Cini*, Jaggi, Seema and Varghese, Eldho. A series of neighbour balanced polycross designs.
 - **International workshop on Data Analytics and Applications organized by Goa Campus of BIT Pilani during 26 February- 01 March 2013**
 - Rai, Anil. Agricultural bioinformatics and computational biology.(invited key speaker)
 - **7th National Conference on Computing for Nation Development – INDIACom organized by Bharti Vidyapeeth's Institute of Computer Applications and Management, New Delhi during 07-08 March 2013**
 - Dahiya, Shashi* and Yadav, Ruchi. Web based system for crop disease identification.
 - **National Symposium on Biotechnology: Present Status & Future Prospects held at Deen Bandhu Chhoturam University of Science & Technology (Haryana State Government University) on 16 March 2013**
 - Kumar, Dinesh. NGS Data analysis and its challenges. (Invited lead paper)
 - **4th Annual review Meeting of FASAL at ANGRAU, Hyderabad during 18-19 March 2013**
 - Agrawal, Ranjana. Statistical techniques for crop yield forecasting-IASRI approaches (Invited talk)
 - **National Seminar on Applied Statistics at Bayesian and Interdisciplinary Research Unit, ISI Kolkata on 22 March 2013**
 - Parsad, Rajender* and Gupta, VK. Application of designs for factorial experiments in national agricultural research system. (Invited talk)
 - **NAIP Component-I Workshop organized by NAARM Hyderabad during 22-23 March 2013**
 - Rai, Anil. Establishment of National Agricultural Bioinformatics Grid in ICAR.
- INVITED LECTURES/ SEMINAR TALKS DELIVERED**
- Dr. UC Sud**
- A lecture on Agriculture statistics for ISS probationers at National Academy of Statistical Administration (NASA), Greater Noida, UP on 21 June 2012.
 - A lecture on Agriculture in India and emerging Techniques for generation of agriculture statistics under training programme for ISS probationers at NASA, Greater Noida, UP on 02 July 2012.
 - A lecture on Agriculture in India and emerging techniques for generation of agriculture statistics under 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 NASA, MOS&PI, Govt. of India, Greater Noida, UP.
 - A lecture on Small area estimation procedure and its uses in agriculture during training programme for the participants from Madhya Pradesh organized by NASA, Greater Noida, UP during 10-14 September 2012.
 - Two lectures i) Statistic, estimators (Least Square, Maximum Likelihood and BLUE), ii) properties of estimators with introduction to ratio and regression estimators during 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.

- Two lectures on Small area estimation procedure and its uses in Agriculture Statistics under training programme organized by NASA, Greater Noida, UP, for the participants from DES Jammu & Kashmir during 01-12 October 2012.

Dr. Prajneshu

- Invited talk on Non-linear statistical models and their applications at JNKVV, Jabalpur on 28 December 2012.

Dr. Rajender Parsad

- A lecture on SAS: Statistical procedures under training programme on Field Survey, Data Acquisition and Analysis held at NCAP New Delhi during 21-27 July 201.
- A lecture on SAS for statistical procedures under 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.
- Two lectures on SAS: An overview to the participants of the training programme on Statistical Models for Forecasting in Agriculture organized at IARI, New Delhi under the aegis of CAFT during 11 September – 01 October 2012 .
- Two lectures on Design resources server and Indian NARS statistical computing portal through WebEx session under training programme on Analysis of Experimental Data Using SAS organized at NAARM, Hyderabad under the aegis of NAIP Consortium on Strengthening Statistical Computing for NARS during 02-08 November 2012.
- Two lectures on Design resources server and Indian NARS statistical portal during training programme on Biometrical Analysis Using SAS organized under the NAIP Consortium Strengthening Statistical Computing for NARS at IGKV, Raipur on 01 February 2013.
- Nine lectures i) SAS: An overview; ii) Tests of significance using SAS; iii) Correlation and regression analysis using SAS; (iv) Analysis of experimental data using SAS; (v) Design resources server; vi) Indian NARS statistical computing portal; vii) Mixed models using SAS; viii) Multivariate analysis using SAS and ix) Diagnostics and remedial measures under training programme on Data Analysis using SAS organized by IASRI under NAIP

Consortium Strengthening Statistical Computing for NARS at Rajmata Vijayaraja Scindia Krishi Vishwa Vidyalaya (RVSKVV), Gwalior during 18-23 February 2013.

- Three lectures i) Strengthening statistical computing for NARS, ii) Genesis, achievements and impact; Indian NARS statistical computing portal; Design resources server and iii) SAS: A brief overview under Sensitization programme on Statistical Computing for NARS organized by IISR, Lucknow on 28 March 2013.

Dr. Anil Rai

- A lecture on Genotype imputation under training program on Bioinformatics for Conservation and Improvement of Animal Genetic Resources during 18-28 February 2013 at NBAGR Karnal.

Dr. KK Tyagi

- A lecture on Sampling methods and sequential sampling plans relevant with RCT under workshop on Biostatistical Aspects of Randomized Clinical Trials (RCT) and Medical Ethics, organized at Govt. Medical College Hospital, Chandigarh on 21 September 2012.
- A lecture on Randomized response techniques under workshop on Randomised Response Techniques at Govt. Medical Hospital College, Chandigarh on 20 October 2012.

Dr. Krishan Lal

- Eight lectures i) Incomplete block designs ii) Factorial experiments, iii) Analysis of covariance, iv) Combined analysis of data, v) Response surface designs, vi) Experiments with mixtures, vii) Analysis of repeated measures and viii) Principal component analysis during training on Analysis of Design of Experiments using SAS during 19-24 November 2012 organized by Department of Agricultural Statistics and Social Science, College of Agriculture, Indira Gandhi Agricultural University, Raipur.
- Eight lectures i) Design resources server, ii) CRD, iii) RCBD, iv) LSD, v) BIB designs, vi) Factorial experiments including confounding, vii) Split and strip plot design and viii) Combined analysis of data under training programme during 18-23 February 2013 on Data Analysis for Water Management Research using SAS under the NAIP Consortium Strengthening Statistical Computing for NARS at DWM, Bhubaneswar.



Dr. Seema Jaggi

- Four Lectures i) SPSS: An overview, (ii) Frequency Distribution and descriptive statistics using SPSS, (iii) Correlation and regression and (iv) Testing of hypothesis and ANOVA under training course on Data Processing and Analysis organized by Council for Social Development, New Delhi during 21-26 May 2012.
- Four lectures i) Correlation and regression analysis, ii) SPSS: An overview, iii) Testing of hypothesis and iv) ANOVA under training programme on Research Methodology for Social Sciences organized by Council for Social Development, New Delhi during 03-15 September 2012.
- Two lectures on SAS Enterprise Guide for analysis of experimental data under NAIP Consortium Strengthening Statistical Computing for NARS at Rajmata Vijayaraja Scindia Krishi Vishwa Vidyalaya (RVSKVV), Gwalior during 18-23 February 2013.

Dr. Lalmohan Bhar

- Three lectures i) Regression diagnostics and remedial measures, ii) Non-linear models, iii) Probit analysis and Analysis of experimental data under NAIP Consortium Strengthening Statistical Computing for NARS at Rajmata Vijayaraja Scindia Krishi Vishwa Vidyalaya (RVSKVV), Gwalior during 18-23 February 2013.

Dr. AR Rao

- Three lectures i) PCA, ii) Factor analysis and iii) Practicals on PCA & FA under training course on data processing and analysis organized by Council for Social Development, New Delhi during 21-26 May 2012.
- A lecture on R-Software: Usefulness in agricultural research under Centre for Advanced Faculty Training (CAFT) in Agricultural Economics on 23 August 2012 at Economics Division, IARI, New Delhi.
- A lecture on Structure and characterization of gene coding regions in the workshop-cum-training on Bioinformatics approaches to discover new crop genes on 26 September 2012 at NBPGR, New Delhi.
- Three lectures i) PCA, ii) Factor analysis and iii) Practicals on PCA & FA using SPSS in a training programme on Data processing and analysis, organized by Council for Social Development during 07-12 January 2013.

- Six lectures i) PCA, ii) Factor analysis, iii) Cluster analysis, iv) MANGYA, v) Stability and vi) AMMI models under training programme on Biometrical Analysis Using SAS organised during 29 January - 05 February 2013 at Indira Gandhi Agricultural University, Raipur.

Dr. Dinesh Kumar

- A lecture on DNA signature of germplasm by computational approach under summer school on phenomic and genomic tools for analysis of livestock genomes during 14 -23 June 2012 held at NBAGR, Karnal.
- A lecture on Applications of bioinformatics tools on bio-resource management at Institute of Bioresources and Sustainable Development (IBSD) (DBT Institute), Imphal, Manipur on 06 September 2012.
- Three lectures i) Analytical tools in functional and comparative genomics in fisheries domain ii) Bioinformatics tools for genome annotations and iii) Computational approach for germplasm identification at subspecies level in fishes using STR and SNP markers followed by practical on demo dataset of ten experiments under Subject-Matter training under the NAIP funded project Establishment of National Agricultural Bioinformatics Grid (NABG) held at NBFGR, Lucknow during 27 November-07 December 2012.
- Two lectures i) Microbial genome annotation and ii) Computational approach for microbial identification using DNA markers under the NAIP funded project Establishment of National Agricultural Bioinformatics Grid (NABG) on Bioinformatics: Methods, Tasks and Applications in Microbial Research held at National Bureau of Agriculturally Important Microorganism (NBAIM), Mau during 04-15 December 2012.
- A lecture on Bioinformatics tools for microbial identification under National Training Programme: Polyphasic Microbial Identification Methods and Application organized at NBAIM, Mau, UP during 05-14 March 2013.
- Two lectures i) Domestic animal genomics and Bioinformatics: Global status vs Indian scenario and ii) Bioinformatics based domestic animal germplasm piracy without movement of germplasm: Case studies under CAFT programme on Molecular genetic data generation, analysis and utilization in animal breeding organized at National Dairy

Research Institute, Karnal during 05-25 March 2013.

- Three lectures i) Genome annotation in Prokaryotes and Eukaryotes, ii) Intellectual property right and germplasm management: Indian case studies and iii) Microarray probe designing and data analysis under DBT -National Training on Functional genomic analysis for livestock improvement at PDC, Meerut during 22 January-04 February 2013.
- Two lectures i) Application of bioinformatics tools in agricultural productivity and ii) Intellectual property rights & Domestic animal germplasm: case studies under training workshop on Bioinformatics: Applications in Agricultural & Medical Sciences held at Centre for Bioinformatics, School of Biotechnology, BHU, Varanasi during 09-11 February 2013.
- A talk on Computational approach for crop and domestic animal improvement: Global status and challenges for India at State Agricultural University SKUAST, Jammu on 11 March 2013.

Dr. Cini Varghese

- Three lectures (i) frequency distribution and graphical presentation, (ii) Descriptive statistics and (iii) Practical on correlation and regression using SPSS and Practical on testing of hypotheses and ANOVA using SPSS under training course on Data Processing and Analysis organized by Council for Social Development, New Delhi during 21-26 May 2012.
- Three lectures (i) Introduction to basic statistics; (ii) Non-parametric methods and (iii) Practical: Statistical analysis using SPSS under training programme on Research Methodology for Social Sciences organized by Council for Social Development, New Delhi during 03-15 September 2012.
- Three lectures i) Tests of significance, ii) Practical on tests of significance and iii) Non-parametric tests and Practical on non-parametric tests under training course on Data Processing and Analysis organized at Council for Social Development, New Delhi during 07-12 January 2013.

Dr. Hukum Chandra

- Two lectures i) Overview of R software and practical exercise and ii) Survey data analysis using R software under 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.

Dr. Ramasubramanian V

- A lecture on Technology forecasting models in agriculture under 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.
- Lectures on Correlations, practical on correlations using SPSS, regression: univariate and multivariate and practical on regression using SPSS under training course on Data Processing and Analysis organized at Council for Social Development, New Delhi during 07-12 January 2013.
- Six lectures i) Simple and multiple linear regression modeling, diagnostics & remedial measures, ii) Forecasting using weather indices based regression models, iii) Fitting non-linear models – Gompertz, Logistic and monomolecular, iv) Time series analysis and modelling - Exponential smoothing, ARIMA, Intervention and ARCH/GARCH models, v) Logistic regression and logit models and vi) Markov chain modeling for crop forecasting under training programme on Data Analysis Using SAS during 14-20 January 2013 at MPUAT, Udaipur.
- Three lectures i) Cluster analysis, ii) Canonical correlation and iii) Multi-dimensional scaling under training programme on Survey Design and Data Analysis using SAS in Social Sciences at NAARM, Hyderabad held during 28 January-06 February 2013.
- Two lectures i) Multi-dimensional scaling and ii) Logistic regression for classification and prediction under training programme on SAS for Data Reduction and Multivariate Analysis at CIFE, Mumbai held during 11-16 February 2013.
- Five lectures i) Time series analysis using SAS (Exponential smoothing, ARIMA, etc.), ii) Hands on time series analysis, iii) Fitting non-linear models using SAS, iv) Multidimensional scaling using SAS and v) Forecasting using weather indices based regression models through SAS under NAIP Consortium Strengthening Statistical Computing for

NARS at Rajmata Vijayaraja Scindia Krishi Vishwa Vidyalaya (RVSKVV), Gwalior during 18-23 February 2013.

- A lecture on Technology forecasting techniques with applications in agriculture: Retrospect and prospects under national workshop on Foresight and Future Pathways of Agricultural Research through youth in India held at NAS Complex, New Delhi during 01-02 March 2013.

Dr. Prachi Misra Sahoo

- A lecture on Geostatistics and its applications under national workshop on geospatial technologies and applications held during 30-31 May 2012 at Manav Rachna International University, Faridabad.
- A lecture on Spatial data modeling and its applications during training programme on Geospatial Technology for the university and college faculty held during 22 May - 11 June 2012 at the Department of Geography, Jamia Millia Islamia, New Delhi sponsored by NRDMS of DST.

Dr. Alka Arora

- Two lectures Hyper Text Markup Language (HTML) and Microsoft Word as HTML editor in the CAFT training program on Emerging Paradigms of Competencies for Extension Professionals in Context of Changing Agricultural Scenario during 03-23 January 2013 at IARI.

Md. Samir Farooqi

- A lecture on Data management and statistical procedures using SAS EG under the training programme on Data Analysis Using SAS during 04-09 March 2013 at SKRAU, Bikaner.
- Five lectures on Design resources server, Indian NARS Statistical Computing Portal Analysis, running of macros and data management and statistical procedures using SAS EG, under the training program held at National Bureau of Agriculturally Important Microbes (NBAIM), Mau Nath Bhanjan, Uttar Pradesh during 22-24 November 2012.

Dr. Wasi Alam

- A lecture on Simulation modelling and design of experiments under training on Recent advances in micro-irrigation and fertigation at Center for Protected Cultivation Technology (CPCT), IARI, New Delhi during 05-25 November 2012.

Dr. Amrit Kumar Paul

- Four lectures i) SAS for biometrical analysis, ii) SAS for inbreeding analysis, iii) Diallel analysis using SAS and iv) SAS macros for biometrical study under training programme on Biometrical Analysis using SAS at IGKVV, Raipur on 28 January 2013.
- Three lectures i) Application of SAS for breeding data analysis, ii) Diallel analysis using SAS and iii) Running of genetics SAS macro under NAIP Consortium Strengthening Statistical Computing for NARS at Rajmata Vijayaraja Scindia Krishi Vishwa Vidyalaya (RVSKVV), Gwalior during 18-23 February 2013.

Dr. Dwijesh Chandra Mishra

- A lecture on Statistical data mining using MATLAB under workshop on statistical data mining using matlab at Maharaja Agrasen Institute of Technology, New Delhi during 26-27 July 2012.
- Seven lectures i) Exploratory data analysis using SAS, ii) Application of SAS software in basic statistical analysis, iii) Correlation and regression analysis, iv) Multivariate analysis, v) Analysis of the data of designed experiments, vi) Microarray data analysis using JMP genomics and vii) Cluster analysis under the training program held at National Bureau of Agriculturally Important Microbes (NBAIM), Mau Nath Bhanjan, Uttar Pradesh during 22-24 November 2012.

Dr. Sudeep

- A lecture on Designing expert system, Content creation (Web designing, Multimedia Authoring Tools) in the CAFT training program on Emerging Paradigms of Competencies for Extension Professionals in Context of Changing Agricultural Scenario during 03-23 January 2013 at IARI.

Dr. Tauqueer Ahmad

- A lecture on Crop area estimation using GIS and remote sensing technology under 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.
- A lecture on Overview of geographic information system under training programme on Research Methodology for Social Sciences organized by

Council for Social Development, New Delhi during 03-15 September 2012.

Sh. SN Islam

- Three lectures i) Expert system on wheat and ii) Expert system on seed spices and iii) e-Platform for seed spice growers under farmers training programme at NRCSS, Ajmer on 30 October 2012 and at Krishihy Vigyan Kendra, Tabiji, Ajmer under Rajasthan Agricultural University on 31 October 2012.
- A lecture on Expert system technology for irrigation management during a Winter School Recent Advances in Micro Irrigation and Fertigation at CPCT, New Delhi on 09 November 2012.

Smt. Anu Sharma

- A lecture on Overview of data mining under workshop on statistical data mining using matlab at Maharaja Agrasen Institute of Technology, New Delhi during 26-27 July 2012.

Smt. Anshu Bharadwaj

- Two lectures i) Geoinformatics in precision agriculture: Statistical aspect and ii) Spatial data mining under training on Geospatial Technologies and its Applications at HPKV, Palampur during 30 June-02 July 2012.

Dr. Eldho Varghese

- Three lectures i) Non-parametric tests, ii) Practical on non-parametric tests using SPSS and iii) Logistic regression and practical on logistic regression using SPSS under training course on data processing and analysis organized by Council for Social Development, New Delhi during 21-26 May 2012.

Sh. Sanjeev Kumar

- Three lectures i) Classification techniques, ii) SVM and SVM using MATLAB and iii) R under workshop on statistical data mining using matlab at Maharaja Agrasen Institute of Technology, New Delhi during 26-27 July 2012.

Sh. SB Lal

- A lecture on Parallel computing and workflows/pipelines in bioinformatics under a workshop on Bioinformatics Tool and Application in Agriculture organized by Unit of Simulation and Informatics, IARI, New Delhi during 11-13 March 2013.

PARTICIPATION

Conferences / Workshops / Seminars / Symposia/ Trainings etc.

- Symposium on Agricultural biotechnology Regulation, Trade, and Co-existence 2012 - BIGMAP which was held at Gateway Hotel and Conference Centre, Ames, IA, USA on 14 April 2012. (Dr. AK Paul)
- 5th World Information Technology Forum (WITFOR) 2012 i.e. the International Federation for Information Processing (IFIP) flagship conference on ICT for Sustainable Human Development organized in partnership with the Department of Electronics and Information Technology, Ministry of Communications and Information Technology, Govt. of India at Vigyan Bhawan, New Delhi during 16-18 April 2012. (Dr. KN Singh, Dr. Tauqueer Ahmad, Dr. Prachi Misra Sahoo, Dr. Cini Varghese, Dr. Alka Arora, Ms. Shashi Dahiya, Ms. Anshu Bharadwaj, Sh. Pal Singh, Sh. SN Islam, Sh. Soumen Pal, Dr. AR Rao, Sh. SB Lal, Smt. Anu Sharma, Sh. Sanjeev Kumar, Dr. DC Mishra, Md. Samir Farooqi and Sh. KK Chaturvedi)
- National Conference on Cooperatives organised at NASC on 15 May 2012. (Dr. Sushila Kaul)
- International Conference on New Statistical Methods for Next Generation Sequencing Data Analysis on 11 May 2012 at Iowa State University, Howe Hall, Alliant Energy Lee Liu Auditorium. (Dr. AK Paul)
- National Conference on Cooperatives' at NASC, New Delhi on 15 May 2012. (Dr. Sushila Kaul)
- Policy Dialogue on Building Climate Resilient Agriculture in India, organized jointly by the International Crop Research Institute for Semi-Arid Tropics (ICRISAT) and the Indian Council of Agricultural Research (ICAR) on 22 May 2012 in National Agricultural Science Centre (NASC), Pusa, New Delhi. (Dr. DR Singh)
- Ion Torrent™ International Workshop hosted by the Genomic Technologies Facility, Iowa State University, Ames, USA on 22 May 2012. (Dr. AK Paul)
- Workshop on IPv6 Essentials, Implementation and Security organized at CERT-In, Electronics Niketan, CGO Complex, New Delhi on 11 June 2012. (Md. Samir Farooqi and Smt. Anu Sharma)
- Annual Review Workshop of NICRA at CRIDA, Hyderabad during 12-14 June 2012. (Dr. RK Paul)



- SAS Installation Workshop at NAARM, Hyderabad on 27 June 2012 and at CIFE, Mumbai on 30 June 2012. (Dr. AK Paul)
- 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)
- 1st 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)
- Authors Workshop organized by DULS, University of Delhi and Springer Private Ltd. on 23 August 2012 at Conference Centre, University of Delhi, Delhi. (Sh. KK Chaturvedi)
- 51st All India Wheat and Barley's Worker's Meet at Jaipur during 23-27 August 2012. (Sh. SN Islam)
- 6th CSI-IEEE International Conference on Software Engineering (CONSEG-2012) during 05-07 September 2012 held at DAVV Indore, MP (India). (Sh. KK Chaturvedi)
- 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)
- International Conference on Advances in Interdisciplinary Statistics and Combinatorics at UNCG, USA during 05-07 October, 2012. (Dr. Prajneshu)
- Workshop on National Data Sharing and Accessibility Policy on 05 October 2012 organized by National Informatics Centre (NIC) at CGO Complex, New Delhi. (Dr. VK Bhatia, Dr. Seema Jaggi and Dr. Alka Arora)
- 4th Organisation for Economic Cooperation and Development (OECD) World Forum during 16-19 October 2012 at New Delhi. (Dr. Hukum Chandra)
- Workshop on Wireless Security organized by the Department of Electronics and Information Technology on 17 October 2012 at Electronics Niketan, CGO Complex, New Delhi. (Sh. SN Islam, Sh. Virendra Kumar and Sh. Sunil Bhatia)
- XXX Workshop of AICRP on Integrated Farming Systems during 16-19 November 2012 at ICAR Research Complex for Goa. (Dr. Anil Kumar and Sh. NK Sharma)
- 26th Workshop on Developing Winning Research Proposals organized by NAIP at NAARM, Hyderabad during 22-23 November 2012. (Dr. Dinesh Kumar, Dr. Anil Rai and Sh. Sanjeev Kumar)
- 6th International Conference on Quality, Reliability, Infocomm Technology and Industrial Technology Management (ICQRITIM 2012) during 26-28 November 2012 at Conference Centre, University of Delhi, Delhi. (Sh. KK Chaturvedi)
- 3rd International Agronomy Congress on Agricultural Diversification, Climate Change Management and Livelihoods organized at IARI, New Delhi during 26-30 November 2012. (Sh. SN Islam)
- National Symposium on Space Technology for Food & Environment Security & Annual Convention of Indian Society of Remote Sensing & Indian Society of Geomatics at IARI, New Delhi during 05-07 December, 2012. (Dr. Prachi Misra Sahoo)
- International Conference on Reviving Growth organized by Ministry of Finance (GoI), CII and NIPFP under Delhi Economics Conclave-2012 held at Hotel Taj Palace, New Delhi during 14-15 December 2012. (Dr. DR Singh and Dr. Prawin Arya)
- 26th Annual Conference of Indian Society of Agricultural Marketing held at Pune during 20-22 December 2012. (Dr. SP Bharadwaj)
- International Conference on Big Data Analytics (BDA 2012) during 24-26 December 2012 organized by Department of Computer Science, University of Delhi (India) and University of Aizu (Japan) held at India International Centre, New Delhi (India). (Sh. KK Chaturvedi)
- Workshop on Combinatorial Mathematics with Statistical Applications in Health and Related Sciences at Guwahati University, Guwahati, Assam, India on 30 December 2012. (Dr. RK Paul)

- **International Conference on Statistics, Science, and Society: New Challenges and Opportunities (IISA 2013), organized by International Indian Statistical Association, Chennai, India during 02-05 January 2013**
 - Dr. Hukum Chandra as Convener and Chaired two sessions (i) session on Sample and Census, and (ii) session on Recent Advances in Sample Surveys
 - Dr. UC Sud organized a Session on Recent Advances in Sample Surveys
- National Workshop on Statistics in Health Research at TERI, New Delhi supported by ICMR on 04 January 2013. (Dr. Prachi Misra Sahoo)
- National Workshop on Museum Evaluation & Visitor Research organized by National Science Centre, Delhi during 17-19 January 2013. (Dr. Sushila Kaul)
- International Conference on Reliability, Infocom Technologies and Optimization (ICRITO 2013) during 29-31 January 2013 held at Amity University, Noida, UP. (Sh. KK Chaturvedi)
- International Conference on Bio-resource and Stress Management during 06-09 February 2013 organized at Science City, Kolkata (Dr. Dwijesh Chandra Mishra)
- Brainstorming Workshop on Methodologies to Assess Impact of Capacity Building under NAIP jointly organized by International Food Policy Research Institute and NAIP on 21 February 2013 at NASC Complex, Pusa, New Delhi (Dr. AR Rao also acted as a Panelist in the Technical Session-II on Experience sharing on impact of capacity building)
- 15th Annual Conference of the Society of Statistics and Computer Applications during 24-26 February 2013 at Apaji Institute of Mathematics & Applied Computer Technology, Banasthali Vidyapith, Banasthali, Jaipur, Rajasthan. (Dr. UC Sud, Dr. Rajender Parsad, Dr. LM Bhar, Dr. Hukum Chandra, Dr. Cini Varghese, Dr. Susheel Kumar Sarkar and Dr. Sukant Dash)
- Workshop on the Cost of Cultivation Study at Management Study Centre, Harish Chandra Mathur, Regional Public Administration Institute (HRM RIPA), Jawahar Lal Nehru Marg, Jaipur (Rajasthan) on 26 February 2013. (Dr. UC Sud)
- International workshop on Data Analytics and

Applications organized by Goa Campus of BITS Pilani during 26 February-01 March 2013 (Sh. SB Lal)

- Workshop on Information Technology in Agriculture and Food-A strategy formulation meeting during 15-16 March 2013 at NASC Complex, New Delhi. (Dr. Anil Rai)
- National Seminar on Applied Statistics on 22 March 2013 at Bayesian and Interdisciplinary Research Unit, ISI Kolkata. (Dr. Rajender Parsad)

Krishi Vigyan Mela- 2013

Institute participated in the Krishi Vigyan Mela 2013 held at IARI, New Delhi during 06-08 March 2013. Maize Agridaksh, Expert System on Wheat Crop Management, Expert System for Mushroom Crop, Expert System on Seed Spices and Design Resources Server were demonstrated to visitors, researchers and farmers. Posters on several other research achievements such as Strengthening of Statistical Computing for NARS, Management System: PG School IARI, eLearning resource for teaching and training agricultural women, Center for Agricultural Bioinformatics, Modelling the crop yield under agroforestry system, Impact assessment of



agroforestry system on the yield of associated barley and gram crops etc., were exhibited at the stall and the visitors were given leaflets and encouraged to use the expert systems developed.

Trainings

- Training on Practical approach on Networking during 11-15 April 2012 at IIT, Kanpur. (Sh. SN Islam)

- All India Training of Trainers on data collection for 19th Livestock Census, 2012 organized by Animal Husbandry Statistics Division of Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture, GOI at IASRI, New Delhi on 12 June 2012. (Dr. UC Sud, Dr. KK Tyagi, Dr. AK Gupta and Sh. VK Jain)
 - Management Development Programme in Agricultural Research at NAARM, Hyderabad during 02-07 July 2012. (Dr. UC Sud)
 - Training/meeting/ workshop on Harvest and Post Harvest Losses during 03-04 September 2012 at MPUAS, Jaipur. (Dr. Anil Rai)
 - Training programme on Statistical Model for Forecasting in Agriculture offered by IASRI under CAFT from 11 September-01 October 2012. (Dr. Eldho Varghese)
 - 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)
 - Management Development Programme on Leadership Development (a Pre-RMP Programme) training programme organized by NAARM, Hyderabad during 08-19 October 2012. (Dr. Rajender Parsad and Dr. KN Singh)
 - Short term course on Soft Computing Techniques Applications during 05-09 November 2012 at GB Pant University of Agriculture and Technology by National Institute of Technical Teachers' Training and Research (NITTTR), Chandigarh. (Dr. MA Iquebal)
 - Training course on Field Trial & QTL Analysis using R & R/QTL at ICRISAT Hyderabad during 03-06 December 2012. (Dr. Susheel Kumar Sarkar)
 - National training on Project formulation, risk assessment, scientific report writing and presentations (NAIP funded) in the Division of Agricultural Engineering, Indian Agricultural Research Institute during 11-15 December 2012. (Dr. Ramasubramanian V, and Sh. Arpan Bhowmik)
 - Professional Attachment training at NBAIM, Mau, UP as a part of 94th FOCARS Training during 22 February - 22 May 2012 (Sh. Sudhir Srivastava).
 - Professional Attachment training under Dr. RN Sahoo, Senior Scientist, Division of Agricultural Physics, IARI, New Delhi as a part of 96th FOCARS training during 01 January-31 March 2013. (Sh. Ankur Biswas)
 - Professional Attachment training under Prof. Alope Dey at Indian Statistical Institute (Delhi Centre) as a part of 96th FOCARS training during 01 January - 31 March 2013 (Sh. Arpan Bhowmik)
 - National Workshop on Museum Evaluation & Visitor Research organized by National Science Centre, Delhi during 17-19 January 2013. (Dr. Sushila Kaul)
 - Training programme on Hyper Spectral Remote Sensing for Agriculture (HYPERAGRI-2013) sponsored by Department of Science and Technology (DST), Govt. of India in the Division of Agricultural Physics, IARI, New Delhi during 18-27 February 2013. (Sh. Ankur Biswas)
 - Training program on Hyperspectral Remote Sensing and Applications in Water Resources during 18-23 March 2013 in Agricultural and Food Engineering Department, Indian Institute of Technology, Kharagpur. (Dr. Prachi Misra Sahoo)
- Visit Abroad**
- Dr. VK Gupta**
- UK to attend the meeting of the CRP 1.1 Dryland Systems - Integrated Agricultural Production Systems for the Poor and Vulnerable Dry Areas of the CGIAR at University of Reading, UK held during 26-28 November 2012.
- Dr. VK Bhatia**
- EBI, London and SIB Switzerland for studying the infrastructural facilities, exploring the possibility of collaboration and capacity building as a member of the team of five scientists constituted by ICAR during 17-22 June 2012.
 - Bangkok, Thailand to attend meetings of the Steering Group of Agricultural Statistics held during 24-25 May 2012 and 18-20 July 2012.
- Dr. UC Sud**
- Thailand to attend Regional Workshop on Sampling for Agricultural Censuses and Surveys in Bangkok, Thailand during 13-18 May 2012.
 - Bangladesh for the Consultancy on Harmonization and Dissemination of Unified Agricultural Production

Statistics in Bangladesh during 16-23 October 2012 and during 18-20 December 2012.

Dr. Rajender Parsad

- Japan to attend 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 at Tsukuba, Japan during 02-04 July 2012.

Dr. Prajneshu

- Pakistan 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 at Islamabad, Pakistan during 02-03 September 2012.
- USA to participate in the International Conference on Advances in Interdisciplinary Statistics and Combinatorics held at UNCG, USA during 05-07 October 2012.

Dr. Anil Rai

- EBI, London and SIB Switzerland for studying the infrastructural facilities, exploring the possibility of collaboration and capacity building as a member of the team of five scientists constituted by ICAR during 17-23 June 2012.

Dr. Hukum Chandra

- Colombia to attend the 22nd Colombian Symposium in Statistics at Bucaramanga, Colombia during 17-21 July 2012. He delivered an invited talk on Applications of small area estimation.

Dr. AK Paul

- USA for three months NAIP HRD training in the area of Crop Bioinformatics (Comparative genomics in soybean's pathogens) in Agronomy Division of Iowa State University, USA during 08 March-07 June 2012.

Dr. Prawin Arya

- USA to attend three months international training under NAIP on Policy Analysis: Sub area : Modeling for Land Use Planning (Social Sciences) at Division of Agricultural and Biosystems Engineering, Iowa State University of Science and Technology, Davidson Hall, Ames, USA during 15 June-12 September 2012.

Sh. Sanjeev Kumar

- USA to attend training programme in the area of Bioinformatics and Comparative Genomics at Iowa State University, Ames, Iowa, USA during 14 December 2012-07 March 2013.

