

List of Publications

Research Papers

1. Arora, Alka, Singh, Balbir, Dahiya, Shashi and Farooqi, Mohd. Samir (2005). [Planning and distribution of manpower of ICAR using PERMISnet](#). J. Ind. Soc. Agril. Statist., **59**, 141–145.
2. Bhatia, Ajit Kaur, Parsad, Rajender, Sharma, SK and Kaur, Rajinder (2005). [Statistical assessment of different crop rotations](#). J. Farm. Sys. Res. Dev., 11(2), 190–196.
3. Bhatia, VK and Paul, Amrit Kumar (2006). [Effect of aberrant values on estimation of heritability](#). J. Anim. Sci., 76(10), 862–863.
4. Bhatia, VK and Paul, Amrit Kumar (2006). [Estimation of heritability by Bayesian approach](#). J. Anim. Sci., 76(10), 860–861.
5. Chandran, KP and Prajneshu (2007). [Nonparametric regression approach for modelling and forecasting country's meteorological subdivisions rainfall data](#). J. Agrometeorology, 8, 254–259.
6. Choudhary, Gunanand, Kumar, Jitendra, Walia, Suresh, Parsad, Rajender and Parmar, Balraj S (2006). [Development of controlled release formulations of carbofuran and evaluation of their efficacy against Meloidogyne incognita](#). J. Agric. Food Chem., 54, 4727–4733.
7. Choudhary, Gunanand, Kumar, Jitendra, Walia, Suresh, Parsad, Rajender and Parmar, Balraj S (2006). [Controlled release of carbofuran into water from polymeric matrices](#). J. Pesticide Res., 18, 65–69.
8. Dash, Jyotiprava, Sarangi, A, Singh, AK, Dahiya, Shashi (2005). [Biodrainage: An alternative technique to control water logging and salinity](#). J. Soil Water Cons., 4, 149–154.
9. Dey, Amitava, Sharma, VK and Ghosh, Himadri (2005). [Prediction in two-equation linear regression models](#). Cal. Stat. Assoc. Bull., 57, 195–207.
10. Ghosh, H, Sunilkumar, G and Prajneshu (2006). [Self exciting threshold autoregressive models for describing cyclical data](#). Cal. Stat. Assoc. Bull., 58, 115–132.
11. Ghosh, H, Prajneshu and Sunilkumar, G (2006). [Modelling and forecasting of bilinear time-series using frequency domain approach](#). J. Comb. Info. Sys. Sci., 31, 121–137.
12. Ghosh, H, Iquebal, MA and Prajneshu (2006). [On mixture nonlinear time-series modelling and forecasting for ARCH effects](#). Sankhya, 68, 111–129.
13. Iquebal, MA and Paul, Amrit Kumar (2006). [Effect of more than one related auxiliary trait on estimation of heritability of herd life](#). Ind. J. Anim. Sci., 76(8), 625–632.
14. Iquebal, MA and Paul, Amrit Kumar (2006). [Empirical comparison of different estimates of heritability of herd life using related auxiliary traits in case of non-normal situations](#). Ind. J. Anim. Sci., 76(9), 750–754.

15. Iquebal, MA, Paul, Amrit Kumar and Bhatia, VK (2004). [Empirical comparison of different estimates of heritability of herd life using unrelated auxiliary traits under non-normal situations](#). *Ind. J. Appl. Statist.*, 8, 59–72.
16. Jaggi, Seema, Gupta, VK and Ashraf, Jawaid (2006). [On block designs partially balanced for neighbouring competition effects](#). *J. Ind. Statist. Assoc.*, 44, 27–41.
17. Kadam, DM, Samuek, DVK and Parsad, Rajender (2006). [Optimisation of pre-treatments of solar dehydrated cauliflower](#). *J. Food Engg.*, 77, 659–664.
18. Kaul, Sushila and Singh, RK (2006). [An economic analysis of wages of agricultural labour in Uttar Pradesh](#). *Manpower J.*, 31(1), 77–86.
19. Kaur, Rajinder, Kumar, Anil and Farooqi, Samir (2005). [Statistical assessment of different rice \(*Oryza sativa*\) varieties based sequences](#). *Ind. J. Agri. Sci.*, 75(8), 501–503.
20. Khurana, GL, Tomar, RS and Kumar, Rajendra (2005). [Comparative study of cropping system experiments by using different statistical techniques](#). *New Botanist.*, 32(1-4), 63–72.
21. Kumar, Rajendra, Kapoor, JK and Singh, NP (2005). [Sugarcane production response study in relation to optimum time of harvesting and dose of potash](#). *Asia Pacific J. Environ. Dev.*, 12(1).
22. Kumar, Rajendra, Kapoor, JK and Singh, NP (2006). [Statistical investigation on the fertilizer use efficiency in relation to cultural practices](#). *Bhartiya Krishi Anusandhan Patrika*, 21(1), 65–72.
23. Kumar, Ranjit, Singh, NP, Singh, RP and Vasisht, AK (2006). [Rural infrastructure and agricultural growth: Interdependence and variability in Indo-Gangetic Plains of India](#). *Ind. J. Agri. Econ.*, 61(3), 469–480.
24. Kumar, Sanjeev, Sethi, IC and Arora, A (2006). [On-line data management system for long term fertilizer experiments](#). *J. Ind. Soc. Agril. Statist.*, 60(3), 162–168.
25. Narain, Prem, Sharma, SD, Rai, SC and Bhatia, VK (2005). [Dimensions of socio-economic development in Jammu and Kashmir](#). *J. Ind. Soc. Agril. Statist.*, 59(3), 243–250.
26. Parsad, Rajender, Gupta, VK and Srivastava, R (2007). [Designs for cropping systems research](#). *J. Statist. Plann. Inf.*, 137, 1687–1703.
27. Prasad, Pushplata, Tiwari, Arun K, Kumar, KM Prasanna, Ammini, AC, Gupta, Arvind, Gupta, Rajeev, Sharma, AK, Rao, AR, Nagendra, R, Chandra, T Satish, Tiwari, SC, Gupta, B Lal and Thelma, BK (2006). [Chronic renal insufficiency among Asian Indians with type 2 diabetics, I. Role of RAAS gene polymorphisms](#). *BMC Med. Genet.*, 7, 42.
28. Rai, Anil, Misra Sahoo, Prachi and Singh, Randhir (2006). [Spatial sampling procedures for agricultural surveys using geographical information system](#). *J. Ind. Soc. Agril. Statist.*, 60(2), 134–143.
29. Rai, Anil, Misra Sahoo, Prachi, Singh, Randhir, Handique, BK and Rao, CS (2005). [Integrated approach based on remote sensing and GIS for estimation of area under paddy crop in northeastern hilly region](#). *J. Ind. Soc. Agril. Statist.*, 59(2), 151–160.

30. Rai, Anil, Saxena, BC and Bindal, Vijay (2005). **Two-phase sampling in multiple frame surveys**. J. Ind. Soc. Agril. Statist., 59(3), 187–189.
31. Raju, BMK, Bhatia, VK and Samanth Kumar, VV (2006). **Assessment of sensitivity with incomplete data**. J. Ind. Soc. Agril. Statist., 60(2), 118–125.
32. Rathore, Abhishek, Parsad, Rajender and Gupta, VK (2006). **Computer aided search of efficient block designs for making all possible pairwise treatment comparisons**. J. Statist. Appl. (Forum of Interdisciplinary Mathematics), 1(1), 15–33.
33. Sarika, Wahi, SD and Rao, AR (2006). **A Study on the robustness of estimate of genetic correlation**. Ind. J. Anim. Sci., 76(9), 759–763.
34. Sarkar, Ananta and Parsad, Rajender (2006). **Block designs for 2-colour micro-array experiments – An overview**. Pusa Agri. Science, 38–54.
35. Sharma, Anu, Goyal, RC, Gupta, VH and Grover, Rajni (2006). **Design and on-line management of database on Indian Agricultural Education System**. J. Ind. Soc. Agril. Statist., 60(3), 155–161.
36. Sharma, SD and Sud, UC (2006). **Observations on situation assessment of farmer households, NSS 59th round (January-December 2003)**. J. Stat. Appl., 4(1) (New Series), 13–28.
37. Singh, DR and Singh, RP (2006). **Structure, determinants and efficiency of groundwater markets in Western Uttar Pradesh**. Agric. Eco. Res. Rev., 10(1), 129–144.
38. Singh, DR, Kaul, Sushila and Sivaramane, N (2006). **Migratory sheep and goat production system: The mainstay of tribal hill economy in Himachal Pradesh**. Agric. Eco. Res. Rev., 10(2), 387–398.
39. Singh, Okendro N, Bhatia, VK and Paul, AK (2006). **Estimation of variance components when errors are correlated by autoregressive of order one**. J. Ind. Soc. Agril. Statist., 60(2), 126–130.
40. Singh, Rama Krishna, Srivastava, R and Parsad, Rajender (2005). **Robustness of standard re-inforced balanced incomplete block designs against exchange of a test treatment**. J. Ind. Soc. Agril. Statist., 59(3), 228–232.
41. Singh, NO, Rao, AR, Wahi, SD and Singh, VP (2005). **Robustness of bootstrap estimates of variance of heritability to master samples in halfsib analysis**. Ind. J. Anim. Genet. Breed., 38(1, 2).
42. Srivastava, R, Parsad, Rajender, Dey, Amitava and Gupta, VK (2006). **A-efficient block designs for asymmetrical slope ratio assays**. J. Statist. Appl. (Forum for Interdisciplinary Mathematics), 1(2–4), 185–192.
43. Swain, SK, Gupta, JP, Sahoo, PK, Kar, Abhijit and Parsad, Rajender (2006). **Studies on rupture characteristics of drum roasted cashewnut**. J. Agric. Engg., 43(3), 122–125.
44. Thomas, G, Mohapatra, T, Rao, AR and Sharma, RP (2006). **Distinguishing Indian commercial wheat varieties using RAPD based DNA fingerprints**. Ind. J. Biotech., 5, 200–206.

45. Venugopalan, R and Prajneshu (2006). [Bootstrap estimation for non equilibrium Schaefer surplus production model](#). Ind. J. Fish., 53, 115–118.
46. Wahi, SD and Rao, AR (2005). [Empirical investigations on the estimation of heritability in presence of non-genetic fixed effects under halfsib mating designs](#). Ind. J. Anim. Genet. Breed., 38, 1–2.
47. Wahi, SD, Bhatia, VK and Rao, AR (2006). [Study of statistical properties of genetic correlation using bootstrap technique](#). Ind. J. Anim. Sci., 76(9), 755–758.
48. Wimmer, K, Roca, X, Beiglbock, H, Etzler, J, Rao, AR, Krainer, AR, Fonatsch, C and Massiaen, L (2007). [Extensive in silico analysis of NF1 splicing defects uncovers determinants for splicing outcome upon 5' splice site disruption](#). Human Mutation, Advanced Online Publication, 1–4.

Popular Articles

- Bhardwaj, SP and Sharma, SD (2007). [Cultivation of NTFPs as the best measure of poverty eradication of poor tribal cultivators - A case study of lac cultivation](#). Non-Wood News, 14, 28–29.
- Prajneshu and Chandran, KP (2006). [Computation of compound growth rates using nonlinear growth models - An illustration with SPSS](#). The SPSS Anal., 24–28.
- अग्रवाल, रंजना एवं भाटिया, विजय कुमार (2007). [संस्थान के कीर्ति स्तम्भ-डॉ विनायक गोविन्द पाण्डे । सांख्यिकी-विमर्श \(2006-07\), भा.कृ.सां.अ.स., नई दिल्ली, 1-5](#)
- कुमार, अशोक एवं कुमार, अनिल (2007). [उत्तर प्रदेश में सूक्ष्म वित्त व स्वयं सहायता समूहों का निष्पादन । सांख्यिकी-विमर्श \(2006-07\), भा.कृ.सां.अ.स., नई दिल्ली, 71-76](#)
- खत्री, आर एस एवं कुमार, अनिल (2006). [भारतीय अर्थव्यवस्था में पशुधन का महत्व । स्मारिका, किसान मेला आवाम पशु विज्ञान प्रदर्शनी। अक्टूबर 28-30, 2006, 127-131](#)
- प्रज्ञेष्, घोष, हिमाद्री एवं अग्रवाल, रंजना (2007). [कृषि अनुसंधान में अरैखिक काल-श्रृंखला मॉडलिंग । सांख्यिकी-विमर्श \(2006-07\)\] भा.कृ.सां.अ.स., नई दिल्ली, 35-42](#)
- सिंह, बलबीर, दहिया, शशि, अरोड़ा, अलका एवं पफारूकी, समीर (2007). [भारतीय कृषि अनुसंधान परिषद \(भा.कृ.अनु.प.\) में कार्मिक प्रबन्धन सूचना-तंत्र नेटवर्क \(परमिसनेट\) । सांख्यिकी-विमर्श \(2006-07\), भा.कृ.सां.अ.स., नई दिल्ली, 35-38](#)
- तोमर, आर एस, कुमार, प्रमोद, शर्मा, वी के एवं कौर र (2007). [टीक एवं यूकेलिप्टस के तने का आयतन-पूर्वानुमान मॉडल । सांख्यिकी-विमर्श \(2006-07\), भा.कृ.सां.अ.स., नई दिल्ली, 67-70](#)
- शर्मा, एस डी (2007). [राष्ट्रीय सांख्यिकी तन्त्र । सांख्यिकी-विमर्श \(2006-07\), भा.कृ.सां.अ.स., नई दिल्ली, 27-34](#)

- शर्मा, एस डी, खत्री, आर एस एवं जैन, आर पी (2007). *राष्ट्रीय कृषि विज्ञान संग्रहालय / सांख्यिकी-विमर्श (2006-07)*, भा.कृ.सां.अ.स., नई दिल्ली, 56-66

The following popular articles were appeared in the Proceedings of XIV National Conference of Agricultural Research Statisticians held at JNKVV, Jabalpur from 17 to 19 November, 2004.

- **Application of Data Mining Techniques in Cluster Analysis**, V.K. Bhatia, 83-89
- **Application of Information Technology (IT) in Agricultural Research and Development-Research Needs**, P.K. Malhotra, 157-164
- **Forecasting Agricultural Systems-Status and Challenges**, Ranjana Agrawal and Chandrahas, 69-75
- **Imputation for Handling Non-Response**, Girish Kumar Jha and Randhir Singh, 188-193
- **Issues of Design and Development of Agricultural Data Warehouse**, Anil Rai, Vipin Kumar Dubey, K.K. Chaturvedi, P.K. Malhotra, 100-107
- **Key Note Address** of Dr. S.D. Sharma, Director, IASRI, New Delhi, 4-7
- **Spatial Data Quality: Issues and Problems**, Prachi Misra Sahoo, Randhir Singh, Anil Rai and Tauqueer Ahmed, 180-187
- **Statistical Issues for Experimentation in National Agricultural Research System**, Rajender Parsad and V.K. Gupta, 144-151
- **Statistical Modelling in Agriculture: Current Status and Future Challenges**, Prajneshu, 53-57
- **Status of Agricultural Experimentation in the National Agricultural Research System**, V.K. Gupta, Rajender Parsad and P.K. Batra, 58-68
- **Teaching and Research Linkages between ICAR Institutes and Agricultural Universities: Current Scenario and Emerging Challenges**, V.K. Sharma and Seema Jaggi, 117-120
- **Teaching and Training in Computer Application in the NARS- Emerging Needs**, P.K. Malhotra, 131-135

Research Project Reports

1. **Design and analysis of on-station and on-farm agricultural research experiments: A revisit.** (Joint Publication of IASDS, Lucknow and IASRI, New Delhi) by AK Nigam, Rajender Parsad and VK Gupta
2. **Study relating to formulating long term mechanisation strategy for each agro-climatic zone/state in India**
3. **Crop yield estimation at small area level using farmer's estimates** by UC Sud, DC Mathur, GK Jha, SC Sethi and RM Bhasin

4. **National Information System on Animal Experiments** (AP Cess fund, ICAR) by PK Batra, RC Goyal, DK Sehgal and VK Sharma
5. **National Information System on Long-term Fertilizer Experiments** (AP Cess fund, ICAR) by MR Vats, DK Sehgal, Krishan Lal, Anshu Dixit and Shashi Dahiya
6. **Some investigations on design and analysis of agroforestry experiments** by Seema Jaggi, VK Sharma, AS Gill and Cini Varghese

Agricultural Research Data Book 2006

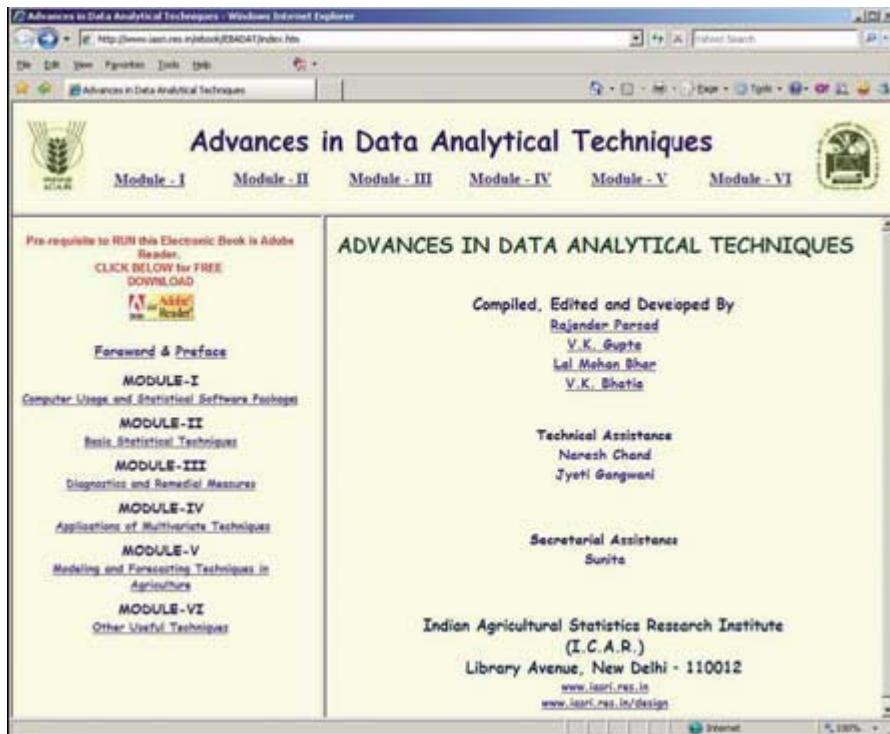
1. **Agricultural Research Data Book 2006** (2006) by HVL Bathla, KK Tyagi, RS Khatri, Jagbir Singh, JP Goyal, SC Agarwal and RM Sood

Book Chapters

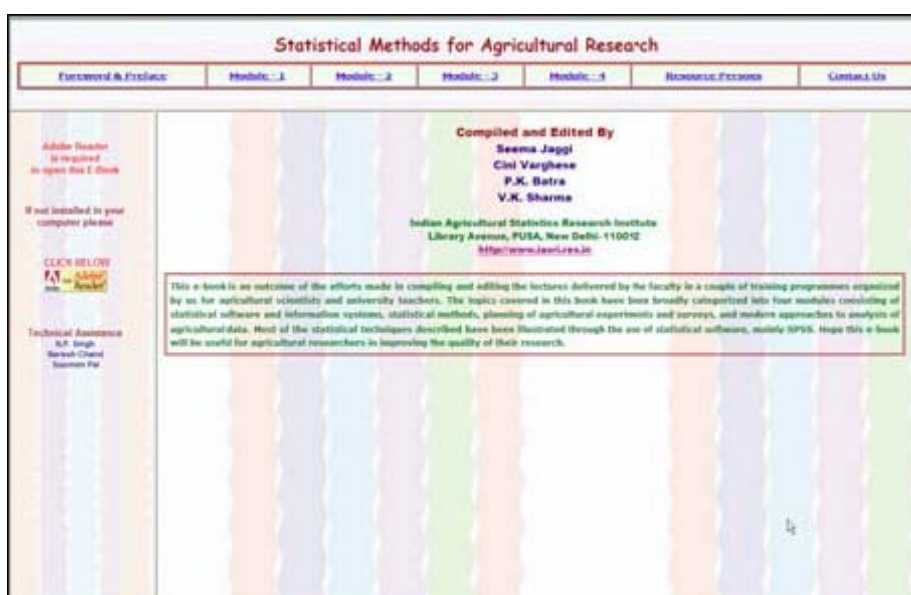
1. Gupta, VK and Parsad, Rajender (2006). **Statistical designing of experiments with emphasis on hill agriculture**. In: **Sustainable Production from Agricultural Watersheds in North West Himalaya**. Eds. HS Gupta, AK Srivastava and JC Bhatt published by Vivekananda Parvatiya Krishi Anusandhan Sansthan, Almora, 457-474.
2. Parsad, Rajender, Dixit, Anshu, Malhotra, PK and Gupta, VK (2007). **Geoinformatics in precision farming: An overview**. In: **Geoinformatics Applications for Sustainable Development**. Eds. AK Singh and UK Chopra published by New India Publishing Agency, New Delhi, 39-78.
3. Prajneshu (2007). **Statistical modelling in aquaculture**. In: **Bioinformatics and Statistics in Fisheries Research**, 3. Eds. AK Roy and N Sarangi, CIFA, Bhubaneswar, 326-340.
4. Rao, AR (2007). **Applications of hidden Markov models in computational biology**. In: **Bioinformatics and Statistics in Fisheries Research**, 3. Eds. AK Roy and Sarangi, CIFA, Bhubaneswar, 50-62.

Electronic Book

1. An electronic book on Advances in Data Analytical Techniques has been compiled, edited and developed by Rajender Parsad, VK Gupta, Lal Mohan Bhar and VK Bhatia. The e-book consists of chapters on 66 topics described in more than 920 pages. The topics covered in this electronic book have been categorized into six modules namely Computer Usage and Statistical Software Packages, Basic Statistical Techniques consisting of Statistical Methods and Inference, Design of Experiments and Sample Surveys, Diagnostics and Remedial Measures, Applications of Multivariate Techniques, Modelling and Forecasting Techniques in Agriculture and Other Useful Techniques such as Bio-informatics, Geoinformatics, Microarrays, DNA Fingerprinting, Nanotechnology in Agriculture etc. This book is available at IASRI website (www.iasri.res.in).



2. An electronic book on Statistical Methods for Agricultural Research has been compiled, edited and developed by Seema Jaggi, Cini Varghese, PK Batra and VK Sharma. This e-book is an outcome of the efforts made in compiling and editing the lectures delivered by the faculty in a couple of training programmes organized by the Institute for agricultural scientists and university teachers. The topics covered in this book have been broadly categorized into four modules consisting of Statistical Software and Information Systems, Statistical Methods, Planning of Agricultural Experiments and Surveys and Modern Approaches to Analysis of Agricultural Data. Most of the statistical techniques described have been illustrated through the use of statistical softwares mainly SPSS. This book is available at IASRI website (www.iasri.res.in).



Lesson Series

Following lessons have been prepared for an application course on Basic Statistics for BA programme of University of Delhi which will be put at the University's website:

Seema Jaggi and Prajneshu: Sampling Distributions

Seema Jaggi and Prajneshu: Testing of Hypothesis