

LIST OF APPROVED RESEARCH PROJECTS

DEVELOPMENT AND ANALYSIS OF EXPERIMENTAL DESIGNS FOR AGRICULTURAL SYSTEM RESEARCH

On-going

1. Designs for single factor and multi-factor experiments and their applications in agricultural systems research. (ICAR National Professor Scheme)

VK Gupta

2. Analysis of experimental designs with *t*-family of error distributions. (SIX1006)

Krishan Lal, Rajender Parsad (till 31.03.2011), VK Gupta, LM Bhar

3. Development of innovative convenience food as protein supplement. (Collaboration with IARI, New Delhi) (CIP0912) (IASRI association w.e.f. 24.10.2009)

IARI, New Delhi SK Jha, Shruti Sethi, RK Pal, Abhijit Kar, VR Sagar, Charanjit Kaur, DVK Samuel, Amar Singh

IASRI, New Delhi **Krishan Lal**

4. Weed assessment and management in the crops and cropping systems. (Collaboration with IARI, New Delhi) (CIP1011) (IASRI association w.e.f. 29.12.2010)

IARI, New Delhi Rajvir Sharma, TK Das, Jitender Kumar, Pankaj, Livleen Shukla, Sangeeta Paul, Renu Pandey, Mahesh Chand Meena

IASRI, New Delhi **Amrit Kumar Paul**

5. Sustainable livelihood through goat farming by disseminating the improved goat production technologies. (Collaboration with CIRG, Makhdoom) (CIP1012) (IASRI association w.e.f. 27.09.2010)

CIRG, Makhdoom Brij Mohan, Ashok Kumar, Khushyal Singh, Vijay Kumar, MK Singh, AK Goel, Ramchandran N, UB Choudhary, RB Sharma, HA Tiwari

IASRI, New Delhi **Anil Kumar**

6. Impact of improved technologies and emerging market conditions on goat production system. (Collaboration with CIRG, Makhdoom) (CIP1013) (IASRI association w.e.f. 27.09.2010)

CIRG, Makhdoom MK Singh, Khushyal Singh, V Kumar

IASRI, New Delhi **Anil Kumar**

Completed Projects

7. Generalised row-column designs for agricultural experiments. (SIX1001)

Cini Varghese, Seema Jaggi

8. A study on fertilizer response ratios for various crops and crop sequences. (SIX1003)

NK Sharma, PK Batra (till 31.07.2011)

9. Response surface methodology incorporating neighbour effects. (SIX1008)

Eldho Varghese, Seema Jaggi

10. A study on multiple Bio-essays. (SIX1007)
LM Bhar, VK Gupta
11. Planning, designing and analysis of experiments planned ON STATIONS under the Project Directorate for Farming Systems Research. (SIX0703)
Anil Kumar, Alope Lahiri (till 30.09.2011), OP Khanduri, Rajendra Kumar (since 01.10.2011)
12. Planning, designing and analysis of ON FARM research experiments planned under the Project Directorate for Farming Systems Research. (SIX0704)
NK Sharma, PK Batra (till 31.07.2011), OP Khanduri (since 01.02.2008)
13. Planning, designing and analysis of data relating to experiments conducted under AICRP on long-term fertilizer experiments. (SIX0705)
DK Sehgal, Krishan Lal (since 01.08.2007), SMG Saran (01.11.2007-30.06.2010), Shashi Dahiya (since 01.08.2008)
14. Agricultural field experiments information system. (SIX0706)
OP Khanduri (PI since 01.07.2011, Co-PI till 30.06.2011), PK Batra (PI till 30.06.2011, Co-PI 01.07.2011-31.07.2011), DK Sehgal, Soumen Pal (since 01.04.2011), Rajender Parsad (01.08.2008-31.03.2011), Sudeep (01.08.2008-31.03.2011)

New Initiated

15. Efficient designs for drug testing in veterinary trials. (SIX1104)
Cini Varghese
16. Application of optimization techniques for construction of incomplete block designs. (SIX1116)
BN Mandal, Rajender Parsad, VK Gupta
17. Efficacy of soil sampling strategies for describing spatial variability of soil attributes. (Collaboration with IISS, Bhopal) (CIP1124) (IASRI association w.e.f. 01.11.2011)
IISS, Bhopal Neenu S, Sanjay Srivastava, Y Muralidharudu
IASRI, New Delhi **BN Mandal**
18. Livelihood and nutritional security of tribal dominated rural areas through integrated farming system and technology models. (NAIP-Component-3-IARI) (CIP1118) (IASRI association w.e.f. 01.08.2011)
MPUAT, Udaipur IJ Mathur
IARI, New Delhi JP Sharma
IASRI, New Delhi **Anil Kumar**
19. Experimental designs in the presence of indirect effects of treatments. (DST Funded) (SOX1115)
Seema Jaggi, Cini Varghese, Anu Sharma, Eldho Varghese
20. Mating-Environmental designs under two-way blocking set up. (SIX1202)
Eldho Varghese, Cini Varghese
21. Main-effects linear trend-free multi-level factorial experiments. (SIX1205)
Susheel Kumar Sarkar, Krishan Lal, VK Gupta



FORECASTING AND REMOTE SENSING TECHNIQUES AND STATISTICAL APPLICATIONS OF GIS IN AGRICULTURAL SYSTEMS

On-going

22. Development of forecasting module for podfly, *Melanagromyza Obtusa* Malloch in the late pigeonpea (Collaboration with IIPR, Kanpur) (CIP0710) (IASRI association w.e.f. 01.01.2009).
IIPR, Kanpur SK Singh
IASRI, New Delhi **Ranjana Agrawal**, Amrender Kumar (till 23.09.2011)
23. Weather based forewarning models for onion thrips (*Thrips tabaci* Lindeman). (Collaboration with DOGR, Pune) (CIL1004)
IASRI, New Delhi **Amrender Kumar**, SC Mehta(till 31.01.2011), Ranjana Agrawal
DOGR, Pune PS Srinivas (till 18.03.2011), Jayanthi Mala BR (since 19.03.2011)
24. Weather based forewarning of mango pests. (Collaboration with CISH, Lucknow) (CIL1005)
IASRI, New Delhi **Ranjana Agrawal**
CISH, Lucknow Rakesh Chandra, G Pandey, AK Misra
RFRS, Vengurle BR Salvi, MB Dalvi, AY Munj
AES, Paria NI Shah, Hemant Sharma, GB Kalariya
BCKV, Mohanpur SK Ray, A Samanta
BAC, Sabour Rajesh Kumar, SN Ray, Mithesh Kumar
FRS, Sangareddy A Bhagwan, B Mahindar, D Anitha Kumari

New Initiated

25. Study to develop methodology for crop acreage estimation under cloud cover in the satellite imageries. (SIX1119)
Prachi Misra Sahoo, Tauqueer Ahmad, KN Singh, AK Gupta
26. National initiative on climate resilient agriculture (NICRA)-Agro forestry Component. (Collaboration with NRCAF, Agroforestry, Jhansi) (COP1111)
NRCAF, Jhansi Ram Newaj, Ajit
IASRI, New Delhi **Tauqueer Ahmad**, Prachi Misra Sahoo
27. An econometric study of water markets in canal command area of North-Western Rajasthan. (SIX1122)
DR Singh, Sivaramane N, Prawin Arya
28. Weather based yield forecast for rice and wheat using non-linear regression techniques. (SIX1129)
Sanjeev Panwar, N Okendro Singh
29. Development of forecasting methodology for fish production from ponds of upland region. (Collaboration with DCFR, Bhimtal) (CIL1109)
IASRI, New Delhi **N Okendro Singh**, Sanjeev Panwar (since 23.09.2011), LM Bhar (till 24.09.2011), Ranjana Agrawal (till 23.09.2011)
DCFR, Bhimtal Prem Kumar
30. Pest and diseases dynamic vis-a-vis climatic change under NICRA. (Collaboration with NCIPM, New Delhi) (COP1105)
NCIPM, New Delhi S Vennila
IASRI, New Delhi **Amrender Kumar**

DEVELOPMENT OF TECHNIQUES FOR PLANNING AND EXECUTION OF SURVEYS AND ANALYSIS OF DATA INCLUDING ECONOMIC PROBLEMS OF CURRENT INTEREST

On-going

31. Farm power machinery use protocol and management for sustainable crop production. (Collaboration with IARI, New Delhi) (CIP0906) (IASRI association w.e.f. 08.02.2010)
IARI, New Delhi Indra Mani, Dipankar De, MS Kalra, JK Singh, Adarsh Kumar, PK Sahoo, PK Sharma, Alka Singh, JP Sinha (since 25.02.2011), Satish Lande (since 25.02.2011)
IASRI, New Delhi **Tauqueer Ahmad**
32. Visioning, Policy Analysis and Gender (V-PAGe) Sub-Prog. II: Technology Forecasting. (NAIP Component I: Consortium Partner) (COP0708)
NCAP, New Delhi Ramesh Chand, P Ramasundaram
IASRI, New Delhi **VK Bhatia**, Ramasubramanian V, Amrender Kumar, Anil Rai (till 31.03.2011), Satya Pal (till 31.12.2010), KK Chaturvedi (till 01.09.2010), Ranjana Agrawal (till 19.11.2008) IARI, New Delhi,
IARI, New Delhi Girish Kumar Jha (till 01.07.2008)
33. Visioning, Policy Analysis and Gender (V-PAGe) Sub-Prog. III: Policy Analysis and Market Intelligence. (NAIP Component I: Consortium Partner) (COP0709)
NCAP, New Delhi Ramesh Chand, P Ramasundaram, Pratap Singh (till 31.05. 2008)
IASRI, New Delhi **VK Bhatia**, AK Vasisht (till 01.03.2010), DR Singh, Ashok Kumar, SP Bhardwaj, Prawin Arya, Sushila Kaul (till 30.03.2010), Anil Rai (till 31.07.2010), KK Chaturvedi (till 31.07.2010), N Sivaramane (18.08.2009-26.03.2012)
IARI, New delhi NP Singh (till 30.06.2008)
34. Risk assessment and insurance products for agriculture. (NAIP Component I: Consortium Partner) (COP0808)
NCAP, New Delhi BC Barah (till 01.12.2010), SS Raju (since 01.12.2010)
IASRI, New Delhi **Anil Rai**, PK Malhotra (till 31.03.2011), KK Chaturvedi (on studyleave since 01.09.2010), Ramasubramanian V

Completed Projects

35. Sampling methodology for estimation of meat production in Meghalaya. (Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture, Govt. of India) (SOX0909)
AK Gupta (PI since 04.07.2010, Co-PI 01.05.2009-03.07.2010), Hukum Chandra (PI till 03.07.2010), UC Sud, DC Mathur (till 01.06.2010)
36. District-level poverty incidence estimation from NSSO data using small area estimation techniques. (Funded by CSO, MOS&PI, Govt.of India) (SOX1009)
UC Sud, Tauqueer Ahmad, VK Jain

New Initiated

37. On small area inference using survey weights. (SIX1107)
Yogita Gharde, Hukum Chandra, VK Jain
38. Spatial non-stationarity in small area estimation under area level model. (SIX1114)
Hukum Chandra, UC Sud, Yogita Gharde
39. Study of sample sizes for estimation of area and production of foodgrain crops. (SIX1125)
KK Tyagi, AK Gupta, VK Jain, Kaustav Aditya
40. Study of asymmetry in retail-wholesale price transmission for selected essential commodities. (SIX1123)
SP Bhardwaj, Ashok Kumar, Sanjeev Panwar



MODELING AND SIMULATION TECHNIQUES IN BIOLOGICAL SYSTEMS

On-going

41. Genomics and molecular markers in crop plants (Sub-project 4: Development of new genomic and EST resources and functional genomics of thermotolerance in mandate crops). (Collaboration with NRCPB, New Delhi) (CIP1010) (IASRI association w.e.f. 28.10.2010)
- NRCPB, New Delhi NK Singh, Kishore Gaikwad
IASRI, New Delhi **AR Rao**
42. Whole Genome Association (WGA) analysis in common complex diseases: An Indian initiative. (DBT Funded) (COP0807)
- UDSC, New Delhi BK Thelma
NII, New Delhi Ramesh C. Juyal
DU, New Delhi Sanjay Jain
IASRI, New Delhi **AR Rao**, SD Wahi (since 22.06.2010)
AIIMS, New Delhi Ashok Kumar
DMC, New Delhi Ajit Sood
43. Bio-prospecting of genes and allele mining for abiotic stress tolerance. (NAIP Component IV: Consortium Partner) (COP0910)
- NRCPB, New Delhi T Mohapatra (Consortium PI)
IASRI, New Delhi **AR Rao** (Consortium CCPI), SB Lal (till 09.09.2011), Sudeep, SD Wahi

New Initiated

44. Estimation of survival functions of a family of lifetime distributions under singly censored observations: Classical vs Bayesian approach. (SIX1103)
- Wasi Alam**
45. Forecasting models using functional data analysis and nonlinear support vector regression techniques. (SIX1117)
- Mir Asif Iquebal**, Prajneshu
46. Development of weather-based crop yield forecasting models using GARCH and wavelet techniques. (SIX1120)
- Ranjit Kumar Paul**, Himadri Ghosh, Prajneshu
47. Enhancing resilience of agriculture to climate change through technologies, institutions and policies (Funded by NICRA). (COP1112)
- NCAP, New Delhi Pratap Singh Birthal, Suresh A Kurup, Shiv Kumar
NAARM, Hyderabad GP Reddy
IASRI, New Delhi **Ranjit Kumar Paul**
48. A study of stochastic volatility models through particle filtering. (SIX1201)
- Bishal Gurung**, Himadri Ghosh
49. Buffalo genome information resources. (DBT Funded) (Collaboration with NDRI, Karnal)(COP 1215)
- NDRI, Karnal Sachinandan De
IASRI, New Delhi **AR Rao**

DEVELOPMENT OF INFORMATICS IN AGRICULTURAL RESEARCH

On-going

50. Project Information and Management System of ICAR (PIMS-ICAR). (SIX0901)
RC Goyal, PK Malhotra, Sudeep, Alka Arora, Pal Singh
51. Phenomics of moisture deficit and low temperature stress tolerance in rice. (Collaboration with NRCPB) (Funded by NRCPB, New Delhi) (IASRI association w.e.f. 13.05.2011) (COP1106)
NRCPB, New Delhi P Ananda Kumar
IARI, New Delhi Viswanathan Chinnusamy
IASRI, New Delhi **Sudeep**, SD Wahi, Alka Arora
IIT, New Delhi S Chaudhury
DU, South Campus JP Khurana
CRRI, Cuttack ON Singh
IGKV, Raipur G Chandel
CAU, Barapani Wricha Tyagi
RC-NEHR, Barapani A Pattanaik
52. Strengthening Statistical Computing for NARS. (NAIP Component I: Consortium Leader with 08 other Consortium Partners) (COL0908)
VK Bhatia, Consortium Leader; **Rajender Parsad**, CPI; PK Malhotra (till 31.03.2011), VK Gupta (till 06.06.2010), VK Mahajan (till 31.03.2011), Seema Jaggi, Samir Farooqi, Ramasubramanian V, LM Bhar, AK Paul, N Sivaramane
53. Establishment of National Agricultural Bioinformatics Grid (NABG) in ICAR (NAIP Component-I: Consortium Leader with 5 Consortium Partners) (COL1002)
VK Bhatia, Consortium Leader, **Anil Rai**, CPI, PK Malhotra (till 31.03.2011), KK Chaturvedi (on study leave since 01.09.2010), SB Lal, Anu Sharma, Samir Farooqi, Sudeep (till 31.03.2011), Hukum Chandra, AR Rao, Seema Jaggi, Sanjeev Kumar (since 01.09.2011)

Completed Projects

54. Development of expert system on seed spices. (Collaboration with NRC on Seed Spices, Ajmer) (CIL0904)
IASRI, New Delhi **SN Islam**, Hari Om Agarwal
NRC on Seed Spices, Ajmer RK Kakani, Krishna Kant, OP Aishwat, MA Khan, GK Tripathi
55. Software for survey data analysis (SSDA 2.0). (SIX0903)
SB Lal, Anu Sharma, VK Mahajan (till 31.03.2011), Hukum Chandra (on study leave 04.07.2010-18.06.2011), Anil Rai (01.02.2009 to 15.03.2012)
56. Development of gender information system for agriculture. (Collaboration with DRWA, Bhubaneswar) (CIP0803)
DRWA Bhubaneswar HK Dash, M Srinath, Sabita Mishra
IASRI, New Delhi **SB Lal**, Anu Sharma (till 31.03.2011), Anil Rai (till 31.03.2011)
57. Expert system for Maize crop (Collaboration with Directorate of Maize Research, New Delhi) (CIL0907)
IASRI, New Delhi **Hari Om Agarwal**, Sudeep, HS Sikarwar, Pal Singh (since 01.02.2010)
DMR, New Delhi Virendra Kumar Yadav, Sain Dass (till 30.06.2010), Jyoti Kaul, Sangit Kumar, P Kumar, KP Singh, Chitermal Parihar (since 01.02.2010)

58. Machine learning approach for data mining. (SIX0805)
IASRI, New Delhi **Anshu Bharadwaj**, Shashi Dahiya
NCAP, New Delhi Rajni Jain
59. Development of web enabled statistical package for agricultural research (SPAR3.0). (SIX0905)
Sangeeta Ahuja
60. National information system on agricultural education network in India (NISAGENET-III). (SIX0902)
RC Goyal, Alka Arora (since February 2011), Shashi Dahiya (since February 2011), Pal Singh (since February 2011), Soumen Pal (since February 2011)
61. Management system for post graduate education. (SIX0804)
Sudeep, Hari Om Agarwal (till 29.02.2012), Pal Singh (till 23.09.2011)

New Initiated

62. Development of methodology for estimation of compound growth rate and its web-based solution. (SIX1102)
Soumen Pal, Himadri Ghosh, Prajneshu
63. Analysis and determination of antimicrobial peptides: A machine learning approach. (SIX1121)
Sarika, Mir Asif Iquebal
64. Development of web enabled Statistical Package for Factorial Experiments (SPFE 2.0). (SIX1126)
Sangeeta Ahuja, PK Malhotra
65. Exploration of central data warehouse for knowledge discovery. (SIX1127)
Anshu Bharadwaj, SN Islam, DR Singh
66. Development of web based mushroom expert system. (Collaboration with Directorate of Mushroom Research, Solan). (CIP1110)
DMR, New Delhi Mahantesh Shirur, B Vijay, RC Upadhyay, VP Sharma, OP Ahlawat, Satish Kumar, Shwet Kamal, Goraksha C Wokchaure, K Manikandan
IASRI, New Delhi **Hari Om Agarwal** (till 29.02.2012), Pal Singh, Harnam Singh (till 01.02.2012), Yogesh Gautam
67. Strengthening & refinement of Maize AgriDaksh. (Collaboration with DMR, New Delhi). (CIP1113)
DMR, New Delhi Virendra Kumar Yadav, KP Singh, P Kumar, Vinay Mahajan, KS Hooda, Jyoti Kaul, Ashok Kumar, Aditya Kumar Singh, Ishwar Singh, Meena Shekhar, DP Choudhary, Avinash Singode, CM Parihar, Chikkappa G Karjagi, Ambika Rajendran
IASRI, New Delhi **Sudeep**, Hari Om Agarwal (till 29.02.2012), HS Sikarwar (till 01.02.2012), Yogesh Gautam
AICRP Centers Robin Gogoi (IARI), G Nallathambi (Coimbatore), Mruthunjaya C Wali (Arbhavi), SR Kulkarni (Kolhapur), SM Khanorkar (Godra), Dev Raj Lenka (Bhubaneswar), JP Shahi (Varanasi), SPS Brar (Ludhiana), Bashir Ahmad Alaie (Srinagar), Dilip Singh (Banswara), NS Barua (Assam)
68. e-Platform for seed spice growers. (Collaboration with NRCSS, Ajmer) (CIL1128)
IASRI, New Delhi **SN Islam**, Shashi Dahiya, Anshu Bharadwaj, SP Bhardwaj
NRCSS, Ajmer RS Mehta, MK Vishal, MA Khan

69. Study of synonymous codon usage and its relation with gene expressivity in halophilic bacteria. (Collaboration with NABIM, Mau). (CIL1108)
IASRI, New Delhi **Samir Farooqi**, Dwijesh Chandra Mishra
NABIM, Mau DP Singh, KK Meena
70. Web based software for codon usage analysis for gene expression identification. (SIX1204)
Anu Sharma, SB Lal, Dwijesh Chandra Mishra
71. Implementation of Management Information System (MIS) including Financial Management System (FMS) in ICAR. (NAIP) (COL1203)
VK Bhatia, Alka Arora, Sudeep, Shashi Dahiya, Soumen Pal
72. In silico identification of abiotic stress (salinity) responsive transcription factors and their cis-regulatory elements in grapes. (Collaboration with NRC for Grapes, Pune). (CIP1213)
NRC for Grapes, Pune Anuradha Upadhyay, Ajay Kumar Upadhyay
IASRI, New Delhi **Sarika**