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CITATIONS

ICAR AWARD CEREMONY

16 JULY, 2013

भाकृअनुप
ICAR

Indian Council of Agricultural Research
New Delhi

www.icar.org.in

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शरद पवार
Sharad Pawar

Minister of Agriculture &
Food Processing Industries
Government of India
New Delhi 110 001

MESSAGE

I am pleased to know that the Indian Council of Agricultural Research (ICAR) is organizing its Annual Awards Ceremony, 2013 on 16th July 2013. I extend my heartiest congratulations to all the scientists, farmers and journalists who have excelled in their chosen field of work and have been awarded for their outstanding contributions towards agricultural research, education, extension and productions. I am confident that the recognition will lead to enhanced zeal and creative work by the awardees as well as enthuse and encourage others to strive harder for greater accomplishments.

(Sharad Pawar)

5th July 2013
New Delhi

तारिक अनवर
Tariq Anwar

Minister of State for Agriculture,
Food Processing Industries
Government of India
New Delhi 110 001

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Application of emerging technologies and innovations at the farm level through effective strategies assumes special relevance in today's context. I am sure, our agricultural scientists and farmers will contribute their best in this endeavour. I extend my best wishes to the award winners, their families and to all others who are part of the National Agricultural Research System.

5th July 2013
New Delhi

(Tariq Anwar)

डॉ चरण दास महंत
Dr. Charan Das Mahant

Minister of State for Agriculture,
Food Processing Industries
Government of India
New Delhi 110 001

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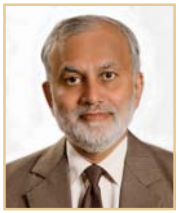
(Charan Das Mahant)

डा. एस. अय्यप्पन
Dr. S. Ayyappan

Secretary, Department of Agricultural Research
& Education and Director General,
Indian Council of Agricultural Research
New Delhi 110 001

FROM THE DG'S DESK



In an era of competition, fair and appropriate incentive and reward system in an organization makes its employees proficient and productive along with job satisfaction. The Awards, besides recognizing merit and accomplishments, generate a healthy competition among individuals, groups and institutions to attain yet higher levels of excellence in their area of work.

The Indian Council of Agricultural Research has been recognizing and rewarding the institutions, scientists, teachers and farmers every year. It is a pleasure to see that during this year, 70 awardees under 15 different categories have been selected. These comprise three Institutions, one AICRP, 55 scientists, nine farmers and two journalists. It is gratifying to see that of the 55 scientists, ten are women.

Among the Agricultural Universities and Deemed universities, the Best Institution Award has been bestowed upon University of Agricultural Sciences, Bengalore. The major accomplishment of the UAS includes a unique integrated approach of Bio-resource model which has shown a potential to enhance the agricultural productivity by more than 7%. ICAR Research Complex for North Eastern Hill Region has been adjudged the Best ICAR institution among Large Institute category for its achievement in Conservation

Agriculture. The National Institute of Animal Nutrition and Physiology, Bangalore has been bestowed the Best Institution Award under relatively Small Institute category for developing technologies like Area Specific Mineral Mixture (ASMM) and Chelated minerals that have been widely accepted by Stakeholders.

Chaudhary Devi Lal Outstanding AICRP Award has been bagged by the All-India Co-ordinated Research Project on Application of Plastics in Agriculture for developing technologies for resource poor, small and marginal farmers.

Jawaharlal Nehru Awards for high quality Ph.D. thesis are being given to 16 scholars. There are two awardees for Panjabrao Deshmukh Woman Agricultural Scientist Award. The Vasantrao Naik Award for Research Applications in Dryland Agriculture for 2012 has gone to research team from Central Soil and Water Conservation Research & Training Institute Research Centre, Udhagamandalam, Tamil Nadu.

Jagjivan Ram Kisan Puruskar has been awarded to eight farmers, one at National level and seven at Zonal level. The N.G. Ranga Award for Diversified Agriculture has been awarded to a farmer from Punjab.

Rafi Ahmed Kidwai Award 2012 and the Hari Om Ashram Trust Award 2011-12 have been bagged by three researchers and three research teams respectively, in areas of Crop & Horticultural Sciences, Natural Resource Management & Agricultural Engineering and the Fisheries and Animal Sciences. There are four awardees for the Lal Bahadur Shastri Young Scientist Award including one in the discipline of social science.

Fakhruddin Ali Ahmed Award for Outstanding Agricultural Research in Tribal Areas has been bagged by two teams of the Scientists from North Eastern Hill Region and the

other from Andhra Pradesh. Swami Sahajanand Sarswati Outstanding Extension Scientists Award went to two scientists, one from Bihar an the other from Rajasthan.

The authors of two technical books in Hindi, one each on Crop Science and Horticulture have been selected for Dr. Rajendra Prasad Puruskar. Three teachers have been selected for the Bharat Ratna Dr. C. Subramaniam Award in the fields of Crop and Horticultural Science, Fisheries ad Animal Science and the Agricultural Engineering and Natural Resource Management. Two journalists one each from Print and Electronic media have been given the Chaudhary Charan Singh Award.

I congratulate all the award winners and their family members and hope that these awards will encourage them to achieve new heights in future and also inspire their colleague to emulate them in pursuit of excellence. I wish to thank all the Judging Committees who finalized the Award winners after a scrupulous evaluation.

Our greetings the NARS family on the occasion.

(S. Ayyappan)

7th July 2013
New Delhi

PREFACE

THE ICAR acknowledges the outstanding contributions of Institutions AICRP, Scientists, Innovative Farmers, Students, Teachers, Women Scientists, Extension Scientist, Journalists covering farm research and innovation and Technical Books in Hindi every year by giving away cash award, citation and certificate. The first of these awards was given in 1956. With the passage of time, new awards were added. At present there are nineteen categories of award, seventeen are annual and two biennial. In the year 2013, extraordinary contributions are being recognized in 15 categories on 16th July – the foundation day of ICAR.

Overall, 521 applications/nominations were received for 18 different ICAR Awards 2012. The procedure for selecting the awardees involves many steps which ask for a meticulous planning and diligent efforts. The ICAR Awards were advertised in the month of October-November, 2012 and applications/nomination were received till 15.01.2013. The applicant's documents were scrutinized and classified either subject area or geographical zone wise as per guidelines of the awards. The documents alongwith criteria for evaluation were sent to Judging Committee members and chairpersons well in advance. The committees were chaired by an eminent scientist of national stature and consisted of 3-5 experts in different discipline and from different parts of the country. 17 Judging Committee met in the months of April, May and June for finalizing the awards. In all Judging Committee meetings took place for 18 days. The significant contributions of the awardees are compiled in the booklet entitled CITATIONS. The contributions of KVK would be presented in Annual conference of KVK. I hope the achievements presented in the booklet would not only bring a sense of gratification and honour in the awardees but

would also apprise the new and emerging areas of research work and innovations to scientists, farmers and institutions and encourage them to participate and compete. I express sincere gratitude to Dr. S. Ayyappan, Secretary DARE and DG, ICAR for continuous encouragement and guidance and to Shri Arvind Kaushal, Additional Secretary DARE and Secretary ICAR for useful suggestions. The efforts made by staff of Award Cell and Coordinating Unit in scrutinizing the applications, organizing the meetings and award function deserve appreciation.

9th July 2013
New Delhi

(Ravindra Kumar)
Assistant Director General
(Coordination)

ICAR AWARD CEREMONY 2013

SARDAR PATEL OUTSTANDING ICAR INSTITUTION AWARD 2012

Award 2012

THE Indian Council of Agricultural Research (ICAR) was set up on 16th July, 1929 on the recommendations of the Royal Commission on Agriculture. It was reorganized in 1965 and 1973. Over the years it has developed a large research and training infrastructure and operates through 99 institutes including Bureaux, PD & NRC and 53 Agricultural universities.

In order to recognize outstanding performance by the ICAR institutes, DUs of ICAR, CAU and State Agricultural Universities, three Awards of ₹10,00,000 lakh each, are given to two ICAR Institutes/NRC/Project Directorates/National Bureaus (one to large and other to small) and one to State Agricultural University/DUs/CAU. The award has been named after Sardar Vallabhbhai Patel (1875–1950), the first Deputy Prime Minister and Home Minister of India. For the awards for the three categories, viz. (i) ICAR's National Institutes/Large Institutes (scientific cadre strength more than 60), (ii) ICAR's NRCs/Project Directorates etc./Small Institutes,(scientific cadre strength up to 60), and (iii) State Agricultural Universities/DUs/CAU. Fifteen (15) applications were received in response to the open advertisement, the recipient of awards are:

University of Agricultural Sciences
GCKV Campus, Bangalore
Karnataka 560 065

THE University of Agricultural Sciences is involved in interdisciplinary education in various academic programs at undergraduate and postgraduate level and emerged as an educational Hub with international repute. Strategic research on basic and translational programs implemented has resulted in significant scientific contributions and release of several high yielding varieties and technologies for enhancing agricultural productivity. An unique integrated approach of Bioresource Model evolved at the university has shown the potential to increase the agricultural productivity by more than 7% and also generating employment opportunities for rural youth. An innovative two-way interactive technology transfer mode adapted by the university has made significant progress in evolving the effective extension education. The university has visionary plan for dynamic educational programs and need driven research.

ICAR Research Complex for NEH Region located in the remote part of the country has made commendable contribution to the agricultural research, extension and educational development of the region. During the last five years, the institute focused on strategic programmes on Farming Systems Research and developed location specific farming system models for rural empowerment and livelihood improvement. The major thrust of institute was on conservation agriculture for various laduses, acid soil management and agrofrestry systems for sustainable hill agriculture. The institute could release fourteen varieties of crops suitable for the varying agroclimatic situations of the region. The dreaded Porcine reproductive and respiratory syndrome virus (PRRSV) which caused havoc in many countries was reported for the first time in India by the scientists of the institute. With availability of nearly one hundred scientists spread over the headquarters and its six regional stations across eighteen odd disciplines, the institute generated 42 technologies, 5 patents and many services for the region. Extending access to knowledge, quality seed and excellent plant and animal health care to as many as 96,000 farmers has been another significant contribution to the region.

ICAR Research Complex for NEH Region
Umiam, Umroi Road
Meghalaya 793 103

National Institute of Animal Nutrition and Physiology
Adugodi, Bangalore
Karnataka 560 030

THE National Institute of Animal Nutrition and Physiology, Bangalore with a mandate to conduct basic and fundamental studies in physiological and nutritional problems related to biophysical translation of nutrients for productive functions in livestock, has become a role model of scientific success of the country. The Institute has developed several technologies like Area Specific Mineral Mixture (ASMM), chelated minerals, all widely accepted by various stakeholders. In addition, some simple technologies like use of areca sheath as feed, improving egg production using red light and newer semen evaluation tests have been developed. Looking into their impact, the DAHDF, GOI has taken initiative in popularizing them through its programmes. Trainings and consultancy services provided have yielded enhanced skills and technical competencies. Extension services rendered by the Institute have enabled farmers to take up scientific innovations and enhance their livelihood security.

CHAUDHARY DEVI LAL OUTSTANDING ALL INDIA CO-ORDINATED RESEARCH PROJECT (AICRP) AWARD 2012

Award 2012

THE Council has several All India Coordinated Research Projects (AICRP). In order to recognize the outstanding performance of the AICRP and its cooperating centres for enhancement of agricultural productivity, one award of ₹300,000 (₹2.0 lakh for main coordinating unit and ₹1.0 lakh for the best centre) is given to the All India Coordinated Research Project. The award has been named after Chaudhary Devi Lal (1914–2001), who had been the Deputy Prime Minister and Agriculture Minister of India. In all eight (08) applications were received in response to the open advertisement. Winner with its achievement is given on next page:

AICRP on Application of Plastics in Agriculture, Central Institute for Post Harvest Engineering & Technology
PO: PAU, Ludhiana,
Punjab 141 004

AICRP on Application of Plastics in Agriculture at CIPHET, Ludhiana has developed several region specific plasticulture technologies especially for resource poor small and marginal farmers with a view to maximize the benefits from small land holdings. Low cost Bamboo frame polyhouses, polythene film (LDPE/Silpauline) lined water ponds for storage run off/water of low discharge springs, Portable FRP Crap hatchery, packaging techniques, are some of the technologies which are very popular. VPKS Almora was selected as best centre of the AICRP of Plastics in Agriculture.

RAFI AHMED KIDWAI AWARD FOR OUTSTANDING RESEARCH IN AGRICULTURAL SCIENCES 2012

Award 2012

THE Council has instituted the Rafi Ahmed Kidwai Award for Outstanding Research in Agricultural Sciences in order to recognize outstanding research in agricultural and allied sciences and provide incentives for excellence in agricultural research. This award is to be given to agricultural scientists for outstanding contribution in specified areas defined as: (1) Crop and Horticultural Science, (2) NRM and Agricultural Engineering, (3) Animal and Fisheries Sciences, and (4) Social Sciences. A total of four awards are assigned one each in the above areas. Each award consists of ₹500,000 in cash. All Indian scientists engaged in agricultural research and overseas Indian scientists working in the areas relevant to Indian agriculture are eligible for these awards. The award has been named after Rafi Ahmed Kidwai (1894–1954) who was the president of ICAR from 1952 to 1954. A total of forty four (44) applications were received in response to the open advertisement and the winners with their contributions are:

Dr. K.V. Prabhu
Principal Scientist (PB) & Head
Division of Genetics
Indian Agricultural Research Institute
PUSA, New Delhi 110 012

DR. K.V. PRABHU started his research career as a wheat and barley breeder in 1986 to breed six varieties of wheat and two of barley by 1998, carrying rust resistance using classical genetic approaches and conventional breeding methods improvised with breeding strategy for durable rust resistance. He developed a practical concept of breeding with minor genes in early 1990s.

With the advent of molecular marker technology, he was one of the first to develop expertise in the area and tag genes for disease resistance having tagged most leaf rust resistance genes under his leadership and many QTLs, Prabhu was closely associated with the wheat, brassica and rice, through molecular marker route by being able to tag and map 6 different genes of leaf rust resistance in wheat. He thus assisted as an effective team member in developing breeding strategies and methodologies that led to the release so far of 17 varieties comprising 8 of wheat, 2 of barley, 5 of mustard and 2 of basmati rice.

DR. JAI SINGH PARIHAR, scientist from Space Applications Centre has been instrumental in spearheading the "Crop Acreage and Production Estimation (CAPE)" and "Forecasting Agricultural output using Space, Agro-meteorology and Land based observations (FASAL)" programmes. These programmes have progressively matured leading to setting up of the Mahalanobis National Crop Forecast Centre (MNCFC) by the Department of Agriculture and Cooperation, Govt. of India during April, 2012. The FASAL outputs on pre-harvest crop production forecast is now a handy information with policy makers. The uniqueness of his work lies in providing cost effective multiple forecasts and spatial distribution over large area in a short project.

Dr. Jai Singh Parihar
Dy. Director, EPSA
Space Applications Centre
ISRO Jodhpur Tekra
Ambawadi Vistar PO.
Ahmedabad 380 015

DR. J.K. JENA carried out diversification of freshwater aquaculture and brought four species of medium sized carps and barbs viz., frings-lipped carp (*Labeo fimbriatus*), kuria labeo (*L. gonius*), olive barb (*Puntius sarana*) and silver barb (*P. gonionotus*) into the mainstream major carp polyculture system. He was involved in standardization of induced breeding and hatchery management techniques and studied aspects of stocking density, species ratio, input use, compatibility, nutritional requirements, input optimization, pond dynamics and environmental management. This led to development of technologies for seed production and grow-out farming of these species with major carps in polyculture system.

Dr. J.K. Jena
Director
National Bureau of Fish Genetic Resources (NBFGR)
Canal Ring Road, PO Dilkusha
Lucknow 226 002

LAL BAHADUR SHASTRI OUTSTANDING YOUNG SCIENTIST AWARD 2012

Award 2012

THE council has instituted the Lal Bahadur Shastri Outstanding Young Scientist Award in order to recognize the talented young scientists who have shown extraordinary originality and dedication in their research programmes. Four individual awards are to be given annually across the disciplines, limited to only one award in any discipline. An individual award of ₹100,000 in cash and a challenge project for three years with budgetary provision of ₹10.0 lakh per year + ₹5.0 lakh for foreign training (3 months). The challenge project and foreign training will be administered/monitored by Division of Agricultural Education at ICAR, Headquarters. All young scientists who possess a doctoral degree and are below 40 years of age, and hold a regular teaching, research, extension education job in the ICAR-SAU system of institutions and engaged in research in agricultural and allied sciences for at least five years continuously are eligible for consideration. The award has been named after Lal Bahadur Shastri (1904–1966) who was prime minister of India and gave the slogan 'Jai Jawan Jai Kisan'. A total of forty four (44) applications were received in response to the open advertisement and the winners are:

DR. M.S. MADHAV has actively contributed towards development and application of molecular markers for improvement of important traits in rice. He fine-mapped and cloned two major rice blast resistance genes i.e *Pi54*and *Pi40* and identified superior alleles for *Pi54*. He also identified new genetic resources for blast resistance as well as key candidate genes involved in biotic and abiotic stress through transcriptome analysis. He is actively involved in development of biotic stress resistant lines in mega varieties and hybrid parental lines possessing three important blast and blight resistant genes through marker-assisted back cross breeding. Dr. Madhav also identified QTLs for major cooking quality traits using indica parents, that helps in identification of genes controlling these complex traits. He has also developed simple, rapid and reliable functional markers for the Aroma, Kernel elongation and Pi54 which are very useful in molecular breeding programmes of rice for improvement of quality as well as incorporation of resistance.

Dr. Maganti Sheshu Madhav
Senior Scientist
Biotechnology Laboratory
Crop Improvement Section
Directorate of Rice Research
Rajendranagar, Hyderabad 500 030

Crops & Horticultural Sciences

Dr. Pratap Bhattacharyya
Senior Scientist
Crop Production Division
Central Rice Research Institute
Bidyadharpur, Cuttack 753 006

NRM & Agricultutal Engineering

DR. PRATAP BHATTACHARYYA studied the carbon dynamics in soil-plant system in relation to greenhouse gas emissions under anticipatory climatic changes in low land submerged rice ecology. An advanced eddy covariance based technology was validated in low land rice ecology for budgeting of net ecosystem carbon dioxide exchange, exchange, gross primary production and ecosystem respiration. Subsequently, refinement of two resource conservation techniques in light of carbon sequestration, sustainable yield and reduction of greenhouse gas emission in low land rice ecology were recommended to cope with anticipatory climatic changes.

Dr. Veerasamy Sejian
Senior Scientist
Animal Physiology Division
National Institute of Animal Nutrition
and Physiology, Adugodi,
Hosur Road, Bangalore 560 030

Animal & Fishery Sciences

DR. V. SEJIAN evaluated the influence of multiple environmental factors such as heat stress, nutritional stress and walking stress simultaneously on the physiological adaptability, growth, reproductive performance, biochemical and endocrine responses of Malpura sheep. He concluded that when multiple stresses occur simultaneously, the total impact may be severe on biological functions. He could show that optimum nutrition to sheep counteracts thermal stress during summer.

DR. HUKUM CHANDRA has made outstanding research contributions to the discipline of sample survey. He has developed several methodologies for small area estimation to produce reliable estimates at micro level from different type of survey data. He has made number of applications of small area estimation to the real data, such as estimation of crop yield, estimation of poverty parameters and child malnutrition related parameters at micro level. He also developed applications of different statistical techniques to the agricultural and other related data and has been recognized internationally.

Dr. Hukum Chandra
Senior Scientist
Division of Sample Surveys
Indian Agricultural Statistics Research Institute (IASRI)
Library Avenue, Pusa Campus
New Delhi 110 012

Social Science

PANJABRAO DESHMUKH OUTSTANDING WOMAN SCIENTIST AWARD 2012

Award 2012

In order to recognize and encourage the women agricultural scientists for their outstanding research contribution in agriculture and allied sciences, the ICAR has constituted Panjabrao Deshmukh Outstanding Woman Scientist Award. Two annual awards are meant exclusively for outstanding women agricultural scientists. The award consists of ₹100,000 in cash with provision of equal amount of ₹ 1 lakh for motivating Women Scientists and female students across the country including travel within a year of receiving the award. All women scientists engaged in research in agricultural and allied subjects /extension in a recognized institutions are eligible. The awards are exclusively meant for individual women scientists. The award has been named after Panjabrao Deshmukh (1898–1965) who was Minister of Agriculture in the first cabinet of Pt. Nehru in 1952. Twenty four (24) applications were received in response to the open advertisement. The awardees are:

PROF. RINTU BANERJEE has made significant contributions in the fermentation sector including cost-effective production of industrial enzymes. She has introduced "Modified Solid State Fermentation" system for improved yield of extracellular enzymes and has also made valuable contributions in the field of "Enzymatic degradation of potent xenobiotics". She has pioneered novel food processing technologies including enzymatic rice polishing, debittering of juices, nutraceutically enriched food products and lactic acid production. Prof. Banerjee has three international and six national patents to her credit. She has guided 18 PhDs published over 100 research papers and authored a book entitled "Environmental Biotechnology" published by Oxford University Press.

Prof. Rintu Banerjee
Agricultural &
Food Engineering Department,
Indian Institute of Technology
Kharagpur,
West Bengal 721 302

Dr. Radha Prasanna
Principal Scientist
CCUBGA & Division of Microbiology
Indian Agricultural Research Institute
New Delhi 110 012

DR. RADHA PRASANNA made significant and pioneering contributions towards exploring cyanobacteria for their multifaceted abilities as plantgrowth promoting and biocontrol agents. She generated a comprehensive database of *Anabaena* diversity which is being explored as valuable sources of pigments, novel genes and metabolites. She reported for the first time the significant role of cyanobacteria as plant growth promoting inoculants for wheat because they colonise inter/intracellular regions of wheat roots and produce hydrolytic enzymes – chitosanase and endoglucanase. Her work demonstrated agriculturally useful synergistic interactions among bacterial – cyanobacterial strains which lead to 20-25 kg N savings, biofortification and 10-12% enhanced yields. She identified novel gene(s) coding for endoglucanase, chitosanase and IAA synthesis in *Anabaena* and *Calothrix strain.*

BHARAT RATNA DR. C. SUBRAMANIAM AWARD FOR OUTSTANDING TEACHERS 2012

Award 2012

To provide recognition to outstanding teachers, incentive for excellence in teaching and to promote quality teaching, ICAR constituted Bharat Ratna Dr. C. Subramaniam Award for Outstanding Teachers. These awards are meant for individual teachers independently offering a full course or part of an integrated course. An individual award consists of ₹100,000 in cash + travel grant of ₹1.0 lakh to promote innovation in teaching across the country including travel and a citation. A total of four such awards one each in the Crop/Horticultural Sciences, Natural Resource Management/Agril. Engineering, Animal/Fisheries Sciences and Social Sciences have been assigned. The award has been named after Bharat Ratna Dr. C. Subramaniam (1910–2000) who ushered in an era of self-sufficiency in food production. Twenty Seven (27) applications were received in response to an open advertisement and the selected awardees are:

Dr. M.K. Naik
Professor and Head, Dean (PGS)
Department of Plant Pathology
Agriculture College,
University of Agricultural Sciences
Raichur, Karnataka 504 102

Crop and Horticultural Sciences

DR. M.K. NAIK has experience of 18 years PG teaching and 16 years UG teaching. He designed courses such as Plant Clinic, Diseases of Field Crops and Their Management, Disease Resistance in Plants, Molecular Basis for Host Pathogen interaction, Biological Control of Plant Diseases, Phytobacteriology, used varieties of teaching Techniques like" Chalk and Talk" methods, PowerPoint Presentations, Smart boards, Interactive Boards and developed teaching Aids viz, 250 Green preserved disease specimens, 1000 dryp preserved specimens, 1200 microscopic slides of fungal pathogens. Dr. Naik blended teaching with research by securing a dozen of externally funded projects on Biological Control, Plant Clinic, Wilt network project. He guided 24 PG theses as major guide & 120 PG theses as Co-guide. He taught a full course on Fungal Biology as a Fulbright Nehru Visiting Lecture Fellow in USA and was giving guest lectures at different universities in USA.

DR. A.K. TIWARI has 15 years of experience in postgraduate and doctoral teaching and research. He taught more than 50 updated academic courses in Biotechnology and other disciplines with innovative teaching approaches like recorded power point presentations, real time experiments. Taught courses were always evaluated student feedback, question-answer sessions and peer reviews. He was conferred with 'Institute Best Teacher Award' in 2002-03. He updated learning material in the form of books, e-book, and laboratory manuals.

Dr. Ashok Kumar Tiwari
Head, Division of Animal Biological Standardization,
Indian Veterinary Research Institute
Izatnagar 243 122

Animal & Fisheries Sciences

DR. INDRA MANI was involved in revamping of the courses in 2001 in 2009-10 at IARI. He introduced newer techniques like reliability analysis, NC, CNC and fundamental of robotics which helped the students to have pace with the manufacturing industry in India and abroad. New techniques of Farm machinery design like CAD and CAM were introduced. In seminar his important contribution was inculcating values among the students. Eight of his students have joined as Assistant Professor/ Scientist in NARS System. He had written valuable instructional material and more than 15 research papers from student Thesis.

Dr. Indra Mani
Principal Scientist
Division of Agricultural Engineering
IARI, Pusa Campus
New Delhi 110 012

NRM & Agricultural Engineering

HARI OM ASHRAM TRUST AWARD 2010-11

Award 2012

THE council has instituted the Hari Om Ashram Trust Award in order to recognize the outstanding research on long-term problems in agricultural and allied sciences, four individual awards have been instituted. Each individual award consists of ₹1,00,000. All scientists engaged in research in the field of crop/Horticulture sciences, Resource Management/ Agricultural Engineering and Animal/Fisheries Sciences and Social Sciences in India are eligible for the award. The award is open to individual scientists as well as team of scientists. The award is biennial. A total of sixty three (63) applications were received in response to the open advertisement. The winners with their contributions are:

DR. D.K. SHARMA and his team consisting of Dr. Vinay Kumar Mishra, Dr. Amaresh Kumar Nayak, Dr. Yas Pal Singh addressed the specific issue of Harnessing the production potential of sodic soils in Uttar Pradesh for livelihood security of the farmers. The technologies for crop production on salt-affected soils through efficient, balanced and integrated use amendments were developed. These waste land (sodic soil) was reclaimed by industrial waste material (phosphogypsum) through innovative technology developed by the scientists. During 2008-2011, sizable sodic land was reclaimed, small and marginal farmers who are having sodic land were benefited under various programmes. This reclaimed land is providing additional quantity of food grains annually to the food basket of the Uttar Pradesh. Roughly 135 man-days per ha employment was created from these reclaimed lands to the farmers and landless laborers per year in Uttar Pradesh. Impact of the reclamation is quite visible in terms of additional food grains production, employment, farm income, farm assets, capital formation and eliminating poverty and inequity amongst the rural people.

Dr. Dinesh Kumar Sharma
Central Soil Salinity Research Institute
Karnal 132 001, Haryana
Resi: G-1, CSSRI Campus,
CSSRI Zarifa Farm, Karnal 132 001

NRM & Agricultural Engineering

Dr. B.C. Viraktamath
Project Director
Directorate of Rice Research (DRR)
Rajendranagar, Hyderabad 500 030

Crop Science & Horticulture

DR. B.C. VIRAKTAMATH and his team consistining of Dr. M.S. Ramesha, Dr. R.M. Sundaram, Dr. A.S. Hari Prasad have made excellent contributions through the development and adoption of high yielding hybrids, optimizing seed production package, human resource development and public-private partnership. The first early duration hybrid DRRH-2 and the first premier quality medium slender grain hybrid DRRH-3 developed and released by the team have tremendous potential. The team has developed eight CMS lines and six new restores which have been registered with NBPGR, New Delhi. Most interestingly, three high yielding varieties viz., Akshayadhan, Varadhan and DRR Dhan 38 have been released as the by-products of hybrid rice work. Also Seed production package developed at DRR has been widely adopted by the seed growers who are getting very good profits.

Dr. Tarun Kumar Bhattacharya
ICAR National Fellow
Agricultural Research Institute
Rajendranagar,Hyderabad 500 030

Animal & Fisheries Sciences

DR. T.K. BHATTACHARYA and Dr. R.N. CHANTTERJEE developed two new layer crosses, IWHxIWK and IWIxIWK with higher egg production (more than 300 eggs) and egg weight. Two layer varieties, *Krishi-layer* and White *Gramapriya* developed from IWHxIWI and PD-2Xiwi, respectively were improved over the generations. The egg production and quality controlling genes namely, prolactin, receptor, Pit-I, GnRH I, GnRH II, growth hormone, growth hormone receptor and insulin like growth factor-1 were characterized at DNA level.

FAKHRUDDIN ALI AHMED AWARD FOR OUTSTANDING RESEARCH IN TRIBAL FARMING SYSTEMS 2012

Award 2012

ICAR instituted Fakhruddin Ali Ahmed Award for Outstanding Research in Tribal Farming Systems primarily for any person or team (with two or three associates, if any) engaged in applied research and its applications in tribal areas of the country aimed at improving the biological resources and livelihoods or in original work directly applicable to tribal farming system. Two awards of the value of 100,000 in cash and citation + provision of equal amount for study on related subject in geographical area for a year. The award has been named after Fakhruddin Ali Ahmed (1905–1977) who was president of ICAR society 1971 to 1974. Seventeen (17) applications were received in response to the open advertisement and the winners with their contributions are:

Dr. B. Venkateswarlu
Central Research Institute for
Dryland Agriculture
Santsohnagar, Saidabad
P.O. Hyderabad 500 059

DR. B. VENKATESWARLU and his team (Dr. Sreenath Dixit, Dr. M. Osman, Dr. K.V. Rao) worked with 2923 tribal households in five districts of Andhra Pradesh viz. Adilabad, Khammam, Nalgonda, Rangareddy, Warangal inhabited by Gonds are Lambada. Through a series of technology and institutional interventions they could increase the productivity of tribal farming systems by 30% in five years and the average household income by 25% in the same period due to the innovations in accessing and up-scaling of proven technologies and strengthening of institutional arrangements in the tribal hamlets and bringing about convergence with the on-going development schemes in the districts.

DR. PANWAR and his team (Dr. S.V. Ngachan, Dr. Anup Das) was associated with development of integrated farming system models, conservation agriculture practices and organic farming technologies for low, medium and terrace land conditions, land configuration options of raised and sunken bed system, *in-situ* residue management, multiple use of water and recycling of on-and off-farm biomass in crop production for resource conservation, increasing cropping intensity, productivity and farm income in fragile ecosystems of North East India predominatly tribal farming. Dr. Panwar and his team demonstrated various resource conserving options, multiple use of water, improved crop production technologies in about 500 farmers field, training of more than 1500 farmers and about 150 trainers in various aspects of hill farming in tribal areas. All these efforts directly benefitted 7500 tribal farmers and stakeholders in fragile ecosystems of North East India improving their livelihood significantly.

Dr. A.S. Panwar
Principal Scientist
Division of Natural Resource Management
ICAR Research Complex for NEH Region
Umroi Road,Umiam 793 103
Meghalaya

JAWAHARLAL NEHRU AWARD FOR OUTSTANDING DOCTORAL THESIS RESEARCH IN AGRICULTURAL AND ALLIED SCIENCES 2012

Award 2012

THE ICAR instituted in January, 1969, the Jawaharlal Nehru Awards for 'Post-graduate Agricultural Research' based on Ph.D. theses of the young scientists as an incentive for high-quality fundamental or applied research among post-graduate students in India and to recognize outstanding research work done by them in different fields of agricultural research including Animal Husbandry, Fisheries, Social Science, etc. There are 18 awards with a cash prize of ₹50,000 each with a Gold plated silver medal. The award has been named after Pt. Jawaharlal Nehru (1889–1964), the first Prime Minister of India. A total of eighty two (82) applications were received for consideration in different discipline and 16 were selected for the award. Out of 16 awardees, 8 obtained degree outside NARS, 4 from Agricultural University and 4 from ICAR Institutes. The awardees and their contributions are given in following pages:

DR. PRASHANT VIKRAM worked upon Development and morpho molecular evaluation of swarna (*Oryza sativa* L) Intogression lines for drought tolerance. For this he studied four $F_{3.4}$ mapping populations- N22 x IR64, N22 x MTU1010 and have identified large effect QTLs showing consistent effect under Swarna, IR64 and MTU1010. Recombinant inbred lines with introgressed segments out performed their susceptible parents Swarna, IR64 and MTU 1010 in two years screening for yield under drought. Dr. Prashant Vikram was awarded Ph.D. from VBS Puruvanchal University, Jaunpur.

Dr. Prashant Vikram
Sr. Scientist, Plant Breeder
International Rice Research Institute
Metro Manila, Philippines

Crop Sciences

Dr. Ganapati Mukri
Directorate of Maize Research
Pusa Campus,
New Delhi 110 012

Crop Sciences

DR. GANPATI MUKRI identified eighteen accessions with higher nutritional traits such as protein content, oil content, oleic acid and oleic to linoleic acid ratio with superior agronomic traits in groundnut monicore collection. On the basis of higher nutritional and agronomic traits, 11 diverse accessions of subsp. fastigiata and 10 of subsp. hypogaea were identified with more than two desirable trait combinations for use in peanut breeding programs for genetic enhancement of nutritional traits. The QTL mapping for nutritional traits indicated region flanked by marker ahFAD2A – TC3H02 contributed more towards phenotypic variance and single marker analysis indicated CAPS designed to identify mutation in ahFAD2A can be utilized for marker assisted selection for the improvement of nutritional quality traits in groundnut. Dr. Mukri got his Ph.D from UAS, Dharwad.

DR. CHARU LATA worked upon Transcript profiling of dehydration stress in foxtail millet (*Setaria italica* L.) and cloning-characterization of a stress related gene. Her work contributes towards (a) understanding the role of plant transcription factors in regulation of abiotic stress tolerance; (b) development of large scale transcriptome data for dehydration stress response in foxtail millet, (c) identification and validation of a single nucleotide polymorphism (SNP) in a novel DREB2-like gene *SiDREB2* in foxtail millet associated with dehydration stress tolerance and development of an allele-specific marker useful for allele mining and maker-assisted selection; (d) development of first set of novel molecular markers like SNP and intron length polymorphism (ILP), applicable for genetic/comparative mapping, molecular genetic diversity and identification of QTLs for dehydration trait in foxtail millet. She carried out her work in National Institute of Plant Genome Research, New Delhi and obtained Ph.D. from Jawaharlal Nehru University, New Delhi.

Dr. Charu Lata
NRC Plant Biotechnology
LBS Building
Pusa, New Delhi 110 012

Plant Biotechnology

Dr. Abhinav Grover
DST Inspire Faculty
School of Life Sciences
JNU, New Delhi 110 067

Plant Biotechnology

DR. ABHINAV GROVER worked upon withanolides herbal drugs from the ayurvedic plant *Withania somnifera*. He could produce the drug in high yields in plant tissue cultures by engineering the biosynthetic metabolic pathway. It opens doors for mass-scale, economically-viable production of these drugs using large-scale bioreactors. The recombinant cell lines developed by him yield high quantities of these withanolides using low cost plant tissue cultures. His work also elucidated the anti-cancerous and neuro-protective molecular mechanisms of actions of these natural prospective drugs. Dr. Grover got his Ph.D. from IIT, Delhi.

DR. TUSHAR KANTI DUTTA studied the differences in host recognition, invasion, development and reproduction of the root-knot nematodes, Meloidogyne graminicola and M. incognita on rice and tomato. M. incognita preferred tomato roots more than rice while M. graminicola was attracted more towards rice compared to tomato. By providing two routes to a source of attractant, one long and one short in Y-chamber, nematodes took the most direct route towards their preferred hosts but often took the longer route towards poor hosts. The analysis of root exudates which might have regulated the nematode movement towards specific hosts, showed presence of some small lipophilic molecules (SLM). These molecules from tomato (ToSLM) and rice (RiSLM) showed motility inhibitive and nematotoxic effects in neat concentration and nematostatic effect in diluted concentration on both M. incognita and M. graminicola. Dr. T.K. Dutta was awarded Ph.D. from IARI, New Delhi.

Dr. Tushar Kanti Dutta
Division of Nematology
IARI, New Delhi 110 012

Crop Protection

Dr. Nandani Shukla
Deptt. of Agronomy
GBPUA&T Pantnagar 263 145
Uttarakhand

Crop Protection

Ph.D. thesis of Dr. Nandani Shukla deals with the study of morphological and molecular characteri zation of *Trichoderma* isolates and physiological and biochemical evaluation of plants under abiotic (drought) stress colonized with drought tolerant isolates of *Trichoderma harzianum*. She isolated more than 150 *Trichoderma* isolates from different farming situations of Uttarakhand during her research work. Her work opens the avenue for the use of *Trichoderma* application in the plants for enhanced abiotic stress (drought) tolerance. Dr. N. Shukla obtained her Ph.D. degree from G.B.P.U. Ag. & Tech. Pantnagar.

THE study conducted by Dr. Arbinda Sharma deals with "Terrain uncertainty and hydrologic analysis of Maithon catchment". He explored the effects of Land use and Land CON (LNLC) change on hydrologic response of a catchment by minimizing the uncertainty related to DEM and spatial pattern of LNLC in MAITHON catchment. The study also examined the intruisic quality of DEM using fractal dimension, entropy and variogram modeling which ultimately led to determining the appropriate DEM Cell size prior to hydrological modeling. The study developed a regressing icring model and the concept of connectivity, a completely new approach the understanding the pattern process relationship in hydrological sciences. Dr. Sharma was awarded Ph.D. from IIT, Kharagpur.

Dr. Arabinda Sharma
Civil Engg. Deptt.
BRCM College Engg. Bahal
Bhiwani, Haryana

Natural Resource Management

Dr. Gulab Pandove
6982 Sunil Park
Jaissian Road
Ludhiana 141 001
Punjab

Natural Resource Management

DR. GULAB PANDOVE carried out epidemiological investigations leading to the occurrence of Yersinia enterocolitica, Aeromonas hydrophila and Listeria spp. organisms in the drinking water samples. The Emerging pathogens Aeromonas hydrophila, Yersinia enterocolitica and Listeria spp. were found to be 78.94%, 69.61% and 52.63% of drinking water respectively. These pathogen showed Multiple antibiotic resistance (MAR) >0.2, resistant to conventional dose of chlorine used for the treatment of drinking water(for human consumption) and their presence even in the absence of standard indicator (E.coli) of bacteriological quality of drinking water. These pathogens are responsible for recurrent incidences of gasteoenteritis in Ludhiana, Punjab. The Bacteriological water testing kit, Multiplex PCR water testing kit and species specific kits that were developed in the present research work, can play a very significant and crucial role in epidemiological surveillance investigations. She got her Ph.D. from PAU, Ludhiana.

DR. PARTHA SAHA worked upon "Genetic and molecular investigation of black rot resistance in cauliflower". He identified molecular markers linked to black rot resistant gene in cauliflower by screening resistant cauliflower genotypes (BR-161 and BR-207) for black rot disease and developed a genetic linkage map of 74.7 cM length for black rot resistance gene where a dominant marker RAPD-4_{833} and ISSR-11_{635} were closest (1.6cM) distance flanking to the resistance locus (R gene). He reported for the first time RAPD 04_{833} and ISSR 11_{635} markers closely linked to the black rot resistance gene in cauliflower and this marker may pave the way for the development of black resistant varieties or hybrids in near future. He got Ph.D. from IARI, New Delhi.

Dr. Partha Saha
Division of Vegetable Science
Indian Agricultural Research
Institute, New Delhi 110 012

Horticulture

Dr. Prabhanjan Kumar Pranav
Assistant Prof.
Agricultural Engineering
NERIST, Nirjuli Itanagar
Arunachal Pradesh

Agricultural Engineering

DR. PRABHANJAN KUMAR PRANAV, worked upon Development of Slip Sensing and Control System for Two Wheel Drive Tractors. The system continuously measures the slip and communicates to the hydraulic system for depth adjustment incase slip falls outside the desired range. The performance data indicated a significant reduction, 20-30%, in fuel consumption per hectare, also there was a increase of 07-38% in field efficiency and a gain of 04-10% intractive efficiency over the existing system. The developed system is also expected to reduce the operator's effort as it adjusts the depth control level automatically as per the variation in the soil condition within the field. Dr. P.K. Pranav got his Ph.D. from IIT, Kharagpur.

DR. R.C. PRADHAN studied Design and Development of Low Cost Post Harvest Equipment for Jatropha. He developed two machines. One is a manual jatropha fruit decorticator (40 kg/h capacity) which has a decortications efficiency of about 91% at 08% mc, db and a concave clearance of 21mm. The other machine is an extruder type screw press oil expeller (15kg/h) giving an oil expression efficiency of about 81% at 7.22% seed moisture, db. He also determined the physical properties of jotropha fruits, seeds & kernels and physic-chemical properties of expressed jotropha oil. The economic feasibility analysis for the two developed machines were also done. He got his Ph.D. from IIT, Delhi.

Dr. R.C. Pradhan
Deptt. Farm Engineering
BHU, Varanasi (UP)

Agricultural Engineering

Dr. Gaurav Kumar Sharma
Project Directorate on FMD
Mukteswar
Nainital, Uttarakhand

Animal Science

DR. GAURAV KUMAR SHARMA developed an immunoassay for differentiation of foot and mouth disease infected and vaccinated animals (DIVA) using recombinant 3ABC non-structural protein. The formats of ELISA for DIVA were developed and evaluated for FMD diagnosis indifferent species of animals. The author optimized a sandwich ELISA using unpurified protein to reduce the cost in a kit. The developed ELISA worked without much of the background noise and results were comparable with standard assays. The study will help to declare an animal free of FMD and the study provides and alternative tool for retrospective diagnosis of the disease from an area where active outbreaks could not be attained.

Also the developed immunoassay is highly useful for providing a common method for sero-surveillance studies in susceptible domestic and wild animal species. Dr. G.K. Sharma obtained his Ph.D. degree from IVRI, Izatnagar.

DR. GURPREET KAUR worked on bacteriocin resistance among dairy pathogens and spoilage bacteria with focus on elucidating the physical, biochemical and molecular mechanisms of resistance of pathogenic and spoilage bacteria to nicin and class II bacteriocin of lactic acid bacteria. She delineated the strategies to be adopted for successful and effective application of bacteriocin in the food preservation. The minimum inhibitory concentration (MIC) of different bacteriocin against common dairy pathogens and spoilage bacteria was also determined. Comparative evaluation of changes between resistant and wild type strains at cellular and molecular level were elucidated. The work paved the way for control of dairy food spoilage. Dr. G. Kaur obtained Ph.D. from NDRI, Karnal.

Dr. Gurpreet Kaur
PDF Deptt. Oncologic Science, USA
Mitchell Cancer Institute, 1660
Springhill AV USA

Animal Science

Raghunath Ravi
'Roshni'
Chavara Centre Road
Cochin, Kerala

Fisheries

DR. RAGHUNATH RAVI studied reproductive biology and carval rearing of the Blue Swimmer Crab *Portunus pelogicus* L. from the South-East Coast of India. The blue swimmer crab *Portunus pelogicus* is a suitable candidate species for its fast growth rate, hardy nature and good market demand. In a comprehensive study on the reproductive system of the male and female *Portunus pelogicus* he carapace width was found to be the most reliable morphometric characteristic that could predict the reproductive performance of the animal. All his findings will help in the mass production of seeds of crabs. Dr. R. Ravi was awarded Ph.D. degree from Manglore University, Karnataka.

MS. P. MAHALAKSHMI worked on Decision making models for identification and classification of optional location for aquaculture farming development. In this study two user friendly computer based decision making models were developed. Mahalanobis Tagnchi System (MTS) was used to develop the procedure for selecting the prime set of variables. Visual basic programming language was used to implement the developed decision.

The developed decision making models is an original contribution in this particular area. This was attained through the modular and flexible design which would enable expanding of the models.

The models and their corresponding tools will be useful for enhancing the decision making capacity of any one involved in aquaculture farming. Dr. P. Mahalaxmi got Ph.D. from VIT University, Vellore, Tamil Nadu.

Dr. P. Mahalaxmi
Scientist (Sr. Scale)
CIBA Chennai
Tamil Nadu

Social Science

Dr. Sanchita Garai
Scientist
Extension Division
NDRI, Karnal
Haryana

Social Science

DR. SANCHITA GARAI carried out a systematic and in-depth study on Self Help Groups in terms of their groups' dynamics effiectiveness, information communication behaviour, and impact on women empowerment in the New Alluvial Zone of West Bengal. The study established that NGO/Facilitator was not only the main sources of information, but it provided more useful and credible information to the SHG members. An exclusive 'Information Communication Behaviour Index' and 'Integrated Information Communication Behaviour Model on Information Dynamics among the SHG Members' was developed in this study. The study successfully established the different dimensions of group dynamics effectiveness and factors affecting group dynamics effectiveness among the members of SHG. She got her Ph.D. degree from BCKV, Mohanpur, Nadia.

JAGJIVAN RAM ABHINAV KISAN PURUSKAR / JAGJIVAN RAM INNOVATIVE FARMER AWARD (NATIONAL/ZONAL) 2012

Award 2012

In order to recognize the outstanding contributions of innovative farmers for initiatives in development adoption, modification and dissemination of improved technology and practices for increased income with sustainability, the ICAR instituted the awards for farmers at National and Zonal levels as:

- **National:** One annual national award of ₹100,000 each in any of the areas of agriculture and allied sciences + equal amount of travel grant across the country to promote his achievement are given to farmers at national level.
- **Zonal:** Eight annual awards of ₹0.50 lakh + equal amount of travel grant to promote his achievement and motivate farmers in his perspective zone. The geographical area of each zone is given in the guidelines of award.

These awards have been named after Jagjivan Ram (1908–1986) who was the Deputy Prime Minister and Union Minister for Food and Agriculture in the Union Cabinet. Sixty nine (69) applications were received in response to the open advertisement. The winners in National level as well as at Zonal levels are as:

Shri Uddhav Asaram Khedekar
At Shivni
Post: Ner Tq.
Dist. Jalna 431203
Maharashtra

National

SHRI UDHAV ASARAM KHEDKAR from Shivni Dist. Jalna took the initiative for community watershed development to harvest maximum possible rain water to solve the water scarcity problem of the village. He Developed the technologies for *in situ* soil water conservation by construction of farm bunds, use of Silicon in Onion for pest control, use of insect net for prevention of pests in shade net and Fracture Seal Cementing (FSC) for trapping subsurface ground water. He also adapted the technologies for In-line drip irrigation, soybean seed production, Integrated Pest Management in Cotton, soil test based fertilizer management, vermicomposting and crossbred cow management.

Shri Gurpreet Singh Shergill
Village Majhal Khurd
P.O. Panjola, Distt. Patiala 147 101
Punjab

Zone-1

SHRI G.S. SHERGILL, a farmer from Majhal Khurd, Patiala, not only increased his income and social status by adopting floriculture cultivation as his profession but also created farm jobs on an average for 20 persons daily. He developed gladiolus bulb grader and digger which helped him to cut costs. Other farmers of the adjoining areas often seek guidance from him regarding cultivation of cut flowers etc. and he personally encourages them to adopt crop diversification as a means to conserve environment and increase income.

SHRI DILIP KUMAR SINGH from Distt. Rohtas (Bihar) carried out Inter Cropping of Green Chili + Maize, Tomato (One row) + Maize (Two rows), Chili + Coriander leaf, Onion + Coriander leaf and cow pea + maize. These intercroppings were very effective. He used Neem cake/Neem oil/ Tobacco extract/ organic product as insecticide/ pesticides. His contribution in tearms of New package of practices/ management strategies are: Intercropping, Mixed cropping, Timely preventive& Curative measures, three-tier-operational management system (human resource) in cropping for effective management of labour manpower in the entire farming system.

Shri Dilip Kumar Singh
Vill-Mahddiganj, PO-Sasaram
P.S - Sasaram, Distt-Rohtas
Bihar 821 115

Zone-2

SHRI SANDEEP GOEL from Vill. Jaitpur (Uttarakhand) adopted SRI to save about 50 per cent of water with increase in the 30 per cent yield on an average and SWI to save about 70 kg. Seed/ha. For Clean Milk production he washed teat with fresh water with a norminal amount of alum. This made animals free from mastitis disease. His contribution in terms of New package of practice/ management strategies are High Yielding Seed Variety, SWI(Wheat), Laser Land Laveller and Palava in Wheat Field.

Shri Sandeep Goel
H.K. Agriculture Farm
Vill. Jaitpur, PO. Kundeshwari
Kashipur 244 713, Uttarakhand

Zone-4

Mohanrao Janrao Jayale
At Post: Akole (J)
Tq. Akot. Dist. Akola 444 101
Maharashtra

Zone-5

SHRI MOHANRAO JANRAO JAYALE carried out Rainwater Harvesting, groundwater augmentation, ETL based sprays, rejuvenation of old mandarin trees and diversified agric practices towards the organic family with this he could raise the productivity of cotton 12 to 14 Q, Soybean 8 to 8.5Q, orange from 3 to 4.5 Q and mango 2.1 to 2.5 T from 2008-09 to 2012-13.

Sohan Singh Chauhan
Shri Ashapura Bagwani Farm Village &
Post-Joyla, Tehsil-Sheoganj
Dist.-Sirohi, Rajasthan

Zone-6

SHRI SOHAN SINGH CHOUHAN, developed the innovative rejuvenation technology of lime and motivated many farmers for establishment of lime and papaya orchard. He identified 68 plus trees of lime orchard for preparing lime planting material from the seeds of my lime fruits. Also, he started grading and packaging of fruits. By adopting modern technologies he save 50% water by adoption of micro-irrgation, 40% labour saved by farm mechanization and by use of neem based pesticides, 50%cost of pesticides reduced with quality produce.

SHRI DOLAMANI SAHU inducted innovative interaction by using Dhanicha Crop as Green Manuring, Line Transplanting, cultivating Aromatic Paddy, using of Direct Paddy Drum seeder, spraying method for less water use locally designed hand spray machine for fertilizer and pesticides and application of kitchen ash for improving seed germination and preventing loss due to bird eating. With his efforts around 5000 farmers have adapted Line Transplanting of Paddy in Bargarh district of Odishaand nearly 300 farmers of Bargarh and Sambalpur dist. Have been trained at the farm site.

Shri Dolamani Sahu
At-Malipali
Po-Gaisama, Via-Tora
Dist-Bargarh 768 040
Odisha

Zone-7

SHRI H. SADANANADA carried out innovative interventions by growing onion and garlic in between rose plants for additional income, utilizing temporary water storage pond for profitable fish production, judicious use of water and minimizing labour costs. He adopted drip irrigation system for the entire farm to make judicious use of water and used crop and animal residues to produce required quantity of compost and vermicompost on the farm, grew quality colour capsicum in poly house, minimized weed growth by providing water to near the rooting zone through drips and produced coconuts, fruits (jack, lemon, papaya and pomegranate), drumstick and fodder crops around the farm fence and bunds.

Shri H. Sadananda
Tapasihalli Village
Antharahalli Post
Doddaballapur taluk
Bangalore rural district
Karnataka

Zone-8

N.G. RANGA FARMER AWARD FOR DIVERSIFIED AGRICULTURE 2012

Award 2012

THE Council has instituted the N.G. Ranga Farmer Award for diversified agriculture in order to recognize the distinguished farmers for their outstanding contributions in the field of diversified agriculture. The award is aimed at creative and innovative approaches resulting in enhancement of production and productivity, resource conservation and application of improved farming techniques/practices in different disciplines of agriculture. The award carries a cash prize of ₹100,000 and given annually. The award has been named after Prof. N.G. Ranga (1900–1995). Sixteen (16) applications were received in response to the open advertisement, the recipient of award is:

MAJOR MANMOHAN SINGH VERKA pioneered the kinnow cultivation in Punjab. He developed a kinnow orchard by planting kinnow plants at a distance of 20ft x10ft instead of traditional 20 ft x 20 ft. He also carried out successful intercropping of sugarcane and turmeric in poplar forestry. Major Verka developed a new technique of sugarcane transplanting adopted by raising nursery from single bud technique and transplanted at row to row 4 feet and plant to plant 2 feet distance with cauliflower, peas and mustard as intercrops. With this technique only 5-7 quintal of sugar cane seed was used as compared with 35 quintal per acre with traditional technique. He introduced mechanical washing, waxing and established a grading unit of kinnow. For efficient use of ground water drip irrigation is being used in Verka farm.

Major Manmohan Singh Verka
D-107, Ranjit Avenue
Amritsar
Punjab 143 001

कृषि एवं संबंधित विज्ञान की तकनीकी पुस्तकें हेतु डा. राजेन्द्र प्रसाद पुरस्कार 2012

पुरस्कार 2012

परिषद ने कृषि एवं संबंधित विज्ञान पर हिन्दी में तकनीकी पुस्तक लेखन के क्षेत्र में मौलिक व स्तरीय लेखन तथा भारतीय लेखकों को प्रोत्साहित करने के उद्देश्य से डॉ. राजेन्द्र प्रसाद पुरस्कार की स्थापना की है। यह पुरस्कार व्यक्तिगत रूप से अथवा लेखकों की टीम के रूप में प्रदान किया जाता है। प्रत्येक पुरस्कार एक लाख रुपये (100,000 रु.) नकद के रूप में दिया जाता है। कृषि एवं संबंधित विज्ञान के विभिन्न विषयों पर चार पुरस्कार प्रदान किए जाते हैं लेकिन एक विषय पर एक ही पुरस्कार दिया जाता है। कृषि एवं संबंधित विषयों के सभी मौलिक हिन्दी तकनीकी पुस्तकों के भारतीय लेखक तथा एक से अधिक लेखकों की पुस्तकों के संपादक जिनका स्वयं पुस्तक में उल्लेखनीय योगदान हो, इस पुरस्कार के पात्र हैं। यह पुरस्कार भारत के प्रथम राष्ट्रपति डा. राजेन्द्र प्रसाद (1884-1963) के नाम से दिया जाता है। खुले विज्ञापन से प्राप्त दस (10) प्रविष्टियों में से पुरस्कृत लेखक और उनका योगदान इस प्रकार हैं।

डॉ. राजेन्द्र कुमार यादव व डॉ. राम कृष्ण की पुस्तक आनुवंशिकी के सिद्धांत की एक पाठयपुस्तक सभी कृषि विश्वविद्यालयों एवं कृषि महाविद्यालयों की स्नातक कक्षाओं, संघ लोक सेवा आयोग, राष्ट्रीय पात्रता परीक्षा, कृषि वैज्ञानिक चयन मंडल, प्रदेश पात्रता परीक्षा, उत्तर प्रदेश लोक सेवा आयोग, उत्तर प्रदेश उच्च शिक्षा सेवा आयोग आदि की प्रतियोगी परीक्षाओं की विषय-सामग्री को ध्यान में रखते हुए तैयार किया गया है। विषय को चित्रों द्वारा स्पष्ट करने का प्रयत्न किया गया है। प्रस्तुत पुस्तक में दोनों तरह के वस्तुनिष्ठ एवं विस्तृत प्रश्न दिए गए हैं जो विद्यार्थियों के लिए अत्यन्त उपयोगी सिद्व होंगे। इसे लिखते समय इस क्षेत्र में उपलब्ध पुस्तकों, बुलेटिन्स, जर्नल्स एवं रिपोर्ट आदि से सहायता ली गयी है। भाषा को सरल एवं रोचक बनाने का भरसक प्रयत्न किया गया है। अंग्रेजी शब्दों के उचित पर्यायवाची हिन्दी शब्द भारत सरकार की विज्ञान शब्दावली से मुख्यत: लिए गए हैं।

डॉ. राजेन्द्र कुमार यादव
सह प्राध्यापक
आनुवंशिकी एवं पादप
प्रजनन विभाग
चन्द्रशेखर आजाद कृषि एवं
प्रौद्योगिक विश्वविद्यालय,
कानपुर

डॉ. चन्द्र भानु
वैज्ञानिक
कृषि प्रणाली अनुसंधान
परियोजना निदेशालय
मेरठ

खरपतवार हमारी कृषि एवं बंजर भूमि, चरागाहों, जंगलों, आवासीय परिसर, सड़क के किनारों, तालाबों व अन्य वास स्थानों पर उगते हुए पाए जाते हैं। सामान्यतया खरपतवारों को फसलों के शत्रु के रूप में जाना जाता है। परन्तु, इन खरपतवार रूपी वनस्पतियों की कई प्रजातियां औषधीय गुणों से भरपूर होती हैं तथा मनुष्य को स्वस्थ और निरोग रखने में सहायक होती हैं। ''औषधीय खरपतवार (पहचान एवं उपयोगिता)'' पुस्तक के माध्यम से डॉ. चन्द्रभानु एवं डॉ. वी.एस.जी.आर. नायडू ने प्रयास किया है कि शोधकर्ताओं, छात्रों, कृषि विस्तार अधिकारियों, कृषकों व जड़ी-बूटी विशेषज्ञों का खरपतवारों की सही पहचान, उनके भौगोलिक वितरण, वासस्थानों व औषधीय उपयोगों की विस्तृत जानकारी उपलब्ध कराई जा सके।

VASANTRAO NAIK AWARD FOR OUTSTANDING RESEARCH APPLICATION IN DRYLAND FARMING SYSTEMS 2012

Award 2012

In order to provide recognition for outstanding research and application leading to improvement of dry land farming systems, ICAR instituted an annual Vasantrao Naik Award for Research Application in dryland Agriculture 2011 of ₹100,000 which is given to a scientist or an extension worker who has made outstanding contribution in the areas of Water Conservation and Dry land Farming. The award has been named after Vasantrao Naik (1913–1979) who is regarded as Father of Green Revolution in Maharashtra. Four (04) applications were received in response to the open advertisement and the winner is:

Dr. Om Pal Singh Khola
Principal Scientist & Head
Central Soil and Water Conservation
Research and Training Institute
Research Centre, Rees 'Corner,
Fernhill Post Uphagamandalam
The Nilgiris, Tamil Nadu 643 004

DR. O.P. S. KHOLA and his team have contributed in building an innovative, replicable and sustainable watershed model for upliftment of resource poor farmers and landless of semi arid drylands. Participatory watershed planningand management of natural land human resources for enhancing the productivity, equity and profitability of wastelands on a sustained basis, keeping in view of the socio-economic and bio physical conditions at Ayalur Watershed in Ertode district of Tamil Nadu was demonstrated. The participatory approach has delivered the desirable dividends as proved by different projects in India and around the world. The team consisted of Er. V. Selvi, Dr. Dharam Vir Singh and Dr. K. Kannan.

SWAMI SAHAJANAND SARASWATI OUTSTANDING EXTENSION SCIENTIST AWARD 2012

Award 2012

THE Council has instituted the Swami Sahajanand Saraswati Outstanding Extension Scientist Award in order to Provide recognition to outstanding agricultural extension work done by agricultural scientists and teachers in the ICAR-SAU system and to provide incentive for excellence in agricultural extension methodology and education work. The award is exclusively meant for individual extension scientist/teacher. Two individual awards have been provided. An individual award would consist of ₹100,000 in cash and a citation. The awards have been assigned across the disciplines in agriculture and allied sciences. The award has been named after Swami Sahajanand Saraswati (1889–1950) a social reformer and the first president of All India Kisan Sabha. A total of twenty five (25) applications were received in response to the open advertisement and the winners with their significant contributions are:

Dr. Dayaram
Senior Scientist, Plant Pathology
Department of Microbiology
Faculty of Basic Sciences & Humanities
Rajendra Agricultural University
Bihar Pusa, Samastipur 848 125
Bihar

DR. DAYARAM demonstrated mushroom production technology to women. He organized eight training programmes for Master trainers, and one training for spawn production. A total of 238 participants from 20 districts (62 blocks) of Bihar were trained as Master Trainer and 10 candidates from 9 districts were trained as spawn producer. He was involved in establishing six resource centres to disseminate the mushroom production technology in rural area. Farmers were provided 50 Oyster bags (well colonized). He regularly monitored to popularize the mushroom among them. Presently they are growing Oyster & Button mushroom at their door. They are presently earning ₹3000/- to 5000/- per month. All districts of Bihar the Button and Oyster mushroom are being grown seasonally and sold in the market.

DR. SARLA LAKHAWAT developed a postharvest technology unit of KVK, Anta for processing and value addition of garlic by using non-conventional energy resources (Solar dryer) and making garlic powder and granules to export in Newzealand and Singapur. Consequently KVK, Anta got an order of 500 kg of garlic granule for export. She also prepared and introduced a recipe of "Soya sattu" which is highly suitable for diabetic patient, growing children, pregnant and lactating women. People have accepted it as wholesome food and are willing to include it in their regular diet. She was instrumental in developing "Self Help Groups" and formed 350 SHGs from different villages of Baran district which have become self supporting.

Dr. Sarla Lakhawat
SMS (Home Science)
5/4 CAD Colony, Anta
Baran 325 202,
Rajasthan

CHOUDHARY CHARAN SINGH AWARD FOR EXCELLENCE IN JOURNALISM IN AGRICULTURAL RESEARCH AND DEVELOPMENT 2012

Award 2012

CHAUDHARY CHARAN SINGH Award for Excellence in Journalism in Agricultural Research and Development was instituted by the ICAR in 2000 in order to recognize the outstanding contribution in Journalism in the field of Agricultural Research and Development in the country. The award carries a cash value of ₹100,000 and is given annually for the outstanding contribution in Journalism in Agriculture and Allied Science through Hindi/English newspapers/magazines/Journals published in India. From 2010, an award for Journalist from electronic media, has also been added. An individual who has made significant contribution by way of writing/analyzing/reporting for enhancement/promotion of Indian Agriculture is eligible for this award. The award has been named after Chaudhary Charan Singh (1902–1987) who was the seventh prime minister of India. Seven (7) applications were received by the Council in response to the open advertisement and the recipients of the awards with their contributions are:

SHRI VIRSAIN MALIK has established close linkages with many agricultural scientists, science managers and farmers. He has been actively participating in the various programmes of Indian Council of Agricultural Research/State Agricultural Universities and worked hard to link scientists with farmers and contributed towards transfer of agricultural technologies to the end users through All India Radio.

Shri Virsain Malik
Programme Executive
Farm & Home, Sansad Marg
All India Radio, New Delhi

Electronic Media

Shri Naseeb Saini
Junior Sub-Editor, Amar Ujala
Kaithal, Haryana

Print Media

SHRI NASEEB SAINI raises the basic issues on agriculture and farmers of the region through Amar Ujala. Many a time administration gets acquainted with the basic problems of farmers through his reporting. Most of his reportages on farming issues can be considered as impact stories. His keenness to highlight newest developments in the agriculture sector are very informative. Shri Naseeb Saini collaborated with Haryana Gramin Bank to assess the credit needs of farmers.

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

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