ISO 9001:2008 Organisation

ICAR @ 89

CITATIONS

ICAR AWARD CEREMONY

16 JULY 2017

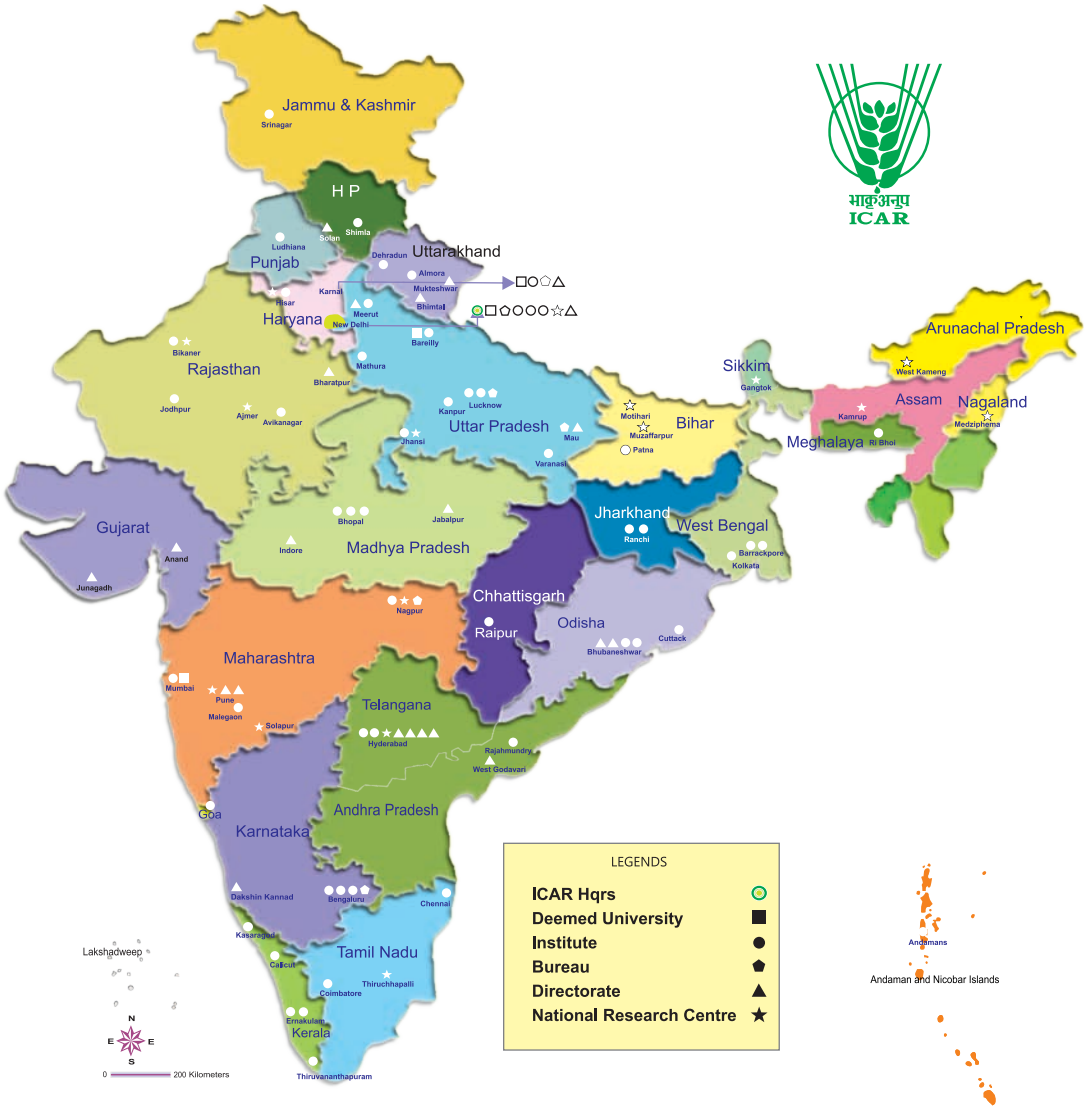
भाकृअनुप
ICAR

Indian Council of Agricultural Research
New Delhi

www.icar.org.in

Indian Council of Agricultural Research

Institutes, Bureaux, Directorates and National Research Centres



67 RESEARCH INSTITUTES • 15 NATIONAL RESEARCH CENTRES • 6 NATIONAL BUREAUX • 14 DIRECTORATES

CITATIONS

ICAR AWARD CEREMONY

16 JULY 2017

Indian Council of Agricultural Research
New Delhi
www.icar.org.in

राधा मोहन सिंह
RADHA MOHAN SINGH

सत्यमेव जयते

कृषि मंत्री, भारत सरकार
MINISTER OF AGRICULTURE
GOVERNMENT OF INDIA

संदेश

हर्ष का विषय है कि भारतीय कृषि अनुसंधान परिषद अपने 89वें स्थापना दिवस समारोह का आयोजन कृषि विज्ञान अकादेमी परिसर, नई दिल्ली में 16 जुलाई, 2017 को करने जा रहा है। इस अवसर पर परिषद द्वारा स्थापित पुरस्कारों का वितरण करने हेतु वार्षिक पुरस्कार वितरण समारोह का भी आयोजन किया जा रहा है एवं पुरस्कार विजेताओं के उपलब्धियों पर एक पुस्तिका भी निकाली जा रही है। मैं सभी पुरस्कार विजेता, संस्थानों, वैज्ञानिकों, शिक्षाविदों, किसानों एवं छात्रों का अभिनंदन करता हूँ और इन सभी को अपने–अपने कार्य क्षेत्रों में उत्कृष्ट उपलब्धियों और योगदान के लिए हार्दिक बधाई देता हूँ। मुझे पूर्ण विश्वास है कि इस प्रकार के पुरस्कार रचनात्मक और नई संकल्पनाओं को बढ़ावा देने के लिए बहुत जरूरी है जिनके फलस्वरूप कृषि विज्ञान के सभी क्षेत्रों में नई और बेहतर प्रौद्योगिकियों और कौशलों का विकास होता है तथा माननीय प्रधानमंत्री के कृषि उत्पादकता को बढ़ाने, संसाधनों के उपयोग की दक्षता में सुधार लाने, उत्पादन लागतों में कमी लाने तथा लाभ–मार्जिन को बढ़ाने जैसे स्वप्नों को साकार रूप दिया जा सकता है। माननीय प्रधानमंत्री इन बातों को सभी मंचों पर प्रमुखता से उठाते आए हैं। इस अवसर पर, मैं सभी पुरस्कार विजेताओं को उनकी शानदार उपलब्धियों के लिए पुनः बधाई देता हूँ और जो इस बार पुरस्कार प्राप्त नहीं कर सके उनको भी भविष्य के लिए मैं अपनी हार्दिक शुभकामनाएं देता हूँ।

6 जुलाई, 2017
नई दिल्ली

(राधा मोहन सिंह)

एस. एस. अहलुवालिया
S.S. AHLUWALIA

सत्यमेव जयते

कृषि एवं किसान कल्याण और
संसदीय कार्य राज्य मंत्री
भारत सरकार
कृषि भवन, नई दिल्ली 110001

Minister of State for Agriculture &
Farmers Welfare and Parliamentry Affairs
Government of India
Krishi Bhawan, New Delhi 110001

संदेश

मुझे यह जानकर अत्यधिक प्रसन्नता हो रही है कि भारतीय कृषि अनुसंधान परिषद ने असाधारण व्यक्तिगत प्रतिभाओं और वैज्ञानिकों की टीमों, अग्रणी वैज्ञानिकों, किसानों, संस्थानों को सम्मानित करने के लिए विभिन्न वार्षिक एवं द्विवार्षिक पुरस्कार आरम्भ किए हैं। कृषि क्षेत्र में नई एवं बेहतर प्रौद्योगिकियों के तेजी से विकास एवं कृषि में अनुसंधान, अध्यापन एवं विस्तार की नई–नई अवधारणाओं को अपनाना आज के संदर्भ में सर्वाधिक महत्वपूर्ण हो गया है, क्योंकि आज हम नित नई एवं बड़ी–बड़ी चुनौतियों का सामना कर रहे हैं। मुझे पूर्ण विश्वास है कि हमारे सभी कृषि वैज्ञानिक, अनुसंधान छात्र, अध्यापक, विस्तार पदाधिकारी, किसान एवं अन्य सभी हितकारक इस बात से बखूबी परिचित हैं और वे इस अवसर का लाभ उठाते हुए तथा इन समस्याओं का समाधान करने के लिए अपना सामूहिक योगदान प्रदान करेंगे और इन जटिल चुनौतियों का दृढ़तापूर्वक सामना करेंगे। मुझे पूरी उम्मीद है कि पुरस्कारों एवं सम्मानों के रूप में प्रतिस्पर्धा की भावना को प्रोत्साहित करने से देश में कृषि विकास के सभी क्षेत्रों में वैज्ञानिक प्रयासों को और अधिक बढ़ावा मिलेगा एवं इस प्रयास के लिए मैं अपनी ओर से शुभकामनाएं देता हूँ।

शुभकामनाओं सहित।

7 जुलाई, 2017
नई दिल्ली

(एस. एस. अहलुवालिया)

परशोत्तम रूपाला
PARSHOTTAM RUPALA

सत्यमेव जयते

कृषि एवं किसान कल्याण और
पंचायती राज राज्य मंत्री
भारत सरकार

Minister of State for Agriculture &
Farmers Welfare and Panchayati Raj
Government of India

संदेश

मुझे यह जानकर अत्यधिक प्रसन्नता हो रही है कि भारतीय कृषि अनुसंधान परिषद ने असाधारण व्यक्तिगत प्रतिभाओं और वैज्ञानिकों की टीमों, अग्रणी वैज्ञानिकों, किसानों, संस्थानों को सम्मानित करने के लिए विभिन्न वार्षिक एवं द्विवार्षिक पुरस्कार आरम्भ किए हैं। परिषद द्वारा आयोजित किए जा रहे 89वें स्थापना दिवस समारोह के अवसर पर 16 जुलाई 2017 को इन पुरस्कारों का वितरण किया जाएगा एवं पुरस्कार विजेताओं की विशेष उपलब्धियों के संकलन हेतु एक पुस्तिका भी इस अवसर पर निकाली जा रही है। मैं सभी पुरस्कार विजेताओं को हार्दिक बधाई देता हूँ। कृषि क्षेत्र में नई एवं बेहतर प्रौद्योगिकियों के तेजी से विकास एवं कृषि में अनुसंधान, अध्यापन एवं विस्तार की नई–नई अवधारणाओं को अपनाना आज के संदर्भ में सर्वाधिक महत्वपूर्ण हो गया है क्योंकि आज हम नित नई एवं बड़ी–बड़ी चुनौतियों का सामना कर रहे हैं। मुझे पूर्ण विश्वास है कि हमारे सभी कृषि वैज्ञानिक, अनुसंधान छात्र, अध्यापक, विस्तार पदाधिकारी, किसान एवं अन्य सभी हितधारक इस बात से बखूबी परिचित हैं और वे इस अवसर का लाभ उठाते हुए तथा इन समस्याओं का समाधान करने के लिए अपना सामूहिक योगदान प्रदान करेंगे और इन जटिल चुनौतियों का दृढ़तापूर्वक सामना करेंगे। मुझे परी उम्मीद है कि पुरस्कारों एवं सम्मानों के रूप में प्रतिस्पर्धा की भावना को प्रोत्साहित करने से देश में कृषि विकास के सभी क्षेत्रों में वैज्ञानिक प्रयासों को और अधिक बढ़ावा मिलेगा।

12 जुलाई, 2017
नई दिल्ली

(परशोत्तम रूपाला)

सुदर्शन भगत
SUDARSHAN BHAGAT

सत्यमेव जयते

कृषि एवं किसान कल्याण
राज्य मंत्री
भारत सरकार

Minister of State for
Agriculture & Farmers Welfare
Government of India

संदेश

मुझे यह जानकर प्रसन्नता हुई है कि भारतीय कृषि अनुसंधान परिषद ने व्यक्तिगत प्रतिभाओं, वैज्ञानिकों की टीमों, अग्रणी वैज्ञानिकों, किसानों एवं संस्थानों को सम्मानित करने के लिए विभिन्न वार्षिक एवं द्विवार्षिक पुरस्कार प्रारम्भ किए हैं। कृषि क्षेत्र में नई एवं बेहतर प्रौद्योगिकियों का तेजी से विकास, अनुसंधान, अध्यापन एवं विस्तार की नई–नई अवधारणाओं को अपनाना आज के संदर्भ में सर्वाधिक महत्वपूर्ण हो गया है। मुझे पूर्ण विश्वास है कि हमारे सभी कृषि वैज्ञानिक, अनुसंधान छात्र, अध्यापक, विस्तार पदाधिकारी, किसान एवं अन्य सभी हितधारक कृषि क्षेत्र के सर्वांगीण विकास के लिए अपना सामूहिक योगदान प्रदान करेंगे। मुझे पूरी उम्मीद है कि पुरस्कारों एवं सम्मानों के रूप में स्वस्थ प्रतिस्पर्धा की भावना को प्रोत्साहित करने से देश में कृषि विकास के प्रयासों को और अधिक बढ़ावा मिलेगा।

12 जुलाई, 2017
नई दिल्ली

(सुदर्शन भगत)

डॉ. त्रिलोचन महापात्र
Dr. T. MOHAPATRA

सत्यमेव जयते

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

FROM THE DG'S DESK

Agricultural R&D has steered the country out of food-shortage to surplus through development of high-yielding and climate-resilient varieties and good agricultural practices promoted by the Indian Council of Agricultural Research and State Agricultural Universities that is in existence since 1929.The Council recognizes the significant contributions of the scientists and farmers to motivate all those who work for excellence and incentivize outstanding performances in respective areas of work field across organizations. To this effect, ICAR has instituted several awards for recognizing merit and accomplishmentsto promote healthy competition among individuals, groups and institutions. While we celebrate the 89th Foundation Day of the Council, we are delighted to felicitate 122 awardees under 19 different categories for their excellence. Over all, the ICAR awards for the year 2017 comprised of three Institutes, two AICRPs, 12 KVKs, 19 farmers, 80 scientists including 13 women.

Among the Agricultural Universities and Deemed Universities, Chaudhary Charan Singh Haryana Agricultural University, Hisar, Haryana has been bestowed with the Best Agriculture University Award for the rapid strides in all spheres of teaching, research, extension and innovations. ICAR-Indian Institute of Soil & Water Conservation, Dehradun, Uttarakhand has been recognized with the Best Institute Award in the large institute category whereas, the ICAR-Indian Institute of Wheat & Barley Research, Karnal, Haryana has been adjudged the best ICAR institute among smaller Institute category. All India Coordinated Research Project on Chickpea, ICAR-Indian Institute of Pulses Research, Kanpur and All India Coordinated Research Project on Fruits, Indian Institute of Horticultural Research, Bengaluru have been jointly conferred the Chaudhary Devi Lal Outstanding All India Coordinated Research Project Award 2016.

Pandit Deendayal Upadhyay Rashtriya Krishi Vigyan Protsahan Puraskar (1 National and 11 Zonal) is given to promote healthy competition amongst Krishi Vigyan Kendras (KVKs) at Zonal and National Level for application of scientific methods and appropriate technologies for enhanced productivity, profitability and sustainability of farming systems.

The prestigious Rafi Ahmed Kidwai Award has been bagged by four scientists for outstanding contributions in Crop/Horticultural Sciences, NRM/Agricultural Engineering, Animal/Fisheries Sciences and Social Sciences, respectively. Lal Bahadur Shastri Outstanding Young Scientist Award 2016 has been bagged by 4 scientists, one each in Crop/Horticultural Sciences, NRM/ Agricultural Engineering, Animal/Fisheries Sciences and Social Sciences. Vasant Rao Naik Award for Research Application in Agriculture 2016 has been bagged by a research team of AICRP for Dryland Agriculture, Agricultural Research Station, Acharya N.G. Ranga Agricultural University, Anantapur, Andhra Pradesh.

Fakhruddin Ali Ahmed Award for Outstanding Research in Tribal Farming Systems has been bagged by 3 teams of the Scientists from Zonal Agriculture Research Station (RVSKVV), Jhabua, Madhya Pradesh, ICAR-Central Island Agricultural Research Institute, Andaman & Nicobar and ICAR-National Research Centre on Pig, Guwahati. Swami SahajanandSaraswati Outstanding Extension Scientist Award has been bagged by two scientists, one from Meghalaya and the other from Punjab, for their outstanding work with the farming community towards promotion of the sustainable development models.

To motivate young scientists, Jawaharlal Nehru Awards for high quality Ph.D. thesis are being given to 18 scholars. There are 2 awardees for Panjabrao Deshmukh Woman Scientist Award. This year, Dr. Ettannil Jayashree of Kozhikode is conferred the NASI-ICAR Award for contributions in developing equipments to reduce drudgery and cater to the specific requirements of the farm women.

The Council is incomplete without the cooperation of farmers, not only for testing and demonstration purposes of agricultural technologies, but also taking them forward to achieve enhanced and sustainable production and productivity. Inevitably, exclusive awards are given to farmers who have proven records of agricultural performances. For instance, Pandit DeenDayal Upadhyay Antyodaya Krishi Puraskar has been given to 6 farmers at zonal level having small agricultural holdings. In similar lines, Jagjivan Ram Abhinav Kisan Puraskar has been awarded to 11 farmers (one at National level and 10 at Zonal level). And, the N.G. Ranga Award for Diversified Agriculture has been awarded to Sh. Harbir Singh Shah, a Progressive Farmer from Haryana.

I congratulate all the award winners and hope that these awards will encourage them to attain newer heights in future and set benchmarks that inspire the others to emulate them in their pursuit for excellence.

I wish to thank all the Chairpersons and members of the Award Committees for logical assessment of applications/nominations for the ICAR Awards.

I convey my greetings to all members of the NARES family on this auspicious occasion.

8 July, 2017
New Delhi

(**T. Mohapatra**)

Dr. SHIV PRASAD KIMOTHI
Assistant Director General
(Coordination)

भारतीय कृषि अनुसंधान परिषद
कृषि भवन, डा. राजेन्द्र प्रसाद मार्ग
नई दिल्ली–110001

INDIAN COUNCIL OF AGRICULTURAL RESEARCH
Krishi Bhawan, Dr. Rajendra Prasad Road
New Delhi - 110001

PREFACE

Indian Council of Agricultural Research (ICAR) acknowledges the outstanding contributions of Institutions, AIRCPs, Scientists, Women Scientists, Teachers, Students, Innovative Farmers, and writers of 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. In order to reduce drudgery of farmwomen, ICAR and NASI instituted NASI-ICAR Award for Innovation and Research on Farm Implements from the year 2013. During the period 2014 until date, four new awards have been instituted. As a follow-up of budget announcement (2016-17) of the Government of India,Pandit Deendayal Upadhyay Rashtriya Krishi Vigyan Protsahan Puraskar (National / Zonal) was institutedto promote healthy competition among Krishi Vigyan Kendras (KVKs) at Zonal and National Level for application of science and technology in agriculture. In addition, Haldhar Organic Farmer Award for the promotion of organic farming, Pandit Deendayal Upadhyay Antyodaya Krishi Puraskar for recognizing the contributions of the small and marginal farmers in Indian Agriculture and the ICAR Administrative Award, to recognize the contribution of Administrative, Technical and Supporting categories of staff were also instituted during last three years. At present, there are twenty-three categories of ICAR awards; nineteen are annual and two biennial. Among these,ICAR Norman Borlaug award is given once in 5 years and as the ICAR Challenge award is to be given as and when any of the listed challenge is solved.

This year a total 122 awardees under 19 different categories for their excellence which include three Institution, two AICRPs, 12 KVKs, 19 farmers and 80 scientists including 13 women. For ICAR Awards 2016, a total 703 applications/nominations were received. The procedure for selecting the awardees involves many steps. The ICAR Awards were advertised in the month of October-November, 2016 and applications/nominations were received till 31st December, 2016. The applicant's documents were scrutinized and categorized subject, area or zone wise as per guidelines of the awards. The documents along-with criteria for evaluation were sent to the Award Judging Committee members and Chairpersons well in advance. The Award Judging committees were Chaired by eminent scientists of national stature and consisted of 3-6 experts in different disciplines and from different parts of the country. Judging Committees met in the months of April- May for finalizing the awards.

The significant contributions of the awardees are compiled in the booklet entitled CITATIONS. It is hoped that the booklet would not only provide an interesting and motivational reading to the scientists, academicians, extension personnel and the agricultural farmers but would also inspire all those engaged in the agricultural, research, teaching and extension to alleviate their efforts to the newer heights so that they could also achieve similar laurels/recognition. I express sincere gratitude to Dr. T. Mohapatra, Secretary DARE and Director General, ICAR for continuous encouragement and guidance and Shri Chhabilendra Roul, Additional Secretary DARE and Secretary, ICAR for constant guidance and useful suggestions. Support received from the Scientists and staff of the Technical Coordination and Award cell is duly acknowledged.

7th July, 2017
New Delhi

(Shiv Prasad Kimothi)

CONTENTS

SARDAR PATEL OUTSTANDING ICAR INSTITUTION AWARD 2016

Award 2016

The Indian Council of Agricultural Research (ICAR) was set up on 16th July, 1929 on the recommendation of the Royal Commission on Agriculture. It was recognised in 1965. Over the years it has developed a large research and training infrastructure and operates through 100 Institutes including Bureaux, PDs & National Research Centres (NRCs) and 71 Agricultural Universities.

In order to recognize the outstanding performance by the ICAR Institutes, Deemed Universities of ICAR, Central Agricultural University and State Agricultural Universities, three Awards of ₹ 10.00 lakh each, are given to two ICAR Institutes/NRCs/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 of the three categories *viz.* ICAR's National Institutes/ Large Institutes (scientific cadre strength more than 60) (ii) ICAR's NRCs/Project Directorate etc./small institutes (scientific cadre strength up to 60) and (iii) State Agricultural Universities/ DUs/CAU. 16 eligible applications were received in response to the open advertisement, the recipient of awards are:

INDIAN INSTITUTE OF SOIL & WATER CONSERVATION
Dehradun, Uttarakhand

ICAR-INDIAN INSTITUTE OF SOIL & WATER CONSERVATION, DEHRADUN, UTTARAKHAND has been awarded Sardar Patel Outstanding ICAR Institution Award, 2016 in the Large Institute category. The institute with primary mandate of conservation of natural resources and having over 60 years of experience, has done pioneering work in developing a number of resource conserving technologies, both for arable and non-arable lands, which have potential to check land degradation, minimize soil erosion, preserve soil's fertility, sustain productivity, conserve rainwater in-situ, harvest and recycle inevitable runoff, mitigate droughts, moderate floods downstream, and ensure environmental security in different agro-ecological regions of India. The institute's biggest contribution has been to evolve, demonstrate and popularize the concept of participatory integrated watershed management encompassing biophysical and socio-economic aspects for food, environmental and livelihood securities of local communities. It has successfully demonstrated a number of technologies in different agro-ecological regions in watershed mode. It has established networking and linkages with people, SAUs, State and Central agencies and International organizations through collaborative multi-disciplinary research and consultancy projects. The institute has continuously strived hard for effective development and management of country's precious soil and water resources through imparting technical skills as a nodal agency to manpower engaged in natural resource conservation and watershed management. It is actively involved in Government's national programmes PMKSY and Soil Health.

ICAR-INDIAN INSTITUTE OF WHEAT & BARLEY RESEARCH, KARNAL has been awarded Sardar Patel Outstanding ICAR Institution Award, 2016 in the Small Institute category. The institute through the All India Coordinated Wheat and Barley Improvement project coordinate multidisciplinary and multilocational activities across the diverse ecosystems for increasing the wheat and barley production in the country in an ecologically and economically sustainable manner. During the past five years, the country has witnessed record production in wheat making India progress as a world leader in wheat production. This achievement is an outcome of the research being conducted at the institute along with the efforts of millions of farmers and farmer-friendly government policy. During this period the institute has released 36 and 16 high yielding, disease resistant wheat and barley cultivars respectively. The research on conservation agriculture has led to increased farm income and through concerted research efforts on protection technologies; a check has been kept on the management of various insects, pests and diseases since last four decades. The institute has done commendable work in tackling heat and drought stress through genomics and phenomics along with path breaking research for decoding the genome of leaf rust and Karnal bunt pathogens. The quality trait analysis done at the institute helped the FCI to export about 6.5 million tonnes of wheat. The institute has published 162 publications in high impact journals besides several technical and popular articles. As a nodal centre under PPVFRA, the institute has facilitated registration of wheat and barley varieties in IPR regime for protecting the plant breeder's and farmers' rights.

INDIAN INSTITUTE OF WHEAT & BARLEY RESEARCH
Karnal, Haryana

CHAUDHARY CHARAN SINGH HARYANA AGRICULTURAL UNIVERSITY
Hisar, Haryana

CHAUDHARY CHARAN SINGH HARYANA AGRICULTURAL UNIVERSITY (CCSHAU), HISAR, HARYANA has been awarded Sardar Patel Outstanding ICAR Institution Award, 2016 in the category of Agricultural Universities. CCSHAU is a public fundedagricultural university located at Hisar in the Indian state of Haryana. It is one of the biggest agriculturaluniversities in Asia. It was initially a satellite campus of Punjab Agricultural University at Hisar. It was established as a university by Haryana and Punjab Agricultural Universities Act, ratified 2 February 1970 and was named as Haryana Agricultural University. It is the first established university of the state Haryana. In 1991, it was renamed as Chaudhary Charan Singh Haryana Agricultural University. The university is carrying out a yeoman service in shaping the future of agriculture, and has made tremendous contribution towards sustainable agriculture development in Haryana. The university is a forerunner in undertaking excellent teaching, research and extension activities related to agriculture. In the area of teaching, it has four faculties in five constituent colleges. It has been continuously striving to strengthen its lifelong connection with its alumni over the world with a view to forging a lifelong connection with the university that will be mutually beneficial. The university is equipped with latest IT facilities, central library with rich collection of print and electronic resources satisfying informational need of agricultural user community. The university has published the most number of research papers among agricultural universities in India.The university has been a leader in the rapid development of extension education, public-private partnership for commercialization of technologies and in the area of natural resource conservation.The university has contributed significantly to Green Revolution and White Revolution in India.

CHAUDHARY DEVILAL OUTSTANDING ALL INDIA CO-ORDINATED RESEARCH PROJECT (AICRP) AWARD 2016

Award 2016

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 ₹3.0 lakh (₹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 10 eligible applications were received in response to the open advertisement. The details about the winning AICRP along with major achievements are as follows:

ALL INDIA COORDINATED RESEARCH PROJECT ON CHICKPEA, ICAR-INDIAN INSTITUTE OF PULSES RESEARCH
Kanpur, Uttar Pradesh

ALL INDIA COORDINATED RESEARCH PROJECT ON CHICKPEA, ICAR-INDIAN INSTITUTE OF PULSES RESEARCH, KANPUR has been awarded Chaudhary Devi Lal Outstanding All India Coordinated Research Project Award 2016. It has been involved in research and development activities of chickpea in India for over 20 years. Several disease resistant varieties like GNG 1581, CSJ 515, JG 16, JG 315, GJG 0809 etc. have been developed and popularized. Development of short duration varieties have helped to significantly increase chickpea cultivation in central and south India. Development of large and extra-large seeded Kabuli varieties have opened new avenues for chickpea export from the country. Development of varieties matching crop production and protection technologies have made chickpea cultivation remunerative for farmers in rice fallows. It developed technologies, which have been instrumental in increasing the area, production and productivity of chickpea in the country.

SRIGANGANAGAR, RAJASTHAN CENTRE under All India Coordinated Research Project (AICRP on Chickpea) has been awarded Chaudhary Devi Lal Outstanding All India Coordinated Research Project Award 2016 for best centre under the AICRP. It has released various chickpea varieties such as –Desi chickpea variety GNG 1958 (Marudhar), Kabuli chickpea variety GNG 1969 (Triveni), Desi chickpea variety GNG 2144 (Teej), Desi chickpea variety GNG 2171 (Meera), etc., which have been instrumental in increasing the area, production and productivity of chickpea in the country.

ALL INDIA COORDINATED RESEARCH PROJECT ON FRUITS, ICAR-INDIAN INSTITUTE OF HORTICULTURAL RESEARCH, BENGALURU has been awarded Chaudhary Devi Lal Outstanding All India Coordinated Research Project Award 2016. The AICRP adopted multidisciplinary approach to generate 541 technologies to improve resource use efficiency in fruit crops. It has ensured timely supply of quality planting material, optimized the high-density planting and drip fertigation technologies that can contribute to yield increase and savings of nutrients and water, standardized crop regulation and canopy architecture for higher yields and integrated pest and disease management.

GANDEVI CENTRE under Navsari Agricultural University, Gujaratunder this AICRP (AICRP on Fruits), has been awarded Chaudhary Devi Lal Outstanding All India Coordinated Research Project Award 2016 for best centre under the AICRP. It has enriched the local germplasm collections besides supporting farmers of different regions with new recommended varieties and hybrids. It has also developed numerous region-specific technologies of crop production and protection as a best approach in meeting stake holder need.

ALL INDIA COORDINATED RESEARCH PROJECT ON FRUITS, ICAR-INDIAN INSTITUTE OF HORTICULTURAL RESEARCH
Bengaluru, Karnataka

RAFI AHMED KIDWAI AWARD FOR OUSTANDING RESEARCH IN AGRICULTURAL SCIENCES 2016

Award 2016

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 specific areas defined as: (1) Crop and Horticultural Sciences; (2) Natural Resources Management 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 ₹5.00 lakh in cash. All Indian Scientists engaged in agricultural research and overseas Indian scientists working in the area relevant to Indian agriculture are eligible for these awards. The award has been named after Late Sh. Rafi Ahmed Kidwai (1894-1954) who was the president of ICAR from 1952-1954. A total of 75 eligible applications were received in response to the open advertisement and the winners with their contributions are:

Dr. PRITAM KALIA
Principal Scientist &
Former Head, ICAR-Indian Agricultural
Research Institute, Pusa, New Delhi

Dr. PRITAM KALIA, Principal Scientist & Former Head, ICAR-Indian Agricultural Research Institute, Pusa, New Delhi has been awarded Rafi Ahmed Kidwai Award for Outstanding Research in Agricultural Sciences, 2016 for Crop & Horticultural Sciences. He has done commendable work on the improvement of different vegetable crops, especially powdery mildew resistant cauliflower varieties Pusa Paushja & Pusa Shakti. He pioneered introduction of broccoli as a crop, developing indigenous varieties and popularized this important nutritious vegetable crop in India. The tropical carrot varieties he developed have become popular with the growers enhancing their production and profit. Dr. Kalia has also, for the first time, introgressed cytoplasmic male sterility in tropical carrot elite lines making it possible to ease the process of F1 hybrid development as well as low cost affordable hybrid seed production. In Indian cauliflower, Dr. Kalia established Cytoplasmic Male Sterility system paving the way for hybrid development. Besides, he is successfully progressing in diversification of sterile cytoplasm from Alien *Brassica* species using *in vitro* techniques. On resistance breeding front in cauliflower, he has found new source of resistance in Brassica oleracea to black rot disease having single dominant gene (Xcalbo) governing resitance making it possible to develop black rot resistant hybrids in cauliflower. He has also developed closely linked flanking markers to this gene, which has since been converted into SCARS and is being used in marker-assisted selection for black rot resistance. The success Dr. Kalia obtained in biofortifying Indian cauliflower with betacarotene enhancing Or gene and developing first ever bred betacarotene rich variety Pusa Kesari VitA-1 recently will go a long way in tackling betacarotene malnutrition problem in India.

Dr. KRISHNA KUMAR SINGH
Director, ICAR-Central Institute of Agricultural Engineering, Bhopal

Dr. KRISHNA KUMAR SINGH, Director, ICAR- Central Institute of Agricultural Engineering, Bhopal has been awarded Rafi Ahmed Kidwai Award for Outstanding Research in Agricultural Sciences, 2016 for Natural Resource Management & Agricultural Engineering. He has made original contributions on the application of cryogenics in food processing for retention of aroma in spice grinding establishing an internationally recognized school of thought in CRYOGENIC GRINDING OF SPICES, an area little explored until now in India or abroad. Based on basic theory of heat and mass transfer and properties of the spices, he developed a design concept as well as a physical model of cryogenic grinding system for spices. He characterized cryogenic grinding parameters for two commercially important spices, cumin and clove. He developed protocols for nutritionally rich extruded products, flaxseed dehulling, thermal processing model to predict cooking index, screw pressing of dehulled kernel and functional energy bar, peanut based dairy analogues and puffed potato cubes. He developed a number of need based food processing machines like, small capacity dryer for fruits and vegetables, potato peeler and slicer, power operated peanut sheller, expanding pitch type fruit grader, potato pulper for extraction of potato starch, and solar supplemented pulse dryer for small entrepreneurs/ farmers. These machines have been helpful in reducing the drudgery and enhancing efficiency of operations, and have been adopted by the small scale processors/ farmers.

Dr. PRIYABRAT SWAIN, Principal Scientist & National Fellow, ICAR-Central Institute of Freshwater Aquaculture, Bhubaneswar has been awarded Rafi Ahmed Kidwai Award for Outstanding Research in Agricultural Sciences, 2016 for Animal & Fisheries Sciences.He has done pioneering work on different aspects of nanotechnology research and application in Aquaculture, particularly in fish health management, microbial water remediation, hatchery applications and nano-nutrients. His research has resulted in the development of five diagnostic kits for microbial diseases of freshwater fish. Besides, he did the research, development, upscaling and commercialization work of eight important technologies and popularized them among fish farmers and state fisheries departments of the country. He contributed immensely towards development of maternal immunity and safe motherhood in fish for getting healthy carp seeds. He has been instrumental for revolutionizing the intellectual property protection and building institute-industry-entrepreneurs-farmers partnershipsfor the effective dissemination of technologies for upliftment of freshwater aquaculture sectordeveloped by Central Institute for Freshwater Aquaculture (CIFA). Through his effort, CIFA has been able to obtain ten patents, six design/ trademark registrations and twenty-five copyrights.

Dr. PRIYABRAT SWAIN
Principal Scientist & National Fellow
ICAR-Central Institute of Freshwater Aquaculture, Bhubaneswar

Dr. PRATAP SINGH BIRTHAL
Principal Scientist
ICAR-National Institute of Agricultural Economics and Policy Research (NIAP)
New Delhi

Dr. PRATAP SINGH BIRTHAL, Principal Scientist, ICAR-National Institute of Agricultural Economics and Policy Research (NIAP), New Delhi has been awarded Rafi Ahmed Kidwai Award for Outstanding Research in Agricultural Sciences, 2016 for Social Sciences. He has made pioneering contributions towards understanding the role of diversification as a driver of agricultural growth, and its impact on poverty, food and nutritional security, and empowerment of marginalized sections of rural society. The analytical rigour in his research on various aspects of diversification, from plough to plate, has provided a sound empirical basis for greater policy emphasis on agricultural diversification, and institutional and market reforms for efficient and sustainable growth of agriculture and scaling-out agricultural value chains, so critical to enhance farm income, manage production and market risks, improve food and nutritional security, reduce rural poverty, and improve competitiveness of agriculture to face the challenges of globalization. His contributions are highly acclaimed by professionals and policymakers for their relevance to development of policies for smallholder agriculture.

LAL BAHADUR SHASTRI OUTSTANDING YOUNG SCIENTIST AWARD 2016

Award 2016

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 ₹1.00 lakh in cash and a challenge project for three years with budgetary provision of ₹ 10.00 lakh per year ₹5.00 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 Late Sh. Lal Bahadur Shastri (1904-1966) the former Prime Minister of India who gave the slogan 'Jai Jawan Jai Kisan'. 47 eligible applications were received in response to the open advertisement and the winners are:

CROP AND HORTICULTURAL SCIENCES

Dr. SATENDRA KUMAR MANGRAUTHIA
Scientist (SS)-Plant Biochemistry, Indian Institute of Rice Research, Rajendranagar, Hyderabad

Dr. SATENDRA KUMAR MANGRAUTHIA, Scientist (SS)-Plant Biochemistry, Indian Institute of Rice Research, Rajendranagar, Hyderabad has been awarded Lal Bahadur Shastri Outstanding Young Scientist Award 2016 for the Crop & Horticultural Sciences category. He has made significant contributions in understanding the elevated temperature response in different growth phases of rice genotypes and discovered key genes/ microRNAs and physiological/ biochemical traits which can be exploited for development of heat tolerant rice cultivars. His work on tungro virus genomics and recombination helped in understanding the evolution and adaptation of viruses to new host/ ecology. For management of rice tungro disease, he has developed virus sequence based PCR diagnostic markers. Using RNAi based binary constructs; he developed rice transgenics showing high degree of tolerance to RTSV. His contributions in understanding the gene regulation through methylation/ demethylation are of considerable significance. The epigenetic factors such as ASH, MBD7, Met18, HDP1 and HDP2 involved in removal of methylation from transcriptionally active DNA were characterized. He has contributed significantly towards functional genomics, bio-fortification and finding solutions for management of rice insects and diseases. His research contributions have also found place in peer reviewed journals of high impact.

NATURAL RESOURCE MANAGEMENT AND AGRICULTURAL ENGINEERING

Dr. PRIYABRATA SANTRA, Sr. Scientist, ICAR-Central Arid Zone Research Institute, Jodhpur, Rajasthan has been awarded Lal Bahadur Shastri Outstanding Young Scientist Award 2016 for the Natural Resource Management & Agricultural Engineering category. He has contributed greatly in the study of wind erosion in hot arid region of India and its impact on agriculture, environment and ecosystem. A new wind erosion sampler was designed and developed by him for quantifying wind eroded soil loss in field conditions. Further, he developed models for quantifying soil factors affecting wind erosion process in terms of pedo-transfer functions. Digital soil mapping approach through geo-statistical modeling was successfully applied by him for spatial assessment of soil factors and the wind erosion severity. He further designed and developed a dual purpose mechanical barrier with low height vertical axis wind turbines (VAWT) to control wind erosion as well as to harness wind energy for electricity generation. He also developed a wind tunnel facility for simulation study of wind erosion process.

Dr. PRIYABRATA SANTRA
Professor (Agril. Processing)
Anbil Dharamalingam Agricultural College
& Research Institute, TNAU
Navalur Kuttappattu, Tiruchirappalli
Tamil Nadu

ANIMAL & FISHERIES SCIENCES

Dr. TARUNA ANAND
Scientist, National Centre for Veterinary Type Cultures, ICAR-National Research Centre on Equines, Hisar

Dr. TARUNA ANAND, Scientist, National Centre for Veterinary Type Cultures, ICAR-National Research Centre on Equines, Hisar has been awarded Lal Bahadur Shastri Outstanding Young Scientist Award 2016 for the Animal & Fisheries Sciences category. She is an active researcher in the area of bacteriophages where she has also isolated and characterized bacteriophages against resistant bacteria of veterinary significance. She has also contributed in the molecular characterization of bacterial and viral strains including First laboratory confirmed case of buffalo pox. She has been actively involved in generation of Bacterial artificial chromosomes (BACs) and implementation of reverse genetics approach for equine influenza to generate improved vaccines. A novel small animal model (BALB/c mice) has been developed and established to study the pathology of EIV is of immense potential to evaluate vaccines and therapeutics. She has contributed in the area of establishing buffalo stem cells by exploring stem cell markers and demonstrating their directed differentiation ability into cells of skeletal myogenic lineage. She has also been associated in the establishment of pregnancies in buffalo using handmade cloned (HMC) embryos. The murine iPS cells, which were generated and differentiated to eye lens lineage through her efforts, may prove their biological relevance in treatment of cataract disease. She is also currently associated with the generation of Buffalo iPSCs through non-viral approach, which will help in improving the buffalo cloning efficiency.

SOCIAL SCIENCES

Dr. RANJIT KUMAR PAUL, Scientist, IASRI, Library Avenue, Pusa, New Delhi has been awarded Lal Bahadur Shastri Outstanding Young Scientist Award 2016 for the Social Sciences category. He has made significant contributions in developing statistical methodology for forecasting crop yield and agricultural commodity prices. He worked with AGRIMAX-GARCH model for crop yield forecasting. He derived the formulae for best predictor and prediction error variance for carrying out out-of–sample forecasts by GRACH, EGRACH and AGRIMAX-GRACH models. He investigated FCAR model for forecasting lac export from India. He has also done pioneering studies in analyzing the trend in India's monsoon rainfall and analyzed rainfall behavior across all agro-climatic zones in India using wavelet analysis. By using MCMC he has carried out comparative assessment of different estimation procedures for estimating long memory parameters of ARFIMA model. Dr. Paul has been working in the area of time series modeling and climate change. He has published more than 90 research papers in various national and international journals of repute besides publishing popular articles, book chapters and a book. He is also actively involved in PG teaching.

Dr. RANJIT KUMAR PAUL
Scientist, IASRI, Library Avenue,
Pusa, New Delhi

PANJABRAO DESHMUKH OUTSTANDING WOMAN SCIENTIST AWARD 2016

Award 2016

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 Women Scientist Award. Two annual awards are meant exclusively for outstanding women agricultural scientists. The award consists of ₹1.00 lakh in cash with provision of equal amount of ₹1.00 lakh for motivating Woman 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 woman scientists. The award has been named after Late Sh. Panjabrao Deshmukh (1898-1965) who was Minister of Agriculture in the first cabinet of Pt. Nehru in 1952. A total of 35 applications were received in response to the open advertisement. The awardees are:

Dr. (Ms.) ARCHANA MUKHERJEE, Principal Scientist and Head, Central Tuber Crops Research Institute, Regional Centre, Dumduma, Bhubaneswar, Odisha has been awarded Punjabrao Deshmukh Outstanding Woman Scientist Award, 2016. She has been engaged in conducting research on the genetic improvement of tuber crops through conventional and non-conventional approached for over thirty years of her service career. The miseries of farm families caused due by 'Super Cyclone' in October 1999 prompted her to shift towards developing climate resilient nutrient rich crops through integrated approach. She has developeda number of bio fortified, climate resilient varieties/ technologies of sweet potato and taro for the benefit of underprivileged and undernourished population of the region and its dissemination through various line departments as well as various other national and international agencies. These improved technologies are coherent with the demands of second green revolution but their field application warrants multidisciplinary approach with systems perspective.

Dr. (Ms.) ARCHANA MUKHERJEE
Principal Scientist and Head,
Central Tuber Crops Research Institute,
Regional Centre, Dumduma,
Bhubaneswar, Odisha

Dr. (Ms.) TARA SATYAVATHI CHELLAPILLA
Professor,
Deptt. of Food Science & Nutrition
College of Rural Home Science
UAS, Dharwad, Karnataka

Dr. (Ms.) TARA SATYAVATHI CHELLAPILLA, Pulse Laboratory, Division of Genetics, ICAR-Indian Agricultural Research Institute, Pusa Campus, New Delhi has been awarded Punjabrao Deshmukh Outstanding Woman Scientist Award 2016. She has contributed significantly towards improvement of Brassica, Soybean and Pearl Millet crops. She contributed towards the development of minimal descriptor which paved way to the formulation of National Test Guidelines for testing distinctiveness, uniformity and stability in soybean. She has characterized the Indian soybean cultivars with AFLP and SSR markers for the first time. She is also instrumental in establishing the molecular breeding facilities in soybean. She has been working in the area of improving seed longevity in soybean and identifying the QTLs responsible for seed longevity through in-depth studies on seed coat permeability. She has developed a number of useful breeding materials in soybean. She is also involved in digitalization of the morphological characters of soybean and developing a database for identification of reference varieties for DUS testing in soybean. She is also the first Indian scientist to estimate the genetic base of Indian soybean varieties and compare it with that of American and Brazilian soybean genetic base. In addition, Dr. Tara was also involved in developing a number of composites and hybrids of pearl millet. She pioneered the work on nutritional improvement through bio fortification and development of pearl millet genotypes with improved iron, zinc and amino acid profile. She is also involved in improving the utilization of pearl millet in ready to eat snacks, use of extrusion technology, etc. She also isolated thermotolerance genes from pearl millet. She developed a number of white/ cream coloured pearl millet lines with resistance to downy mildew with vision for their future use in food industry. Dr.Tara is involved in developing interspecific and intergeneric hybrids of *Brassica campestris* with *Brassica gravinae* and *Diplotaxistenuisiliqua* through embryo rescue techniques. She is also involved in identification of early maturing stable brassica genotypes like SEJ-2, which was later released as PusaAgrani for cultivation in Northern India. She has experimentally proved that basal branching architecture in brassica is high yielding and protects the crop from yield losses during hail storms. She is also involved in PG teaching and guided a number of Master's and Ph.D. students in Genetics and Plant breeding at Division of Genetics, IARI.

JAWAHARLAL NEHRU AWARD FOR P.G. OUTSTANDING DOCTORAL THESIS RESEARCH IN AGRICULTURAL AND ALLIED SCIENCES 2016

Award 2016

The ICAR instituted in January, 1969, the Jawaharlal Nehru Awards for 'Post-graduate Agricultural Research' based on Ph.D. thesis 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 ₹0.50 lakh each with a Gold plated silver medal. The award has been named after Late Pt. Jawaharlal Nehru (1889-1964), the first Prime Minister of India. A total of 107 eligible applications were received for consideration in different discipline and 18 were selected for the award. The awardees and their contributions are given in following pages:

Dr. (Ms.) MEHAK GUPTA
Department of Plant Breeding & Genetics, PAU, Ludhiana

Dr. (Ms.) MEHAK GUPTA, Department of Plant Breeding & Genetics, PAU, Ludhiana has been awarded Jawaharlal Nehru Award for P.G. Outstanding Doctoral Thesis Research in Agricultural and Allied Sciences, 2016 in Crop Sciences category. Through her Ph.D. research, she reported the synthesis of a stable *Brassica* allohexaploid for the first time. This research may prove helpful in evolving into new synthetic species. It could also find application as a diversity conduit to genetically enrich *Brassica juncea*. Excellent variation for a majority of traits was indicative of emerging phenotypical divergence and breeding value of the new germplasm. Results may also help to overcome the challenges of multivalent formation and chromosome segregation caused by genome duplication through greater understanding of cytological diploidization. These can also provide greater insights into evolutionary aspects of chromosome pairing and advance our understanding of pairing regulation and genome evolution in complex allopolyploids.

Dr. M.G. MALLIKARJUNA, Division of Genetics, ICAR-IARI, New Delhi has been awarded Jawaharlal Nehru Award for P.G. Outstanding Doctoral Thesis Research in Agricultural and Allied Sciences, 2016 in Crop Sciences category. He worked on the issues of zinc and iron malnutrition, the most widespread problem in developing nations including India. Genetic biofortification of staple cereals like maize is found to be most sustainable and self-targeted approach to tackle the iron and zinc malnutrition. The success of genetic biofortification of maize relays on the stable inbreds with appreciable iron and zinc concentration, knowledge on genes and pathways involved in uptake and accumulation of iron and zinc. The genetics of iron and zinc revealed, CM-501 and SKV-775 inbreds with higher kernel Fe and Zn, which can be used in development of iron and zinc rich maize cultivars. Genome-wide transcriptome assay deciphered genes and the pathway associated with iron and zinc uptake and accumulation in kernels. Several candidate genes namely, *OPT (Zm.16913.1.S1_at), metal binding protein (Zm.2647.1.A1_at), vacuolar cation proton exchanger-3 (Zm.7306.1.S1_at), vacuolar metal transporter nramp3 (Zm.13647.1.S1_at), NAS (Zm.4166.1.A1_at, Zm.8336.1.S1_at)* were identified for improvement of kernel iron and zinc concentration in the maize.

Dr. M.G. MALLIKARJUNA
Division of Genetics, ICAR-IARI,
New Delhi

Dr. SHRABANI SAUGANDHIKA
Department of Obstratics & Gynecology
All India Institute of Medical Sciences
New Delhi

Dr. SHRABANI SAUGANDHIKA, Department of Obstratics & Gynecology, All India Institute of Medical Sciences, New Delhi has been awarded Jawaharlal Nehru Award for P.G. Outstanding Doctoral Thesis Research in Agricultural and Allied Sciences, 2016 in Animal Sciences category. She worked with Interferon tau (IFN-T) which acts as the signaling molecule for maternal recognition of pregnancy (MRP) in ruminants. Cloning and characterization of Buffalo IFN-T genes revealed BuIFN-T1 to be the relatively more abundant isoform. For the first time, BuIFN-T1 was successfully expressed and purified from a prokaryotic expression system using different chromatographic methods. The purified recombinant BuIFN-T1 protein was evaluated for biological activity by Antiviral assay. Examination of the effect of purified recombinant BuIFN-T1 was found to have potential impact in promoting *in vitro* embryonic growth and development. Further, the purified recombinant BuIFN-T1 can be explored for other applications such as early pregnancy diagnosis and preventing early embryonic loss due to failure in MRP. This research may also have potential applications in human disease models and cancer research. Two research papers were published in peer reviewed international journals from this thesis research work.

Dr. K. LAXMANA NAIK N., Scientist, Dairy Chemistry Section, Southern Regional Station of ICAR-NDRI, Bengaluru, Karnataka has been awarded Jawaharlal Nehru Award for P.G. Outstanding Doctoral Thesis Research in Agricultural and Allied Sciences, 2016 in Animal Sciences category. He conducted research on the topic "Development of analytical methods for the detection of oxytetracycline in milk by lateral flow assay and HPLC-coupled with molecular imprint solid-phase extraction technique." His research work has resulted in the development of two innovative test methods for the detection of antibiotics in milk. Rapid, user friendly and cost effective screening test was developed using lateral flow assay concept. This test gives qualitative result about presence or absence of antibiotics in milk at its MRL level in just 5 minutes without use of any instruments. Semi-quantification to the tune of 30 ppb is also possible in this test. To enhance the sensitivity in the confirmatory HPLC test, molecular imprinted polymers were prepared and used to analyze pre-concentration, which could be quantified subsequently. This resulted in sensitive detection of oxytetracycline in milk at limit of detection range of 6.2-9.71 ppb. Practical applicability of this test is high at all milk collection points to ensure safety of milk.

Dr. K. LAXMANA NAIK N.
Scientist, Dairy Chemistry Section,
Southern Regional Station of ICAR-NDRI,
Bengaluru, Karnataka

Dr. BINEESH KINATTUMKARA
Scientist, ICAR-NBFGR,
CMFRI Campus, Kochi, Kerala

Dr. BINEESH KINATTUMKARA, Scientist, ICAR-NBFGR, CMFRI Campus, Kochi, Kerala has been awarded Jawaharlal Nehru Award for P.G. Outstanding Doctoral Thesis Research in Agricultural and Allied Sciences, 2016 in Fisheries Sciences category. His research work entitled "Molecular Taxonomy of Deep Sea Fishes off the Southern Coast of India" involved expansion of fishing to deeper waters to avoid the already over exploited coastal regions. In this study, 120 species representing 10 orders and 34 families of deep-sea fishes from India waters were characterized for DNA barcode variability, making this the largest study in the region. He has discovered more than 20 new species to the science and already published 7 new species to the science exclusively from his thesis. Exploitation in deeper waters brought several rare fauna, which were hitherto unknown to India. It revealed a need for germplasm inventorying before depletion of resource. The study revealed an urgent need for more focused taxonomical work using molecular markers to find the accurate species diversity. The output of this work may be useful for developing a specific fishery management for deep-sea fishes including deep-sea chondrichthyan fishery in India and in recommending further biodiversity surveys for deep-sea fishes. He has already published over 30 research papers in various indexed journals from his Ph.D. research work.

Dr. GINSON JOSEPH, Cochin, Kerala has been awarded Jawaharlal Nehru Award for P.G. Outstanding Doctoral Thesis Research in Agricultural and Allied Sciences, 2016 in Fisheries Sciences category. His research work includes an effective application of High Pressure Processing (HPP) to Indian white prawn (*Fenneropenaeusindicus*) and subsequent chilled storage, for improving the overall quality and shelf life, as well as overcoming the processing challenges faced during commercial trading. HPP has been identified as one of the most successful non-thermal food processing technology with its environmental friendly processes, zero waste production, low operational costs and optimum energy consumption. The Indian white prawns subjected to high-pressure treatment at optimum processing condition did not undergo undesirable transformations in the sensory, physical, biochemical and nutritional properties, thereby preventing the formation of black spots, pathogenic microflora and spoilage. The research findings proved that this novel additive-free technology is an alternative preservation technique for Indian white prawn, and an innovative solution to develop a new generation of value added seafood products having superior quality and shelf life, to those produced conventionally.

Dr. GINSON JOSEPH
Cochin, Kerala

Dr. BHOGIREDDY SAILAJA
ICRISAT, Patancheru,
Hyderabad

Dr. BHOGIREDDY SAILAJA, ICRISAT, Patancheru, Hyderabad has been awarded Jawaharlal Nehru Award for P.G. Outstanding Doctoral Thesis Research in Agricultural and Allied Sciences, 2016 in the area of Biotechnology. Dr. Sailaja worked on the challenging task of increasing rice productivity despite the climate change induced high temperature stress, a major challenge ahead for the scientists. Based on computational prediction and expression analysis of miRNAs associated with heat stress, she identified 27 novel miRNAs for the first time in rice genome using homology search. Expression of two novel miRNAs, miR157a and miR165a confirmed their role in heat stress response. Stress responsive miRNAs showed contrasting expression patterns in tolerant and susceptible cultivars during stress and recovery suggesting their role in the expression of target genes. Different expression pattern of *osfd* (iron-sulphur cluster binding protein), cell wall integrity protein and fertility restorer homologue genes during heat stress in tolerant and susceptible cultivars signify their role in heat stress tolerance and recovery and indicate efficient role of systems during recovery. The identified genes, miRNAs, physiological and biochemical traits can be utilized for developing climate resilient rice cultivars.

Dr. SIDDANNA SAVADI, Scientist, ICAR-IIWBR, R.S. Flowerdale, Shimla, Himachal Pradesh has been awarded Jawaharlal Nehru Award for P.G. Outstanding Doctoral Thesis Research in Agricultural and Allied Sciences, 2016 in the area of Biotechnology. His study was pioneering in demonstrating strategic application of transgenic technology to improve complex traits like oil yield and break barriers in crop plants. Four different types of transgenics with improved seed mass and oil content in Indian mustard (*Brassica juncea*) were developed and characterized by altering the expression of key genes involved in seed development and oil biosynthesis. The research led to the generation of transgenics with significantly enhanced seed oil content up to 8% and seed mass up to 39%. Besides this, a novel and rapid method of identifying the true transformants at T0 generation using PCR which overcomes the false positive amplifications due to *Agrobacterium* contamination was reported.

Dr. SIDDANNA SAVADI
Scientist, ICAR-IIWBR
R.S. Flowerdale Shimla
Himachal Pradesh

Dr. (Ms.) RESHMA GILLS
Scientist (Agricultural Extension)
ICAR-IARI, New Delhi

Dr. (Ms.) RESHMA GILLS, Scientist (Agricultural Extension), ICAR-IARI, New Delhi has been awarded Jawaharlal Nehru Award for P.G. Outstanding Doctoral Thesis Research in Agricultural and Allied Sciences, 2016 in Social Sciences category for her work on "Post-harvest decision making pattern and marketing behaviour of peri urban farmers". Through this research, Dr. Gills has made a systematic attempt to explain the dynamics of the harvest decision making and marketing behavior of peri urban farmers. The depiction and economic analysis of marketing channels persisting in the study area helped to recommend the most efficient and preferred marketing personnel. The results of this case analysis have helped towards standardization of best practices in post harvest management and marketing of different agricultural products. The new scales developed for measurement of constraints and inhibitors in post-harvestdecision making are spearheading benefaction to procedures in chain analysis. The results of the study will help in planning and developing strategies for up scaling and out-scaling of marketing systems to maximize profitability of producers and to replicate the strategy in the extrapolation domains with minor modification.

Dr. PRAKASHKUMAR RATHOD, Assistant Professor, Department of Veterinary & Animal Husbandry Extension, Veterinary College, Bidar, Karnataka has been awarded Jawaharlal Nehru Award for P.G. Outstanding Doctoral Thesis Research in Agricultural and Allied Sciences, 2016 in Social Sciences category. His study "Livestock Innovation System: A Multi-Stakeholder Analysis in Dairying" assessed the perception of multi-stakeholders with regard to generation and transfer of dairy innovations, and explore the existing innovation system and enlist suggestions for developing an effective Livestock Innovation System (LIS). The Delphi method identified concentrate feeding, AI, vaccination, CMP and use of mobiles in dairying as the dairy innovations of socio-economic importance in Indian dairying sector. There was a wide percentage gap among farmers-scientists and farmers-extensionists, while the gap was low among scientists and extension experts. The study has pinpointed deficiencies in the existing technologies as well as the process of technology generation and its transfer among farming community. Emphasis has been laid on the development of need based, location-specific and cost-effective dairy innovations for strengthening LIS leading to improved production and productivity in dairy sector and certain strategies have also been proposed in this direction.

Dr. PRAKASHKUMAR RATHOD
Assistant Professor
Department of Veterinary & Animal Husbandry Extension, Veterinary College
Bidar, Karnataka

Dr. KUTUBUDDIN ALI MOLLA
Scientist,
Crop Improvement Division
ICAR-NRRI, Cuttack, Odisha

Dr. KUTUBUDDIN ALI MOLLA, Scientist, Crop Improvement Division, ICAR-NRRI, Cuttack, Odisha has been awarded Jawaharlal Nehru Award for P.G. Outstanding Doctoral Thesis Research in Agricultural and Allied Sciences, 2016 in Crop Protection category. His study was aimed to develop transgenic rice plants expressing defense gene from rice and non-rice sources for enhanced tolerance to the intractable sheath blight disease for which no resistant germplasm is available. Over-expression of rice oxalate oxidase (Osoxo4) gene in transgenic rice has been demonstrated for the first time to enhance tolerance to the sheath blight pathogen through breakdown of oxalate, the pathogenesis factor and through elevating plant's innate defense pathways. The study also showed that green tissue specific expression of *Arabidopsis NPR1* gene is a suitable strategy to enhance the pathogenesis related gene expression and to combat the sheath blight pathogen without any developmental and phenotypic cost. The transgenic lines developed here may be utilized in future resistance breeding programmes of rice against *R.solani*. The approach used in the study could be extended to protect other crops affected by *R.solani*.

Dr. SALINI SANTHAMMA
Yelahanka, Bengaluru

Dr. SALINI SANTHAMMA, Yelahanka, Bangaluru has been awarded Jawaharlal Nehru Award for P.G. Outstanding Doctoral Thesis Research in Agricultural and Allied Sciences, 2016 in Crop Protection category. She studied and documented fauna of Pentatomidae from India. Apart from various surveys conducted across various locations of South India, various museums across India such as Zoological Survey of India, National Pusa Collection, New Delhi, etc. were visited and studied for available specimens of Pentatomidae. A checklist of Pentatomidae along with the distribution within India is prepared for the first time. An illustrated key to Pentatomidae key to subfamilies of Pentatomidae, key to genera of Asopinae, key to tribes and genera of Pentatomidae, key to genera of podopinae and key to genera phyllocephalinae were prepared. 96 species are illustrated and described based on male and female genitalia. A phylogenetic analysis of the subfamily Pentatomidae was undertaken which shows the tribes Aeschrocorini, Halyini, Hoplistoderini, Mendini, Pentatomidae, Rhynchocorini, Rolstoniellini, Sciocorini and Strachiini are monophyletic.

Dr. DIPAK KUMAR GUPTA
Scientist (Environmental Sciences)
ICAR-CAZRI, RRS-Pali, Rajasthan

Dr. DIPAK KUMAR GUPTA, Scientist (Environmental Sciences), ICAR-CAZRI, RRS-Pali, Rajasthan has been awarded Jawaharlal Nehru Award for P.G. Outstanding Doctoral Thesis Research in Agricultural and Allied Sciences 2016 in Natural Resource Management category. His study focused on identification of economically viable, environmentally sustainable and low-C treatments for rice-wheat crop rotation of the Indian IGP to reduce GHG contribution of Indian agriculture and combat climate change. Among seven management treatments i.e., conventionally tilled wheat (CTW); zero tilled wheat (ZTW); transplanted puddle rice (TPR); dry direct seeded rice (DSR); intermittent wetting and drying (IWD); application of neem oil coated urea (NOCU); and surface application of rice residue (RR) were experimented in six different combinations of [CTW-TPR, ZTW-TPR, ZTW-IWD, ZTW-DSR, ZTW+RR-DSR and (ZTW-TPR)+NOCU] for two consecutive years. Among these, ZTW-DSR and ZTW+RR-DSR rotation treatments showed the lowest global warming potential (GWP) and GHG intensity in both the years. Adoption of these treatments in the Indian-IGP can reduce GWP of the conventional RWCS (CTW-TPR) by 44-47% without any significant loss in the system yield and economy. The GWP can be further reduced by use of NOCU and rice residue mulch. InfoRCT model was modified to simulate GWP of conventional RWCS in different locations of trans and middle Indo-Gangetic Plains. The results indicated that the use of resource conserving technologies (RCTs) such as system of rice intensification (SRI), DSR and ZTW lowered the global warming potential than conventional practice of puddle-transplanted rice and tilled wheat without any yield penalty.

Dr. SANJEET KUMAR, Assistant Professor, Applied Engineering Department, Vignan's Foundation for Science Technology & Research University, Vadlamudi, Guntur, Andhra Pradesh has been awarded Jawaharlal Nehru Award for P.G. Outstanding Doctoral Thesis Research in Agricultural and Allied Sciences 2016 in Natural Resource Management category. This study considers using spatial and temporal data for catchment hydrological modeling in addition to other conventional techniques. An integrated approach involving hydrological model application was adopted in this study for evaluating impact of LULC change, climate change on catchment hydrology and reservoir sedimentation. Due consideration has been given to the effect of pattern/ configuration LULC and climate change (historical and future) on soil erosion, reservoir inflow and sediment inflow to the reservoir. The multiple high resolution regional climate model simulations and their ensemble are used to force the SWAT model for evaluating the impact of climate change on the catchment in terms of sedimentation of reservoirs and water availability in future in the region. The approach introduces the concept of neutral landscape, model to develop hydrological connectively indices and to explore the possible effect of spatial and temporal configuration of LULC patches, climate change and adaptation of management strategies on the hydrological regime of a catchment.

Dr. SANJEET KUMAR
Assistant Professor,
Applied Engineering Department,
Vignan's Foundation for Science
Technology & Research University,
Vadlamudi, Guntur, Andhra Pradesh

Dr. VIJAY RAKESH REDDY S.
Scientist (Horticulture)
ICAR-CIAH, Bikaner, Rajasthan

Dr. VIJAY RAKESH REDDY S., Scientist (Horticulture), ICAR-CIAH, Bikaner, Rajasthan has been awarded Jawaharlal Nehru Award for P.G. Outstanding Doctoral Thesis Research in Agricultural and Allied Sciences 2016 in Horticultural sciences. He worked on 'Response modulation of mango (*Mangiferaindica* L.) to ethylene inhibitors' and established the efficacy of various novel plant growth regulators in extending the shelf-life and marketability of the mango cv. Amrapali. His interventions would enable the farmers to harvest their produce at optimum maturity and the processors to increase their radius of procurement area. The newly developed rapid and efficient RNA isolation protocol would contribute to the functional analysis and annotation of new genes in mango. The confirmation of inhibitory effect of various ethylene inhibitors at molecular level would enable them to be used as a candidate gene in the genetic manipulation of mangoes to increase their shelf-life under ambient conditions.

Dr. PONNAM NARESH, Scientist, ICAR-IIHR R.S. CHES, Bhubaneswar, Odisha has been awarded Jawaharlal Nehru Award for P.G. Outstanding Doctoral Thesis Research in Agricultural and Allied Sciences 2016 in Horticultural Sciences. He worked on 'Genetic and molecular analyses for resistance to viruses (cucumber mosaic virus &chillivainal mottle virus) drought tolerance and fruit quality traits in chilli'. He identified resistant sources having combined resistance to both CMV and ChiVMV viruses. He carried out comprehensive genetic analysis of the resistance to both the viruses and identified resistant gene analog polymorphic molecular marker for chilliveinal mottle virus resistance by screening the segregating population developed using IHR 2451 and IHR 3476, this marker can be used in marker assisted selection. He also identified best donors for drought tolerance, identified selection criteria for drought tolerance breeding and studied the genetics of drought tolerance associated traits including root traits. He identified best F1 hybrids for rain-fed cultivation, developed an interspecific population for studying the inheritance of root traits. He also studied the genetics of the yield and yield attributing traits and fruit biochemical traits, identified best F1 hybrids for industrial use. He validated molecular markers for ripened fruit color.

Dr. PONNAM NARESH
Scientist, ICAR-IIHR R.S. CHES,
Bhubaneswar, Odisha

Dr. SNEHASIS CHAKRABORTY
Assistant professor
Food Technology
Institute of Chemical Technology
Mumbai

Dr. SNEHASIS CHAKRABORTY, Assistant professor, Food Technology, Institute of Chemical Technology, Mumbai has been awarded Jawaharlal Nehru Award for P.G. Outstanding Doctoral Thesis Research in Agricultural and Allied Sciences 2016 in Agricultural Engineering category. His study of 'High pressure processing of pineapple puree: Effect on quality attributes and shelf life' encompasses the suitability of high pressure processing (HPP) in improving the post processing nutritional quality of pineapple puree with an extended shelf life. The knowledge of kinetics has been integrated into designing the high pressure process optimization targeting a high quality pineapple puree. An algorithm has been developed to find out the inactivation order (n) within a high pressure-temperature domain. In addition, two empirical kinetic models have been developed to describe high pressure inactivation of enzymes and microorganisms. This information will enable the food industry to apply HPP as an emerging non-thermal technology for superior quality pineapple puree by replacing the conventional thermal pasteurization.

Dr. V. EYARKAI NAMBI, Scientist, TOT Division, ICAR-CIPHET, Ludhiana has been awarded Jawaharlal Nehru Award for P.G. Outstanding Doctoral Thesis Research in Agricultural and Allied Sciences 2016 in Agricultural Engineering Category. He developed a machine for grading of mango based on ripeness and size using machine vision technology. The developed machine can grade the mango into 10 customizable grades with the combination of five-ripeness level and two sizes. During his study, he had developed a scientific methodology for classification of ripening period into different ripeness level like unripe, early ripe, partially ripe, ripe and over ripe for climacteric fruits. A colour grade chart was also developed as a tool for rapid identification of ripeness level of mango. The machine vision algorithm developed by him is capable of detecting mango ripeness level and size within a fraction of second. The thesis output is very useful for mango processing industries and pack houses to reduce the grading cost considerably as compared to manual grading and increase the effectiveness of grading.

Dr. V. EYARKAI NAMBI
Scientist, TOT Division,
ICAR-CIPHET, Ludhiana

JAGJIVAN RAM ABHINAV KISAN PURASKAR/ JAGJIVAN RAM INNOVATIVE FARMER AWARD 2016 (NATIONAL/ZONAL)

Award 2016

ICAR instituted this award for Innovative farmers at National and Zonal levels in order to recognize the outstanding contribution of innovative farmers for initiatives in development, adoption, modification and dissemination of innovations and improved technologies for increased and sustained productivity, improve resource use efficiency and higher profitability. These awards have been named after Late Sh. Jagjivan Ram (1908-1986) who was the Deputy Prime Minister and Union Minister for Food and Agriculture in the Union Cabinet.

National: One annual national award of ₹ 1.00 lakh 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: Eleven annual awards of ₹ 0.50 lakh each + equal amount of travel grant to promote his achievement and motivate farmers in his respective zone. The geographical area of each zone is given in the guidelines of the award.

46 eligible applications were received in response to the open advertisement. The winners in National and the Zonal levels are:

NATIONAL

Sh. KARAN SIKRI, Village-Dhangali, PO-Jandheri, Shahabad Markanda, Distt.-Kurukshetra, Haryana has been awarded Jagjivan Ram Abhinav Kisan Puraskar 2016 for National category. He is an innovative and progressive farmer who has adopted diversified farming approach. He has established a high-technique vermin compost plant unique in the country. He is an example for fellow farmers who has adopted holistic system of farming in sustainable agriculture.

Sh. KARAN SIKRI
Kurukshetra, Haryana

ZONAL

ZONE-II

Sh. POONAM CHAND PATIDAR, P.O.-Dityakhedi, Via-Raipur, P.S.-Jhalarapatan, Distt.-Jhalawar, Rajasthan has been awarded Jagjivan Ram Abhinav Kisan Puraskar 2016for Zone II.He has adopted several new farming technologies in his village-intercropping of turmeric crop in mandarin orchard, drip irrigation in turmeric crop, seed production, grading of mandarin, bamboo plantation, artificial insemination, which has resulted in huge profit earned along with saving of resources/ inputs and inspiration among fellow farmers.

Sh. POONAM CHAND PATIDAR
Jhalawar, Rajasthan

ZONE-II

Sh. MAHAVEER SINGH RATHORE
Bhilwara, Rajasthan

Sh. MAHAVEER SINGH RATHORE, Village & Post-Rupaheli Kalan, Tehsil-Hurda, Distt.-Bhilwara, Rajasthan has been awarded Jagjivan Ram Abhinav Kisan Puraskar 2016 for Zone II. He has adopted new technologies like IFS model use of groundnut cake at middle of two plants which reduced fruit cracking and improved shining of fruit, used organic slurry, cow urine, neem based pesticide and drip irrigation system in orchard, which have resulted in economic and technological empowerment.

ZONE-III

Sh. AGYA RAM VERMA
Basti, Uttar Pradesh

Sh. AGYA RAM VERMA, Village-Kharkadewri, Post-Kodia, District-Basti, Uttar Pradesh has been awarded Jagjivan Ram Abhinav Kisan Puraskar 2016for Zone III. He has adopted innovative farming technologies in wheat production, which have resulted in economic and technological empowerment.

ZONE-III

Sh. RAGHUPAT SINGH, Village-Samathal, The.-Bilari, Distt.-Muradabad, Uttar Pradesh shares Jagjivan Ram Abhinav Kisan Puraskar 2016 for Zone III. He has adopted new farming technologies in Rajma, chana, bottleguard, karela, arbi production, which has resulted in huge profit earned along with saving of resources/ inputs and inspiration among fellow farmers.

Sh. RAGHUPAT SINGH
Muradabad, Uttar Pradesh

ZONE-IV

Sh. SANJEEV KUMAR, Vill.-Chakwara, P.O.-Hajipur, Distt.-Vaishali, Bihar has been awarded Jagjivan Ram Abhinav Kisan Puraskar 2016 for Zone IV. He is a progressive-cum-innovative farmer. He specializes in commercial seed production of vegetables, particularly cauliflower. The credit goes to him for being the pioneer in undertaking massive cultivation of vegetables under green house condition in the Vaishali district. He has mobilized a large number of farmers and rural youths for entrepreneurship development in the field of vegetable cultivation. He has also created employment opportunities for more than 500 farm women and rural youth.

Sh. SANJEEV KUMAR
Vaishali, Bihar

ZONE-VI

Sh. PANKAJ KALITA
Nalbari, Assam

Sh. PANKAJ KALITA, Village-Pub Balitara, PO-Balitara, Distt.-Nalbari, Assam has been awarded Jagjivan Ram Abhinav Kisan Puraskar 2016 for Zone VI. He has made innovation in pumpkin cultivation in sand-silt area of Nalbari using drip irrigation. He also made progress in horticulture and dairying and has helped in employment of his fellow farmers as well.

ZONE-VII

Sh. R.D. PETER
Senapati, Manipur

Sh. R.D. PETER, Village-Purul Akutpa, Distt.-Senapati, Manipur has been awarded Jagjivan Ram Abhinav Kisan Puraskar 2016 for Zone VII. He is a progressive farmer as well as an active extension worker. He has benefitted many of his fellow farmers. Due to his initiatives, maximum villagers in PurulAkutpa have adopted Vanaraja poultry, double cropping, intercropping, rain water harvesting and natural resource conservation technique. His kiwi fruit and mushroom production has earned huge profits.

ZONE-VIII

Smt. SUNANDABAI MADANRAV SHINDE, At Post-Manoli, Tq.-Manwat, Distt.-Parbhani, Maharashtra has been awarded Jagjivan Ram Abhinav Kisan Puraskar 2016 for Zone VIII. She has adopted new technologies in soybean, sorghum and cotton production, which has earned huge profits. Her rain water harvesting and recycling through farm pond has resulted in huge savings of resources.

Smt. SUNANDABAI MADANRAV SHINDE
Parbhani, Maharashtra

ZONE-IX

Sh. RAM PATIDAR, Village-Paltawad, Distt.-Dhar, Madhya Pradesh has been awarded Jagjivan Ram Abhinav Kisan Puraskar 2016 for Zone IX. He has done excellent work in adoption and transfer of technology and has a good knowledge of modern agricultural practices, strategies for agricultural climate resilient practices and expertise in diversified agriculture. He has the world record of developing 'Largest biodiversity on a hillock' and 'Most trees planted by an individual'.

Sh. RAM PATIDAR
Dhar, Madhya Pradesh

ZONE-XI

Sh. DHAREPPA P. KITTUR
Nalbari, Assam

Sh. DHAREPPA P. KITTUR, Near Siddeshwar Temple, At Post-Terdal, Tq.-Jamkhandi, Distt.-Bagalkot, Karnataka has been awarded Jagjivan Ram Abhinav Kisan Puraskar 2016 for Zone XI. He has highly contributed in integrated farming system and organic farming, saving of resources/ inputs by use of locally produced nutrient supplements such as bio-digester liquid, vermicomposting, FYM, Neem cake, weeds and crop residues in enhancing soil fertility.

BHARAT RATNA Dr C. SUBRAMANIAM AWARD FOR OUTSTANDING TEACHERS 2016

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 ₹1.00 lakh in cash + travel grant of ₹1.00 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 Science 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. 32 eligible applications were received in response to an open advertisement and the selected awardees are:

Prof. SANJAY KUMAR SINGH
Head
(Fruits & Horticultural Technology)
IARI, New Delhi

Prof. SANJAY KUMAR SINGH, Head (Fruits & Horticultural Technology), IARI, New Delhi has been awarded Dr. C. Subramaniam Award, 2016 for Crop & Horticultural Sciences. He has contributed significantly towards the postgraduate teaching and related academic activities over the last 22 years. He has guided over 15 students, formulated, and introduced six PG courses. Besides, he has helped in revision of courses at 4 Central & State universities. His students worked on crop improvement, biotechnological interventions and physiological aspects of horticultural crops culminating in over 80 research papers in various high impact journals. He developed smart classroom facilities and two modern laboratories for students; four practical manuals, five training manuals and three online e-study materials. He was instrumental in initiating M.Sc. & Ph.D. Courses in Horticulture at Sikkim University and North Eastern Hill University. He is Nodal Officer for establishment of IARI-Jharkhand and also coordinated outreach programmes of IARI in four Horticulture sub-disciplines at IIHR, Bengaluru.

Dr. SIBA PRASAD DATTA
Principal Scientist,
ICAR-IARI, New Delhi

Dr. SIBA PRASAD DATTA, Principal Scientist, ICAR-IARI, New Delhi has been awarded Dr. C. Subramaniam Award, 2016 for Natural Resource Management and Agricultural Engineering. He has made significant contributions towards quality education and human resource development in natural resource management during last 19 years at ICAR-Indian Agricultural Research Institute, New Delhi. During this period, he has been involved in teaching of 7 important courses covering soil chemistry, fertility and plant nutrition. He has been involved in supervising 12 M.Sc. and 12 Ph.D. students as Chairman and Co-Chairman, besides guiding a large number of students as an advisory committee member. Over the period, he was involved in designing one new course and upgrading three courses. He has published 44 research papers out of students' work in peer reviewed journals. In all, he has contributed 32 books, book chapters, bulletin and scientific reviews, which are serving as reference materials for both teachers and students. He has introduced several innovative methods of teaching including discussion, assignment, home exercise, use of audiovisual aids and on-line resources as and when needed to augment black-board teaching. He has contributed significantly in developing a programmable-digital Pusa Soil Test Fertilizer Recommendation Meter and novel micronutrient fertilizer products as well as filed 2 patents. With the active support of his students, he has been able to create a distinct school of research particularly in the area of risk assessment and management of metal polluted soils as well as devising ways and means for alleviating micronutrient deficiency in soil-plant-human continuum.

Dr. ARJAMADUTTA SARANGI
Principal Scientist
IARI, New Delhi

Dr. ARJAMADUTTA SARANGI, Principal Scientist, IARI, New Delhi has been awarded Dr. C. Subramaniam Award 2016 for Natural Resource Management and Agricultural Engineering. He developed teaching aids in form of lecture notes, manuals and visual presentations through meticulous review of textbooks and research papers, which were updated periodically. Students were provided with lecture notes and web links to access publications and instruction materials pertaining to course modules. Both the interactive digital and marker boards were used during lecture as and when desired. Students were sensitized through brainstorming sessions and evaluated by unannounced classroom quizzes, term papers and assignments. Hands on training during practical classes and discussion on real world problems were taken up to disseminate the practical utility of course modules. Knack of presenting good seminars besides model seminars by faculties were delivered. Students were evaluated at the beginning and at the end of course to understand the efficacy of learning vis-à-vis subsequent improvement. Good teaching practices upholding the ethics and morale values in academic career besides inculcating fearless attitude during scientific deliberations were disseminated to students. Capacity building on scientific writing to mentored students resulted in 52 publications in peer-reviewed journals, which not only enhanced the quality of thesis but also infused passion in students to undertake quality research. Moreover, mentored students are engaged in agricultural research, teaching and extension activities in the capacity of Scientists and Assistant Professors in different organizations of India and abroad.

Dr. A. KUMARESAN, Senior Scientist, ICAR-NDRI, Karnal has been awarded Dr. C. Subramaniam Award 2016 for Animal and Fisheries Sciences. He has made notable contribution towards quality education to make the students competitive and excel in the chosen subject. He was instrumental in starting and effective implementation of Master's and Doctoral programmes in Animal Reproduction, Gynaecology & Obstetrics course at NDRI and taught 20 courses taking more than 140 classes per year. He is part of the team that developed e-learning courses for Gynaecology and Interactive Educational Multimedia Module for easy understanding of dairy animal production and reproduction. As major advisor, he guided 17 students in upstream areas of Animal Reproduction that identified bull-fertility prediction and composite female reproduction management tools. He has published 58 research papers from students' research apart from publishing over 75 research papers in reputed journals. He authored 12 books, 11 bulletins and several book chapters besides more than 30 technical articles. He was involved in 8 externally-funded and 16 In-house research projects. He contributed significantly to streamlining and effective implementation of Master's and Doctoral programmes in his Division.

Dr. A. KUMARESAN
Senior Scientist
ICAR-NDRI, Karnal

Dr. SHIVENDRA KUMAR KASHYAP
Prof. & Head
(Agricultural Communication)
GBPUAT, Pantnagar

Dr. SHIVENDRA KUMAR KASHYAP, Prof. & Head (Agricultural Communication), GBPUAT, Pantnagar has been awarded Dr. C. Subramaniam Award, 2016 for Social Sciences. Capacity building programmes on essential teaching skills developed by him and coordinated by university teachers has helped hundreds of teachers to improve their teaching skills. The simulation games and instructional materials developed by him and his three books on the best practices of teaching authored by him are serving as ready reckoner on teaching-learning, training, agricultural education, etc. The teachers in various universities have found these teaching aids very useful. Besides, he hosted 80 off-time sessions of students' mentoring on soft skills, which helped needy students tremendously.

Dr. (Mrs.) RUPASI TIWARI, Principal Scientist and Incharge ATIC, IVRI, Izatnagar has been awarded Dr. C. Subramaniam Award, 2016 for Social Sciences. She has made notable contributions towards PG education. She guided 19 PG students in new areas of extension research that led to the development of 8 expert/ interactive softwares of which, 2 have received copyrights, one software has been commercialized and 4 ICT products are being sold from the Institute to stakeholders across the country and outside leading to entrepreneurship generation and improving animal health and production. She has been instrumental in introducing innovative teaching methods like e-manuals/ books, online tools, interactive software to make teaching more effective. Her students have received prestigious awards, publishedover 37 research papers in various national and international journals of repute and are well placed in reputed organizations around the country.

Dr. (Ms.) RUPASI TIWARI
Principal Scientist and
Incharge ATIC, IVRI, Izatnagar

FAKHRUDDIN ALI AHMED AWARD FOR OUTSTANDING RESEARCH IN TRIBAL FARMING SYSTEMS 2016

Award 2016

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 ₹1.00 lakh in cash, a citation and provision of equal amount for study on related subject in the geographical area for a year. The award has been named after Late Sh. Fakhruddin Ali Ahmed (1905-1977) who was president of ICAR Society from 1971 to 1974. In all 23 eligible applications were received in response to the open advertisement and the winners with their contribution are:

Dr. INDRA SINGH TOMAR, Senior Scientist & Head, Zonal Agriculture Research Station (RVSKVV), Jhabua (Team Leader), Dr. Rakesh Kumar Yadav, Scientist, Krishi Vigyan Kendra, Jhabua (Associate) and Dr. Anil Kumar Singh, Vice-Chancellor, Rajmata Vijayaraje Scindia Agricultural University, Gwalior, M.P (Associate) have been awarded Fakhruddin Ali Ahmed Award for Outstanding Research in Tribal Farming Systems, 2016. They have contributed significantly in improving livelihoods of the vulnerable tribal community through sustainable enhancement in productivity and profitability, management of natural resources through low cost measures, empowerment for entrepreneurships, value addition, transportation and marketing., especially Kadaknath farming technology. Their innovative farming techniques have contributed towards sizeable increases in income of the farmers in their neighbouring areas and thus contributed in reduction of migration for employment during off crop season.

Dr. INDRA SINGH TOMAR
Senior Scientist & Head, Zonal Agriculture Research Station (RVSKVV)
Jhabua

Dr. T.P. SWARNAM
Central Island Agricultural Research Institute, Port Blair
Andaman & Nicobar Islands

Dr. T.P. SWARNAM, Senior Scientist (Team Leader); Dr. A. Velmurugan, Senior Scientist, Dr. Awnindra K.Singh, Senior Scientist, Dr. Sibnarayan Dam Roy, Director and Dr. I. Jaisankar, Scientist, Central Island Agricultural Research Institute, Port Blair, Andaman & Nicobar Islands (Associates) have been awarded Fakhruddin Ali Ahmed Award for Outstanding Research in Tribal Farming Systems 2016. They were involved in enhancing the nutritional and livelihood security of tribes inhabiting Nicobar group of islands through diversification of on and off farm enterprises. A homestead based integrated farming system model was evaluated and implemented in 35 tribal *tuhets* and ergonomically designed farm implements were distributed directly benefitting 500 farm families. The household nutritional security was achieved by on-farm production of pulses, vegetables, fruits, tubers, eggs and meat besides fodder for livestock.The team isolated and produced efficient microbial consortia for plant growth promotion and disease management. They regularly issue weekly agromet and fishing zone advisories and organised number of capacity building programmes to improve the agricultural production.

Dr. D.K. SARMA, Director (Team Leader); Dr. M.K. Tamuli, Principal Scientist, Dr. Mohan N.H., Senior Scientist and Dr. R. Thomas, Scientist (Associates), National Research Centre on Pig, Rani, Guwahati, Assam have been awarded Fakhruddin Ali Ahmed Award for Outstanding Research in Tribal Farming Systems, 2016. They developed and released an upgraded variety of pig suitable for northeastern region after conducting multi location trials on the performance evaluation the for its large-scale propagation duly supported by the production packages to ensure increased production of pork in the region. They also introduced large-scale artificial insemination at tribal households with more than 35000 crossbred piglets with higher birth weight and faster growth ratethan indigenous animals. They also developed critical interventions covering major aspects of pig husbandry practices to ensure economically sustainable pig farming in this region. The efforts of this team of researchers through critical interventions in the pig husbandry introduced scientific pig production practices to increase the income of tribal farmers substantially and also aroused interest in them to undertake piggery as a viable occupation.

Dr. D.K. SARMA
Director
National Research Centre on Pig,
Rani, Guwahati, Assam

कृषि एवं संबंधित विज्ञान की तकनीकी पुस्तकों हेतु डॉ. राजेन्द्र प्रसाद पुरस्कार 2016

Award 2016

परिषद ने कृषि एवं संबंधित विज्ञान पर हिन्दी में तकनीकी पुस्तक लेखन के क्षेत्र में मौलिक 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 (1,00,000 रू.) नकद के रूप 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 डॉ. राजेन्द्र प्रसाद (1884–1963) के सम्मान में दिया जाता है। खुले विज्ञापन से प्राप्त 18 प्रविष्टियों में से पुरस्कृत लेखक और उनका योगदान इस प्रकार है।

डॉ. जितेन्द्र सिंह, प्राध्यापक, बागवानी, उधानिकी एवं वानिकी महाविद्यालय, कृषि विश्वविद्यालय कोटा परिसर, झालावाड़, राजस्थान, को कृषि और संबद्ध विज्ञान में हिन्दी में तकनीकी पुस्तकों के लिए फसल एवं बागवानी श्रेणी में वर्ष 2016 का डॉ. राजेन्द्र प्रसाद पुरस्कार इनकी पुस्तक 'आधारीय बागवानी' के लिए प्रदान किया जा रहा है। रचना में बागवानी की मूल प्रकृति के विभिन्न घटक पहलुओं को करीने से संजोया गया है। परिचयात्मक बागवानी, प्रबन्धन क्रियाएँ और कार्बनिक खेती सम्बन्धी घटकों समेत 23 अध्याय इस पुस्तक की पठन सामग्री का सृजन करते हैं। पुस्तक की भाषा सहज हो, ऐसा भरसक प्रयास किया गया है। विषय–विधा अधिक से अधिक बोधगम्य बने, इस हेतु तथ्यों को यथावश्यक सन्निकट चित्रों के माध्यम से प्रस्तुत किया गया है।

डॉ. जितेन्द्र प्रसाद
प्रधान वैज्ञानिक (एनआरएम)
झालावाड़, राजस्थान

डॉ. बी.पी. भट्ट
निदेशक, पूर्वी क्षेत्र के लिए
भारतीय कृषि अनुसंधान परिषद
के अनुसंधान परिसर, पटना

डॉ. बी.पी. भट्ट, निदेशक, पूर्वी क्षेत्र के लिए भारतीय कृषि अनुसंधान परिषद के अनुसंधान परिसर, पटना को कृषि और संबद्ध विज्ञान में हिन्दी में तकनीकी पुस्तकों के लिए वर्ष 2016 का डॉ. राजेन्द्र प्रसाद पुरस्कार, प्राकृतिक संसाधन प्रबंधन एवं कृषि अभियांत्रिकी श्रेणी में इनकी पुस्तक 'द्वितीय हरित क्रांति की ओर राष्ट्र के बढ़ते कदम' के लिए प्रदान किया जा रहा है। इस पुस्तक में खाधान्न उत्पादन एवं उत्पादकता, बागवानी, मात्स्यिकी, पशुधन आदि विषयों पर महत्वपूर्ण जानकारी प्रदान करने का प्रयास किया गया है। कृषि जलवायु क्षेत्र के आधार पर उत्पादन एवं उत्पादकता का विश्लेषण, उत्पादन एवं उत्पादकता बढ़ाने के लिए अपनाए जा रहे उपाए, उत्पादन बढ़ाने में अनेवाली रुकावटें तथा उन्नत प्रभेदों के विस्तृत विवरण आदि के आकलन के आधार पर यह पुस्तक निश्चित तौर पर कृषकों, कृषि वैज्ञानिकों एवं नीति निर्धारकों के लिए एक उपयोगी पुस्तक सिद्ध होगी।

वर्ष 2016 के लिए कृषि और संबद्ध विज्ञान में हिन्दी में तकनीकी पुस्तकों के लेखन हेतु डॉ. राजेन्द्र प्रसाद पुरस्कार पशु एवं मात्स्यिकी विज्ञान श्रेणी में डॉ. अरुण कुमार, प्रधान वैज्ञानिक, केंद्रीय भेड़ एवं ऊन अनुसंधान संस्थान, अविकानगर, राजस्थान, डॉ. विनीत भसीन, प्रधान वैज्ञानिक, भारतीय कृषि अनुसंधान परिषद, नई दिल्ली, डॉ. एस. एम. के. नकवी, निदेशक केंद्रीय भेड़ एवं ऊन अनुसंधान संस्थान, अविकानगर, राजस्थान, एवं डॉ. आर. एस. गांधी, सहायक महानिदेशक, भारतीय कृषि अनुसंधान परिषद, नई दिल्ली को इनकी पुस्तक 'उन्नत भेड़ पालन' के लिए प्रदान किया जा रहा है। भेड़ पालन को अधिक लाभदायक बनाने के लिए जिन पहलुओं पर ध्यान देने की आवश्यकता है उन सभी महत्वपूर्ण विषयों का इस पुस्तक में काफी सरल भाषा में वर्णन किया गया हे ताकि भेड़ पालक इस व्यवसाय से भरपूर लाभ कमा सकें।

डॉ. अरूण कुमार
प्रधान वैज्ञानिक
केंद्रीय भेड़ एवं ऊन अनुसंधान
संस्थान, अविकानगर, राजस्थान

डॉ. चन्द्रभान सिंह
वरिष्ठ वैज्ञानिक
भारतीय कृषि अनुसंधान संस्थान
क्षेत्रीय अनुसंधान परिसर
आर.एस. पूसा समस्तीपुर (बिहार)

वर्ष 2016 के लिए कृषि और संबद्ध विज्ञान में हिन्दी में तकनीकी पुस्तकों के लेखन हेतु डॉ. राजेन्द्र प्रसाद पुरस्कार सामाजिक विज्ञान श्रेणी में डॉ. चन्द्र भान सिंह, वरिष्ठ वैज्ञानिक, भारतीय कृषि अनुसंधान संस्थान, क्षेत्रीय अनुसंधान परिसर, आर.एस. पूसा समस्तीपुर, बिहार, डॉ. जे. पी. शर्मा, संयुक्त निदेशक, कृषि प्रसार, भारतीय कृषि अनुसंधान संस्थान, नई दिल्ली एवं श्री रणवीर सिंह, वरिष्ठ तकनीकी अधिकारी, भारतीय कृषि अनुसंधान संस्थान, नई दिल्ली को इनकी पुस्तक 'भारतीय कृषिः चुनोतियाँ एवं अवसर' हेतु प्रदान किया जा रहा है। इस पुस्तक की विषय वस्तु में समसामयिक विषयों जैसे, उदारीकरण के दौर में भारतीय कृषि से अपेक्षाएँ, फसल विविधीकरण में नवीनतम कृषि तकनीकें, वर्ष भर कृषि फसलों, फल वृक्षों एवं सब्जियों द्वारा विविधीकरण, कृषि क्षेत्र में रोजगार के अवसर, कृषि उद्योग धंधे, संसाधनों के संरक्षण हेतु आधुनिक कृषि यंत्र, सूचना एवं संचार तकनीकियों की विस्तार से विवेचना करने के साथ साथ लेखकों द्वारा भारतीय कृषि अनुसंधान परिषद की विभिन्न योजनाओं पर भी जानकारी दी गई है। प्रस्तुत पुस्तक कृषि व्यवसायियों, कृषकों, कृषि उद्यमियों, छात्रों एवं शोधकर्ताओं के लिए समान रूप से उपयोगी है।

VASANTRAO NAIK AWARD FOR OUTSTANDING RESEARCH AND APPLICATION IN DRYLAND FARMING SYSTEMS 2016

Award 2016

In order to provide recognition for outstanding research and application leading to improvement of dryland farming systems, ICAR instituted an annual Vasantrao Naik Award for Research and Application in Dryland Agriculture-2014 of ₹1.00 lakh which is given to a scientist or an extension worker who has made outstanding contribution in the areas of Water Conservation and Dryland Farming. The award has been named after Late Sh. Vasantrao Naik (1913-1979) who is regarded as Father of Green Revolution in Maharashtra. 4 eligible applications were received in response to the open advertisement and the winner is:

Dr. B. SAHADEVA REDDY
AICRP for Dryland Agriculture
Agricultural Research Station
Acharya N.G. Ranga Agricultural
University, Anantapur,
Andhra Pradesh

Dr. B. SAHADEVA REDDY (Team Leader) and the associates including Dr. B. Ravindranatha Reddy, Dr. K. Bhargavi, Dr. M. Vijaya Sankar Babu, Dr. K. Madhusudhana Reddy, Dr. G. Narayana Swamy, Dr. C. Radha Kumari- AICRP for Dryland Agriculture, Agricultural Research Station, Acharya N.G. Ranga Agricultural University, Anantapur, Andhra Pradesh have been awarded Vasant Rao Naik Award for Research Applications in Agriculture, 2016. The research project entitled "Development and transfer of small farmer friendly and low cost dryland agriculture technologies for improving the net returns and livelihoods of the farming community in scarce rainfall zone of Andhra Pradesh" was developed by the team and executed at Agricultural Research Station, Anantapur, and on watershed basin at Girigetla and Ameenabad villages of Kurnool in 450 farmers' fields. Rainwater management techniques with moisture conservation and utilization to rainfed groundnut with an economic potential of ₹ 5650 lakhs was implemented in all the five-rainfed districts of Andhra Pradesh. Adoption of improved varieties of K6 and Dharani, with real time crop planning have prime importance under changing climatic scenario with overall economic potential of ₹ 2160 lakhs. In addition to the generation of economically viable and easily adoptable technology, the efforts made in transferring the same by adopting the innovative extension methodologies through focus group interactions, large number of on-farm demonstrations, training programmes done across the domain area of scarce rainfall zone proved successful in percolating the technology.

SWAMI SAHAJANAND SARASWATI OUTSTANDING EXTENSION SCIENTIST AWARD 2016

Award 2016

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 scientist/teacher. Two individual award have been provided. An individual award would consist of ₹1.00 lakh in cash and a citation. The award has been assigned across the disciplines in agriculture and allied sciences. The award has been named after Late Swami Sahajanand Saraswati (1889-1950) a social reformer and the first president of All India Kisan Sabha. A total of 6 eligible applications were received in response to the open advertisement and the winners with their significant contributions are:

Dr. ANUP DAS
Principal Scientist (Agronomy)
ICAR Research Complex for NEH Region
Umiam, Meghalaya

Dr. ANUP DAS, Principal Scientist (Agronomy), ICAR Research Complex for NEH Region, Umiam, Meghalaya has been awarded Swami Sahajanand Saraswati Award, 2016.Dr. Das has conducted a series of awareness programs, trainings and participatory demonstrations involving innovative water management practices in a participatory approach for empowering farmers in North Eastern Hill Region. The technologies which include; water harvesting in *jalkund*, farm ponds and in-situ moisture conservation through residue management and zero-till cultivation of pulses and capsicum in rice and maize fallows, raised and sunken bed technologies have created multiple livelihood opportunities for hill farmers. About 187 million litres of rainwater harvested in farm ponds and jalkunds bringing about 148 ha area under lifesaving irrigation. A total of 6812 farmers/ trainers covered on various aspects of rainwater management. Another 181.8 million-litre rainwater was harvested in 438 harvesting structures creating irrigation facilities for 216 ha covering 9854 farmers under a project funded by NAIP for which Dr. Das was the coordinator. Impact analysis revealed that system productivity enhanced by 1.5 to 3 times, water productivity by 2 to 4 times and income by 1.5 to 4 times at farmers' field due to various rain water management based interventions. Innovative extension strategies comprising linkages with unemployed youth as 'village resource persons', Line Departments, NGOs and KVKs along with convergence and technological backstopping, use of print and electronic media positively changed farmers' knowledge, skills and attitude towards adoption of water efficient technologies.

Dr. RAJBIR SINGH
Director
ICAR-Agricultural Technology
Application Research Institute
Zone-I, PAU Campus
Ludhiana, Punjab

Dr. RAJBIR SINGH, Director, ICAR-Agricultural Technology Application Research Institute, Zone-I, PAU Campus, Ludhiana, Punjab has been awarded Swami Sahajanand Saraswati Award 2016. To address the problem of on-farm burning of residues, Dr. Rajbir Singh initiated Mass Awareness Campaign against Residue Burning ('Pakhwara' during wheat harvesting; 'Chetna Mas' during paddy harvesting) and demonstrated available technologies through KVKs of Haryana and Punjab. During the Campaign, more than 45000 farmers were contacted directly through organizing Kisan Melas, Sammelans, Gosthis, group meetings with Panchayats; more than five lakhs advisories and published literature were released/ distributed to farmers besides delivering 22 Radio and TV talks. Special programmes were arranged on DD Kisan to highlight the implications of residue burning for wider publicity. More than 1200 demonstration on Happy Seeder, Zero tillage, Baler cum knotter, Laser Leveller, District Seeded Rice were laid out in six Climate Resilient Villages (four in Punjab and two in Haryana) resulted in either no or very little burning of crop residues in nearly 50 villages of the area. To popularize Happy Seeder, front line demonstrations on more than 1335 and 2373 hectares area during 2015 and 2016 respectively in 151 villages were laid out to demonstrate the benefits of residue management in multi-location strategic sites. Besides, he is instrumental in coverage of whole village (total six) with climate smart technologies including; laser leveled fields, creation of seed bank of climate resilient varieties, ensuring round the year fodder availability, vaccination, and deworming and mineral mixture supplementation in animals for sustain production and productivity.

NASI-ICAR AWARD FOR INNOVATION AND RESEARCH ON FARM IMPLEMENTS 2016

Award 2016

The Indian Council of Agricultural Research (ICAR) and National Academy of Sciences India (NASI) has instituted NASI-ICAR Award for Innovation and Research on Farm Implements from the year 2013 in order to reduce drudgery of farm women by development of farm implements and to encourage researchers and innovators to develop farm implements for farm women. The award carries a cash price of ₹1.00 lakh and is given annually. A total of 4 applications were received in response to the open advertisement, the recipient of award is:

Dr. ETTANNIL JAYASHREE, ICAR-Indian Institute of Spices Research, Marikunnu P.O., Kozhikode, Kerala has been awarded NASI-ICAR Award for Innovation and Research on Farm Implements-2016. She has developed eco friendly farm equipments which cater to the specific requirements of the farm women working in the spices sector. Development of concentrated solar thermal curing unit for turmeric cooking is a major step towards mechanization in turmeric processing which is otherwise labour intensive, pollution causing and environmentally degrading process. In the developed system, the burning of firewood is eliminated and hence there is no carbon release to the environment, whichin turn improves the working environment in the turmeric field. She has also developed a mechanical unit for the production of white pepper from green pepper to ensure that the value added product is obtained in a very hygienic manner. She was also instrumental in establishing a Spice Processing Facility at India Spice Research Institute, Kozhikode that serves as an incubation centre for spice entrepreneurs. Several farmers and entrepreneurs have obtained training for spices processing under her guidance. All these developments will go a long way in reducing the drudgery, improving the working efficiency, income and quality of life of farming families.

Dr. ETTANNIL JAYASHREE
ICAR-Indian Institute of Spices Research,
Marikunnu P.O., Kozhikode, Kerala

HARI OM ASHRAM TRUST AWARD FOR BIENNIUM 2014-15

Award 2016

The Council has instituted the Hari Om Ashram Trust Award in order to recognize the outstanding research on long term problem in agricultural and allied sciences. Four individual awards have been instituted, each consists of ₹1,00,000 (Rupees One lakh only). All scientists engaged in research in the field of Crop / Horticultural sciences, Natural Resource Management / Agricultural Engineering, Animal / Fisheries sciences and Social Sciences in India shall be eligible for the award. The award is open to individual scientists as well as team of scientist. The award is biennial. 41 eligible applications were received in response to an open advertisement and the selected awardees are:

Dr. PARVEEN KUMAR, Principal Scientist (Team Leader), CSSRI, Karnal, Haryana; Dr. S.K. Pandey, Ex-Director, Dr. Dinesh Kumar, Principal Scientist, Dr. S.V.Singh, Ex-Principal Scientist, ICAR-Central Potato Research Institute, Shimla (Associates) have been conferred Hari Om Ashram Trust Award, 2014-15 for Crop & Horticultural Sciences.They have made pioneering research in developing improved potato processing varieties, agro-techniques for their cultivation in west-central plains and pre and post harvest strategies for production of potatoes for excellent quality chips, French fries and flakes. The agro-techniques giving 20-30% higher chipping/ French fry grade quality potatoes at harvest and after long term storage at 10-12 degree centigrade with CIPC made it possible to run the potato processing industry uninterrupted round the year, savings on post-harvest and huge transportation losses thus making it a sustainable and profitable venture. The work carried out by them will benefit the farmers, cold storage and processing industries and saving of foreign exchange and increased export of potato products and generation of employment in the country.

Dr. PARVEEN KUMAR
Principal Scientist
CSSRI, Karnal, Haryana

Dr. SUSHIL KUMAR KAMRA
Principal Scientist
CSSRI, Karnal

Dr. SUSHIL KUMAR KAMRA, Principal Scientist (Team Leader), Dr. Satyendra Kumar, Principal Scientist and Dr. Bhaskar Narjary, Scientist (Associates), CSSRI, Karnal have been conferred Hari Om Ashram Trust Award, 2014-15 for Natural Resource Management and Agricultural Engineering. They have developed the design of small groundwater recharge wells and installed and monitored such structures at 43 low lying farmers' fields in Punjab and Haryana during the past 5 years. These structures consist of a bore well coupled to a recharge filter consisting of layers of coarse sand, gravel and boulders in a small brick masonry chamber. These groundwater recharge wells were found to be highly effective in augmenting groundwater, improving its quality and enhancing considerably the farmers' income by saving submerged crops. These structures are successful at any low lying location where runoff gets accumulated and adversely affects the production of rice during rainy season and of wheat during any heavy winter rain.

Dr. ASHOK K. TIWARI, Head of Division (Biological Standardization & Team Leader); Dr. Ravi Kumar, Senior Scientist, Dr. Aditya P. Sahoo, Scientist, Prof. N.S. Jadon, Head of Division (Surgery & Radiology) (Associates), IVRI, Izatnagar have been conferred Hari Om Ashram Trust Award, 2014-15 for Animal & Fisheries Sciences. They have developed a cheap, affordable alternative therapy utilizing genes derived from animal viruses to treat cancer in animals. The gene therapeutics developed has been found to be effective in different types of tumours and can cure venereal and mammary tumours of dogs. The gene therapy developed by them have opened new areas in cancer treatment not only for animals but also for humans.

Dr. ASHOK K. TIWARI
Head of Division
Biological Standardization
IVRI, Izatnagar

Dr. RAJARSHI ROY BURMAN
Principal Scientist
IARI, New Delhi

Dr. RAJARSHI ROY BURMAN, Principal Scientist (Team Leader), Dr. J.P. Sharma, Joint Director (Extension), Dr. S.K. Dubey, Principal Scientist, Dr. K. Vijayragavan, Former Joint Director (Extension) (Associates), IARI, New Delhi have been conferred Hari Om Ashram Trust Award, 2014-15 for Social Sciences. They have developed a post office linkage extension model which has been mentioned as alternate frontline extension model named *krishidak* by the Council. The viability of the model was proved both for high volume and low volume crops. The sustainability of the model was ensured through MOU between ICAR-IARI, New Delhi and the Department of Post, Government of India. Farmers and post office personnel showed significant agreement on this model of mutual interest. This has offered a new opportunity for making agricultural technologies accessible to the farmers who are distantly located. Improved crop varieties of paddy, wheat, mustard, vegetables and flowers were disseminated among 5299 farmers covered through 175 rural post offices of 56 districts across 13 states of India. The crop varieties were made available to the farmers within 3-5 days of the dispatch, which helped to improve the crop productivity upto 35% over farmers' local varieties.

PANDIT DEENDAYAL UPADHYAY ANTYODAYA KRISHI PURASKAR AWARD 2016-17 (NATIONAL & ZONAL)

Award 2016

In order to recognize the contributions of marginal, small and landless farmers for developing sustainable integrated models of farming, the ICAR has instituted Pandit Deendayal Upadhyay Antyodaya Krishi Puraskar (National/Zonal) annually. For National level there is one award comprising of ₹1,00,000/- (Rupees one lakh only) and Award Certificate to be given annually. At zonal level there are total eleven awards: one for each zone of ATARIs comprising of ₹ 50,000/- (Rupees fifty thousand only). Nominating authority may put on record a clear cut recommendation highlighting the contributions made by the nominee and giving full justification for the nomination. This year 24 applications were received through open advertisement.

Sh. NIRBHAI SINGH
Bathinda, Punjab

Sh. NIRBHAI SINGH, Village-Sukha Singh Wala, Bathinda, Punjab has been awarded Pandit Deen Dayal Upadhyay Antyodaya Krishi Puraskar 2016-17 from Zone-I. He is well known as nursery king in the Malwa zone of Punjab. His work is highly appreciable and impressive along with self-marketing. He has very good reputation among the farmers in the area as well as in adjoining states like Rajasthan and Haryana. He is acting as a lighthouse for other farmers of the region. He is also generating employment for the village labourers at his farm. After getting motivation from him, many farmers in the Malwa region have started raising nursey and have taken to vegetable cultivation using similar innovative ways of farming. His new and innovative ways of managing of enterprises including, nursery of vegetable crops, nursery of ornamental plants as well as other income supplementing entreprises which involve, verka milk bar, juice corner and vermi compost unit have earned him good profit as well as awards and recognitions from various quarters and his success story has been published by various newspapers.

Sh. SATPAL SINGH, a landless farmer of village-Gohran, Kaithal, Haryana has been awarded Pandit Deendayal Upadhyay Antyodaya Krishi Puraskar 2016-17 from Zone-II. He has done exceptional work on bee keeping. Under his able guidance village, Gohran made huge profit from the sale of honey and other honey based products. He has established several bee-keeping units in his neighboring areas, and imparted technical guidance and training to the youth for bee keeping. The skill development initiatives by him have provided livelihood to more than 1000 unemployment youth in the region. Recognizing his skills in bee keeping his services are used by the KVK, Kaithal and CCSHAU, Hisar as a master trainer in honeybee raising. His efforts have earned him several recognitions besides providing a stable source of income. His success stories have also made newspaper headlines.

Sh. SATPAL SINGH
Kaithal, Haryana

Sh. RAGHUPAT SINGH
Muradabad, Uttar Pradesh

Sh. RAGHUPAT SINGH, Village-Samathal, Muradabad, U.P. has been awarded Pandit Deendayal Upadhyay Antyodaya Krishi Puraskar 2016-17 from Zone-III. This farmer owns only 1.5 ha land, which, about 10 years ego, was under traditional farming making it difficult for the family to meet the both ends. Having got the knowledge and expertise from different ICAR Institutes and KVKs, he resorted to diversified farming cultivating improved cultivars and varieties of vegetables and medicinal plants adopting integrated approach to maximize the profit. He developed integrated farming model for the benefit of the small and marginal farmers. He has also developed 7new varieties of kidney bean (Rajma) besides identifying several improved selections of different vegetable crops. He has successfully developed a bottle gourd variety with fruit size as long as 1.5 meters. Through his innovative ways of farming, he has been successful in growing vegetables in pots for the benefit of landless/ urban clients. His innovative ways of farming have helped a large number of the farmers from the area and have earned him recognition from various quarters.

Sh. PHONI BORA, Burakuri, Jorhat, Assam has been awarded Pandit Deendayal Upadhyay Antyodaya Krishi Puraskar 2016-17 from Zone-VI. His integrated farming system has opened a new window for economic empowerment of rural farmers in Bolona area. He has adopted and popularized integrated farming system (IFS) in the locality taking fishery, piggery and dairy as different components of the IFS model. One of his important innovations is the development of raised and sunken bed system in medium land for vegetable cultivation where vegetables cannot be grown in normal situation. His initiative in vegetable farming developed the Boloma area as important vegetable producing area of the district. Shri Bora is actively contributing as farmer partner in testing, popularization and horizontal spread of different agricultural and allied technologies with KVK, Jorhat, State Agriculture University and the state development department. He is also working to popularize water saving technologies like drip irrigation-using water harvesting approach. His pioneering efforts have earned him awards and recognitions from district and the state authorities.

Sh. PHONI BORA
Jorhat, Assam

Ms. THEJANO MAKRITSU
Dimapur, Nagaland

Ms. THEJANO MAKRITSU, Sethikema, Dimapur, Nagaland has been awarded Pandit Deendayal Upadhyay Antyodaya Krishi Puraskar 2016-17 from Zone-VII. Her story is that of a successful woman farmer who started with a very modest beginning with traditional animal husbandry and related subsidiary activities. With active guidance and training support from KVK, Dimapur and ICAR Regional Complex, Nagaland Centre, she has developed a very remunerative Integrated Farming System (IFS) model on her 1.25 ha agricultural farm which has fourbasic components including a poultry unit, a dairy unit with biogas plant, horticulture unit and the maize block. She is widely acknowledged as a role model in the area because of her successful Integrated Farming System and her commitment towards farming.

Sh. LALU RAM KORETI, a tribal farmer from village-Aturgaon, Uttar Bastar, Kanker (M.P.) has been awarded Pandit Deendayal Upadhyay Antyodaya Krishi Puraskar 2016-17 from Zone-IX. He successfully practices integrated farming and developed IFS Model in guidance of KVK scientist and convergence of Govt. Schemes. He also constructed Azola tank, Vermi compost pit and Bio gas unit. By adopting IFS model and the rabi cropping at his farm, he is now a very established and successful farmer and is a source of inspiration for all the farmers of the locality. He has been able to double his earnings from the 1.8 ha holding which the family possesses. In his IFS model he practices, dairy and goat farming, pig farming, poultry rearing, fish cum duck rearing, paddy and rabi maize cultivation besides growing vegetables and Napier grass. He has also established a biogas unit, Azola production unit and a vermi compost unit at his farm. His innovative and very remunerative IFS model has earned him name and fame in the form of awards and recognitions from several quarters.

Sh. LALU RAM KORETI
Kanker, Madhya Pradesh

ICAR CASH AWARD SCHEME 2016

ICAR Cash Award Scheme for Administrative/Technical/Supporting category employees of ICAR Research Institutes/NRCs/Bureaus/ZCUs has been instituted by the ICAR in order to recognize the excellence in performance. Three annual awards of ₹ 51,000/- (Rupees fifty thousand only) are to be given to the regular employees of ICAR. The forwarding authority may provide a detailed note on the most significant activities made by the employee in his/her service career. This year 27 applications were received through open advertisement.

Smt. PREM KUMARI MEHTA, Private Secretary, NDRI Karnal, Haryana has been awarded ICAR Cash Award Scheme 2016 for Administrative Category. She has proficiently provided secretarial assistance to the Head, Dairy Technology Division as well as the Director of the Institute during her posting in the Director's Office. She has a very good skills/ experience of handling important and sensitive documents. She has good command over English/ Hindi languages and various computer operations. She is a multidimensional person with varied interests. She has been handling the positionof Cultural Secretary of ICAR-NDRI staff club very efficiently for several years, and has contributed towards preparation of the NDRI theme song. Due to her cordial and helpful nature, she has always been a favorite with her superiors and peers.

Smt. PREM KUMARI MEHTA
NDRI, Karnal, Haryana

Sh. HARPAL THAKUR, Section Officer, ICAR Headquarters, New Delhi has been awarded ICAR Cash Award Scheme 2016 for Administrative Category. By dint of hard work and dedication to duties and the quality of the work delivered by him and due to his cordial and helpful nature, he has always been a favorite with his superiors and peers. He has always held key and demanding positions in ICAR Headquarters. He handles administrative work very efficiently, reflecting vast knowledge of the office procedures and great capacity of examination of the cases. He is a multi-talented person. He actively participates in ICAR sports and has won several awards and recognitions for the ICAR Headquarters in these competitions. He has continuously excelled at the Annual Hindi Competitions conducted by the Hindi Cell, ICAR.

Sh. HARPAL THAKUR
ICAR Headquarters, New Delhi

Sh. MUKESH CHAND
Hisar, Haryana

Sh. MUKESH CHAND, Senior Technical Officer, NRC on Equines, Hisar, Haryana, has been awarded ICAR Cash Award Scheme 2016 for Technical Category. He has efficiently managed work assigned to him and has assisted in controlling outbreak of equine influenza and in developing inactivated equine herpes virus-1 vaccine and murine model for equine influenza. Besides being hardworking, he is a very disciplined and dedicated officer, very helpful to his peers and superior officers and is willing to work late hours and even during Sundays/ holidays as per requirement of the demanding and sensitive area of work being handled by him. He is also a very good team man.

Sh. MAHESH GUPTA
ICAR Headquarters,
New Delhi

Sh. MAHESH GUPTA, Senior Technical Officer, ICAR Headquarters, New Delhi, has been awarded ICAR Cash Award Scheme 2016 for Technical Category. He has the outstanding ability to work as the Hindi translator along with the work of Hindi typing/ type setting with very high accuracyas per demand of the DG Office, which hehandles efficiently and within very short notice in addition to other technical work of time-bound nature assigned to him. He has also conducted Hindi competitions in ICAR and was involved in the publication of the Journal 'Rajbhasha Alok'. He is also a prominent personality in ICAR Sports team.

Sh. KULVINDER SINGH, Skilled Supporting Staff, NDRI Karnal, Haryana has been awarded ICAR Cash Award Sheme 2016 for Supporting Category. He has worked in the technical laboratory of the institute very efficiently and assists actively in the practical classes to the complete satisfaction of his superiors. Besides being hardworking, he is a very disciplined and dedicated worker, very helpful and supportive to the concerned technical staff and the students working in the laboratory and is willing to work late hours and even during Sundays/ holidays as per requirement of the laboratory and as advised by his controlling officers.

Sh. KULVINDER SINGH
NDRI, Karnal, Haryana

HALDHAR ORGANIC FARMER AWARD 2016

In order to recognize outstanding contribution of organic farmers, ICAR has instituted an award title 'Haldhar Organic Farmer Award 2016.' The award consists of ₹ 1,00,000/- (Rupees one lakh only). The award is annual in nature. Any farmer involved in organic farming/activities in the area of field crop/horticultural crops/medicinal crops/milk products etc., with an experience of 10 years is eligible. Applications must be submitted in the recommended format and should be duly authenticated and forwarded by the competent forwarding authority. This year 6 applications were received through open advertisement.

Smt. K. LAVANYA RAMANA REDDY, Vill.-Karwanga, Distt-Nagarm, Kurnool, Telangana has been awarded Haldhar Organic Farmer Award 2016 for her outstanding achievements in the area of organic farming. She has done extensive work on organic farming using chemical and fertilizers. Under organic management system, she has achieved net profit of over ₹ 1.3 lakhs per acre from paddy cultivation and ₹ 5.85 per acre per year from the cultivation of chillies. She started organic farming in 2002 in a modest 0.5 acres land, which has now been extended to entire 30 acres of land under her possession. She has inspired the people from different streams including political leadership, scientific community, senior officers from the state and central government, officials from the state agriculture department and the farming community who have visited her farm. Free Trainings at the farm premises and the visits have also been organised for the benefit of the farmers, NGOs and others to create awareness and promote organic farming in the area. Her achievements in organic farming have also earned her awards and recognitions from various other organisations including Andhra Pradesh Academy of Rural Development.

Smt. K. LAVANYA RAMANA REDDY
Kurnool, Telangana

N.G. RANGA FARMER AWARD FOR DIVERSIFIED AGRICULTURE 2016

Award 2016

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 caries a cash prize of ₹ 1.00 lakh and given annually. The award has been named after Late Prof. N.G. Ranga (1900-1995). A total of 13 applications were received in response to the open advertisement, the recipient of award is:

SH. HARBIR SINGH SHAH, S/o Sh. Narinder Singh, Village Dadlu, Shahabad, Kurukshetra has been awarded N.G. Ranga Farmer Award for Diversified Agriculture, 2016. He developed low cost vegetable nursery at his farm, which has helped him and other farmers of the region in diversifying from traditional paddy-wheat crop rotation into more remunerative vegetable farming. After making a modest beginning in the form of a small chili nursery in 2005, he has now entered several vegetates including tomato, capsicum, onion and cauliflower often using different hybrids and varieties and evaluating the best among them for cultivation thus making refinements in the technologies and management practices to suit the requirement at micro level. He has also evolved innovative ways of nursery media preparation with available local material. The nursery media preparation developed by him using biogas slurry, riverbed sand containing silica and burnt rice husk ash has been found to be the best nursery media for vegetable growing.He has adopted latest technologies and package of practices at his farm. His farming technology significantly reduced fertilizer, pesticide and water application and prevented outbreak of several diseases and pests in seeds. He has also established a small product evaluation Centre for vegetable crops at his farm with the help of NSA. He does not use any herbicides for managing weeds at his farm. His low cost chili nursery involves low cost tunnels in field for protection from frost during extreme winter months. For this purpose he uses UV protected 25 GSM cloth, which is an innovation. He has also developed a low cost equipment for line sowing on beds. He also maintains a small poultry farm with about 250 birds efficiently. The B:C ratio in different crops/poultry enterprises being raised by him range from 1.8 (Poultry) to 12.0 (chili). His vegetable nursery, which he runs on the commercial scale, meets the healthy seedling requirement of over 7000 farmers from Punjab as well as the neighboring states. His skills in diversification and innovative ways of cultivation have earned him several awards and recognitions from the Govt. and private agencies.

Sh. HARBIR SINGH SHAH
Shahabad, Kurukshetra

PANDIT DEENDAYAL UPADHYAY RASHTRIYA KRISHI VIGYAN PROTSHAHAN PURASKAR 2016-17 (NATIONAL & ZONAL)

Award 2016

These awards promote healthy competition among Krishi Vigyan Kendras (KVKs) at Zonal and National level for application of science and technology in agriculture. All KVKs are eligible tp submit the application for these awards in the prescribed format duly forwarded and authenticated by the competent forwarding authority.

For competition at national level, there is one award having prize money of ₹ 25,00,000/- (₹ 20,00,000/- for infrastructural development + ₹1,00,000/- for sharing among staff + ₹ 4,00,000/- for training of KVK staffs)

At zonal level there are total of eleven awards: one for each zone of KVKs. Each award consists of ₹ 75,000/- for training of KVK staffs).

The Directors/Joint Directors of ICAR institutes/Vice Chancellors/Directors of Extension of Agricultural Universities/Directors of ATARIs may forward the applications in their respective areas of operations. The forwarding authority may give a 1-2 page note on the specific and most significant contributions made by the concerned KVK. This year 55 applications were received through open advertisement.

NATIONAL

DIVYAYAN KVK, RAM KRISHNA MISSION, MORABADI, RANCHI (JHARKHAND) has been awarded Pandit Deenddayal Upadhyay Rashtriya Krishi Vigyan Protshahan Puraskar (National) 2016-17 for their outstanding achievements. The KVK with its approach of holistic development of farming community is dedicated to provide technical backstopping in convergence with other development programmes for the welfare of rural people. They have undertaken activities toward achieving goal of creating awareness on scientific agriculture and animal husbandry with focus on integrated intensive organic farming system among poor tribal communities. The KVK has been working hard to achieve the (i) Zero conventional energy use (ii) Zero water loss (iii)Zero chemical uses, (iv)Zero plastic zone.It has achieved remarkable progress by establishing gravity irrigation systems. KVK is conducting various extension activities like farmer's days, field days, film shows, ex-trainees conferences, farmers fair, exhibitions etc. for the benefit of the farming community of the district. A constant follow-up with the farming community is done to ensure continuity of the gains achieved over the years. Innovative extension methodology adopted by the KVK include, formation of village and block level organizations to empower them to execute the project work through trained youth of Divyayan KVK, organizing village, block and district level feedback meetings every month to review the progress of the previous month and finalize the action plan for the next month, using successful farmers as resource persons by training them as master trainers and formation of women self-help groups for gender equity and the empowerment of women. The KVK has developed video conferencing facility at block levels at 4 places where farmer scientist interactions are organized every Friday benefitting a large number of farmers. With these three tier follow-ups, the KVK has been able to establish a strong linkage between the farmers and the scientists. For their dedicated work and innovative ways of functioning, have earned the KVK a numerous awards and recognitions from various Governmental and non-governmental departments/ agencies.

ZONAL

ZONE - I

KVK R.S. PURA, JAMMU, SKUAST, JAMMU, J&K has been awarded Pandit Deendayal Upadhyay Rashtriya Krishi Vigyan Protshahan Puraskar 2016-17 for Zone-I. The KVK has done pioneering work in the area of preservation and promotion of Basmati 370, a noble variety of the area, introduction of high yielding and early maturing varieties in non-basmati growing areas, promotion of seed replacement and introduction of new and improved varieties of wheat, maize, oilseed, pulses and fodder crops, promotion of commercial farming including vegetable farming, floriculture, mushroom cultivation, fisheries, poultry and dairy farming and ensuring peoples participation in technology development and promotion. The KVK has mobilized farmers for group action and development through forming self-help groups, farmers' associations and cooperatives. It has done very good work in the area of promotion of resource conservation technologies especially the conservation and improvement of soil health. It has promoted use of cono-weeders in paddy, green manuring crops for maintaining soil health and fertility, use of vermin compost and vermin wash in crop husbandry practices, use of azolla in paddy field, etc., which have helped in earning huge profits. Various governmental and non-governmental departments/ agencies have recognized the good work done by KVK R.S. Pura in the form of awards and recognitions.

ZONE - II

KVK BORKHERA, KOTA, RAJASTHAN has been awarded Pandit Deendayal Upadhyay Rashtriya Krishi Vigyan Protshahan Puraskar 2016-17 from Zone-II for their outstanding contributions. The KVK has made valuable contributions in the transfer of agricultural technology, need-based trainings for farmers, entrepreneurship development, creating awareness about improved agricultural technologies, and serves as a knowledge and resource centre for the benefit of the farming community of the district. The major areas of the operation of this KVK are; the enhancement of the productivity and quality of major crops viz; soybean, uradbean, mustard, wheat, chickpea and coriander, integrated nutrient, pest and weed management, soil health management, promotion of floriculture and high tech farming, promotion of poultry, dairy and goat farming, promotion of mechanization in small farms as also the promotion of integrated farming system and climate resilient varieties/technologies. KVK has made outstanding contributions in horizontal spread of the improved varieties/technologies, soil test based fertilizer application, crop diversification, food processing and value addition. It has also played pivotal role in empowering farmwomen and promoting entrepreneurship development among rural youths. The KVK has also been successful in mobilizing external funds to the tune of 172.75 lakhs from various funding agencies. The efforts of the KVK have been recognized both at the district and the state level in the form of awards and recognitions.

ZONE - III

KVK GOPALGRAM, GONDA, U.P. has been awarded Pandit Deendayal Upadhyay Rashtriya Krishi Vigyan Protshahan Puraskar 2016-17 for Zone-III. The KVK has implemented climate resilient practices and technologies under the Technology Demonstration Component of the NICRA project under ICAR. Some of the notable achievements of the KVK towards the promotion of resource conservation technologies include; promotion of green manuring, vermi composting, crop residue management, use of laser guides land leveler for efficient water management, zero tillage technology, raised bed sowing, in situ moisture conservation through mulching, micro irrigation and soil test based fertilizer application. The KVK has also done very good work in the area of diversification and additional income generation through the promotion of vegetable farming and the promotion of backyard poultry and duckery. The efforts of the KVK have been recognized in the form of wards and recognitions from various quarters. The KVK was conferred best NICRA KVK Awards at zonal level for the period April 2011 to March 2014.

ZONE - IV

KVK EAST CHAMPARAN, DR. RPCAU, PUSA, SAMASTIPUR, BIHAR has been awarded Pandit Deendayal Upadhyay Rashtriya Krishi Vigyan Protshahan Puraskar 2016-17 for Zone-IV. The KVK is dedicated to organizing and conducting front line demonstrations for testing, refining and documenting region specific and sustainable land use system. It has also demonstrated sustainable, attractive, remunerative and climate smart agri-based job opportunities for rural youth at village level and upgrade youth-capacity in specific agri-entrtepreneurship model option. The KVK has also done pioneering work towards imparting training and capacity building of the farmers and entrepreneurs of the district by organizing a number of programme in a wide array of activities including; preparation of mango and orange squash, guava jelly, aonla jam, tomato pickle, preservation of fruits and vegetables, integrated farming system, goat farming, tie and dye of fabric, machine embroidery on cotton fabric etc. The efforts of KVK have earned the KVK and the scientists of the KVK a number of awards and recognitions from various quarters.

ZONE - V

KVK UTTAR DINAJPUR, UBKVV, CHOPRA, WEST BENGAL has been awarded Pandit Deendayal Upadhyay Rashtriya Krishi Vigyan Protshahan Puraskar 2016-17 for Zone-V. The KVK has played a major role in creating job opportunities and self-employment opportunities among rural youth through skill enhancement and entrepreneurship development. The KVK has taken pioneering efforts in promoting a wide range of improved technologies and package of practices in the field of agriculture and allied areas apart from working on the skill oriented market linked technologies like low cost weaning food for improving the health of malnourished children and promotion of paddy parboiling technique for drudgery reduction of women having larger social connotations. The efforts made by the KVK towards promotion of zero tillage technology and soil health based nutrients supplementation and efficient water management are also noteworthy.

ZONE - VII

KVK DIMAPUR, ICAR RESEARCH COMPLEX FOR NEH REGION, JHARNAPANI, MEDZIPHEMA, NAGALAND has been awarded Pandit Deendayal Upadhyay Krishi Vigyan Protshahan Puraskar 2016-17 for Zone-VII. The KVK has conducted 775 training programmes for farmers, farmwomen, rural youth, and in-service candidates of horticulture, orchard management of fruit crops, vegetative propagation, package and practices of vegetables. The KVK has developed sustainable farming system for different agro-climatic and socio-economic condition of the state, maintained data base resources for perspective planning, collaborate with state departments for testing and promotion of improved farming technologies and act as a repository of information of different farming systems of the state. Some of the major achievements of the KVK include; promotion of back yard poultry, Banana and Pineapple leaf fiber products, home scale processing of jackfruits, creation of Self-Help Groups (SHGs) for the production and marketing of various agricultural produce including organic products and other such entrepreneurship development programmes. The efforts of KVK have earned it a number of awards and recognitions from various quarters.

ZONE - VIII

KVK KOSBAD HILL, DAHANU, PALGHAR, MAHARASHTRA has been awarded Pandit Deendayal Upadhyay Krishi Vigyan Protshahan Puraskar 2016-17 for Zone-VIII. The KVK has developed three-tier extension system in its district to disseminate agricultural technology, Krishi Vigyan Mandal at district level, Farmers Scientist Manch at Taluka level and farmers club, self-help groups at village level. This has helped to mobilize farmers group for group action. It acts as financial back up to poor farmers to empower them to transform themselves as providers of critically useful agro services to the village community and thus contributed significantly towards the revitalization of agriculture production system of the district. The KVK has played key role in the transfer of agricultural technologies for the upliftment of farming community, more particularly the tribal farmers of the district. The KVK Kosbad Hill is well known for its contribution towards the improvement of crop production in the area through various technological interventions as also towards ensuring food security of the marginal farmers. KVK has established an identity for itself for providing self-employment opportunities to the rural youth through vocational training on agriculture-based enterprises.

ZONE - IX

KVK KOREA, IGKV RAIPUR, MADHYA PRADESH has been awarded Pandit Deendayal Upadhyay Rashtriya Krishi Vigyan Protshahan Puraskar 2016-17 for Zone-IX. The KVK ever since its establishment in 2008 has been striving hard and working in the dedicated manner towards promoting a wide range of improved agricultural technologies and package of practices in the field for the holistic development of the district. The KVK has played a major role in skill development of the farmers and the unemployed youth and creating job opportunities and self-employment opportunities among rural youth through skill enhancement and entrepreneurship development. These include, establishment of the nursery of various fruits, production of quality seeds and planting material, Lac and mushroom cultivation as well as dairying, goat and poultry farming. Other notable achievements of the KVK include, the development of integrated farming system including multiple enterprise, organizing the farmers and farmwomen in close-knit groups and establishing community markets for better returns to the farmers. All these efforts have resulted in marked improvement of the production and productivity of various crops and other enterprises in the region. The efforts made by the KVK have brought laurels to the KVK and earned it appreciation from various quarters.

ZONE - X

KVK UTUKUR, KADAPA, YSR DISTRICT, ANDHRA PRADESH has been awarded Pandit Deendayal Upadhyay Rashtriya Krishi Vigyan Protshahan Puraskar 2016-17 for Zone-X. The KVK has catered to the needs of agriculture and allied sectors to empower the farmers with latest agricultural innovations to apply to their day-to-day activities, especially through extension activities. It has done remarkable work in promotion of value added millet based food products and organized vocational training programmes for rural youth. KVK Kadapa have conducted number of vocational training programmes to the rural youth, farmers and farmwomen for additional income and employment generation. Imparting knowledge on marketing aspects and low investment enterprise have motivated number of farmers towards mushroom cultivation. Among other most notable technologies promoted by the KVK include; Foxtail millet (Korra)-Bengal gram cropping sequence for resource conservation under rain fed medium black soil, inter cropping Korra with Redgram under rain fed shallow red soils, promotion of disease and insect pest resistant varieties of crops, resource conservation technologies with mulching in vegetable and flower crops. Innovative ways of information delivery were adopted by the KVK for greater and more effective dissemination of technology. The KVK successfully trained the progressive farmers to use them as master trainers, initiated an innovative Annapurna Krishi Prasar Sava providing information in the forms of simple text, voice and multimedia, and the establishment of information Kiosk, which were well received by the farmers of the area. The efforts of the KVK have earned it laurels and appreciation from different quarters.

ZONE - XI

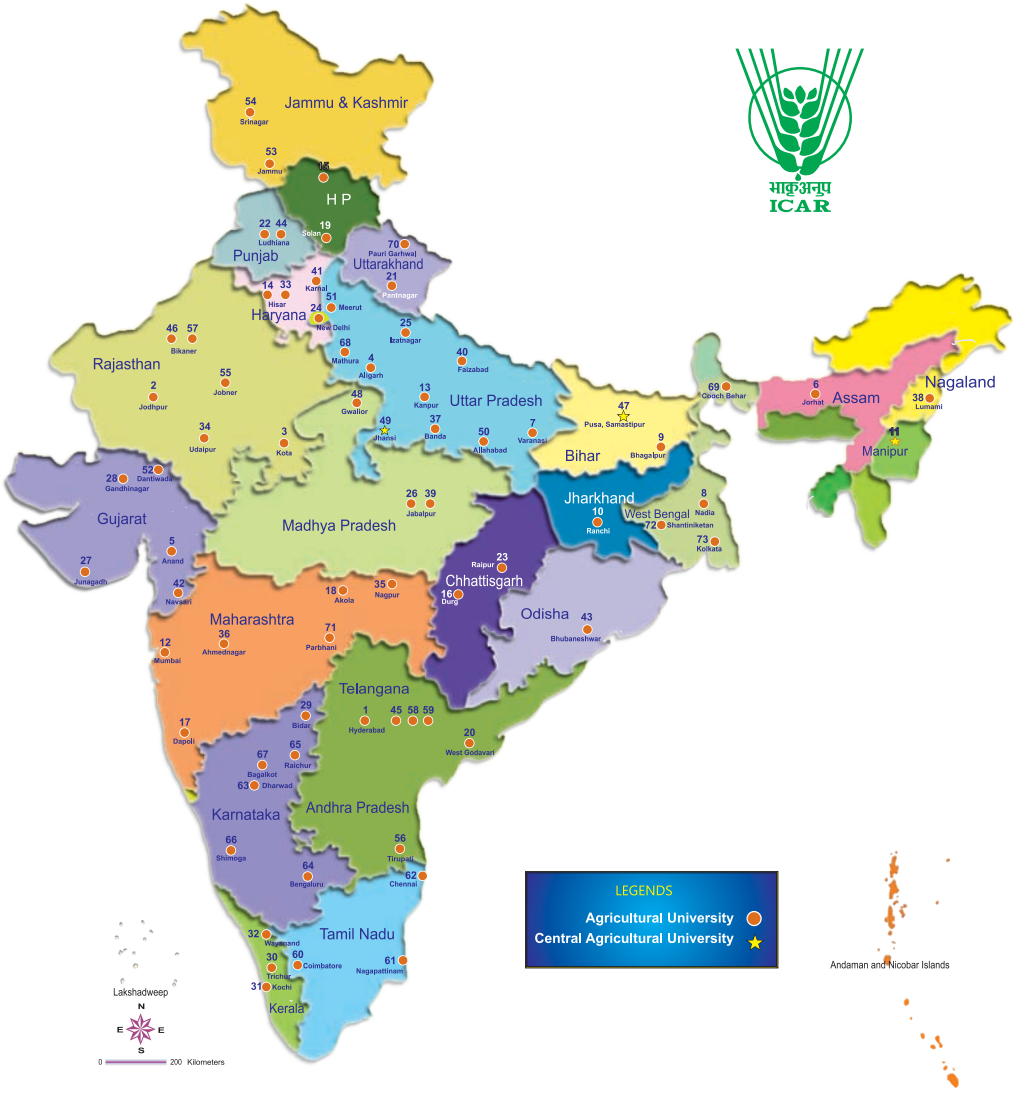
KVK ALAPPUZHA, ICAR-CPCRI, KERALA has been awarded Pandit Deendayal Rashtriya Upadhyay Krishi Vigyan Protshahan Puraskar 2016-17 for Zone-XI. The KVK has attained the status of one of the leading frontline extension providers in its district. It has strived to work for the benefit of farmers. The KVK Alaphuzza, has been functioning as the knowledge and resource center to impart knowledge, skills and conviction from experience through trainings, on farm testing, front line demonstrations, farmer field schools, method demonstrations etc. and functions as the venue for ensuring the availability of inputs, planting materials, produce and information. KVK Alaphuzza hosted by CPCRI, Kasargod is imparting the latest technical expertise to the different clientele to equip the farmers with the knowledge and skills to help them to make a better livelihood for themselves. The pioneering efforts made by the KVK in ensuring food and nutrition security for the farmers and improving their income and employment potential have been very well acknowledged in the form of several awards and recognitions from various quarters.

Design & Production: Dr. V.K. Bharti & Shri Ashok Shastri

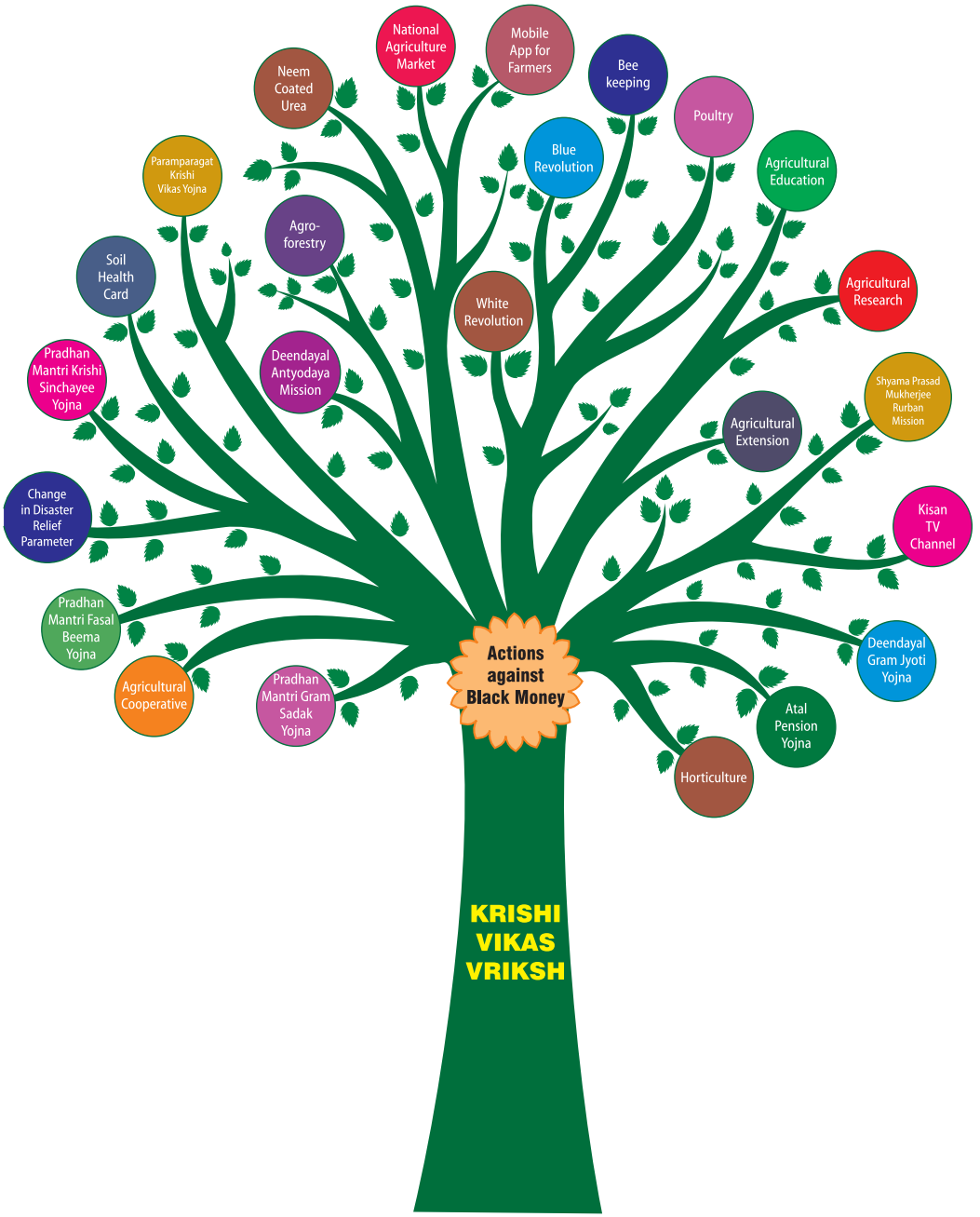
Published by Dr. S.K. Singh, Project Director (DKMA), Indian Council of Agricultural Research, New Delhi; Laser typeset by M/s Dot & Design, 208, Reshabshri House, Ranjeet Nagar Comm. Complex, New Delhi 110 008 and printed at M/s Chandu Press, D-97, Shakarpur, Delhi-110 092.

Indian Council of Agricultural Research

Agricultural Universities/ Deemed Universities/Universities with Agricultural Faculty



73 AGRICULTURAL UNIVERSITIES/ DEEMED UNIVERSITIES/ UNIVERSITIES WITH AGRICULTURAL FACULTY


National Agriculture Market
Mobile App for Farmers
Bee keeping
Poultry
Agricultural Education
Agricultural Research
Shyama Prasad Mukherjee Rurban Mission
Kisan TV Channel
Deendayal Gram Jyoti Yojna
Atal Pension Yojna
Horticulture
Pradhan Mantri Gram Sadak Yojna
Agricultural Cooperative
Pradhan Mantri Fasal Beema Yojna
Change in Disaster Relief Parameter
Pradhan Mantri Krishi Sinchayee Yojna
Soil Health Card
Paramparagat Krishi Vikas Yojna
Neem Coated Urea
Agro-forestry
Deendayal Antyodaya Mission
White Revolution
Blue Revolution
Agricultural Extension
Actions against Black Money
KRISHI VIKAS VRIKSH