

JNKVV NEWS

Official Newsletter of the
Jawaharlal Nehru Krishi
Vishwa Vidyalaya, Jabalpur



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IXth Convocation



Dr. Mangala Rai, Secretary, DARE and Director General, ICAR delivering the Convocation Address (left) and invited dignitaries (right) during the Convocation

The IX Convocation of Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur was organized on 20th October, 2009. In the beginning, the Academic Procession led by Shri B.B. Shrivastava, Registrar, JNKVV, Jabalpur, entered the auditorium following which the convocation was declared open by the Hon'ble Vice Chancellor on behalf of His Excellency Shri Rameshwar Thakur, Governor of Madhya Pradesh and Chancellor of the University. Shri Ishwardas Rohani, Hon'ble Speaker, Madhya Pradesh Vidhan Sabha, Bhopal inaugurated the convocation. The Presidential Address of His Excellency, the Governor of Madhya Pradesh & Chancellor

was delivered by Prof. Gautam Kalloo, Hon'ble Vice Chancellor, JNKVV, Jabalpur. Dr. Mangala Rai, Secretary, DARE & Director General, Indian Council of Agricultural Research, New Delhi delivered the Convocation Address while Prof. Gautam Kalloo, Vice-Chancellor, JNKVV, Jabalpur delivered the Welcome Address and presented the brief report of University activities. Dr. S.M. Paul Khurana, Vice-Chancellor, Rani Durgawati Vishwa Vidyalaya, Jabalpur, Shri Prabhat Parashar, Commissioner, Jabalpur Division, Hon'ble Members of Board of Management, Academic Council, Directors and Deans, Head of the



Award of Degree to an outgoing student by Prof. Gautam Kalloo, Vice Chancellor, JNKVV

Galaxy of invitees, staff and degree awardees during the Convocation

Departments, Faculty Members, other staff, esteemed guests and alumni of the JNKW were present on the occasion.

During the convocation, agricultural scientists of international repute, Dr. Gurdev Singh Khush and Dr. Surinder Kumar Vasal were conferred the Honorary Doctorate degrees (*Honoris Causa*) by the University *in absentia*. In addition, 15 students were conferred the degree of Doctor of Philosophy, 34 were awarded the gold medals and nine with cash awards in various disciplines under different faculties. A total of 1512 students (605 students passing during the academic year 2005-06 and 907 students passing during 2006-07) of undergraduate and post-graduate courses were conferred the degrees during this convocation.

NEW PROJECTS

- "Business Planning & Development (BPD) Unit at Directorate of Farms, JNKVV, Jabalpur sanctioned by ICAR under NAIP Component-I for Rs. 327.36 lakhs, duration 2 years 6 months. Principal Investigator : Dr. S.K. Rao, Dean, College of Agriculture, Rewa and Director Farms, JNKVV, Jabalpur.
- "Rapid conversion of normal maize inbreds to quality protein maize and further enhancement of limiting amino acids in elite inbreds through market assisted selection" sanctioned by the Department of Biotechnology, Ministry of Science & Technology, Govt. of India, New Delhi for Rs.

Dr. Mangala Rai Felicitated



Dr. Mangalar Rai, Secretary DARE & DG, ICAR being felicitated by Prof. Gautam Kalloo, Vice Chancellor, JNKVV, Jabalpur

The University availed the privilege of the august presence of Dr. Mangala Rai, Secretary, DARE and Director General, ICAR to deliver the Convocation Address during IX Convocation of JNKVV on Oct. 20, 2009. Dr. Mangala Rai was felicitated for his exemplary contributions in guiding research, education and extension activities in the National Agricultural Research System (NARS), adding new dimensions to transform agriculture in the country to enhance crop productivity. Dr. Rai reiterated the need for transfer of technology through intensive extension through university system, KVKs and extension agencies of the State.

52.61 lakhs. Principal Investigator Dr. Navinder Saini, Scientist, Biotechnology Centre, JNKVV, Jabalpur.

- "Establishment of nurseries in five districts of Madhya Pradesh" sanctioned by Madhya Pradesh State Medicinal Plant Mission, Bhopal for Rs. 100.00 lakhs for 2009-10. Principal Investigator : Mr.A. B. Tiwari)
- "Development of molecular markers in chickpea breeding for developing superior cultivars with enhanced disease resistance". sanctioned by ICRISAT, Hyderabad for Rs. 56.39 lakhs, duration: five years. Principal Investigator: Dr. (Mrs.) Anita Babbar, Senior Scientist, (PB), College of Agriculture, Jabalpur.
- "Biotic Stress (Rusts)", sanctioned by the Directorate of Wheat Research, ICAR, Karnal for Rs. 5.05 lakhs, duration: 3 years. Principal Investigator: Dr. P.C. Mishra, Principal Scientist

(Plant Breeding & Genetics), Zonal Agric. Research Station, Powarkheda.

- Asia Pacific Association of Agricultural Research Institution (APAARI) has assigned a project on "Evidence Generation and Policy and Institution Mapping on Food and Biofuel" to Prof V.K. Gour, Associate Professor, Department of Plant Breeding and Genetics to conduct this study in India and Pakistan.

NEW VARIETIES

- Wheat variety MP-3288 developed at JNKVV, Jabalpur was found promising in AICRP's



Wheat variety MP-3288

trials on wheat and this year. It is in AVT II under rainfed/ restricted irrigated condition in Central Zone. MP-3288 is semi dwarf, sarbati, bold, and has shining grains with resistance to rust and other diseases, tolerant to heat and drought. It is high yielding, matures in 118-122 days and is suitable for chapatti with good quality attributes.



Soybean variety JS 20-09

- JS 20-09, a soybean culture, has been developed at JNKVV, Jabalpur. It is high yielding has wide adaptability and ranked first in Central Zone. It is being tested in AVT II. It is tolerant to abiotic stresses and shattering. It is of medium maturity duration (102-105 days) with bold and attractive seeds.

EXTENSION ACTIVITIES

- VI National Workshop of KVK was held at TN Agriculture University, Coimbatore from Nov. 6-8, 2009. Dr. K.K. Saxena and Dr. T.R. Sharma participated in the Workshop. An exhibition was



Stall of KVK, Tikamgarh

organized by the KVK, Tikamgarh highlighting the technologies to mitigate the drought situation of Bundelkhand region.

- XVI Zonal Workshop of KVKs of Madhya Pradesh, Chattisgarh and Orissa was held at IGKVV, Bilaspur during November 24-27, 2009. All the KVKs working under JNKVV participated in the workshop and presented the achievements and the action plan for next year. The programme was inaugurated by Dr. K.D. Kokate, DDG (Extension), ICAR, New Delhi. Dr. Kokate appreciated the progress made by the KVKs and congratulated the staff for their achievements. Prof. Gautam Kalloo, Vice Chancellor, JNKVV chaired the Valedictory Session of the Workshop.

- Directorate of Extension, JNKVV, Jabalpur organized the technological backstopping programme for KVK scientists on establishment of progeny orchard and horticultural nursery at the KVK Instructional Farm during Dec. 29-30, 2009. Detailed plan was worked out for establishment of technological park at each KVK.

- A three day training programme cum field visit was organized in collaboration with

IFFCO during October 27-29, 2009 for 40 farmers of nine districts of the State.

- A team of Doordarshan, Bhopal visited the University head quarter on October 1, 2009 and recorded eight talks on different aspects of technology for productivity improvement.



Participants visit to Herbal Garden, JNKVV, Jabalpur

- A Training programme entitled "Introduction to Medicinal Plant Cultivation, Value Addition and Marketing" was conducted by the Facilitation Centre for Medicinal Plants on Oct. 27, 2009 at JNKVV, Jabalpur. The prime objective of the training was to introduce extension workers of Agriculture Technology Management Agency regarding potentials of growing medicinal plants.



Women participants during the training

- The Facilitation Centre for Medicinal Plants organized one day training programme for women participants from Narsingpur district on December

22, 2009. In this programme, participants were trained to prepare household remedies from herbs/medicinal plants. The training aimed to develop an aptitude in women farmers to earn livelihood from herbal production, ensure prudent preparation, use and conserve the traditional system of medicine.

- Facilitation Centre for Medicinal Plants conducted two days training programme entitled "Commercial Cultivation, Value Addition and Marketing of Medicinal Plants during Dec. 29-30, 2009 at Exhibition Hall, Herbal Garden, JNKVV, Jabalpur.

- Four training programmes under NAIP Component - III were organized during October 2009, in Mandla, Betul, Tikamgarh & Chattarpur. 120 participants participated in the training on cultivation of lac technology and integrated farming system.

- Under the NSS, Eco Water Literacy Campaign and Science for Sanitation Programme sponsored by M.P. Council of Science and Technology, Bhopal was organised at College of Agriculture, Rewa during November 21-22, 2009. Dr. A.S. Chauhan, Programme Officer and Dr. S.K. Rao, Dean addressed the NSS students.

- Dr. (Smt.) Om Gupta, Principal Investigator, Crop Protection (Chickpea) organized training programme on Chickpea Pathology (Feb. 15-20, 2010) at IIPR, Kanpur under the auspices of AICRP on Chickpea. During

one week training programme, lectures and practicals on disease diagnostics, screening techniques, procedure for mass multiplication of inoculum, disease scoring scales, disease rating for donor parents and promising entries, development of differentials for identification of races, maintenance of purity of pathotypes, molecular characterization of FOC, host resistance, viral diseases of pulse crops, and visits to important laboratories, green house facilities and disease sick fields were organized. A training manual was also given.

- Five day training programme on "Seed Certification" at Seed Technology Research Unit, Department of Plant Breeding and Genetics, JNKVV, Jabalpur was organised during March 2010 in two batches, each of 25 participants with the financial assistance of Madhya Pradesh Seed Certification Agency, Bhopal. Fifty newly appointed Assistant Seed Certification Officers of Madhya Pradesh Seed Certification Agency, Bhopal participated in the programme.

- State level "Krishi Paricharcha" was organized at College of Agriculture, Rewa on Feb. 20, 2010. Krishak Ayog Chairman, Dr. Rajendra Pathak, Dr. D.P. Singh, Member, Dr. D.P. Dubey, Secretary, Dr. R. Pastore, Commissioner and Mr. R.S. Charmakar, Joint Director Agriculture, graced the function. Five hundred farmers, scientists and KVK staff attended the programme.



A farmer being introduced during Inauguration Function

- One day awareness Programme on "Protection of Farmers Varieties : Issues and Challenges" was organized at College of Agriculture Rewa on March 12, 2010. Dr. S.K. Rao delivered the lecture.

- Seed growers training programme was organized at College of Agriculture, Rewa under Mega Seed Project and Rice fallow-chickpea project. Fifty participants attended in each training of both the projects. A total of 21 trainings were conducted during mid Feb. to March 2010 at College of Agriculture, Rewa.



A training session in progress

- One day training on "Management of Bamboo in Agro-forestry" was organised at KVK, Jabalpur on March 18, 2010. More than 35 farmers/farm women participated in the programme. This training programme created awareness among the farmers about the

income generation through bamboo plantation.

- A ten day vocational training was organized at KVK, Jabalpur during Feb. 15-24, 2010 for entrepreneurship development to rural woman. The participants learned and prepared various value added bakery products like pizza, cake and cookies.

- A 10 day training programme was organised by KVK, Jabalpur during Jan. 27 - Feb. 5, 2010 on preparation and preservation of vegetables and fruit products was organized for rural women and school drop out girls. Thirty rural women and girls participated in the training programme. They were trained in preparation and preservation of tomato ketchup, pickles, jam, jellies and products of aonla.



A progressive farmers being given seeds

- In order to enhance the seed replacement rate of Rabi crops like vegetables, pea and gram, improved seed of varieties PSM-3 and JG-16 were provided to farmers under financial support of Govt. of India under Seed Village Programme and NSFM Project with the collaboration of JNKVV and ICRISAT, Hyderabad.

- Participants of QRT Workshop (Sesame & Niger) were given

overview and online training on CERA (Consortium for e-Resources in Agriculture) on March 26, 2010 at Central Library by Dr. (Mrs.) V. Pandey and Mr. Siddarth Nayak to make participants familiar of online knowledge resources provided by ICAR, New Delhi.



Farmers at the World Food Day programme

- Krishi Vigyan Kendra, Jabalpur celebrated "World Food Day" on Oct. 16, 2010 to create awareness among the people for production, protection and proper utilization of food. 250 persons participated in the programme.

- Dr. N.D. Mazumdar, Project Coordinator (Pigeon pea) Indian Institute of Pulses Research, Kanpur inaugurated a "Kisan Sangoshthi on Arhar" organised under FLO programme in village Magarmoha on February 23, 2010. He also appreciated the FLDs conducted on farmer's field. The Chief Guest was welcomed by Dr. O.P. Veda, Director Instruction, JNKVV, Jabalpur and Professor & Head, Department of Entomology. Dr. S.B. Das, Sr. Scientist, explained about the integrated approach for the management of pod borers and other pests of

pigeonpea. About 200 farmers & extension officials attended the programme.

EVENTS

- Dr. R. Pastore, Commissioner, Rewa presided the meeting held at College of Agriculture, Rewa on November 28, 2009 for adoption of new technologies in Rewa division. Dr. S.K. Rao, Dean delivered special talk on seed production technology and formation of seed societies in the region.



Delegates on the dias during the workshop

- State level Workshop on "System for Rice Intestification (SRI)" was organized on Feb. 6, 2010 at College of Agriculture, Rewa. Dr. A. Satyanarayana, Ex Director Extension, ANGRAU, Hyderabad and Dr. S.K Rao addressed the participants. Joint Director Agriculture, Rewa, Shahdol, Deputy Director Agriculture, Rewa, Satna, Sidhi, Shahdol, Umaria, Panna, Anoopur and Singrauli attended the workshop.

- One day Workshop on "Promotion of Biofuel" was organized at the College of Agriculture, Rewa on March 6, 2010. This workshop was sponsored by the National Council of Rural Institutes, Hyderabad.

Dr. R. Seetha Rama Rao addressed the participants and major stress was given on Jatropa propagation.



Prof. Gautam Kalloo, Vice Chancellor, JNKVV, Jabalpur addressing the workshop participants

- A two day Annual Review Workshop on “Integrated Farming System Modules to Ensure Sustainable Livelihood Security for the Peasants of Disadvantaged District of Madhya Pradesh” of National Agricultural Innovation Project, Component-III was held on March 29-30, 2010 at the Directorate of Extension Services, JNKVV, Jabalpur. The workshop was inaugurated by Prof. Gautam Kalloo, Vice Chancellor, JNKVV. Dr. S.S.Tomar, Director Research Services and Dr. K.K. Saxena, Director Extension Services addressed the participants. Dr. N.K. Khare, CPI presented achievements in brief and progress done during 2009-10. Consortia Partners- ASA, BAIF, GVT, Pragma Research and Programme Coordinator of Mandla, Betul, Chhattarpur & Tikamgarh Krishi Vigyan Kendra along with the host farmers participated in the programme.

- An interactive Workshop on

“Guggul” was organized on October 13, 2009 under the Chairmanship of Prof. Gautam Kalloo, Vice Chancellor, JNKVV,



Dr. S.S. Tomar, DRS, Prof. Gautam Kalloo, Vice Chancellor and Dr. Bangali Baboo, Director, IINRG, Ranchi on the dias

Jabalpur. Dr. Bangali Baboo, Director, Indian institute for Natural Resins and Gums, Ranchi and Project Coordinator of Networking Project on “Harvesting, Processing and Value Addition of Natural Resins and Gums” was the Chief Guest. Scientists from State Forest Research Institute, Government College of Ayurved, renowned ayurvedic practitioners, ayurvedic industrialists, scientists of JNKVV and students participated. In the workshop, there was sharing of knowledge on medicinal, environmental and economic importance of guggul which is the red listed plant in India. Dr. Bangali Baboo in his presentation focused on the economic importance of natural resins and gums on livelihood of forest dependent community in India. Prof. Gautam Kalloo in his Presidential Address expressed concern on the decline of guggul and need for holistic approach involving all the stake holders for

promotion and sustainable harvesting of guggul in Madhya Pradesh. Dr. S.S.Tomar, Director Research Services, JNKVV, delivered the Welcome Address. Dr. Moni Thomas, PI proposed the vote of thanks.

- A Buyer-Seller Meet was co-organised by Facilitation Centre for Medicinal Plants at JNKVV and Madhya Pradesh Consultancy Organization Ltd, Bhopal on March 27, 2010 at JNKVV, Jabalpur. The core goals of the event was buyer-seller interface, focusing quality aspects, elite germplasms, venture appraisals, scheme execution and crop management. A large group of medicinal



plants growers and buyers like Baidyanath, Patna; Sami Labs, Bangalore ; Himalayan Herbals, Dehradun; MFP Processing & Research Centre, Bhopal along with extension workers and scientists discussed the modalities of production and marketing of prioritized medicinal plants. The meet was inaugurated by Mr. Prabhat Parasher, Commissioner, Jabalpur Division and chaired by Prof. Gautam Kalloo, Vice Chancellor, JNKVV, Jabalpur. The programme was coordinated jointly by Dr. S.D.

Upadhyaya, Professor (Botany), JNKVV, Jabalpur and Mr. Manoj Jain, MPCON, Bhopal.

AWARDS & HONOURS

- During the 74th Annual Convention of the Indian Society of Soil Science held at New Delhi on December 22, 2009, Dr. S.S. Tomar, Dean, Faculty of Agriculture and Director Research Services, JNKVV, Jabalpur was conferred with the Fellowship of the Indian Society of Soil Science. Dr. Tomar, an eminent Soil Physicist was honoured in recognition of his outstanding work on evolving "Technology for land and water management (raised sunken bed and ridge furrow) in deep vertisols of high rainfall area and improving tillage practices for rice-wheat cropping systems in vertisols".

- Dr. S. K. Rao, Director Farms and Dean, College of Agriculture, Rewa has been conferred the prestigious Dr. Kailash Nath Katju Award for the year 2008 for his outstanding contribution in the field of varietal improvement and Breeder Seed Production by the Department of Science & Technology, Govt. of Madhya Pradesh, Bhopal.

- Dr. S.K. Gupta, Technical Officer, Faculty of Agriculture, JNKVV, Jabalpur and Principal Scientist (Agriculture Economics) was elected as Executive Member of the Indian Society of Agricultural Economics for two years i.e., for 2008 and 2009 during General Body Meeting of the Society held at Bankers Institute of Rural Development (BIRD), Lucknow (UP).



Dr. M.L. Kewat receiving ISWS Fellowship Award from Shri Chandra Shekhar Sahu, Minister of Agriculture, Chattisgarh,

- Dr. M.L. Kewat, Associate Professor (Agronomy) was awarded Indian Society of Weed Science (ISWS) Fellowship 2009-10 for his excellence contribution in the field of Weed Science by Hon'ble Minister of Agriculture, Govt. of Chattisgarh Shri Chandra Shekhar Sahu during Biennial Conference of ISWS held at Indira Gandhi Krishi Vishwavidyalaya, Raipur during Feb. 25, 2010.

- Dr. S.B. Nahatkar, Senior Scientist, Directorate of Research Services, JNKVV, Jabalpur has been elected as a Member of Executive Body of the Indian Society of Agricultural Economics, Mumbai for the years 2010 and 2011. He has also been elected as Member of Executive Body of Agricultural Economics Research Association (India), New Delhi for the period 2010-12.



Prof. V.K. Gour presenting invited deliberations during Conference

- Prof. V.K. Gour (Geneticist & Plant Breeder), JNKVV was

invited as one of the panelist for the Round Table during the First International Biofuel Conference on "New Frontiers in Biofuels" organized during January 18-19, 2010 under the auspices of Delhi Technological University, Delhi. The panel discussed the "Impact of Biofuels on Climate Change". He was honored by Dr. P.B. Sharma, Vice Chancellor amongst the august gathering. Prof. Gour also presented two invited papers during the conference viz. "Genetic Improvement of *Jatropha curcas*" & "*Jatropha* as Feedstock for Biodiesel - Challenges and Potential *vis-a-vis* other non-food Crops: Global Scenario and Indian Perspective" respectively. He was also invited to present a paper entitled "*Jatropha* Plantation and Management to Maximize Feedstock Production" during the the Biofuel Conference organized by Winrock International, India from February 11-13, 2010.

- Mr. A.B. Tiwari, Sr. Scientist, Deptt. of Plant Physiology has been nominated by the Collector, Jabalpur as a Member of District Medicinal Plants Mission Committee to promote medicinal plants in Jabalpur district.

- Dr. S.K. Tripathi, Sr. Scientist, College of Agriculture, Rewa was awarded KPV Menon Award 2009 from Indian Phytopathological Society, IARI, New Delhi during 5th International Conference on "Plant Pathology in Globalized Era" held at New Delhi during Nov. 10-13, 2009.

PERSONALIA

New Assignments to staff:

- Dr. N.K. Raghuwanshi - Professor & Head, Deptt. of Agriculture Economics & F.M.
- Dr. Nalin Khare - Professor & Head, Deptt. of Extension Education. Also nominated as CPI, National Agricultural Innovation Project (NAIP), Component-III
- Dr. (Mrs.) S. Rao - Professor & Head, Deptt. of Plant Physiology
- Dr. G. Jha - Professor & Head, Deptt. of Agronomy
- Dr. D.K. Mishra - Professor & Head, Deptt. of Plant Breeding & Genetics
- Dr. A.K. Naidu - I/c Head, Deptt. of Horticulture, JNKVV, Jabalpur.

GUEST LECTURES

- Mr. K.T. Chacko, IAS, Director, Indian Institute for Foreign Trade, New Delhi visited JNKVV, Jabalpur on Oct. 10, 2009 addressed the scientists of JNKVV and explored the possibility of opening a Centre for WTO Studies at JNKVV, Jabalpur.
- Dr. Bangali Baboo, Director, Indian Institute for Natural Resins and Gums, Ranchi, visited JNKVV, Jabalpur on Oct. 13, 2009. He visited Lac growing areas in Anoopur district, Dr. Baboo delivered a lecture on "Importance of Resins and Gums in Indian Economy".
- Shri Rajan Sunderasan, General Manager, Agro-

Chemicals Policy Group, New Delhi visited JNKVV, Jabalpur on Nov. 10, 2009 and delivered a talk on "Pesticide Perception".

- Dr. K.C. Upadhyaya, Former Vice Chancellor, M.S. University Baroda and Professor, School of Life Sciences, Jawaharlal Nehru University, New Delhi visited JNKVV, Jabalpur on Dec. 22, 2009 and delivered a lecture on "Gene and Genomics".

VISITS ABROAD



Delegates including Prof. V.K. Gour during a GCARD-2010 session in France

- Prof. V.K. Gour (Geneticist & Plant Breeder), was invited by Global Forum for Agricultural Research (GFAR) and Agropolis International, France as delegate to participate in Global Conference on Agriculture Research for Development (GCARD 2010) held at Montpellier, France during March 27 - April 1, 2010. He actively participated in concurrent sessions on Bio-diversity and Visioning Future Agriculture. Prof. Gour emphasized the need of global collection and conservation of *Jatropha curcas* germplasm for genetic enhancement and its development to ensure livelihood security as long term option to the rural poor across the tropical and sub-tropical regions of the world

besides food security being the focus of the conference.

- Dr. P.C. Mishra, Principal Scientist (Plant Breeding & Genetics), Zonal Agricultural Research Station, Powarkheda visited CIMMYT, Mexico to participate as Visiting Scientist in the course on "Phenotyping for Physiological trait based breeding" from November, 23 to December 4, 2009.

VISITS

- Smt. Vidyavati, Deputy Director, Agriculture Department, Satna and a group of farmers from Satna district visited Facilitation Centre for Medicinal Plants on November 17, 2009 to study the production, processing and value addition of medicinal plants suitable for commercial cultivation in the Satna district.
- Dr. Ranjana Chaudhary, Addl. Chief Secretary and Agriculture Production Commissioner, M.P. visited College of Agriculture, Rewa on Oct. 2, 2009. She visited Millet & Rice Project and appreciated the seed production programme of Kodo Kutki and hybrid rice.
- Shri Kedar Nath Shukla, MLA and Board Member, JNKVV, Jabalpur visited College of Agriculture, Kuthulia Farm, Rewa on Nov. 2, 2009 and KVK, Sidhi on Nov. 3, 2009 with Dr. S.K. Rao and Dr. R.P. Singh and appreciated the activities.
- Prof. Gautam Kalloo, Vice Chancellor, JNKVV, Jabalpur and Dr. Arvind Kumar from IRRI, Philippines visited Rewa on Oct.

25, 2009. Special lecture on "Drought Stress and Aerobic Rice" was delivered by Dr. Arvind Kumar.



Dr. R. Kasturirangan, Member, Planning Commission visited Kisan Mela

- Dr. K. Kasturirangan, Hon'ble Member, Planning Commission, Govt. of India, New Delhi visited JNKVV, Jabalpur on Jan. 22, 2010 for an interface meeting to discuss and review pulse production programme/ strategies for increasing productivity and production in M.P. Vice Chancellors, Director Research of State Agricultural Universities, Director of Pulse Development, Senior officers of Department of Agriculture and senior pulse scientists, representatives of ICAR, DAC and Planning Commission participated in the meet. Short and long term strategies for pulse improvement in future were discussed at length and finalized for further implementation.
- Dr. N.P. Singh, Project Co-ordinator (Chickpea), IIPR, Kanpur visited JNKVV, Jabalpur on Feb. 23, 2010 to review the ongoing research programme in different disciplines under AICRP on chickpea.

- Drs. P.M. Gaur, Principal Scientist (Chickpea Breeding) and Suresh Pande (Legume Pathologist) ICRISAT, Hyderabad visited JNKVV, Jabalpur during March 11-12, 2010 to review the experiments being conducted on chickpea under ICAR- ICRISAT Collaborative programme and DBT projects.

- Dr. Suresh Pande, Scientist, ICRISAT, Hyderabad visited and monitored Rice fallow-chickpea programme in Rewa and Satna districts from March 5-12, 2010.

- Dr. R.J. Rabindra, Director, National Bureau of Agriculturally Important Insects, Bangalore on January 5, 2010 advocated the farming community that due consideration should be given to biological control in managing the insect pests population. He was addressing a group of scientists, students in JNKVV and warned about number of problems arising due to non-judicious use of pesticides.

- Dr. K. Kasturirangan, Hon'ble Member, Planning Commission, Govt. of India, New Delhi visited the Entomology stall arranged in the Farmers Fair (*Kisan Mela*) organised by the Directorate of Weed Science Research, Maharajpur, Jabalpur on January 23, 2010. Dr. O.P. Veda, Director Instruction and Professor & Head (Entomology) explained him about the role of Light Trap in managing the insect pest population. About

1500 farmers visited the Entomology stall.

ACADEMICS

- 4th year B.Sc. (Ag.) RAWE (Rural Agricultural Work Experience) 2009-10 students returned after successful completion of RAWE on Nov. 31, 2009. During the programme, they learned about various aspects of cultivation of Kharif and Rabi crops.

STUDENTS ACTIVITIES

- Two students, Shri Gopal Nigwal and Shri Satendra Singh Bagri have been selected in the Union Bank of India as Rural Development Officer (RDO).

PLACEMENTS

- Office of the Dean Student Welfare, JNKVV, Jabalpur organized campus interviews for placement of Agriculture Graduates, Post Graduates, MBA, B.Tech., M.Tech., B.V.Sc. and M.V.Sc. pass outs. Union Bank of India, Bank of India, Hindustan Petroleum and Dhanuka Agritech conducted interviews at the VV headquarter. Fifty two students were selected for different positions.



Selected students in various organisations with Dr. P.K. Bisen, Dean Student Welfare, JNKVV, Jabalpur

Business Planning and Development (BPD) Unit launched at JNKVV, Jabalpur (A NAIP-ICAR-JNKVV campus)

JNKVV is a leading Agriculture University in Central India with substantial investments in agricultural research and development programmes funded through State, National as well as International agencies i.e. IFPRI, ICRISAT, World Bank, IRRI etc., for the cause of improving the livelihood security of farmers. Several transferable commercial technologies like genetically improved varieties/hybrids, biofertilizers and bio control agents, medicinal and aromatics, etc. for promotion with entrepreneurs and benefit of farmers are being considered in Phase-I of BPD-JNKVV project. The BPD-JNKVV project will play a vital role in the entrepreneurship development of the small and marginal investors and the product delivery will be at a faster rate by reducing the length of supply chains. These facilities can easily flag the transferable technologies through incubator, protection through IPR, licensing, commercialization, market linkages, net working of stake holders, research institutions, quality assurance systems, capacity building of the human resources etc. These strategies will deliver the products and services at the right destinations within a reasonable time and at lowest cost. To manage all these activities, basic infrastructure facilities of agric business incubator, human resources with

a mind set to commercialize will be helpful for better mobilization of technologies to the farmers. Promotion of production and processing technologies medicinal plants especially Ashwagandha, Isabgol and Kalmegh will provide better health services at a reasonable cost.

Capacity building of the technical manpower of Agri business incubator as well as entrepreneurs will be helpful to popularize the technologies among the beneficiaries. The establishments of farmers' seed cooperative societies are an example in MP which resulted in increased availability of certified seed to the farmers at a reasonable cost as well as generated huge employment in the rural areas with high seed replacement rates. This will ensure the livelihood security of farmers and strengthen the food and nutritional security as well as promote rural employment and income generation ultimately reflecting in increasing gross domestic product through agriculture sector.

Creation of Business Planning & Development (BPD) unit is acknowledged to be an effective way for fostering the growth of sustainable business endeavour and is expected to provide a wide range of services ranging from incubation facilities such as research support and business

planning to business services such as office space, access to information and communication technologies, advice on management, marketing, technical, legal and financial issues. The BPD Units are also expected to promote entrepreneurial attitude and raise awareness about the opportunities that the entrepreneurship can bring into the local business environment. The BPD units have been developed in an institutional system to organise and promote the sharing of information among small and medium entrepreneurs and farmers.

One of the chief objectives of BPD units is also to help the entrepreneurs to market their commodities by offering broad scale support system to build a network of active and practical backers along with market feasibility studies. The BPD unit is in essence an endeavour to build and strengthen partnership with many organisations such as service providers, universities, emerging entrepreneurs, government departments, finance providers, large MNCs to help as mentors, trainers and as channels to markets.

Three technologies and products have been identified in the first phase for technology incubation and commercialization.

- Hybrid seed technologies

- Soil, seed & plant conditioning bio-agents (Rhizobium, Azotobactor and Jawahar enriched bio organics)
- Medicinal & aromatic plants and their derivates (Ashwa-

gandha, Isbogoal and Kalmegh production & processing technologies).

The financial outlay of the project is Rs. 327.362 lakhs and duration of the project is 2.5 years. The

project will create a climate for sustaining new breed of entrepreneurs and farmers to generate wealth from agricultural technologies, products and services.

Reflections.....

Tractor Drawn Straw Combine

Tractor drawn straw combine was tested after harvesting of wheat crop by self propelled combine at JNKVV and farmers fields nearby Jabalpur district. This machine is used to recover the wheat straw



after combine operation of tractor PTO operated machine. The field capacity of machine was found to be 0.5 ha/h. Straw recovery was found to be 55 66 per cent, and grain recovery 30 kg/ha. This machine cuts straw at 2 cm height from the ground. By using this

machine, farmers can save 60 per cent labour as compared to the traditional method. By using this machine, farmers can solve the problems of straw for their animals and also recover the grains, which were generally not recovered from the fields. It is a smart eco friendly machine for men and animals both.

Tractor Mounted Rotavator

One of the major constraints in increasing the farmers income is reduction in input cost per unit area.

Effective mechanization contributes to increased production with timeliness in operations like seed bed preparation, cultivation and harvesting as well as also saves the fuel and reduces the irrigation intensity for which the existing

human and animal power is becoming inadequate.

Tillage is the most important operation in crop production. It is done mainly to loosen the upper layer of soil, to mix the soil with fertilizer and to destroy weeds. This provides suitable environment for seed germination and plant development.

Traditionally, drought animals have been used in India for seed bed preparation. With increased cropping intensity, farmers have supplemented animal power with tractors. The land preparation for growing crop is energy intensive operation due to presence of heavy soils, tendency to develop cracks and presence of weeds and crop residues. The common implements used for field preparation are M.B. plough, cultivators, harrows etc., if used in



Tractor mounted rotavator



Field testing of tractor mounted rotavator for puddling of paddy fields



Field testing of tractor mounted rotavator for seed bed preparation (dry land)

combination, requires only 2 or 3 passes.

In heavy soils, land preparation after harvesting of paddy is very difficult and if land preparation is delayed, deep cracks develop. Further paddy stubbles (after combine harvesting) create problems in subsequent sowing operations.

One of the solutions for all above mentioned problems is "Rotavator". The main components of Rotavator are (1) Hitch point, (2) Gear box, (3) Spur gear assembly, (4) Gear box assembly, (5) Cordon shaft, (6) Depth adjusting skids, (7) Rotary blades, (8) Metal shield, (9) Rack for skid adjustment, (10) troling board and (11) leveller.

The rotavator is mounted on three point linkage system of tractor of 26 KW or more. The power is transmitted to the rotary tilling unit through tractor P.T.O. (Power Take away Device) while in operation. Rotary tines gives impact on soil surface and throw the soil upward because of its rotational speed and thus pulverizes the soil by breaking the clods. A leveller is provided on the rear side of rotavator to level the soil and break the clods upto some extent. The gap between tines and metal shield is adjustable, thus facilitating degree of pulverization. The shield also help to distribute the pulverized soil equally on ground surface. Skid on both sides of machine can be used to change the working depth as per need. The gear box assembly keeps the

Test results of tractor mounted rotavator at J.N.K.V.V. Jabalpur

Parameters	Seedbed preparation			Puddling	
	Rotavator *1	Cultivator *2	Disc harrow *2	Rotavator	Puddler
Field capacity, ha/h	0.43	0.62	1	0.38	0.63
Field efficiency,%	79.0	72	70	70	70
Fuel consumption, l/h	3.2	3.3	3.0	3.5	3.5
Clod size after operation, mm (MWD)	4.3	10.5	7.5	--	--
Speed of operation, km/h	3.6	3.1	5.5	4.5	4.5
Savings (For same tilt level at 12-14-18.5%, moisture content (db))	56 % fuel saving over cultivator			21% fuel & time saving over puddler	
	23 % fuel saving over disc harrow				

Number of operations required to made a proper tilth level of soil for different crops.

S.No.	Name of crops	Tilth level of soil	No. of operation required by rotavator
1.	Wheat	Fine	One
2.	Paddy	Fine	One
3.	Soybean	Fine	One
4.	Linseed	Fine	One
5.	Safflower	Medium/rough	One or two
6.	Sunflower	Medium/rough	One or two
7.	Black and Green gram	Medium/rough	One or two
8.	Gram	Medium/rough	One or two
9.	Sesamum and Niger	Fine	One

Source: Hand Book of Agriculture, ICAR, New Delhi.

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speed of rotary tines in the range of 140-300 rpm.

The rotavators are available in different sizes of 0.83-1.455 m width of cut as per the availability of tractor power. Under AICRP on FIM, JNKVV has conducted feasibility test and demonstrations were given in about 900 ha during the last five years. Results revealed that its field capacity is 0.43 ha/h, field efficiency 75-80%, fuels consumption 3.2 liter/ha, clod size

(MMD) 5 MM at speed of operation 3.6 km/h.

It saves 56% fuel in comparison to traditional methods of field preparation and time saved is 50%. It is also a very good device for incorporation of green manure into the soil. Further, it can also be used for churning soil in water filled fields for paddy crop seedling transplantation. Therefore, rotavator is recommended for large scale popularization.