

MINE NEWS

QUARTERLY NEWSLETTER OF INDIAN AGRICULTURAL UNIVERSITIES ASSOCIATION

VOLUME 9 No. 4

OCTOBER - DECEMBER 2009

CONTENTS

Spot News
IAUA Executive, 2010

New VCs

Prof. S.K. Sanyal, VC, BCKV, Mohanpur

Prof. V.S. Tomar, VC, RVSKVV, Gwalior

Dr A.K. Bakhshi, VC, SVBPUAT, Meerut

Prof. (Dr) A.P. Singh, VC, PDUPCVVGAS, Mathura

Dr B.V. Patil, VC and Special Officer, UAS, Raichur

Deemed to-be Universities

SHIATS (AAI), Allahabad

CIFE, Mumbai

Universities

Profile*

BCKV, Mohanpur *

DRPDKV, Akola

GBPUAT, Pantnagar

MPKV, Rahuri

Short Profile*

RVSKVV, Gwalior *

SDAU, Sardarkrushinagar

UAS, Raichur *

Awards

DPDKV, Akola

ADVISORY BOARD

Prof. (Dr) Rajendra B. Lal

President

Dr Tej Pratap

Vice-President

Prof. M.C. Varshneya

Secretary-Treasurer

Dr R.B. Deshmukh

Member

Dr Dilip Kumar

Member

Dr S.S. Kadam

Member

EDITORIAL BOARD

Dr R.P. Singh Secretary General, IAUA

Dr J.S.P. Yadav

Ex-Chairman, ASRB

Dr Baldeo Singh

Jt Dir. (Extn), IARI

Mr. R.S. Gupta

Ex-Editor (English), ICAR

Shri C. Thomas

Editor (English), IARI

Spot News

IAUA, EXECUTIVE COMMITTEE, 2010

Prof. (Dr) Rajendra B. Lal VC, SHIATS, Allahabad

Dr Tej Pratap, VC, CSKHPKKV, Palampur

Dr M. C Varshneya, VC, AAU, Anand

Dr R.B. Deshmukh, VC, MPKV, Rahuri

Dr Dilip Kumar, Director, CIFE, Mumbai

Dr S.S. Kadam, VC, MAU, Parbhani

Dr A.K Das, VC, UBVK, Coochbehar

Dr Anwar Alam, VC, SKUAST(K), Srinagar

President

: Vice-President

: Secretary Treasurer

: Member

: Member

: Member

Special Member from

Eastern Region
Member Ex-Officio
(Past-President)



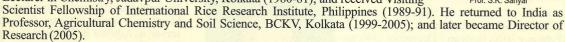
Dr Rajendra B. Lal

NEW VCs

Prof. Saroj Kumar Sanyal takes over as VC, BCKV, Mohanpur

Prof. S.K. Sanyal joined as VC, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, West Bengal, on 4 January 2010. Born in Kolkata on 16 December 1950, he did his B. Sc. (Hons) from Presidency College, Calcutta University, Kolkata (1972); M. Sc. from IARI, New Delhi (1974); and Ph. D. from University of Cambridge, England, the UK (1978).

He served as Assistant Professor of Chemistry, Presidency College, Kolkata (1978-83); and Honorary Post-Graduate Lecturer in Agricultural Chemistry and Soil Science, Calcutta University, Kolkata (1978-2003). He was then invited as Post-Graduate Lecturer in Chemistry, Jadavpur University, Kolkata (1980-81); and received Visiting



Prof. Sanyal received awards such as Scindia Gold Medal and Gwalior Award of Presidency College, Kolkata (1970-71); 12th International Congress Commemoration Award of Indian Society of Soil Science (1994); and Platinum Jubilee Lecturer Award in the section of Agriculture and Forestry Sciences (2006-07). He also served as Member, QRT for IISS (ICAR), Bhopal (1988-1996); Member, QRT for NBSSLUP, (2002-2006); Member, Editorial Board, Indian Society of Soil Science, New Delhi (1992-93, 2001-2008); Associate Editor, Indian Chemical Society, Kolkata (2004-05); President, Indian Science Congress Association, (2004-05); President, Agricultural Society of India, Kolkata (2008-10); President, Kolkata Chapter, ISSS, (2008-10); Convener, Agriculture and Forestry Section, West Bengal Academy of Science and Technology (2009-10). He is a Fellow of National Academy of Agricultural Sciences, New Delhi; Indian Society of Soil Science, New Delhi; and West Bengal Academy of Science and Technology, Kolkata.

Prof. V.S. Tomar takes over as VC, RVSKVV, Gwalior

Prof. V.S. Tomar joined as founder VC, Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya, Gwalior on 21 August 2008. Born on 1 July 1946, he did M.Sc. (Agric.) from JNKVV, Jabalpur; Ph.D. (Soil Science) from GBPUAT, Pantnagar (1973); and Post-Doctorate from International Rice Research Institute, Manila, Phillipines (1978-80). He joined as Assistant Professor, Department of Soil Science, GBPUAT, Pantnagar (1972); and Professor, JNKVV, Jabalpur (1985). Thereafter he served as Dean, and as Director of Extension; and again Dean, Faculty of Agriculture, Director of Instructions, and Director of Research, JNKVV, Jabalpur, till his superannuation in June 2008.

Prof. Tomar established Biotechnology Centre having advanced facilities, and UNDP/ ICAR Centre of Advanced Studies in Soil Science, JNKVV, Jabalpur. He published 95 scientific papers in national and international journals, eight books and



Prof. V. S. Tomar

manuals, more than 30 popular articles and several bulletins. He also helped plan and establish College of Horticulture, Mandsaur; Colleges of Agriculture, Tikamgarh and Ganjbasoda; and Dryland Horticulture Research Centre and Centre of Vocational Education in Horticulture, Garhakota (Sagar) in Madhya Pardesh.

He received Jawaharlal Nehru Award of ICAR (1974); biennial Best KVK Award of ICAR (2002), and Golden Jubilee Best Agricutural Scientist (1997), Government of M.P. as well as Agricultural Scientist (2007) from State Bank of India. He was Councilor of Indian Society of Soil Science and Indian Society of Water Management, and Fellow, National Academy of Agricultural Sciences and Indian Society of Soil Science. Prof. Tomar served as Chairman of Editorial Board of *JNKVV Research Journal* and Selection Committees of ICAR and SAUs. He was invited to present lead or scientific papers at 17 international conferences and in several national conferences, and he was also invited to deliver Dr R.V. Tamhane Memorial Lecture at Indian Society of Soil Science. He visited several countries on various official assignments.

Dr A. K. Bakhshi takes over as VC, SVBPUAT, Meerut

Dr A.K. Bakhshi joined SVBPUAT, Modipuram, Meerut as VC on 2 January 2010. Born on 6 October 1947, he did his B. Sc. from PAU, Ludhiana; M. Sc. from CFTRI-IFTTC, Mysore and Ph. D. from PAU, Ludhiana in post-harvest management and value addition (food technology). He was deputed as Director of Research, SKUAST, Jammu and became Head, Department of Food Science and Technology, PAU, Ludhiana. At CIMMYT, Mixico he worked with the team of noble laureate Dr Norman E. Borlaug, and World Food Prize winner Dr E. Villegas on screening early-generation segregating



Dr A. K Bakhshi

materials of wheat and maize for quality. He joined through a World Bank project on participating teaching and research technology at NDSU (the USA). In Israel he gained work experience on various aspects of food and fruit processing. He was awarded three national awards including ICAR Team Award for wheat improvement. He is Member, Research Advisory Council of CISH, Lucknow; NAARM, Hyderabad; and FADC, Bureau of Indian Standards, besides of Board on World Noni Research Foundation, Chennai, and other institutions in India. He published 198 papers.

Prof. (Dr) Ambika Prasad Singh takes over VC, PDUPCVVGAS, Mathura

Prof. (Dr) A.P. Singh joined PDUPCVVGAS, Mathura (U.P.) as VC on 8 February 2010. Born on 3 December 1945, he did BVScs AH (1968), and MVSc from UPAU, Pantnagar (1971) and Ph.D. in Veterinary Science from HAU, Hisar (1977). He worked in different capacities as Instructor, Assistant Research Officer, Associate Professor and Head, Director and Dean at various universities. He has 45 years of experience in teaching and administration. Dr Singh supervised six MVSc and four PhD theses. He went on foreign assignments to Iraq



Prof. (Dr) A. P Singh

as Associate Professor, College of Veterinary Medicine, Mosul University, Mosul (April 1985 to June 1989) and to Ethiopia as Professor, Harmaya University (24 December 2007 to 7 February 2010). He was fellow of NAVSISVS, and was awarded Late Prof. Ratan Singh Memorial Award for life-time achievement in the field of veterinary surgery, of Jabalpur Division. He served as Executive Secretary ISVS (1991 till date), Executive Member-Veterinary, Council of India, and Member, Board of Management, WBUAF. Dr Singh published 237 national and international research articles, 13 books and 14 chapters in different books.

Dr B.V. Patil takes over as VC, UAS, Raichur

Dr Basavaraj Veeranagouda Patil was born on 1 March 1955. He completed B.Sc. (Agric), M.Sc. (Agric) and Ph.D. (Entomology) from UAS, Bangaluru, he was awarded gold medals and fellowships from ICAR and UNDP. He did Post-Doctorate from University of South Hampton, England on Commonwealth fellowship. He has experience of 29



Dr B. V Patil

years in teaching, research and extension in Agricultural Entomology. He served as Research Associate (1980 to 1982), Regional Agricultural Research Station, Raichur; Assistant Entomologist (1982 to 1984) Agricultural Research Station, Bijapur; Cotton Entomologist (1984 to 1987), Agricultural Research Station, Dharwad; Professor (I/C) (1987 to 1994) and Professor of Entomology (1994), College of Agriculture, Raichur; Associate Director of Research, (2001 to April 2004) at Regional Agricultural Research Station, Raichur; Director of Instruction (Agric), College of Agriculture, Raichur (May 2004 to August 2008); and Director of Research, UAS, Bangaluru (August 2008 to February 2009). Dr Patil guided 36 M.Sc. (Agric) and 8 Ph.D. students as major advisor. He developed IPM technology for cotton and plant-protection schedule for cotton in irrigated conditions. He demonstrated bio-control programmes for cotton pests, collaborated for release of cotton varieties resistant to bollworm and sucking pests (DDH-2, RAS-299-1, Abaditha, RAHS-14, RAS-100), developed IPM schedule for Bt cotton and worked on insecticide resistance.

Dr Patil published more than 300 research papers in international and national journals, and visited countries such as England, France, Germany, Australia, Netherlands, Israel, Italy, Switzerland, the USA, Greece, Iran, Thailand, Vietnam, Japan and Malaysia for presentation of research papers. He worked as expert FAO consultant on cotton IPM in Thailand and Vietnam, and as consultant on whitefly management in Iran. He also served as Member, National Cotton Pest Management Task Force. He was admitted as Fellow, Royal Entomological Society, England, (the UK) and Fellow, Entomological Society of India. He is Life Member of many societies in Entomology and Plant Protection and served as Advisor or Editorial Committee Member for many journals in Entomology.

Dr Patil received several awards such as Sir C. V. Raman Young Scientist Award (2000), Dr M. Puttarudraiah Endowment National Award in the field of plant protection (2002); Outstanding Teacher Award from ICAR, New Delhi; Silver Jubilee Award for Plant Protection Sciences from Central Institute for Research on Cotton Technology, Mumbai; Distinguished Achievement for Pest Management from CSAUAST, Kanpur; Hexamar Award for Cotton Entomology Research; and Best Teacher Awad from UAS, Dharwad, as well as Incentive Award twice for getting ad-hoc Projects worth more than 3.5 crores.

Focus on Universities : Achievements and Events

DEEMED TO-BE UNIVERSITIES

SAM HIGGINBOTTOM INSTITUTE OF AGRICULTURAL TECHNOLOGY AND SCIENCES, ALLAHABAD

AAI is now SHIATS

Allahabad Agricultural Institute, Allahabad is renamed as Sam Higginbottom Institute of Agricultural Technology and Sciences, Allahabad (Deemed to-be University), vide notification no. 13-7/2008-U3A, Dated 22-9-2009, Department of Higher Education, Ministry of Human Resource Development Government of India, Shastri Bhavan, New Delhi.

CENTRAL INSTITUTE OF FISHERIES EDUCATION, MUMBAI

Technology for tiger shrimp

Central Institute of Fisheries Education has developed and demonstrated a lowcost technology at Rohtak centre for shrimp culture in inland subsurface saline water supplemented with K. The technology was developed under the Niche area programme of CIFE by a team of scientists led by Dr C.S. Purushothaman. In 2008 they obtained



A culture field of tiger shrimp

661.0 kg/ha tiger shrimp (Penaeus monodon) in 110 days of culture duration with a survival of 65% at a density of 4 specimens/ m2 stocking density. In view of its success, the experiment was continued in July 2009 to study the economic feasibility of this technology. The culture trials at higher stocking densities were undertaken to increase the total production and the profitability margin. In the field trials, using judicious management practices, net shrimp production of 1,332 kg/ ha was achieved with a survival of 83% in 107 days of culture duration, fairly equal to that in the coastal areas. It shows the validity and the soundness of the technology, as well as its economic feasibility. Considering the unsuitability of inland saline water for conventional agricultural practices and economic losses to the farmers due to salinity of inland water, the new technology of shrimp farming has opened a new avenue of livelihood for the farmers of salt-affected areas.

The main advantages of the developed technology are as follows:

- · This technology may bring prosperity to farmers whose lands have become saline and not fit for growing any agricultural crop.
- Tiger prawn has very high demand both in national and international markets, and fetches very high price in comparison with chicken, mutton or most of the fishes available in the Indian market.



Harvest of tiger shrimp

- Since its culture duration is only 4 months, the farmers of northern India can easily take two crops a year between March and November.
- The north-western region is free from many dreadful shrimp pathogens that the major bottlenecks to shrimp culture in the coastal region.
- The inland saline tiger shrimp culture is sustainable and secured, unlike in the coastal region. However, strict guarantine measures are essential to ensure the sustainability of shrimp farming.

Write-shops on indigenous technical knowledge in fisheries

Ethnic communities in India possess rich knowledge about fisheries. In view of rapid globalization accompanied with imminent threat of bio-piracy, it has become imperative to document the ITKs in fisheries for their scientific validation and subsequent protection under IPR regime.

The CIFE Mumbai, initiated efforts in this direction by adopting a novel approach of write-shops for authentic documentation of indigenous knowledge



Write-shop's on indigenous technical knowledge centre

in fisheries in all the regions of India. These write-shops were based on a participatory approach where a group of experts, contributors, organizers, facilitators, language editors and artists are involved in editing or rewriting the descriptions of ITKs to develop a final draft of the contributions with suitable illustrations in a ready- to-print state. The first write-shop in the series was organized at Shillong, where 81 contributions of North-Eastern region were documented. In October 2009 the writeshop was organized at Kakinada to document the ITKs of East coast. Total 75 contributions were received on harvesting (28), aquaculture (34), processing (10) and therapeutics (3). Similar write-shops are planned for West coast and Central region during 2010.

A similar effort was made in Hindi language to prepare Bharat ke prachin granthon mein matsya evam matsyiki. At Mumbai the write-shop was organized during 28-30 July 2009, and further plans are ahead for holding write-shops at Daman and in Chhattisgarh.

UNIVERSITIES

A Profile

BIDHAN CHANDRA KRISHI VISWAVIDYALAYA, MOHANPUR

The BCKV was established on 1 September 1974 by Government of West Bengal, West Bengal Act XLIS of 1974.

Purpose

- · To provide facilities for the study of agriculture, both basic and applied. relating to terrestrial and aquatic crops and animal production, forestry including farm forestry, home economics, agricultural engineering and technology, horticulture, marketing and processing, land use and management, soil and water management and all related matters.
- Administrative building

- To conduct researches in these sciences and undertake the educational and extension programmes in agriculture among the rural clientele base, keeping in view the requirements of the state.
- To provide appropriate technical and consultative support to the state government for implementation of agricultural development programme.

Objectives

- · To provide facilities for the study of agriculture and allied subjects for prosperity of rural West Bengal.
- · To conduct research in agricultural and allied sciences.
- To undertake outreach education programmes concerning agriculture and allied pursuits.



Central library

To provide appropriate technology support and consultation or advice to the state government and its activities for development of agriculture.

Major achievements

1974-80

Journey began with two faculties – Faculty of Agriculture and Faculty of Veterinary

- and Animal Sciences, offering UG and PG degrees in Agriculture, Veterinary and Animal Sciences, and Dairy Technology.
- Produced 1,318 graduates, 521 masters and 71 doctorates in different disciplines.
- · Released lustrous fiber-yielding corchpus olitorious variety of jute, Rupali Tosha.
- · Establishment of Nodule Research Laboratory for carrying out research and commercial production of different bio-inoculants.

1981-90

- Established 6 Regional Research Stations and 6 Regional Research Substations; and initiated agro-climatic region-specific research based on wel -documented status reports.
- Produced 1914 graduates, 1,065 post-graduates and 274 Ph.D. scholars in different disciplines.
- Released ricebean (Vigna umbellata L.) varieties Bidhan Ricebean 1 and 2, Bidhan Ricebean forage, and cashewnut variety Jhargram - 1.
- · Initiated steps for diversification of major cropping systems aross new alluvial zone of the state under Lab-to-Land programme.
- Large-scale introduction of Kavoor variety of elephant-foot yam and Giant Governor variety of banana.
- 2. Vegetable-based cropping system under newly created irrigated situations.
- 3. Popularization of composite fish culture vis-a-vis induced breeding.
- · Introduced skip-row technique in rice cultivation.
- Initiated regular training programmes for capability upgradation of state extension functionaries.
- · Operationalized joint decision-making mechanism with State Department of Agriculture and other line departments on strategic intervention mechanism relating to situation-specific production technologies.

1991-2000

- · Opened Faculty of Horticulture and Faculty of Agricultural Engineering.
- · Produced 1,459 graduates, 894 postgraduates and 393 Ph.D. scholars in different disciplines.
- Released short-duration photo-insensitive C. capsularis varieties of jute (Bidhan Pat



Faculty of Agricultural Engineering

- 1, 2 and 3), non-irritant elephant-foot yam variety Bidhan Kusum and high-yield potential cowpea varieties Bidhan Barbati-1 and 2.
- Initiated organized institution-village linkage programme for new alluvial zone and hill zone-farming systems under Pilot Project on IVLP.
- · Established the first Krishi Vigyan Kendra of BCKV at Kalimpong, Darjeeling.
- Established full-fledged Farmers' Training Centre of the university having facilities for holding four training courses at a time.
- Began large-scale participation of the university in frontline extension activities concerning rice, pulses and oilseeds programmes.
- · Popularized the use of BGA (blue-green algae) and bio-fertilizers.
- · Initiated research projects under NATP.

2001-2008

- Produced 1,082 graduates, 1,278 postgraduates and 561 Ph.D. scholars in different disciplines.
- Established three new KVKs as well as Agricultural Technology Information Centres under single window service centre.
- Executed 21 AICRPs or AINPs, 16 ICARfunded ad-hoc schemes, 38 State-funded projects, 29 Government of Indiasponsored schemes, and 106 institutionindustry partnership projects.



Prof. M.S. Swaminathan at convocation

- Initiated five different projects under NAIP, two as consortium leader and three as one of the partner institutions.
- Initiated large-scale project for production of quality seeds and planting materials under Mega Seed Project.
- Released upland taro varieties Bidhan Chaitanya and Bidhan Jaideb, one leaf-curl virus-tolerant tomato hybrid Bidhan Tomato Hybrid-4; one high-yielding tomato variety having good processing qualities Bidhan Tomato Hybrid-62; one high curcumin-containing turmeric variety Suranjana.
- Developed three new entries of pointed gourd, viz. BCPG-3, BCPG-9 and BCPG-11, and two potential sweet potato genotypes, viz. Kamala Sundari and 90/101 (Bidhan Jagannath).
- Developed a ready-reckoner on soil testbased fertilizer recommendations for different soil-crop systems of the state, and generated 20 targeted-yield equations for rice, wheat, potato, sesame, rapeseed, ground-nut etc.



Sixteenth convocation

- Developed IPM modules to control mango-hopper, litchi fruit-borer, sweet potato weevil as well as guava wilt and powdery mildew.
- Standardized the rejuvenation technology for old and unproductive mango and guava orchards.
- Regulated flowering in guava through bending for round-the-year fruiting.
- Introduced four sequential cropping systems, viz. rice-chilli-dhaincha, ricelentil-sesame, rice-rapeseed-blackgram and rice-lathyrus-greengram, under rice monocrop situation of coastal and saline zone.



H.E. Shri D. T. Gandhi awarding the farmers

- Prepared state-wise distribution map of root-knot nametodes, (Meloidogyne incognita), infecting jute, vegetables and banana; Hirschmanniella oryzae, Meloidogyne graminicola and Aphelenchoides besseyi in rice; Rotylenchulus reniformis in various crops including pulses; and Heterodera cajani in arhar (piegeonpea).
- Developed management strategy for foliar nematode in tuberose, root-knot nematode in pointed gourd and rice Meloidodyne-Macrophomina disease complex in jute and Rotylenchulus reniformis in cowpea.
- Rendered vocational vis-à-vis capability upgradation training to cover 20321 numbers of different stake-holders through 516 modular courses.

Technologies that are still relevant

The university achieved success in several research domains to effectively address the issues concerning productivity, stability, sustainability and equitable targeted growth across the agrarian nexus of the state. A few landmark technologies and varieties developed by the university and still relevant are given below.



H.E. Shri D.T. Gandhi awarding the farmers

Released varieties

- Photoperiod-insensitive *C. capsularis* jute: Bidhan Pat -1, 2 and 3.
- Ricebean (Vigna umbellata) for forage crop: Bidhan Ricebean 1 and 2.
- Cowpea: Bidhan Barbati-1 and 2.
- · Turmeric (Curcuma longa) / Suranjana.
- · One variety of elephant foot-yam: Bidhan Kusum.
- Taro: Bidhan Chaitanya.
- Casew: Jhargram -1.

Promising entries ready for release

- · Pointed gourd: BCPG-3, BCPG-9 and BGPG
- Tomato hybrid talerant to leaf-curl virus: BCTH-4 and Bidhan Tomato Hybrid-4.
- High-yielding tomato with good processing qualities: BCTH-62 and Bidhan Tomato Hybrid-62.

Taro: Bidhan Chaitanya

- Breeding lines resistant to tomato leaf-curl virus through introgression of resistance from wild relative: Lycopersicon hirsutum and Lycopersicon peruvianum.
- Potential sweet potato genotypes: Kamala Sundari and 90/101Bidhan Jagannath.
- Coix aquatica suited to lowland rice eco-system and saline tracts with excellent regeneration habit: KCA-3.
- Identification of medium-duration (135 145 days), non-lodging type rice with high-yield potential and bold grain rice for semi-deep situations of New Alluvial Zone: Kakdwip-7 and Kakdwip-15.

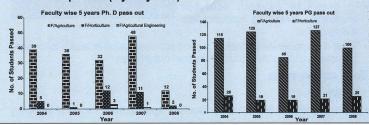
◆ Improved crop-husbandry technology

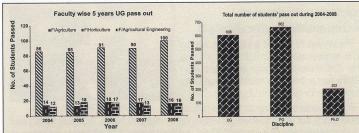
- · Production of low-cost healthy seedlings for early cauliflower.
- · Management of fruit and vine-rot disease in pointed gourd.
- · Progeny improvement in black Bengal goat.
- Management of stem-rot disease in jute.
- Selection of healthy paddy rice seeds through low-cost brine-water treatment.
- Soil-health management under winter rice-summer rice cropping sequence for low-lying and submerged lands.
- · Control of gam bean cracking.
- · Development of IPM package against sweet potato weevil.
- Management strategy for foliar nematode in tuberose, root-knot nematode in pointed gourd and rice, Meloidodyne-Macrophomina disease complex in jute and Rotylenchulus reniformis in cowpea.
- Generation of 20 targeted yield equations for rice, wheat, potato, sesame, rape, groundnut etc.
- Development of a ready-reckoner on soil test-based fertilizer recommendations for soil-crop systems of the state.
- Standardization of drip-irrigation technology for brinjal, papaya, banana, capsicum and sugarcane.
- Introduction of low-cost channel-lining materials with burnt clay and bambooreinforced concrete slabs.
- Minimal tillage in wheat and mustard.
- Development of IPM packages against mango-hopper, litchi fruit-borer as well as guava wilt and powdery mildew.
- Rejuvenation of old and unproductive mango and guava orchards.
- Flowering regulation in guava through bending for round-the-year fruiting.
- Introduction of four sequential cropping systems, viz. rice-chilli-dhaincha, rice-lentil-sesame, rice-rapeseed-blackgram and rice-lathyrus-greengram under rice monocrop situation of Coastal and Saline Zone.
- Introduction of high-performing bamboo species *Thyrsostachy oliveri*, native to Tripura, for West Bengal planes.

◆ Patent registration

- Underwater water sampler
- Cashewnut sheller

Students passed (5-yearly data)





International collaboration

International collaboration were established with university of Turin, Italy; South China Agricultural University, China; Government of Bulgaria under Indo-Bulgarian joint project.

New initiatives

Education

- · Reorientation of agricultural education as per emerging national need vis-a-vis State scenario.
- Provision of more hands-on skill training and intimate exposure to new frontiers of knowledge.
- Initiation of courses on Remote Sensing and NRM for PG students in collaboration with National Bureau of Soil Survey and Land Use Planning, ICAR.
- Introduction of non-degree courses on mushroom cultivation, spawn production, soil testing and fertilizer recommendations, composting technology, plant propagation and nursery management, fruit and vegetable processing etc.
- Improvement in computer and network facilities in all faculties and library.
- Strengthening of Central Instrumentation facilities, Biotechnology Laboratory and Laboratories on GIS and Remote Sensing.

Research

- · Initiated two research projects as consortium leader under National Agricultural Innovation Project and three as consortium partner.
- Conducted adaptive research leading to selection of high-yielding pulse, wheat, maize and oilseed crop varieties.
- Strengthened focused research on rainfed agriculture, problem soils management, resource conservation and management, watershed development, waste-land management, integrated farming, climate change and crop-weather relations.
- Strengthened linkage and collaborative research work with external research partners of the state and ICAR.
- Bio-diversity conservation and management.
- Developed Seed Gene Bank for seedproducing crops.

Extension education

- · Established three KVKs in Nadia, Howrah and Hooghly districts.
- Opened one additional KVK in each of three larger districts Murshidabad, Bardhwan and South 24 Parganas.
- Established Farmers' Training complex at the university headquarters in addition to that at Kalyani
- · Signed MoU with IGNOU for introduction of Certificate Course on Organic Farming.

DR PANJABRAO DESHMUKH KRISHI VIDYAPEETH, AKOLA

Irrigation improvement project

Dr V.M.Mayande, VC, initated a project for strengthening irrigation facility on 20 October 2009, the vidyapeeth foundation day, with support of the ICAR through grant of Rs 40

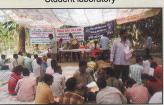
Due to irregular and insufficient monsoon received in the recent years irrigation



Crops in net house



Student laboratory



Farmer 's field day



Field training



Inauguration: irrigation improvement project

facilities were created in university premises and farms. This can help provide lifesaving irrigation to kharif and rabi crops, and more area can be brought under cultivation. Three old wells in the university premises were rejuvenated and the lifted water was stored in water-storage tank for irrigating 100 ha area.

Energy generation from farm waste

The university organized a winter school on efficient utilization of farm waste for energy generation during 10-30 December 2009 at Department of Unconventional Energy Sources, College of Agricultural Engineering and Technology, Akola. It was inaugurated by Dr V.M. Mayande, VC, in the presence of Dr M. Shyam, Project Co-ordinator, All India Coordinated Research Project on



Efficient utilization of farm waste for energy generation

Renewable Sources of Energy, Central Institute of Agricultural Engineering, Bhopal.

The winter school focused the issues on Agro-residue-based renewable energy technologies, mechanization in bio-diesel processing, biomass briquetting, carbon credit and energy conservation, and use of bioenergy in agro-processing. The topics covered were availability of farm waste in dryland, farm waste for energy generation and conservation, characterization of biomass for power generation, effect of global warming on farm waste, intellectual property rights, carbon credit and energy conservation. Dr R.F.Sutar, Prof. R.T. Ramteke, Prof. Umesh Pagrut and Dr Divakar Agarkar provided valuable inputs to the participants. The participants also visited renewable energy park developed at Shri Sant Gajanan Maharaj Engineering College, Shegaon, dist. Buldhana, seed-processing machinery units, organic manure producers and farmers fields.

Agri-business and marketing

Another winter school on Emerging issues in agri-business and marketing was held during 3-23, December 2009 at Department of Agricultural Economics and Statistics and Dr PDKV, Akola. It was inaugurated by Dr P.K. Joshi, Director, National Academy for Agriculture and Research Management, Hyderabad, attended by Dr V.M. Mayande.



Emerging issues in agri-business and marketing

The winter school focused on different aspects of agricultural marketing in relation to international scenario. Dr Joshi highlighted the need of training on the subject for effective percolation of knowledge. Dr Mayande dwelt on different aspects of value chain and market linkages in his presidential address. Twenty five participants from banks, mahabeej, private companies and ICFAI shared their experiences on marketing and business management.

Pigeonpea: PKV Tara

Pigeonpea variety PKV Tara was released in 37th Joint AGRESCO meeting held at Marathwada Agricultural University, Parbhani. DPDKV, Akola developed this cultivar in collaboration with Bhabha Atomic Research Centre, Trombay. It is a medium-



Pigeonpea: PKV Tara

duration (178 days), high-yielding (18.0-19.0 Pigeonpea : PKV Tara q/ha) variety, resistant to wilt and moderately resistant to sterility mosaic disease. It has excellent dal quality, high milling percentage (59.2 % grade) with 75.5% dal recovery. It has red-coloured, medium-bold seeds (9.6g/100 seeds), and it performs well under rainfed areas. It proved superior to ICPL-87119(Asha) and BSMR-736.

Greengram: PKV AKM 4

The Vidyapeeth released greengram PKV AKM-4 for commercial cultivation in Central and South Zones of India. The variety was approved in group meeting of All India Coordinated Research Project on MULLaRP and Pigeonpea, held at University of Agricultural Sciences, Dharwad (Karnataka).



Greengram: PKV AKM 4

The cultivar has yield potential of 15 q/ha and gives 24 to 25 % more yield than the best national check. It is suited for rainfed area is early maturing (67 days), and has synchronous nature and medium-bold grains $(3.08-3.70\,\text{g}/100\,\text{seeds})$. Multiple resistance to diseases is its most promising feature.

G.B. PANT UNIVERSITY OF AGRICULTURE AND TECHNOLOGY. **PANTNAGAR**

Golden jubilee

The university, which came into being on 17 November 1960, commemorated its golden jubilee through a programme organized at Pantnagar on 17 November



Former VCs on Golden Jubilee year

2009. Former VCs Shri Kripa Narain, Shri Anand Saroop and Dr S.B. Singh graced the occasion, shared their memories and outlined the vision for the university in coming years to make it globally competitive. Dr B.S. Bisht, VC, briefly presented its achievements in teaching, research and extension services. Various programmes are planned throughout the golden jubilee year. The ICAR provided grant to the university for the celebrations.

MoU with Georgia University

A memorandum of understanding was signed between GBPUAT. Pantnagar and Georgia University of America on 5 November 2009. The memorandum has the provision of exchange of students and faculty members between the two universities and carry out collaborative



MoU with Georgia University

research programmes of mutual interest, and organize seminars, conferences and trainings in each other's country. The MoU will be operative for 5 years, with provision of extending it for another 5 years with mutual consent. The MoU was signed by Dr B.S. Bisht, VC, and Dr K.K. Singh, Registrar; and Dr Glenn Ames, Director, International Programme of Georgia University.

New variety of forage cowpea

A new white-seeded forage cowpea variety UPC 625, developed at Pantnagar, was released and notified by Central Subcommittee on Crop Standards, Notification and Release of Varieties in Agricultural Crops, Ministry of Agriculture, Government of India. The variety is recommended for cultivation in Uttarakhand, Punjab, Haryana, Rajasthan, U.P., Bihar, West Bengal, Assam, Jharkhand, Chahttisgarh, Orissa, Madhya Pradesh, Gujarat and Maharashtra.

It has luxuriant plant and leafy growth with high leaf: stem ratio (0.80-0.90), which ensures better quality of the fodder. It gives 35-40 tonnes/ha green fodder and 4.5-5.0 tonnes/ha dry matter in 80-85 days at 50%



Cowpea: UPC 625



Seeds of UPC-625

flowering stage. Besides high yield of quality fodder, it has better seed-yield potential of 6-8 q/ha (without cut). It shows field resistance to cowpea yellow mosaic virus, collar/root rot, anthracnose, leaf spot, aphids, flea beetle, pod borer and root-knot nematode. The fodder has better dry matter digestibility (65-70%) and crude protein content (15-17%). The pods are medium-long (18-20 cm) and tolerant to seed shattering. It is dual-purpose (forage-cum-grain) variety due to its 'stay green' biomass at pod maturity and creamy-white seeds with rough-wrinkled testa, most preferred for human consumption.

Technology for increasing shelf-life of paneer

The university developed a new technology to extend the shelf-life of paneer. The scientists of department of Food Science and Technology, College of Agriculture, and of Post-Harvest Processing and Food Engineering, College of Technology, in collaboration developed this technology.

Working on a project 'Functional dairy products' of All-India Coordinated Project on Post-Harvest Technology, Dr Anil Kumar, scientist under guidance of Dr Anupama ngh, Principal Co-ordinator, and Dr Gurumukh Singh, Head of Department, achieved good success. Paneer is a highly perishable dairy item, which can be kept safely only for few hours at normal temperature of 300 C and for 6-7 days under refrigerated condition. But now with the use of this technology paneer can be kept safely even for 4-5 days at normal temperature and for 3 weeks in a refrigerator.

Farmers' fair

The 86th All-India Farmers' Fair and Agro-Industrial Exhibition of Pantnagar was organized by Directorate of Extension Education during 9–12 October 2009. It was inaugurated by Dr J.C. Bhatt, Director, VPKAS, Almora. Dr B.S. Bisht, VC, chaired the inaugural session. On this occasion selected progressive farmers of each district



of Uttarakhand were also honoured. In this fair 166 large and 350 small stalls were put up by the public sector organizations to show-case their products and technologies. About 20,000 farmers registered themselves during the fair, and total 50,000 people visited it. Seeds worth Rs 75 lakhs, and the books and other publications of Directorate of Publication and ATIC worth Rs 83,000 were sold.

Double century by directorate of publication

The Directorate of Publication published its 200th book in October 2009. Phasal-Sabji-Phal: Rog, Pahchan evam Prabandh, the book was in great demand whose 100 copies were sold during the fair.

MoU on nutrition and health of girl

The university signed a MoU with Nestle India, represented by Dr B.S. Bhist, VC and Shri Damodaran, Manager, Pantnagar factory respectively, on nutrition awareness programme for girl child in Uttarakhand.



Shri Damodaran explained that the project would reach out to adolescent girls studying in village schools, to impart health and nutrition awareness. It is targeted at girl students aged 13 to 17 years, and aims to create nutrition awareness through easy-to-learn and interactive sessions. The main topics to be covered include balanced diet, nutritive value of common foods, common local deficiencies and fads, and fallacies related to food.

A pilot project carried out jointly with Punjab Agricultural University, Ludhiana, covering 1,300 girl students in the region of Ludhiana and Moga proved quite successful. The programme will now be launched across locations in India in collaboration with reputed educational institutions.

A joint committee comprising Dr Rita Raghuvanshi, Dr Kalpana Kulshrestha and Dr Pratibha Singh from the university, and Shri Suresh Damodaran, Shri Sanjay Singh Rawat, Ms Chitra Mehra, Shri Ajay Pal Singh Kang and Ms Smriti Singh Verma from Nestle India Ltd was formed to oversee the implementation of the programme. Joint surveys will be carried out to determine the areas in which the project will be

MAHATMA PHULE KRISHI VIDYAPEETH, RAHURI

26th Convocation

The 26th Convocation of MPKV, Rahuri was held on 18 December 2009. Dr C.D. Mayee, Chairman, ASRB, New Delhi, delivered the convocation address. Dr R. B. Deshmukh, VC, presided over the function and Shri Vijayrao Kolte, VC, Maharashtra Council of Agricultural Education and Research, Pune, was the guest of honour. In



26th convocation

his convocation address Dr Mayee said that all the disciplines of science are growing fast, and new branches such as nano-technology, bio-informatics, and nanobiotechnology are emerging. Hence we have to keep pace with the advancements. The impact of climate change is more visible in India, which is likely to influence agricultural production in future. Climate-change research is therefore on forefront of ICAR agenda and is in tune with the national agenda. The agricultural graduates must be equipped with the recent advances in science and technology. Dr Mayee lauded MPKV's commendable progress in education, research and extension education under the leadership of Dr R.B. Deshmukh. Dr A.S. Jadhav, Dean, Faculty of Agriculture, presented the university report. Total 2,130 students of various faculties including 31 Ph.D. students were awarded degrees. Gold medals were also awarded to outstanding students. Dr H.G. More, Associate Dean, Dr Annasaheb Shinde, College of Agricultural Engineering, and Shri V.T. Jare, Registrar, were present on the dias. Dr C.D. Mayee also laid the foundation of the proposed Bio-diversity Park in the university complex.

Research station for fig and custard apple

The foundation stone of the recently sanctioned Agricultural Research Station for fig and custard apple was laid by Shri Ajit Pawar, Minister of Water Resources, Government of Maharashtra at Jadhavwadi (taluka Purandar, district Pune). Shri Pawar assured full assistance from the state for this centre. Dr Deshmukh in his presidential address said that the farmers of the region would be guided on integrated nutrient



Inauguration of ARS

management, and the pest and disease management, water management, and the storage, marketing and export aspects of fig and custard apple. Shri Vijayrao Kolte, VC, Maharashtra Council for Agric. Education and Research, Pune hoped that the establishment of this centre would largely benefit the farmers of this region. Shri Dada Jadhavrao, former Minister of State for Agriculture, Maharasthra, and Dr T.A.More, Director, NRC for Dryland Horticulture, Bikaner, also addressed the farmers.

Four stars for MPKV nursery

The National Horticulture Board of Government of India accorded four-star status to the university nursery. The four-member committee headed by Dr Jagmohan Singh, former VC, DYSPUHF, Solan (H.P.) who visited the nurseries throughout India, accorded quality status to this nursery out of five-stars. Dr S.S.Mehetre, Director of



University nursery

Research, said that the university supplied more than 9 lakh planting material of pomegranate, mango, sapota, guava, fig, custard apple, aonla etc not only in side the state but also outside.

Israel-MPKV collaboration on pomegranate

The National Horticulture Mission has sanctioned funds for MPKV to establish a high-quality pomegranate demonstration centre on 5 ha area and an excellent pomegranate nursery on 2.5 ha area supplying pest-and disease-free planting material at the central campus in collaboration with Israel. In this connection



Israel-MPKV collaboration for pomegranate

Dr Avaribar for Zhur, Advisor, Israel Israel-MPKV collaboration for pomegranate Embassy, visited MPKV, Rahuri. Dr Zhur said that Israel will provide all technical guidance for combating pomegranate problems in the state. Israel scientists will visit pomegranate orchards of the farmers. Dr Zhur visited the nursery and dryland fruit research project of the university.

Demonstrations of rabi sorghum under HOPE

An ambitious project on Harnessing opportunities for productivity enhancement for rabi sorghum was sanctioned by Bill and Melinda Gates Foundation to ICRISAT, Hyderabad, in which Sorghum Improvement Project, MPKV, Rahuri is one of the partners. The project will be implemented during 2009-2012. The main objective of this project is to emprove the productivity of rabi sorghum in the state by 35% through adoption of new crop-production technologies including high-yielding varieties. Three districts Ahmednagar, Solapur and Pune having large area under this crop were selected as target area.

Short Profile

RAJMATA VIJAYARAJE SCINDIA KRISHI VISHWA VIDYALAYA, **GWALIOR**

The RVSKVV, Gwalior was established by Government of Madhya Pradesh vide Ordinance No. 4 of 2008, notified in the Extraordinary Gazette No. 507, dated 19 August 2008, as second agricultural university by bifurcating JNKVV, Jabalpur. As per RVSKVV act (No. 4, 2009), its territorial jurisdiction is spread over 25 districts of Madhya



Administrative building

Pradesh. The university represents well-knit action-oriented education, research and extension centres, operational in agriculture and allied field in the state. It comprises four Colleges of Agriculture, one College of Horticulture, and one College of Veterinary Science and Animal Husbandry having undergraduate, post-graduate and Ph.D. programmes. The research activities are operated through five Zonal Agricultural Research Stations (Morena, Khargone, Jhabua, Indore and Sehore) four Regional Agricultural Research Stations (Gwalior, Mandsaur, Ujjain and Khandwa) and four special research stations (Entkhedi, Bagwai, Jaora and Badwah), having 22 All India Coordinated Research Projects and several ad-hoc projects to improve the productivity and profitability of agricultural system. Transfer of technology is a part of extension activities carried out by 19 Krishi Vigyan Kendras.

The overall climate varies from semi-arid to subhumid, with hot summer, cool and dry winter, and 600-1000 mm mean annual rainfall. The geographical area of the state under the jurisdiction of university contains three types of soils, varying from alluvial to medium and heavy black, spread over six agro climatic zones (Gird Zone, Malwa Plateau, Nimar Valley, Vindhya Plateau, Jhabua Hills and Bundelkhand Zone).

Mission

To conduct education, research and extension activities to improve the productivity, optimize the profit and sustainability of agricultural production system, and improve rural livelihood in Madhya Pradesh.

Mandate

- · To serve as a centre of higher education and research in the field of agriculture and allied sciences.
- · To disseminate technology to farmers, extension personnel and organizations engaged in agricultural development through various extension programmes.

Organic farming for sustainable agriculture

A national seminar on Organic farming for sustainable agriculture and livelihood security was organized by RVSKAVV, Gwalior in collaboration with National Centre of Organic Farming, Ghaziabad, during 23-24 December 2009 at Gwalior. About 300 delegates from different parts of the country and 18 key speakers actively participated in it. The seminar was inaugurated by Prof. M. Kidwai, VC, Jiwaji University, Gwalior, whereas Prof. V.S. Tomar, VC, presided the inaugural function. Prof. Kidwai emphasized the role of organic farming in sustainability of agricultural system, minimizing the soil and water pollution and mitigating the adverse effects of global warming. A Souvenir containing messages of dignitaries, and the activity and achievements of different directorates of the university was also released by the chief guest. While delivering the presidential address, Prof. Tomar emphasized the fact that M.P. has potential to become the leading organic farming state in the country, and advocated the role of organic farming in moisture conservation, checking the degradation of land, improving the soil health, increasing the bio-diversity, reducing the soil, water and environmental pollution, and mitigating the emerging challenges of new era.

The themes of the seminar were (i) landmarks and perspectives in organic farming, (ii) organic resource management for sustainable agriculture, (iii) microbes and organic agriculture, (iv) organic standards for quality of produce, and (v) economic, social and policy aspects of organic farming for livelihood security.

In Valedictory function on 24 December 2009, Shri A.K. Shrivastav, Justice, M.P. High Court, Gwalior, the chief guest, called upon the farmers, scientists and students to work hard for improving the food security, which can be achieved only through sustainability in agricultural system. He advocated that research papers presented at the



Organic farming seminar

seminar will provide baseline and road-map for the development of agriculture. He also gave awards for the best posters. Dr D.N. Sharma, Director, Farmers' Welfare and Agriculture Development, Government of Madhya Pradesh, and the special guest, assured that state is committed to the promotion of organic farming and formulate its policies. Prof. V. S. Tomar, VC, chaired the session.

The following recommendations emerged from the deliberations at the

- To promote organic farming in Madhya Pradesh, there is a need to establish organic farmers societies; self-sufficiency in organic seed production at village level, and the development, standardization and notification of certification standards and technologies for value-added products etc.
- The programmes on vermin-compost and NADEP compost, production of bio-fertilizers and bio-pesticides as well as on green-manuring should be implemented under macro-management and National Food Security Mission.
- · Research efforts should be made to develop efficient techniques to increase the nutritive value of various organic manures.
- Research-based modules of organic farming should be developed for different agro-climatic conditions of the state with financial support from NCOF, Ghaziabad.
- · The infrastructure facilities for commercial production of bio-fertilizers and bio-pesticides, post-harvest management and marketing should be developed.
- Area-specific packages of practices for organic production of field crops, vegetables, fruit crops and spices should be developed and recommended for maximum production.
- Financial support should be given to agricultural universities for establishing quality-control laboratories and for location-specific research to develop packages of practices, techniques for post-harvest management and marketing of organics.
- The cost of certification should be subsidized by the state government.
- The area suitable for organic production should be identified and declared as organic production zones.
- Organic product should meet the requirements of importing countries and WTO norms. Accordingly, national and international certifying agencies should be encouraged to open certification centres in different parts of the
- Mechanism should be developed to provide information on export opportunities, guidance on international quality standards, trainings and marketing.
- Development and maintenance of livestock need to be strengthened.

SARDARKRUSHINAGAR DANTIWADA AGRICULTURAL UNIVERSITY, SARDARKRUSHINAGAR

Leadership training workshop

A Leadership Training Workshop was organized at Sardarkrushinagar, in



Leadership training programme



Students' workshop

collaboration with International School for Public Leadership, Ahmedabad during 5-9 October 2009. Total 51 students from Agriculture, Veterinary Science, Home Science and Nutrition, Dairy Science and Food Technology, B.Sc. (Food-Quality Assurance), Horticulture, B.Tech. (Renewable Energy and Environmental Engineering) colleges participated for personality development and leadership programme. The function was inaugurated by Dr R.C. Maheshwari, VC, Dr Kirit Sehlat, retd. IAS and Founder Member of ISPL; Dr Veer Singh, DSW; and Dr V.P. Vadodaria, Dean, Veterinary College were present along with principals, professors and participants.

Parachuting / Sky-diving and Mountaineering Camp







Parachuting

Mr Mukesh Kumar Khyalia, student of 7th Semester, College of Veterinary Science and Animal Husbandry, participated the sky-diving camp organized jointly by Pramukhsawami Medical College, Karamsad with Indian Parachuting Federation, New Delhi and SDAU at Deesa during 27-31 October 2009.



Mountaineering



Activities

Twenty eight boys of SDAU participated in the Basic Tracking Mountaineering Camp (Climbing Training Course) 2009-10 at Swami Vivekananda Lountaineering Institute, Mount Abu, Rajasthan, during 17-26 November 2009. Out of 78 students of Gujarat, the institute has given three prizes of which, SDAU first and second prizes. Shah Sharva received the first and Amit Pankuta got second prize for the best Mountaineering trainees.

UNIVERSITY OF AGRICULTURAL SCIENCES, RAICHUR

The Hyderabad-Karnataka region is agrarian, with irrigation potential of 12 lakh ha, through Tungabhadra, Krishna, Karanja and Mullamari etc, irrigation projects, covering 44.96 lakh ha, accounting for 33.60% of the geographical area of the state. Out of it 68% is under cultivation, and having medium (32.42%) and large farmers (36.69% bestowed with rich natural resources, especially for agricultural development. The need to open an agricultural university for this area exclusively was felt. To fulfill this need the Government of Karnataka (No. AHD: 165:UAS:99, dated 17-12-1999) directed University of Agricultural Sciences, Dharwad, to submit a feasibility report on the proposal to open it. An expert committee was constituted (No.AO/Est-V/LC/4778-B/99-00; dated 5-1-2000), which recommended the proposal. The cabinet approved the proposal for establishment of agricultural university at Raichur, with an allocation

university at Raichur, with an allocation of Rs 5 crores during 2008-09 academic year on 26 September 2008.

Raichur is the oldest establishment for agricultural research, where an Agricultural Research Station was established in 1932 by the then Nizam's Government of Hyderabad, with a mandate to carry out research on



University building

dryland farming. After the reorganization of states in India, Raichur was identified as the main research station for oilseeds. With the establishment of State Agricultural University in Karnataka in 1964 at Bangalore, it was elevated to the level of Regional Research Station with jurisdiction of five districts of northern Karnataka, Agricultural Engineering Institute was added to Raichur campus in 1969 to offer diploma course in Agri-Engineering, which in 1987 elevated to the status of College of Agricultural Engineering on upgradation of Diploma to B.Tech. degree. In 1984 and 2000, two Colleges of Agriculture were started functioning, one at Raichur and the other at Bheemarayanagudi (Shahapur taluk of Gulbarga district) respectively, with an intake capacity of 30 students. However, with establishment of University of Agricultural Sciences, Dharwad during 1986, Raichur became the component campus under UAS, Dharwad. It continued to have the privilege of being the second largest campus and a major hub of education under UAS, Dharwad. The Post-graduate degree programme leading to Masters degree in eight departments was started in 1995, with an intake capacity of 5 students for each department every year. In 1994 Krishi Vigyana Kendra a component of UAS, Dharwad, but funded and monitored by the ICAR, started functioning in the campus and received the best Krishi Vigyan Kendra National Award for the year 2007-08. Thus Raichur centre completed all the necessities of teaching, research and extension. During 2008-09 and 2009-10, PG programme began in other departments, thus making a total of 13 departments offering Post-graduate programme at the campus level. The Raichur campus has registered significant growth in the last decade, reaching newer heights in education, research and extension.

Mission

The UAS, Raichur has a mission to persue the need of agricultural education to sensitize the farming community with scientific innovations, short- and long-term for the tribulations faced by the farming community through research for growth and sustainability of agricultural sector and outreaching the technologies to uplift the socio-economic status of the farming community through strong extension linkages.

AWARDS AND RECOGNITIONS

International award to DPDKV scientist Dr V.N. Doud

Dr V.N.Doud, Head, Department of Horticulture, DPDKV, Akola received the best poster presentation award, ICS-2009, at 4th International Cucurbitaceae symposium, hosted by International Society for Horticultural Sciences, and organised in association with Hunan Agricultural University, Hunan Cucurbits Research Institute, Hunan Administration of Foreign Experts Affairs, Chinese Society of Horticultural Sciences, and Peoples, Government of Changsa Hunan Province, China during 21-24 September 2009 at Changsa. The selection process for best poster



Dr V.N. Doud

was done out of 350 participants in the symposium attended from 30 different countries. Prof. Xiaowu Sun, convener of the Symposium, presented this award for the poster on Studies on floral biology and fruit set in underutilized cucurbit-spine gourd.

	Printed Matter BOOK-POST	STAMP
To,		
ryce sand, the particular		ni i daya yiku r 29b Danahid 25da ansat
		· Aller
From:	14-04-07-08-08-08-08-08-08-08-08-08-08-08-08-08-	
Indian Agricultural U	Iniversities Association k, NASC Complex, D.P.S. Marg, Pusa Cam	nue Now Dolhi 110 012