

# IAUA NEWS

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## NEW VCs

### Dr Arun S. Ninawe, VC, MAFSU, Nagpur

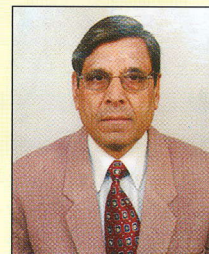
Dr A.S. Ninawe joined as Vice-Chancellor of MAFSU on 17 May 2007; earlier he was Advisor in Department of Biotechnology, Government of India. He did his Ph.D. in Marine Sciences. He has been the prime mover of biotech-based programmes on societal development, with focus on innovation and utility to develop Aquaculture, Marine and Animal Biotechnology sectors. Dr Ninawe visited many laboratories and facilities for improvement of aquaculture programmes within the country and abroad. He promoted the sector of Animal and Aquaculture strains, and their recombinant vaccines, diagnostics and prophylactics. He published many articles in reputed journals.



Dr Arun S. Ninawe

### Dr Pratap Narain, VC, RAU, Bikaner

Dr Pratap Narain, an eminent soil scientist, took over as Vice-Chancellor of Rajasthan Agricultural University, Bikaner on 19 May 2007. He was born on 1 January 1945. He did his M.Sc. (Agric.) in Soil Science and Agricultural Chemistry in 1966 and Ph. D. in 1969 from Indian Agricultural Research Institute, New Delhi. He went to University of Goettingen, West Germany for Post-Doctoral research during 1970-72. Dr Narain started his professional career as Soil Scientist at RBS College, Bichpuri, Agra in 1973 and served as Scientist S-2 (1975-81), Scientist S-3 (1981-85) and Principal Scientist and Head (1986-89) at Central Soil and Water Conservation Research and Training Institute, Dehradun. He served as Director, Central Arid Zone Research Institute, Jodhpur from 1999 to 2006.



Dr Pratap Narain

Dr Pratap Narain is an expert on soil conservation and watershed management. He held offices of several professional bodies and societies including those of Indian Society of Soil and Water Conservationists and Arid Zone Research Association of India. He received several awards and honours such as ICAR Award for Outstanding Multi-disciplinary Team Research in Agriculture and Allied Sciences (1992-93) and Doreen Masher Award (2004) and Brandis Prize of Indian Forester (2003). He also handled several international assignments and represented India during FAO workshops at Kuala Lumpur (1966) and Hanoi (1997), Commonwealth meeting at Kenya (1986) and several UNCCD conventions in recent past. Dr Narain is on the Boards of Consultants of UNCCD, IWMI, Colombo and NRSA, Hyderabad.

He published more than 80 research papers and articles in journals of international repute and has more than 30 popular articles, 50 symposium papers and 30 books or bulletins to his credit as author or editor. He visited West Germany, England, the USA, Nepal, Egypt, UAE and Africa for advanced research, specialized training and international meetings.

### Dr V.M. Mayande, VC, DPKV, Akola

Dr Venkat Manoharrao Mayande joined as VC, DPKV, Akola on 4 July 2007. He was born on 5 July 1950 at Niwali village, dist. Latur. He did his B.Sc. (Agric.) and B. Sc. (Agric. Engng) from DPKV, Akola; M. Tech. (Agric. Engng) in Post-Harvest, Process and Food Engineering from BPUAT, Pantnagar and Ph.D. (Agric. Engng) in Farm Machinery and Power from IIT, Kharagpur. Dr Mayande worked as Assistant Agricultural Engineer, BAIF Agricultural Engineer, Farm Systems Research Programmes at ICRISAT; Head, Division of Resource Management at CRIDA; and Zonal Co-ordinator (ZoneV) for KVKs of Maharashtra and Andhra Pradesh. He visited Israel for study on Micro-irrigation Systems, Water Management and Precision Farming.

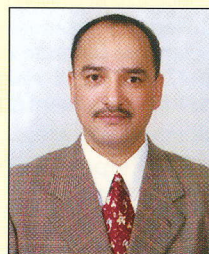


Dr V.M. Mayande

His significant contributions include designing and development of 16 farm implements and adoption of 12 designs for commercial production by 17 industries in 7 states. He was honoured with Rafi Ahemad Kidwai Award, ASPEE Award, Best Invention Award, Best Product Invention Award for development of zero-energy vegetable preserver and Best Product Invention Award for developing mango orchard sprayer. He has 201 publications to his credit. Dr Mayande participated in 13 national seminars on WTO and IPR and delivered lectures to faculty members of SAUs, ICAR and KVKs. He developed expertise in management of multi-disciplinary team research. His research on mechanization in dryland areas enhanced crop productivity by 19-57 per cent and profitability by 31-74 per cent. He developed Public-Private Partnership model for production of farm implements, which were adopted by more than 2 lakh farmers throughout India. Through 55 KVKs he organized vocational training, skill-oriented courses and frontline demonstrations in Maharashtra and Andhra Pradesh. He served as Member of several bodies as well as national and state-level committees.

### Dr Tej Pratap, VC, CSK HPKV, Palampur

Dr Tej Pratap joins CSK HPKV, Palampur as its VC on 5 July 2007 for the second time. Dr Tej Pratap was born on 4 July 1952 in a village in Kullu valley of Himachal Pradesh. He did his M.Phil. and Ph.D. (Ecology) in 1977. His professional expertise revolves around 30 years of international project and programme management, scientific policy research and institutional leadership. It



Dr Tej Pratap

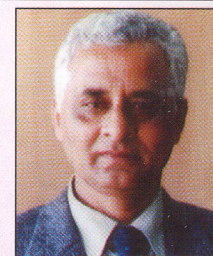


includes over 13 years of international programme on project management at ICIMOD, more than 3 years as Vice-Chancellor of CSK HPKV Palampur (2001-04), over 10 years as ecologist-researcher and 2 years as Executive Director of International Competence Centre for Organic Agriculture. Recently he worked with Planning Commission to prepare XI Five-Year Plan proposal for organic sector and worked as Consultant to National Commission on Farmers, Government of India, for hill agriculture and organic farming sectors. He was responsible for developing strategic partnerships with several Post-Harvest Centres of CGIAR and other donor agencies such as FAO, ADB, WB, UNDP and AUSAID. Dr Partap was awarded Honorary Professorship in Mountain Agriculture by Institute of Geography and Natural Resources, Chinese Academy of Sciences, Beijing, China in 1995 and by Tibet Academy of Agriculture and Animal Sciences in 1996. A born mountain man, he was honoured with Himachal Ratna award (Jewel of Himachal) in 2001 for his services to mountain people.

Dr Pratap has held many important assignments as Chairman, Quinquennial Review Team of CSWCRTI; Chairman, XI Plan Organic Sector Group; Consultant (Hill Farming) to National Commission on Farmers, Government of India; Manager, IFOAM Organic Service Centre; APO Consultant, Japan etc. His publications include 52 research papers and articles in international journals, some books and proceedings, 39 authored and edited books and video films.

## Dr Gautam Kalloo, VC, JNKVV, Jabalpur

Dr Gautam Kalloo joins JNKVV, Jabalpur on 12 July 2007 as its Vice-Chancellor. Dr Kalloo was born on 16 November 1944. He did his Ph.D. in Genetics and Plant Breeding and D.Sc. (Honoris Causa) from Banaras Hindu University, Varanasi; and Post-Doctorate from Germany. He served for 22 years in different capacities at Haryana Agricultural University. He also served in the ICAR as Director, Indian Institute of Vegetable Research, Varanasi and as Deputy Director-General (Horticulture and Crop Science). He developed more than 40 crop varieties. Prof. Kalloo was conferred with several awards including Rafi Ahmed Kidwai Award, ICAR Award of Outstanding Multi-disciplinary Team Research in Agriculture and Allied Sciences etc. He is a Fellow of National Academy of Agricultural Sciences besides President of Indian Society of Vegetable Sciences; President, Indian Society of Seed Technology and President, Indian Society of Oilseeds. He is author and editor of several books published abroad and has more than 250 research papers or articles to his credit. He has widely travelled in various capacities to countries like Thailand (Bangkok), Sri Lanka, China, Egypt, Malaysia, Mexico, Switzerland, Taiwan, Moscow and South Korea.



Dr Gautam Kalloo

## Focus on Universities : Achievements and Events

### DEEMED UNIVERSITY

#### INDIAN AGRICULTURAL RESEARCH INSTITUTE, NEW DELHI

##### Indo-US workshop on strengthening library and information systems

The IARI organized an Indo-US Workshop on library and information systems under the bi-lateral programme of India and the USA during 16-17 May 2007, receiving participation from 69 national and international universities. This joint programme is based on the partnership in four major components, viz. Biotechnology, Curriculum development, Food processing and human-resource development. The Workshop resulted in 21 valuable recommendations for improvement, modernization and automation, networking, human-resource development and disaster management in Indian agriculture, library system and development of IARI Library as national agricultural library.



Indo-US Workshop

##### Indian Veterinary Research Institute, Izatnagar

##### Visit of Governor of Jharkhand

His Excellency Shri Syed Sibtey Razi, the hon'ble Governor and Chancellor of Universities of Jharkhand, and Dr N.N.Singh, VC, Birsa Agricultural University, visited Indian Veterinary Research Institute, Izatnagar on 26 April 2007. They showed keen interest in various activities of the institute and visited the dairy and fodder farms and research divisions including the library and central instrumentation facilities. Shri Razi expressed keenness to have a Regional Station of IVRI in Jharkhand to address region-specific research and development issues.

### UNIVERSITIES

## A Profile

#### RAJASTHAN AGRICULTURAL UNIVERSITY, BIKANER

The RAU was established on 1 August 1987 after being carved out of the multi-faculty M.L.Sukhadia University, Udaipur. However, two colleges, viz. SKN College of Agriculture, Jobner and College of Veterinary and Animal Sciences, Bikaner, established in 1947 and 1954 respectively, are now its constituent colleges.

##### Its mandates are:

- To impart education in agriculture and allied branches of the study;
- To undertake research work in agriculture and allied sciences;
- To undertake mass-education programme, especially for the



Main gate



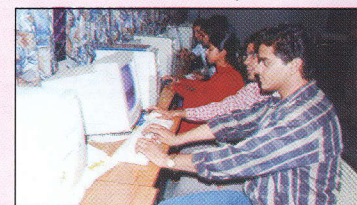
Administrative Block

- rural people of Rajasthan; and
- To undertake such other activity or project as the university may deem proper to achieve the objectives.

The university presently developed into full-fledged state agricultural university with Colleges of Veterinary and Animal Sciences, and of Home Science along with an Agri-business Management Institute. Also, for the development of university staff members an Academic staff college-cum-Distance Education Centre has been developed, which organizes summer or winter school, orientation and refresher courses and has also started imparting education by distance mode through correspondence and e-learning portal.



Main laboratory

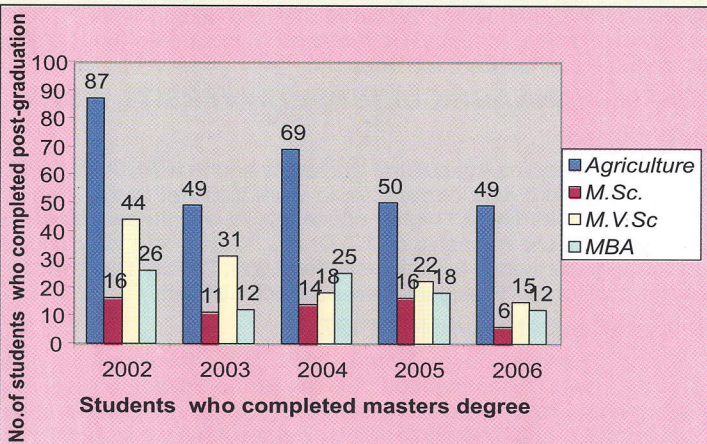
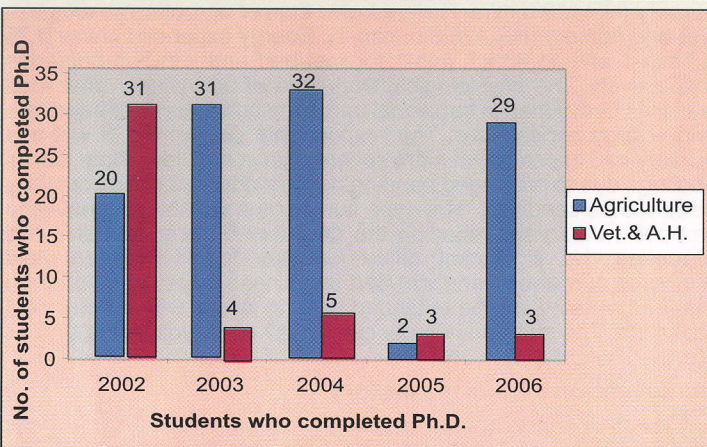
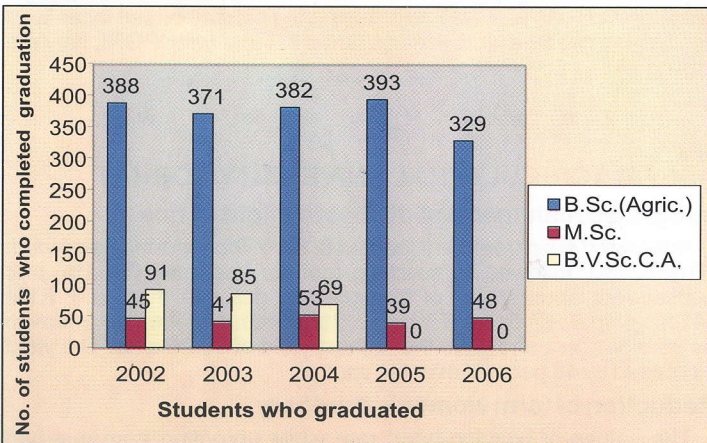


Main computer lab



Date palm cultivation





Research and Extension Directors jointly promote seed-promotion programme, especially the breeder seed of various varieties. Recently a mega seed-production project worth Rs.4.24 lacs has been sanctioned by the ICAR. Veterinary research is focused on improvement of breeds of cattle, camel, sheep and goat. The research activity of College of Veterinary and Animals Science led to the development of balanced ration combination. A monthly animal disease-forecast bulletin for all the districts of the state is also released regularly. The Directorate of Extension with its KVKs located in each district under the jurisdiction of RAU harbinger change in the agricultural scenario and livestock management in arid regions. The goals are achieved through organizing various training programmes, both for the trainers and the farmers, through kisan melas, kisan goshties, field days, frontline demonstrations and activities of women club and youth club. Usually



Course on organic farming through distance mode

## Major programmes and activities

Research is dedicated to the generation of new agriculture and veterinary technologies and their verification. Both All India Co-ordinated Research Projects and Zonal Research are being operated through 14 Agricultural Research Stations and four Livestock Research Stations under Directorates of Research for Agriculture and for Veterinary and Animal Sciences.



Farm extension activities

## Crop varieties developed and promoted by RAU, Bikaner

Crop	No. of varieties released	Varities
Wheat	9	Raj 3077, Raj 3765, Raj 2184, Raj 1972, Raj 1482, Raj 821, Raj 1114, Raj 1555, Raj 3377
Barley	10	Rajkiran. RD 57, BL 2, RD 103, RD 2035, RD 2052, RD 2503, 2508,
Pearlmillet		RD 2992 RCB 2, Raj 171, RHB 30, RCB 911, Raj Bajra Chari 2, RHB 58,RHB 90, RHB 121
Moth	8	Jadia, JwalaSIPCMO 880, RMO 40, IPCMO 912, FMM 96, RMO 225, RMO 423
Chickpea	13	GNG 146, GNG 16, RSG 2, RSG 44,GNG 158,GNG 149, GNG 663, GNG 469, RSG 888, GNG 1292, CSJD 884, RSGK 6, RSG 931
Pea	1	Rpg 3
Greengram	4	RMG 62, RMG 268, RMG 344, RMG 492
Cowpea	3	RC 19, Rcv 7, RC 101
Horsegram	1	KS 2
Guar	10	Durga Bahar, Durgapura Safed, RGC 471, RGC 936, RGC 197, RGC 986, M 83 (veg.), RGC 1002, RGC 1003, Durgajay
Cotton (American)	8	Ganganagar Ageti, Bikaneri Narma, RST 9, Raj 4416, RS 875, RS 810, RS 89, RS 2013
Cotton (desi)	2	RG 8, RG 18
Watermelon	2	Durgapura Meetha. Durgapura Keshar
Muskmelon	1	RM 43
Groundnut	2	RG 141, HNG 10
Sesame	5	RT 46, RT 54,RT 125, RT 103,RT 127
Onion	1	RO 1
Mustard	2	RN 393, RGN 13
Taramira	1	RTM 314
Coriander	2	Rcr 41, Rcr 20
Cumin	2	RZ 19, RZ 209
Fenugreek	1	Rmt 1
Fennel	1	RF 101
Castor	1	RHC 1
Chilli	1	RCh 1

200 extension trainings have been organized with an estimated participation of 10,000 farmers. Directorate of Extension along with College of Home Science take initiatives for enhancing awareness about health and micro-financing in rural women, through self-help groups.

Among new initiatives, the RAU has embarked upon culture of water conservation, tree plantation, promotion of medicinal plants and establishment of fodder bank. The university has also demonstrated the utility of construction *diggies* in water-conservation programmes. It has



New course on Jal Bachat Kheti through distance mode



Visit of dignitaries from National Commission of Farmers



also been demonstrated that the *diggies* can be coupled with aquaculture and fish farming. The Agricultural Research Stations are also promoting use of pressurized irrigation system, especially sprinkler and drip irrigation for water-saving farming. The research is geared to develop high-yielding varieties, bio-regulants technology, balanced animal nutrition and conservation of indigenous breed of cattle. The nurseries have been developed to cater to the needs of indoor and outdoor plantations, and bee-keeping has been shown to be a successful venture along with pursuit of arid horticulture, plantation and nursery.

The traditional teaching programmes in the form of resident instructions have been complemented with innovative short-duration courses, which have been launched through open-distance learning (ODL mode and residence mode). Through distance education, two certificate programmes are in operation on Jaivik Krishi and Jal Bachat Kheti. Similarly, Institute of Agri-business Management has started a residential certificate course of 3 months duration on Agri-business, in which a higher secondary passed student (10+2) of any stream can seek admission and study. Recently a diploma course on Input Management has been started by IABM in collaboration with M/s Dhanuka Group of Industries, in which 100% employment is ensured to the students.

Major achievements have been made in application of electronic, computer and info-communication technology through Centre of Information Management and Computer Application and establishment of CD ROM database in the library. The extension activity is also supported greatly by establishment of Agricultural Technological Information Centre (ATIC) and provision of the facility of helpline and website in Hindi for the use of farming community.

New zeal is being witnessed among the faculty members regarding organization of summer and winter schools, participation in national and international conferences and undertaking academic activities like writing manuals and books. Similarly, the pace of submitting new research proposals has also increased in plant science and animal science. The department of Biotechnology and Plant Biotechnology Centre have taken a lead in the study of molecular markers for arid zone crops.

A document on 'Vision 2020-2025' was prepared for the university, which provides a comprehensive scenario of all the teaching, research and extension activities. The university plans to promote hi-tech agriculture as well as to provide balanced support to organic farming, eco-friendly agriculture, niche agriculture, protected agriculture and water-saving farming. The feed, fodder and forage researches have been provided emphasis along with focus on arid horticulture, water-saving technology, fortified organic manure and crop responses to climate change have been forecasted as future research imperatives. It is anticipated that there would be enhanced use of computers in crop modelling, especially for prediction and simulation modelling. The extension is particularly poised to acquire a balance with traditional methods of communication utilizing contact and oral skills with that of new developments in info-communication technology, i.e. cyber extension, e-learning portal and online open-distance learning programmes. The RAU functions as a leader in developing speciality packages for arid and semi-arid regions of the world. Such packages would be amply supported by its teaching curricula, research plans and extension activities.

In addition to state-level and national-level institutions, RAU is also actively pursuing strong association with international institutes and agencies. Two collaborative projects under this category, viz. Indo-Dutch project on Reclamation of waterlogged soils and Indo-Australian Project on Control of white grub have recently been successfully concluded. Presently two research projects, viz. 'Farmer participatory improvement of grain legumes in rainfed areas' in



New initiatives, distribution of manuals and books. Similarly, the pace of submitting new Ornamental vegetable



Foreign Collaborators-visiting RAU, Bikaner

collaboration with ICRISAT and 'Assessing market-based incentives concerning sesame landraces on farms in India' with IPGRI, Italy are in progress.

\* \* \* \* \*

## ASSAM AGRICULTURAL UNIVERSITY, JORHAT

### Integrated management of sheath blight of rice

Integrated seed treatment [captan 0.1% + *Trichoderma harzianum* (Th) 0.25%], followed by seedling root-dip treatment (Th 1%) and subsequent amendment of transplanted rice with Azolea + FYM (*Azolla pinnata* @ 5 t/ha + FYM @ 2.5 t/ha) reduced the tiller infection by 85.3 per cent and gave the highest yield of 39.96 q/ha. The yield increased by 48 per cent over the control.

### Reduction of farm women's drudgery

The values of working-heart rate while uprooting from mat-bed nursery (HR 113 b.mim-1) were lower than of uprooting seedlings in wet-bed nursery (HR 128.5 b.mim-1). Energy expenditure was 9.25 KJ.min-1 and 11.88 kJ. min-1 for mat-bed and wet-bed nurseries respectively. The physiological work-load of uprooting in mat-bed was less heavy than in traditional uprooting on the basis of heart rate and energy expenditure. The respondents performing in wet-bed nursery had experienced more severe pain in shoulder joints, backs and legs due to prolonged bending posture adopted while uprooting deep-rooted seedlings. Mat-type nursery is a suitable alternative to wet-bed nursery for reducing the drudgery of farm women while uprooting. No significant difference was found between yield attributes of mat-bed and wet-bed seedlings. Transplantation from mat-bed nursery can be extended up to 4 weeks without any yield reduction. The mat-bed nursery can be raised in typical rice land as wet-bed nursery.

### Inauguration of mini tea factory

A mini tea factory (green tea) with a capacity of 500 kg/day was inaugurated on 19 February 2007 at the Department of Tea Husbandry and Technology by Shri Jairam Ramesh, Minister of State for Commerce and Industry, Government of India. The fund for the factory was received from Tea Board.

## CCS HARYANA AGRICULTURAL UNIVERSITY, HISAR

### MoU signed

The CCS Haryana Agricultural University and EURASIA-PACIFIC UNINET signed a joint declaration to work together in the area of agricultural research and higher education. At a high-level meeting held under the chairmanship of VC, Dr J.C. Katyal, on 5 May, a joint declaration was signed by University Registrar, Dr R.S. Dalal and Dr Brigitte Winklehner, President, Eurasia-Pacific Uninet.

### New pearl millet hybrid HHB 197

A new promising bajra hybrid, HHB 197, developed by the university, was recommended for release at national level by International Crops Research Institute for Semi-Arid Tropics, at its 42nd annual group meeting of pearl millet research workers, held at Hyderabad. This hybrid has yield potential of 50 q/ha, matures in 70 days and is quite resistant to major bajra diseases like downy mildew and smut. Besides, it has long bristles, which save it from bird damage.

### Collaboration with Bonn University

The CCS HAU and University of Bonn, Germany decided to collaborate in their research and academic programmes. Dr Paul L.G. Vlek, Director and Professor, Centre for Development Research, University of Bonn, met the VC, Dr J.C. Katyal, and senior scientists on 2 April and assured scholarships to HAU students at Uzbekistan.

## CSK HIMACHAL PRADESH KRISHI VISHVA VIDYALAYA, PALAMPUR

### Hill farming school

Dr S.P. Tiwari, DDG, ICAR, laid the foundation stone of Hill Farming School at Palampur on 31 May 2007. The school aims to provide hand-on-training and technical knowledge to the unemployed youth, hill farmers,



Hill farming school



students, teachers and the research and extension personnel with emphasis on hill and mountain agro-ecosystem of 12 hill states of India as well as of the world. Laying the foundation stone of the school, Dr Tiwari said that to maintain relevance to the needs and challenges of new era, it was imperative to reorient teaching, research and extension education in consonance with the resource base and eco-system.

## DR BALASAHEB SAWANT KONKAN KRISHI VIDYAPEETH, DAPOLI

### Nomination of VC in ICAR Society and Governing Body

The Union Minister for Agriculture and President, ICAR, has nominated Dr Vijay Mehta, VC, as a Member of ICAR Society as well as of Governing Body for 3 years w.e.f. 10 April 2007.



Dr Vijay Mehta

### Release of new varieties

The university released a new variety of rice, Karjat 7. It is dwarf in stature, maturing in 115 to 120 days and is a good alternative to Ratna for grain type and duration. Its average grain yield is 5.0 t/ha. It also released a seedless lime, Konkani Lemon, bearing good size seedless fruit with thick peel. The fruits are useful for pickle making. It gives average yield of 23.92 kg/tree and 263.12 q/ha.

### National-level research project

The research project entitled 'Parabolic concentrating solar cooker: application for cashew-nut shell oil along with household cooking', submitted by Prof. Atul Mohod, in the innovative research project competition organized by World Bank, New Delhi was ranked second at national level. The project was awarded U.S. \$ 20,000 and was qualified for 'Global Development Marketplace-2008'.

## Dr PANJABRAO DESHMUKH KRISHI VIDYAPEETH, AKOLA

### Farmers' rally

A week-duration farmers' rally under Hope Generation Programme was organized by DPDKV, Akola and Regional Harijan Sevak Sangh, Nagpur jointly from Shegaon (dist. Buldhana) to Sevagram (dist. Wardha) from 28 April 2007 to 4 May 2007. This programme was organized for creation of self-confidence amongst the farmers of Vidarbha and for transfer of 'No-cost and low-cost technologies' generated by this university to its ultimate users. The VC, Dr S.A. Nimbalkar; Director of Extension Education, Dr S.R. Khone; Dr R.B. Ulemale, CEEO, Shri S.P. Salame and President of regional Harijan Sevak Sangh, Nagpur, Dr Chauhan, participated in the programme and guided the farmers during the rally.

## INDIRA GANDHI AGRICULTURAL UNIVERSITY, RAIPUR

### Governor's visit

His Excellency, Shri E.S.L. Narsimhan, the Governor of Chhattisgarh and Chancellor, IGAU, Raipur, visited the university on 30 April 2007. He inaugurated the girls' hostel Kadambari, Department of Biotechnology, Horticulture farm and Nehru Library accompanied by the VC, Dr C.R. Hazra. He inspected various activities of the university, viz.

- Soil-testing kit, aquarium and sale-cum-demonstration counter;
- Seed section and display of IGKV varieties of different crops;
- Display of technology and exhibits of Agriculture, Veterinary, Dairy and Agricultural Engineering faculties;
- Recording-cum-audio video hall in ATIC;
- Library-cum-reading-cum-sales room of agricultural literature. Observing great variety in the literature published by the university, he suggested its translation in other languages to convey information to other regions as well.
- Showroom-cum-sale counter of small implements manufactured by the university staff.

### Release of new varieties

**Rice Karma Masuri (1130-80-1-52-1):** This rice strain is a derivative of Mahsuri x R-296-260, and gives average yield 48.10

q/ha, which is 18.72 per cent more than of Mahsuri. It matures 20 days earlier than Swarna, maturing in 125-130 days, has higher yield (38.5 kg/day) than of Swarna (35 kg/ha) and better grain and rice quality than Swarna. It possesses resistance to Gm biotypes 1, 4 and 5 and is tolerant to leaf blast and brown spot. Being early maturing, it is suitable for double cropping for the whole state.

**Wheat Ratan (CG 5016):** This variety was developed at Wheat Research Station, Bilaspur, from cross HUW 325 x DL 2307. It gave average yield 19 q/ha and is suitable for semi-irrigated areas of Chhattisgarh. It has better yield (21 per cent) than C 306 under rainfed conditions. Seeds are amber coloured and medium in size (38 g/1,000 seeds). Besides, it is resistant to brown and black rusts under rainfed conditions in Central Zone and is suitable for rainfed and semi-irrigated areas of state.

**Wheat Arpa (C.G. 5011):** It is a derivative of HD 2234 x HUW 309 and gives 36.6 per cent more grain 23.7 q/ha yield than Lok 1 (17.4 q/ha) under partially irrigated conditions (2-3 irrigations). It has dwarf plant height (80 cm), matures in 110-112 days and is suitable for rice-wheat irrigated late-sown conditions of the state. Seeds are amber coloured. It is resistant to brown and black rusts under field condition.

**Lathyrus Maha Tiwara (RLS 4595):** It is developed through pedigree method from a cross Ratan x JRL II. It gives 13.20 per cent more grain yield than Ratan and has low ODAP content (0.074 per cent). All the existing varieties of *Lathyrus* have purple-blue flower colour, which is similar to that of the landraces, but it has pink flowers, which could be easily identified from the landraces as well as earlier released varieties.

**Greengram Paury Mung (TM 2000-2):** It was evolved jointly by BARC, Trombay and IGKV, Raipur from a cross TARM 1 x J 781. Its average yield is 959 kg/ha, which is 30.32 per cent more than of Pragya and 22.62 per cent more than of Pusa 9072. It is resistant to two genes of powdery mildew up to pod-filling stage. Plants are determinate with synchronous podding and maturity. Seeds are medium bold and shining green. It is suitable for *utera* and semi-irrigated rice fallows of the state.

**Mustard Chhattisgarh Sarson (BBM 05-01):** It was developed at COA, Jagdalpur from a cross PCR 20 x RH 819. It gives 13.22 per cent more yield than Kranti, 22.95 per cent more than Vardan and 18.2 per cent more than Varuna; and it gives 7.68 to 19.46 per cent more oil yield. Its average yield is 1,179 kg/ha with oil yield 447.2 kg/ha. Seeds are medium bold, brown, having 37.48 per cent oil content. Plant height is 115 to 165 cm and maturity 105-128 days. It is suitable for fully or semi-irrigated rice fallows of Chhattisgarh. It is tolerant to major diseases like white rust, powdery mildew and *Alternaria* blight.

**Mango Chhattisgarh Nandiraj (IG Mango 1):** It is a clonal selection of local mango from Nayapara, Jagdalpur. It has attractive shape, appearance and pleasant aroma. Its yield is 280 kg/tree and average fruit size 200-250g with acid blend. It is very much comparable to Dashehri, has good keeping quality and is suitable for export (TSS 21.30 Brix and total sugar 17.87 per cent).

**Sweet potato Indira Nandini (IGSP 17):** It is derived through clonal selection of a polycross between Sree Nandini x open-pollinated varieties. It matures in 120 days, has medium maturity and yields 25.53 tonnes/ha, which is 33.52 per cent more than of the standard check Sri Vardhani. In all India Trials it was identified for release in state of Chhattisgarh.

**Licchi Ambika Licchi 01 (Selection 1):** It was developed at R.M.D. College of Agriculture and Research Station, Ambikapur through selection from local material from village Pratappur, district Surguja. It gave average fruit yield of 31.41 kg, which is 25.64 per cent more than of the standard varieties Sahi and Rose. It has less fruit cracking (6 per cent) compared with 28.62 percent of Sahi. It has desirable levels of sugar and TSS. It is tolerant to leaf minor, grey weevil, stink bug, leaf folder and bark-eating caterpillar.

## MAHATMA PHULE KRISHI VIDYAPEETH, RAHURI

### Overwhelming response of farmers for Phule seeds

At the onset of *kharif* season, the sale of Phule seeds of the Vidyapath received overwhelming response from the farmers, especially for onion seed of Phule Samarth and Baswant 780. The seeds of rice, *bajra*, redgram, greengram,



Farmers queuing for seed purchase



soybean, sunflower, groundnut, cotton and maize of popular varieties of the university were available for sale. The VC, Dr R.B. Deshmukh, was encouraged with the farmers' response.

### Students excel in all India competitive examinations

A large number of Vidyalyaya students achieved success at all-India competitive examinations. Out of 220 students passing the Senior and Junior Research Fellowship (SRF/JRF) examinations, 83 students were awarded scholarships.

Sixteen students of Dr Annasaheb Shinde College of Agricultural Engineering, Rahuri also excelled in the merit list of JRF at all-India level. In Agricultural Engineering subject, Shri Suhas Kadam stood first at the national level, whereas Shri Amol Nikam, Shri Ram Nigare and Shri Saurabh Chaudhary ranked first, second and third respectively in Water Science Technology subject.

### MAHARANA PRATAP UNIVERSITY OF AGRICULTURE AND TECHNOLOGY, UDAIPUR

#### Training on harvest and post-harvest technology of fish

Under the auspices of Golden Jubilee Celebration programme of Central Institute of Fisheries Technology, Cochin, a training programme on 'Harvest and post-harvest technology of fish' was held at College of Fisheries, Udaipur during 2-5 April 2007. Total 23 participants, including faculty members, State fisheries officials, NGOs and students attended the training. There were informative lectures followed by impressive practicals of various fish-processing procedures.

The training covered topics like fishing-craft materials used for inland fishing, fish handling, storage, canning, preservation and making value-added fish products. During practicals it was shown that not a single part of fish goes waste. Fish waste from the processing industries and fish market can be gainfully converted into fish silage, containing more than 35 per cent protein, which is a valuable by-product and can be used as an additive in animals and fish feeds.

#### Skill development training programme for women

Department of Textiles and Apparel Designing, College of Home Science, Udaipur organized two short-term (36 working days) skill-development training programmes on Cutting and tailoring, funded by Rajasthan Mission on Livelihoods and sponsored by Entrepreneurship and Management Development Institute, Jaipur. The first training began during 15 March 2007 to 25 April 2007. The trainees learnt basic seams, fasteners, plackets, hemming to sewing of baby frock, jhabla, shirt, knicker, kurta pajama, ladies suit, chudidar, blouse, lehnga-kurti etc. They were also taught different fabric-embellishment techniques such as embroidery, patch work, quilting, lace work, naka-taki, bandhej and block printing besides correct piku and saree fall on advanced sewing machines.

As per the objectives of livelihood scheme and importance of the programme, the trainees were exposed to entrepreneurship development, traits of entrepreneur, SHGs formation and management, motivation and leadership, development schemes and programmes for women, schemes and assistance from banks procedures and formalities, steps for setting up a small-scale venture, communication and negotiation skill, accounting and book-keeping, interaction with successful entrepreneur etc.

At the end of the training, a tool kit was also given to the trainees anxious to start small-scale enterprise. A booklet was also developed and given to all the participants for reference.

### MARATHWADA AGRICULTURAL UNIVERSITY, PARBHANI

#### Stem borer: new pest of sunflower in Marathwada

Recently sunflower cultivation in Marathwada region was threatened by a new pest of sunflower, identified, as stem-borer, *Nupserha* sp. near *Vexator* (Pascoe).

The newly hatched grub enters the stem above collar region and bores the internal pith to perpetuate. The affected stem breaks easily.

During grain formation there is lodging of infested plants, which



Head borer, damaging sunflower

results in 21 per cent loss. Pooled results of 2004-06 showed that quinalphos 0.05 per cent followed by chlorpyrifos 0.05 per cent and endosulfan 0.07 per cent were best in reducing the damage of stem borer and also in increasing the yield and ICBR.

#### farmers' rally

A Kharif farmers' rally was organized on the occasion of 35th Foundation Day of the university on 18 May 2007. Dr V.D. Patil, Assistant Director-General (OP), ICAR, New Delhi, inaugurated the function and Dr S.S.Kadam, VC, presided. The university scientists guided the farmers on production technologies of various *kharif* crops, followed by question-answer session.



Dr S.S. Kadam, addressing Kharif farmers' rally

### PUNJAB AGRICULTURAL UNIVERSITY, LUDHIANA

#### Release of new varieties of fruits, vegetables and flowers

Six new varieties of chrysanthemum, viz. Anmol, Royal Purple, Yellow Delight, Garden Beauty, Winter Queen and Autumn Joy; two of vegetables, viz. Punjab Nagina brinjal and Punjab 89 peas; and two of fruits, viz. Punjab Soft pear and Punjab Purple grapes, developed by PAU, were released for general cultivation in Punjab state.

Chrysanthemum in general has bright yellow anemone-type flower and is suitable for growing in pots. Royal Purple has purplish pink anemone-type flower, suitable for growing in pot culture. Yellow Delight is an early-flowering variety with bright yellow pompon-type flowers and is suitable as cut flower. Garden Beauty chrysanthemum has maroon, spoon-type flowers and is suitable as garden plant. Winter Queen has pink spoon-type flowers and is suitable for growing in garden. Autumn Joy is an early flowering, highly floriferous variety with pink decorative flowers. It is suitable for cultivation in garden.

Plants of brinjal Punjab Nagina are dwarf, semi-erect with dark and spineless leaves. Flowers are light violet with green calyx. Fruits are shining, purple-black, small, round and are borne in clusters. It is early and gives first picking in 54 days, with average yield 369.33 q/ha.

Plants of peas variety Punjab 89 are medium dwarf (92 cm) and vigorous, having more number of well-filled pods (28-30/plant). The pods borne in doubles are dark green, having 9-10 grains/pod. It takes 85-90 days for first picking. The shelled peas are very sweet and shelling outturn is high. Average green-pod yield is 150 q/ha.

The plants of pear Punjab Soft are upright, spreading and medium in vigour. Leaf colour is light green, fruit size is medium, ground colour is yellow-green and flesh is whitish with TSS 11.3 per cent and acidity 0.135 per cent. The mature fruits are very soft and very juicy. Fruits mature in the first week of July and yield 86-kg/ tree. The fruits are suitable for processing for nectar and squash. These can be stored for 4 weeks at 0-1°C and 90-95 per cent relative humidity.

Grapes Punjab Purple are rich in anthocyanins (a source of antioxidants) and are suitable for processing into juice, nectar and ready-to-serve beverage. It contains 60-65 per cent juice with total soluble solids 17-18 per cent and acidity 0.50 per cent. It has medium and loose bunches. The berry is seeded, medium in size and purple at maturity. It matures in the first week of June.

#### Release of new crop varieties

At a meeting of State Variety Approval Committee, various varieties of different crops were released for cultivation in Punjab. A semi-dwarf, stiff variety of rice (PAU 201) was released. It matures in 144 days after seeding and is resistant to most of the bacterial blight pathogens.

In *desi* cotton, PAU 626-H was released for cultivation (as it is early-maturing and high-yielding), based on genetic male-sterility. It vacates the field in 160 days for timely sowing of *rabi* crops and has better tolerance to *Fusarium* wilt and bacterial blight.

Varieties of pigeonpea (*arhar*), sunnhemp and *kharif* greengram were also released. PAU 881 *arhar* matures in 132 days, with profuse pod formation. Its average grain yield is 5-6 q/acre.

PAU 1691 and Narendra Sanai 1 varieties of sunnhemp are quick growing with erect growth habit. Their average seed yield is 4.8 and



3.9 q/ha respectively. *Kharif* greengram PAU 911 is fairly resistant to mungbean yellow mosaic virus, cercospora leaf-spot and bacterial leaf-spot. It matures in 75 days and gives average yield 4.9 q/acre.

### MoU on HIV and AIDS

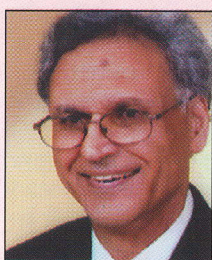
The university signed a Memorandum of Understanding (MoU) with Claflin University, Orangeburg, USA for a USAID-funded project, 'Culturally-sensitive HIV and AIDS reduction and intervention training project in India'. The budget estimate is Rs 5,03,800 initially for 2006-07, but is extendable for the next 3 years. The activities will be carried out through the active participation of National Service Scheme Organization and the extension services of PAU. A five-member working group from the USA under the guidance of Dr Omar Bagasra (Principal Investigator) visited PAU thrice and observed the on-going AIDS awareness activities carried out by the NSS volunteers in the adopted villages Talwandi Kalan, Swaddi and Talwandi Khurd through rallies, posters and skit play in village schools during the special camps.

### Reddy Award to engineer

Er. Bhupinder Singh of College of Agricultural Engineering, PAU, was honoured with Reddy Award by Indian Society of Agricultural Engineers, New Delhi for best post-graduate thesis in Agricultural Engineering submitted in 2004-05. His research work was on 'Integration of model for nitrate movement in soil aquifer with geographic information system'.

### Wide acclaim to VC's new book

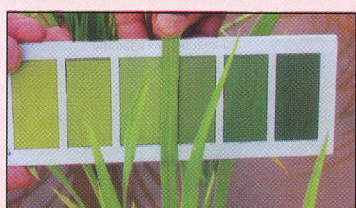
The VC, Dr M.S. Kang's latest book '*Agricultural and Environmental Sustainability Considerations for Future* received wide appreciation. Edited by Dr Kang, the book lays focus on strategies for agriculture for agricultural sustainability, keeping in view the economic, ecological and sociological issues. The 244 page illustrated book provides knowledge on eco-friendly ways of producing and enduring food supply. A special chapter in the book addresses issues on rice-wheat cropping system that has major implication for Punjab agriculture.



Dr M.S. Kang

### Leaf-colour chart

In a state-level meeting of Agricultural Extension specialists, a Leaf-colour chart was released by Dr B.S. Dhillon, Director of Research and Dr N.S. Malhi, Director of Extension Education. The chart was prepared by Department of Soil Science for determining nitrogen requirement during rice cultivation. Though it is developed on the lines of similar Leaf-colour chart by International Rice Research Institute, Manila, Philippines, it has been tailored to suit regional needs.



Leaf-colour chart

The leaf-colour-chart allows measurement of nitrogen demand of the crop simply by matching the leaf colour. Green colour is an estimate of chlorophyll content of leaves, which is related to nitrogen content and can help in determining the time of fertilizer nitrogen application to the crop.

It is a high-quality plastic strip (8" x 3") with six shades of green, ranging from light yellowish green (number 1) to dark green (number 6). Colour strips fabricated with veins resemble those of rice leaves and help in matching the colour. It is an ideal tool to optimize nitrogen use at reasonably high yield levels, irrespective of application of organic manures, crop residues and nitrogen carryover from the previous season. Its cost is Rs 27 per piece.

### Nanoscience facilities

Nano-structured material provides the building blocks for nanoscience and nanotechnology. An Electron Microscopy and Nanoscience Laboratory was established at PAU, Ludhiana. High-resolution imaging for exploring structural, molecular and nano realms is now possible at this EMN laboratory. It would promote the understanding of the cellular and molecular properties, mechanisms and interactions in relation to abiotic and biotic stress in crop plants.

### SHER-E-KASHMIR UNIVERSITY OF AGRICULTURAL

## SCIENCES & TECHNOLOGY, JAMMU

### 21st AICRPDA workshop

The 21st Biennial Workshop of AICRPDA was organized during 2-5 May 2007 at R.S. Pura campus by the SKUAST, Jammu. The salient recommendations and technical programme of the workshop are given below.

#### Recommendations

- Drawing of framework on Action Plan for drought management for AICRPDA centres: It includes capacity building of farmers in managing drought, development and preparation of contingency crop plans, watershed approach for improving water availability to minimize climatic risks, development of alternative land-use system with suitable annuals and perennials, participatory evaluation of varieties for drought tolerance, develop community-based food and water-security system, livestock management, promote need-based agro-advisories, particularly in regional languages and wider use of ICTs.
- Integration of crops-livestock-trees on-farm system approach, laying focus on documentation of traditional farming system in the respective domains of AICRPDA centres, improvement of traditional farming systems with low external inputs, use of food and nutritional security of small farmers and commercial farming system for medium and large farmers for higher total factor productivity and profitability.
- Focus on agro-forestry research in the use of trees for pulp-wood and biomass, bio-fuels, rainfed horticulture with integration of crops and fodder, wind-breaks, green-leaf manures etc., with quantification of data on soil fertility and yield along with economics.
- Improve soil fertility by on-farm biomass generation and incorporate site-specific, nutrient-management strategies, micronutrients in relation to productivity of rainfed and water-nutrient interactions in different cropping or farming systems.

## SRI VENKATES WARA VETERINARY UNIVERSITY, TIRUPATI

### National symposium on livestock-production system

A symposium on 'Recent trends in policy initiatives and technological interventions for rural prosperity in small-holder livestock production system' was jointly organized by SVVU and Indian Society for Animal Production and Management during 20 to 22 June 2007 at College of Veterinary Science, Tirupati. More than 250 delegates from all over the country representing all the states participated in the deliberations, prominent among them being Padmabhushan Prof. Rama Swamy, Director CARTMAN, Bangalore and Dr C. Devendra, Consulting Tropical Animal Production Specialist, Kuala Lumpur, Malaysia, besides Directors of seven national institutes in livestock production, as well as the VC of SVVU, Tirupati. The major recommendations are as follows:



Inaugural function of ISPAAM

- Livestock insurance may be implemented throughout the country at affordable subsidized premium.
- Innovative organization of small farmers into small-scale corporate units for evolving integrated farming, with focus on participatory planning management and marketing of the produce.
- Establishment of small, community-based, environment friendly, multipurpose, women-organized rural management system for effective land-livestock-human resource management, which may be named Jana Kalyana Kendras.
- To capitalize on the high demand for organic products, meat, eggs etc. may be promoted on a large scale as well as improvisation of existing organic standards of livestock production and establishment of low-cost certification agency, development of strong market for organic products. Protect the interests of farmers in the light of tariff and non-tariff barriers under WTO regime.
- For popularization of farmer-friendly and low-cost devices like complete feed-making machines for efficient utilization of crop residues.



- To popularize the propagation and utilization of *Azolla* as supplement in livestock feeding.
- Value addition to livestock products for higher income.
- Thorough study on the use of donkey as an alternative species to cattle and buffaloes for draft purpose.

## AWARDS AND RECOGNITION

### CHANDRA SHEKHAR AZAD UNIVERSITY OF AGRICULTURE AND TECHNOLOGY, KANPUR

#### Shiksha Ratna Puraskar

Professor (Dr) V.K. Suri, VC, was awarded Shiksha Ratna Puraskar for meritorious services, outstanding performance and remarkable role in the field of agriculture by India International Friendship Society, New Delhi on the occasion of Economic growth and national integration seminar held on 12 July, 2007 at New Delhi.



Dr V.K. Suri

#### Lal Bahadur Shastri Young Scientist Award

Dr Mohd Akram, Assistant Professor, Department of Plant Pathology, was awarded Lal Bahadur Shastri Young Scientist Award for Bienium 2005-06 in the field of Plant Protection for outstanding work on Cloning and sequencing of movement protein (NSm) gene of groundnut-bud necrosis virus, a Tospovirus, along with an ad-hoc research scheme on 'Establishment of sequence diversity of Tospoviruses in India' worth Rs 25.18 lakhs for 3 years (2007-10) by the ICAR, New Delhi on 16 July 2007. He was awarded 'Fast track young scientist scheme' by Department of Science and Technology, New Delhi, worth Rs 13.94 lakhs for 3 years (2006-2009).



Mohd. Akram

### Dr PANJABRAO DESHMUKH KRISHI VIDYAPEETH, AKOLA

#### INSA young scientist award to Dr Pawan Kulwal

Dr Pawan Kulwal, Assistant Professor of Agricultural Botany of the Post-Graduate Institute was selected for the prestigious award of young scientist medal (2007) of Indian National Science Academy, New Delhi for his work on Wheat quantitative trait loci (QTLs). The award carries a bronze medal, cash prize of Rs 25,000 and a certificate. Dr R.A. Mashelkar, President, INSA communicated the honour bestowed on Dr Kulwal, who is the first person from this university to be selected for this award. The award ceremony will be held at New Delhi during December 2007.

### MAHATMA PHULE KRISHI VIDYAPEETH, RAHURI

#### Vasantrya Naik Krishi Award-2007 to Dr K.D. Kokate

Dr K.D. Kokate, Director of Extension Education, was bestowed with Vasantrya Naik Krishi Award-2007 by Vasantrya Naik Krishi and Gramin Vikas Pratisthan, Mumbai at a grand function in Mumbai on 20 July 2007. The award carries a citation and cash prize of Rs 11,000. The award was conferred on him by Shri Jayantrao Patil, Minister of Finance, Maharashtra. He was also appointed Member of DIPA (Directorate of Information and Publications of Agriculture) Committee of ICAR, New Delhi.

## PUNJAB AGRICULTURAL UNIVERSITY, LUDHIANA

#### National award to student

Indian Society of Technical Education awarded National Award to Shri Rahul Laxmanrao, a student of PAU for best M. Tech. thesis on 'Development of low-cost polisher for turmeric rhizomes'. The award carries a cash prize of Rs 10,000 and citation. The Society also gave a certificate of achievement to his major advisor, Dr V.K. Sehgal, Co-ordinator of Research (Agricultural Engineering). Another student of Dr Sehgal, Ms Gopika Arora, received the award for Best Student Innovative Project at Masters level in Engineering-2006 by Indian Academy of Engineers. She worked on 'Effect of enzymatic pre-treatment on milling characteristics of basmati rice'.

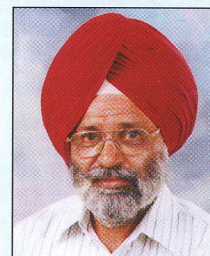
#### Honorary fellowship to Dr S.S. Chahal

Dr S.S. Chahal, Dean, Post-graduate Studies, was elected Honorary Fellow of Punjab Academy of Sciences for his significant contributions in basic and applied research in disease resistance, epidemiology and management of cereal diseases. The honour was conferred on him during the 10th Punjab Science Congress at Jalandhar. He was presented a silver medal and a citation. Dr Chahal's prime achievements include the development of a new and improved screening technique for identification of disease resistance in pearl millet. He also devised a new strategy and developed ergot-resistant pearl millet lines by gene pyramiding. The three downy mildew-resistant varieties of pearl millet developed by him have been recommended for general cultivation in India.

#### Om Prakash Bhasin award to Dr B. S. Dhillon

Dr B.S. Dhillon, Director of Research, has been selected for Om Prakash Bhasin Award for Science and Technology for 2006, in the field of agriculture and allied sciences.

The award carries a cash prize of Rs 1 lakh, a citation and a plaque. By winning this coveted award, he has joined the league of visionaries and scientists like Dr A.P.J. Abdul Kalam, Dr K. Kasturirangan, Dr M.S. Swaminathan, Dr Manju Sharma and Dr E. Sreedharan. Dr Dhillon's notable contributions to research include the development of new breeding methods, mating designs and a scheme to sample foundation plants efficiently for inbreeding. He developed methodology to identify the environment suitable for selection and improvement of germplasm for stress tolerance. He also developed 16 cultivars of maize, of which five were released at national level.



Dr B.S. Dhillon

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