



IAUA NEWS

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SPOT NEWS

Dr S. Nagarajan takes over as Director IARI

Dr Subrahmaniam Nagarajan was born on 14th November 1945. He is a distinguished wheat pathologist. He obtained his B.Sc. degree in Agriculture from Agriculture College, Coimbatore in 1966; M.Sc. from IARI in 1969 and Ph.D. from University of Delhi, in 1973-74. He became Wheat Pathologist at IARI in 1974; Head, IARI Regional Station, Shimla in 1980, ADG (Plant Protection), ICAR in 1988, and acting DDG (Crop Science) from March to November 1993. He was the Project Director (Wheat) at DWR, Karnal during November 1993 to April 2002, and become Director, IARI since 15 April 2002.



Dr S. Nagarajan

He was nominated as Alexander Humboldt Fellow and became Pre Doctoral Fellow at Wageningen, the Netherlands. He held the position of a Consultant at ICRISAT and CIMMYT, and functioned as Chairman to review the CIMMYT's Crop Protection Programme. He received the Rafi Ahmed Kidwai Award of the ICAR jointly, Jeersannadi Lecture Award of the IPS, Sharda Memorial Award, Dr M.O.P. Iyengar Memorial Lecture Award of Madras University and was conferred the Award of Distinction in recognition of his outstanding services to Plant Protection at the International Plant Protection Congress, Hague, the Netherlands in 1995. He was recently awarded the Shri Om Prakash Bhasin Award for Science and Technology for the year 2001. He is a Fellow of the National Academy of Agricultural Sciences, Delhi; Member, Editorial Advisory Committee for *Review of Plant Pathology*, CABI, and several other journals. He has served as a Member of the Board of Management of TNAU and RAU, has been a Advisory Member of the National Horticultural Research and Development Foundation; Task Force member of DBT, and a Member of Pesticide Registration Committee. He has written three books and published more than 110 research papers. He has visited about 30 countries and represented India at the UN, ADB and other fora.

Dr P.L. Gautam takes over as VC Pantvarsity

Dr P.L. Gautam, took over as Vice-Chancellor on 18 June 2002, after serving as National Director, NATP from April 2000 to April 2002, and Director, National Bureau of Plant Genetic Recourses from May 1997 to April 2000. Prior to this Dr Gautam served as Dean, College of Forestry and Research, and Director of Y.S. Parmar University of Agricultural and Forestry, Solan from December 1991 to June 2000. He started his career as Assistant Professor (JRO) from September 1974 and rose to different positions to become Associate Dean and Joint Director (Research and Extension) at Hill Campus Ranichauri, up to December 1991.



Dr P.L. Gautam

Dr Gautam had a brilliant academic career, specializing in plant breeding and genetics. He is a member of about 14 academies/societies and high-level committees and has visited about 15 countries, as a visiting/participating scientist and was Member of Indian delegation to FAO. He is a fellow of NAAS, ISGPB, NESI and a member of National Academy of Sciences, Allahabad. He is also a President of ISPGR. He received gold medals of Best Institutions Award for his efficient working. He has published 120 papers in journals of repute. He made major contributions in Protection of Plant Variety and Farmers' Rights Act, National Act on Conservation of Biological Diversity, Material Transfer Agreement and Registration of Plant Germplasm.

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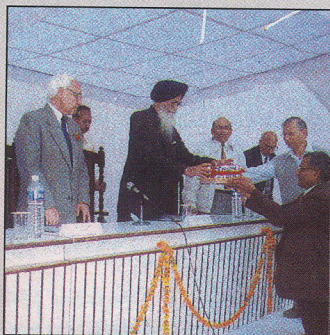
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NEW INITIATIVE

Govind Ballabh Pant University of Agriculture and Technology, Pantnagar

New Kit for Pregnancy Test in Cows

The pregnancy-diagnosis kit, prepared by the College of Veterinary Sciences of this university, was released by Shri Surjit Singh Barnala, the Governor of Uttaranchal. This kit will enable the farmers to check pregnancy in cows after 20 days of insemination with just 2-3 drops of milk of the cow.



Shri Surjit Singh Barnala, Governor of Uttaranchal, releasing the Pregnancy Diagnostic Kit

Sher-e-Kashmir University of Agricultural Sciences and Technology, Srinagar

This is the first-ever successful Reverse Transcriptase Polymerase Chain Reaction (RT-PCR) attempt in the veterinary and medical history of Jammu and Kashmir. The experiment was conducted on gene 9 of the field strain of bovine rotavirus (a major virological diarrhoeic agent). The amplified product of the gene (1.062 kb) is depicted in lane B.



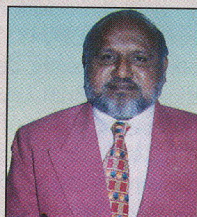
The in-vitro amplification of gene 9 coding for Vp7 protein of field strain of bovine rotavirus. Lane A: Molecular weight marker (500 bp ladder); Lane B: Amplified product of rotavirus-positive sample; Lane C: Rotavirus-negative sample

VCS OF NEW MEMBER UNIVERSITIES

Two universities, i.e. Allahabad Agricultural Institute (deemed university), U.P. and Maharashtra Animal & Fisheries Sciences University, Nagpur, became regular members of IAUA from 8 June 2002. A brief profile of the respective Vice-Chancellors is given below.

Dr Rajender B. Lal

Dr Rajender B. Lal took over as Vice-Chancellor of Allahabad Agricultural Institute (deemed university), U.P. since 15 March 2000. Before this, he rose to the position of its Director from the position of Professor and Head from 16 June 1992 to 15 March 2000. His specialization is in soil and environmental sciences.



Dr Rajender B. Lal

As the Post-Doctoral Fellow in environmental quality (1990-91) at Kansas State University, USA, he worked on degradation of atrazine under saturated and unsaturated flow. He did his Ph.D. in Soil Science from this university in 1990, with specialization in soil physical chemistry/fertility. Before that he did his Ph.D. in Agricultural Botany (Physiology in 1983), from Kanpur; M.Sc. Agronomy in 1978 and B.Sc. (Agriculture) in 1960 in first class from Allahabad University.

He guided 8 M.Sc. and Ph.D. students and has written a few papers for international and national programmes. Dr Lal was a fellow of Bioved Research Society (1995), Member of Gamma Sigma Delta (1988); USA 'STEP' award winner (1989) from Soil Science Society of America; 'Olsons' award (1989) from Kansas State University, USA; Fellow award from Indian Society of Agricultural Chemists; and Education Pioneer award

(2000) from KHET, AIACHE; he also was recognized with 'Jai Jawan Jai Kisan' 2001, SUCO.

Dr A.T. Shekhar

Prof. (Dr) A.T. Shekhar, Head, Department of Food Hygiene and Public Health, Microbiology, Pathology, Para & Radio-Isotope Division, Bombay Veterinary College Parel, Mumbai, has joined as the Vice-Chancellor of the Maharashtra Animal and Fishery Sciences University, Nagpur on 20 November 2000 for 3 years. He was born on 25 April 1949 at Kolhapur. He did his intermediate in science in 1971 from Shivaji University, Kolhapur, and B.V.Sc.&A.H. (1975) from Bombay Veterinary College with Food Hygiene and Public Health as the area of specialization.



Dr A.T. Shekhar

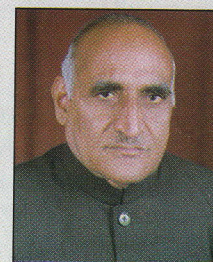
He is an active member of many committees of national and international organizations, e.g. APEDA, Bureau of Indian Standards, AFDC, Meat Industry Sectional Committee for Standardization of Microbial Safety in Meats, Bureau of Indian Standards, FAD 56, Slaughterhouse and Meat Industry Sectional Committee, Panel member of Education Committee of Veterinary Council of India, Expert member on Panel of Bureau of Indian Standards for Rapid Detection Method for Eradication of *Salmonella* spp. in milk and milk products, Sub-committee for Animal Husbandry for finalization of IX Five Year Plan, and Government of Equivalence Committee. He is a life member of Bombay Veterinary College Alumni Association and Indian Association of Meat Scientists and Technologists diseases (IAVMI).

Besides, he has authored a number of books, bulletins, compendia, and has published about 100 research papers.

DR A.S. FARODA GETS SECOND TERM

Dr A.S. Faroda, took over as Vice-Chancellor for the second term at Maharana Pratap University of Agriculture and Technology, Udaipur on 27 April 2002, after his first term from December 1999 to November 2001. He was Director of Central Arid Zone Research Institute, Jodhpur from September 1995 to November 1999. He worked from 1979 to 1995 at CCS Haryana Agricultural University, Hisar in different capacities such as Head, Department of Agronomy (April 1986 to March 1989), and Director of Extension from May 1992 to 1995. Dr Faroda is a fellow of Indian Society of Agronomy, and has been its President consecutively for two terms (1991-1994) and then for a third term from 1992 to 2000. He was also the Chairman of Audit Journal Research Association of India from 1996 to 1999 and the President of Haryana Agronomists Association from 1985-94. He has visited several countries and published 2,000 research papers including bulletins and books.

Dr Faroda has brilliant academic career, receiving Gold Medal in M.Sc. (Agric.) and Honour's certificates in Ph.D.



Dr A.S. Faroda

FOCUS ON UNIVERSITIES – ACHIEVEMENTS AND EVENTS

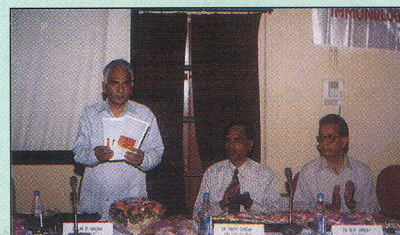
DEEMED UNIVERSITIES

Indian Veterinary Research Institute, Izatnagar

Workshop on 'Immunological Control of Tropical Fasciolosis in Animals'

A workshop on 'Immunological Control of Tropical Fasciolosis in Animals' was organized under the auspices of the National Agricultural Technology Project (NATP) at the Indian Veterinary Research Institute, Izatnagar on 20 March 2002.

'The workshop is a step forward in the process of developing a vaccine to control the onslaught of endemic Fasciolosis, a global problem', said Dr Mahendra Pal Yadav, Director, IVRI.



Dr M.P. Yadav, releasing compendium of the course

UNIVERSITIES

A Profile

Mahatma Phule Krishi Vidyapeeth, Rahuri

Mahatma Phule Krishi Vidyapeeth has been established with its headquarters at Rahuri by an Act of Maharashtra Legislature in 1969, and has been named after the great social reformer, Mahatma Jyotiba Phule, to commemorate his memory, who was the first to champion the cause of farmers and underprivileged people living in most miserable conditions.

The university has three Agricultural Colleges, located at Pune, Dhule and Kolhapur; an Agricultural Engineering College and Post-graduate Institute, located at Rahuri; and a Horticulture College at Pune.

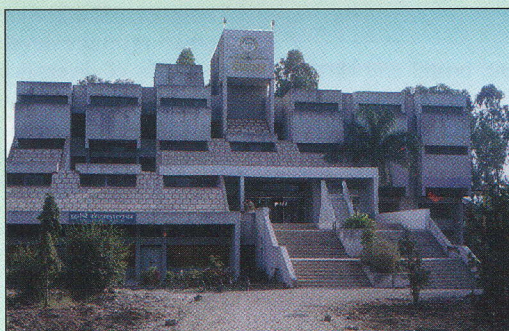
Efforts have been made to improve course curricula of UG and PG programmes and start a new PG degree course in Agricultural Business Management, besides Ph.D. programmes in 15 disciplines. A high-tech project at Pune, and the radio-isotope, bio-control, post-harvest technology and bio-technology laboratories at Rahuri have been established.



Instrumentation Cell Laboratory at PGI

Total 110 varieties of crops, fruits and vegetables have been developed in recent years. These are 'Shradha' and 'Saburi' in pearl millet, 'Yashoda' and 'Maui' in sorghum, 'Trimbak' in wheat, 'Vishal', 'Virat' and 'Vijay' in chickpea, 'Phule Vaibhav' in green gram, 'Varun' in rajma, 'Phule-492' and 'Phule-388' in hybrid cotton, 'Koyama' and 'Phule Vyas' in groundnut and 'Co-86032' ('Nira') in sugarcane. In horticulture, new cultivars 'Mridula' in pomegranate; 'Sai Sarabati' in lime and 'Sai Sugandha' in mango have been developed.

'Triveni' cow, a triple cross of Holstein Friesian, Gir and New Jersey, developed by this university, yields 3,000 litres per lactation with 4% fat. The university has supplied about 100 cows to the farmers for testing their performance at farmers' level.



University Library, MPKV, Rahuri

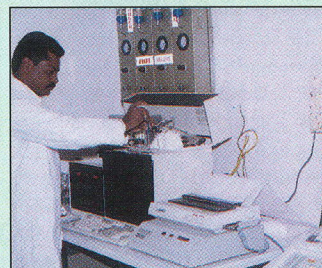
Water Management

This university is a pioneer in developing pressurized irrigation techniques for efficient utilization of limited water resources for crosses like in pomegranate, grapes, banana, cotton, sugarcane, tomato, chilli, onion, ladies-finger, cabbage, bittergourd, cucurbits, groundnut and gram. This has resulted in water saving, its efficient utilization and quality produce. Yield-targeting equations based on soil status, climate and balanced utilization of micronutrients for expected yields have

been developed for the first time for the different crops.

Integrated Nutrient Management

The experiments on biofertilizers, in addition to chemical fertilizers and growth-regulators, for higher production are being conducted with major emphasis on minimizing the use of chemical fertilizers and



PG students working in Pesticide Residues Research Laboratory



Bio-control Laboratory, Rahuri

insecticides. The research on development of more efficient strains of Rhizobium, Azotospirillum, Azolla, blue-green algae, enriched vermin-compost and its dissemination to farmers have already gained momentum. For efficient and effective utilization of costly

phosphatic fertilizers, phosphate-solubilizing bacteria are made available to the farmers. The compost technology by using rock phosphate and farm-waste stubbles is developed for better utilization of phosphatic fertilizers.

Integrated Pest Management

Integrated pest-management technologies have been developed for control of diseases, insects and pests in different crops. Various bioagents like *Trichoderma*, *Paecilomyces*, *Trichogramma*, *Chrysoperla*, *Cryptolaemus*, *Copidosoma*, *Verticillium laecani*,

Nucleopolyhedrovirus (Heliokil, Magic and Spinocide) are multiplied on a large scale.

Transfer of New Technology and Information Dissemination

Realizing the importance of proper dissemination of new technology to farmers, the university has established an Agricultural Technology Information Centre (ATIC) and a Communication Centre at Rahuri, Regional Extension Centres (RECs) and all constituent colleges, utilization of radio, TV, print media and telephonic services to reach the farmers. Similarly, Agricultural Information Centres at places of worship such as Alandi, Jyotiba Temple, Kolhapur, Pandharpur, Shirdi and Kshetre Prakashes have helped in dissemination of agricultural technology to remote areas of Maharashtra. Thousands of farmers are visiting these centres and getting the benefit. Due attention is given in tribal areas for demonstration and krishi melas for transformation of villages through the adoption of new technology.

International Collaborations

As a result of good academic environment, hostel and library facilities, the enrolment of foreign students is increasing especially from Syria, Ethiopia, Iran and Nepal. The university has started various international collaborative research projects, viz. an Indo-Israel Joint Research, Bar Ilan University, Israel; McKnight Foundation, Pullman, USA; Geisenheim Research Institute, Germany; and Indo-Swiss Collaborative Project with NCL; UNDP/FAO assistance; ICRISAT, Hyderabad.

Chaudhary Charan Singh Haryana Agricultural University, Hisar

New Varieties Released

The university has released following varieties for the state. Two hybrids HHB 117 and HSFH 848 of pearl millet and sunflower, respectively and a variety HT 10 of round gourd (*tinda*) have been released.

The released wheat variety, WH 711, has bold and lustrous grains with 11.7% higher protein content in comparison with the existing popular varieties of north India. This variety can fetch better price in the international market. Likewise, durum wheat variety WH-912 has excelled in grain quality and has shown resistance to Karnal bunt disease. It is best suited for preparation of processed food and has export value.

Barley BH 393 gives 10-15% higher yield compared with several existing popular varieties, and has been found best for malt industry.

Chickpea Kabuligram Haryana Kabuli-1 has been found superior to its earlier released varieties Gora Hissari and L-550. It possesses resistance to fusarium wilt and gives stable yields.

Cotton H-1117

Cotton H 1117 has been found suitable for early and normal sowing besides being responsive to fertilizers and resistant to lodging and diseases.

Desi cotton hybrid HHH 223 gives 13% higher yield than HHH 81 and 47% more than HS 6. It is tolerant to major pests and diseases, and has been found good by textile mills and ginners.



Chickpea Haryana Kabuli-1



Cotton H-1117

New Initiatives

1. Special coaching to students for various competitive examinations, SRF, JRF and Fellowships. 2. Staff quarters at Central Campus, Rahuri and at different colleges and agricultural schools, International Students' Hostel, and auditorium at Rahuri. 3. Inland fishery has been started to conduct research on suitable species of fishers and distribution of fish seed to farmers. 4. Large-scale production and distribution of different bio-agents, bio-fertilizers and bio-pesticides to the farmers. 5. Large-scale production of seed, grafts and saplings, and their distribution to farmers. 6. Large-scale IPM demonstrations involving whole village in programme on rainfed cotton, irrigated cotton, rainfed chickpea and grape. Similarly, large-scale demonstrations on university-evolved technology on farmers' fields are being carried out.

Perspective Plan 2020

The emphasis will be laid on vocational courses and specialized human-resource development programmes to meet specific demands of diversification. The academic programme will also be focused to meet the requirement of entrepreneurs, managers, marketing specialists, progressive farmers and consultants for food processing, export-quality production and marketing, high-tech agriculture, organic farming and agro-based industries.

Pearl millet HC 20 is high yielding and is resistant to diseases and pests. It is suitable for cultivation in both irrigated and rainfed areas.

Ergonomics of Farm Women's Drudgery in Cotton Picking

Ergonomics evaluation of 60 rural women engaged in cotton picking revealed their mean age 29.9 years, and body weight and height 40 kg and 154.5 cm respectively. More than half of the respondents (55%), were mesomorphs, having high average physical fitness (81.7.1%). Their aerobic capacity was found to be 1.761/min.

Rural woman collected 20.24 kg cotton per day during 4-5 cycles of cotton picking. A woman on an average travelled 5-7 km in 5.45 hr of total activity. Their average heart rate was measured 87.1 bpm, which increased to 102.1 bpm during cotton picking. Total cardiac work calculated was 5,783 beats for complete activity. Physiological work-load of the women was graded very heavy to moderately heavy during cotton-picking and return journey. Women perceived heavy to moderately heavy exertion after the activity.

Grip strength increased 9.6% in the first cycle of the activity, which decreased by 14.3% at the end of the activity, for an average period of 6 hrs. Bending and standing postures were adopted 48 times during the activity. More deviation was observed in lower back (12.5°) than in upper back (4.5°). Cotton pickers reported very severe pain in palms, fingers and mid-back.

C.S. Azad University of Agriculture and Technology, Kanpur

University Awarded First Prize in Krishi Expo 2002, at New Delhi

Among the various stalls installed by the agricultural universities of the country, the stall of this university fetched the first prize in Krishi Expo 2002 held at New Delhi, during Feb 27 to March

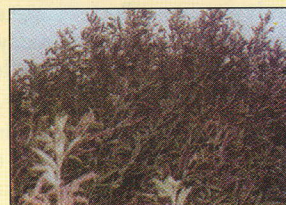
5, 2002. Hon'ble Shri A.P. Singh, Additional Chief Secretary and Agricultural Production Commissioner, UP, inaugurated the exhibition (UP Pavillion). Dr Naseem Zaidi Secretary Agriculture, UP, Dr Mahendra Singh, Technical Coordinator, DASP, were also present on the occasion. Miss Rita Chaudhary, Joint Secretary, Agriculture, Govt of India visited the university stall and appreciated the activities.

Bumper Arhar (Pigeonpea) Crop in Hamirpur

A bumper crop of arhar (*Cajanus cajan*) was harvested in Hamirpur district from Azad and Narendra-1, the high-yielding and wilt-resistant varieties. These gave miraculous yields of 26.43 and 27.72 q/ha and 19.48 and 20.30 q/ha, respectively with one irrigation, though the yield under local check was only 7.34 q/ha.



Arhar var. Narendra-1



Arhar var. Azad

New Varieties of Vegetables and Spices Released

The State Variety Release Committee for Horticultural Crops at a meeting held under the chairmanship of the Director (Horticulture), Government of Uttar Pradesh, Lucknow released 14 varieties belonging to 12 horticultural crops on 8 November 2001.

Okra: Azad Bhindi 1, resistant to yellow-vein mosaic virus, is fairly early fruiting, bears green and thin fruits, and is tall in stature.

Tomato: Azad T 5, indeterminate in growth habit, produces red, round, bold fruits, with better shelf-life. It has 5-6 fruits/cluster, yielding on an average 30-40 fruits/plant with a potential of 500 q/ha yield. It can withstand moderately high temperature. Another variety, Azad T 6, determinate and compact in growth habit, produces red, round, smooth, uniform and medium-size fruits. **Chilli:** Azad Mirch 2, a stuffing-purpose variety, has the distinction of being the first one released by the state for this purpose. Another released variety, Azad Mirch 1, is characterized by erect bearing of fruits, borne in clusters of 10-12. Its fruits are medium long, uniformly green which, however, turn red on ripening. It gives two flushes and is high yielding.

Pea: Azad P 5, is resistant to powdery mildew. It has medium tall, well-branched plants, bearing 28-32 pods/plant. It is suitable for extended bearing till the end of March, when normally pea pods are not available in the market.

Rajmah: Azad Rajmah 1, is a vegetable-purpose variety with attractive, smooth, stringless and fleshy edible pods. It has field tolerance to Fusarium wilt and leaf-curl mosaic virus, and is ideal for northern region, yielding 75-80 q/ha green edible pods.

Long Gourd: Azad Sankar 1, with medium long, green, attractive, cylindrical fruits, has white flesh and good taste. It gives high fruit number/plant and is amenable to packaging for long-distance marketing.

Smooth Gourd: Azad Torai 1, is capable of catching early market with high yield potential, and is resistant to powdery and downy mildews.

Pumpkin: Azad Pumpkin 1, a green-fruited variety of medium size, spherical fruits with pale-yellow flesh, is capable of yielding 500 q/ha green fruits.

Fenugreek: Azad Methi 1, is a high-yielding spices variety, with

vigorous plant canopy, capable of giving a seed yield of 15 q/ha. **Caravan:** Azad Ajwain 1, with erect growth habit, having short internodes, is another high-yielding variety with 10-12 q/ha seed yield.

Turmeric: Azad Haldi 1, is rich in yellow colouring matter (curcumin), with yield of 40 q/ha, and shows resistance to tephria leaf-spot.

Colocasia: Azad Arvi 1, is resistant to leaf blight, with attractive, nearly round corms, having good culinary properties.

Dr Panjabrao Deshmukh Krishi Vidyapeeth, Akola

Research Recommendations

Crop Improvement

The university has released sesame AKT 101 for summer in Vidarbha region.

Agricultural Technology

1. In rainfed areas, 3-tier, soybean-based intercropping of soybean + sorghum + pigeonpea in 6:2:1 or 9:2:1 ratio is recommended to meet the food, feed and pulse-grain requirements.
2. The seed crop of sugarcane should be fertilized with 350 kg N, 150 kg P_2O_5 and 150 kg K_2O in six splits to get good-quality sets.
3. Sowing of blackgram or greengram as intercrops in 1:1 proportion in early and dwarf cotton variety AKH 081 with 90 cm x 30 cm spacing has been recommended to get higher monetary returns.
4. For high seed-cotton yield in drip irrigation and mechanical cultivation of cotton, a spacing of 96 cm x 50 cm for PKV Hy 4 and a of 96 cm x 75 cm for PKV Hy 2 and NHH 44 has been recommended.



Soybean + sorghum + Pigeonpea intercropping 6:2:1

Plant Protection

Neem-seed extract (5%) is recommended for the control of bacterial blight of cotton. This is eco-friendly, economical and more effective than the recommendation of streptomycin 100 ppm + 0.25 % copper oxychloride.



High seed cotton under drip irrigation and mechanical cultivation

Horticulture

For obtaining maximum fruit yield of superior-quality Nagpur mandarin, apply 1200 g N+400 g P_2O_5 +400 g K_2O /tree/year.

Gujarat Agricultural University, Sardar Krushinagar

New Varieties Developed

1. Cotton hybrid G Hy Cot 10 in irrigated areas and herbaceous cotton G Cot 21 and G Cot 23 in rainfed areas have spread fast and contributed to increase in production of cotton even in worst drought-hit years.
2. Castor hybrid GCH 4 has taken the lion's share in seed production and distribution in Gujarat, Rajasthan and Maharashtra, and is now extending to Andhra Pradesh. The university has recently released GCH 5 and GCH 6 to combat wilt and root-rot and at the same time giving higher productivity.

3. GG 2 groundnut for its high stability with greater plasticity to the changing environments has been a most dominating variety for *kharif* as well as for summer cultivation. GG 20, released recently, is excellent for value-added products and can be used for export as an HPS type.
4. Rice GR 7, as transplanted variety has been released and recommended for middle and south Gujarat zone. Dandi, a salt-tolerant rice, has been recommended for salt-affected south Gujarat. There is good response from the farmers for adoption of these varieties. Gurjari variety is grown on a large scale.
5. The variety Gujarat Sugarcane 1 is high-yielding, gives better sugar recovery and is moderately resistant to wilt and red-rot diseases. There is widespread adoption of this variety among the sugarcane growers. In wheat, Gujarat Wheat 273, as timely sown, irrigated variety, is becoming popular among the growers. Gujarat Cumin-3 variety, resistant to wilt, is also adopted by farmers.
6. In mango, Sonapari, which is an improvement over Alphonso, released by GAU, is receiving good response from growers.
7. The area under aonla variety Gujarat Aonla 1 is increasing fast.

G.B. Pant University of Agriculture and Technology, Pantnagar

Pantvarsity Students Proved their Mettle in GATE 2002

The students of Pantvarsity have proved their mettle, with dazzling performance at GATE 2002. Ninety-two students have qualified for the examination, out of which 70 have secured more than 90% marks, and 14 students have 80 and 90%. In Production Engineering, Mr Manish Chandra obtained first rank with 99.95% and in Civil Engineering Mr Sumit Agarwal obtained third rank with 99.96%.

Developed Immuraksha – a herbal immuno-modulator

The scientists of the College of Veterinary Sciences have developed a new immuno-modulator of herbal origin, Immuraksha. Its effectiveness has been tested in mice, chicks and calves, and it has been found to enhance immunity by 30-40%, as measured by ELISA, B- and T-cell blastogenesis assay and DTH reaction. This herbal preparation showed increased phagocytic activity of macrophages in animals. Immuraksha thus will be able to play a major role in prevention and control of diseases in animals, and will reduce the cost on heavy antibiotic therapy.

Himachal Pradesh Krishi Vishvavidyalaya, Palampur

C. M. Inaugurated Krishi Vigyan Kendra at Una

The Himachal Pradesh Chief Minister, Prof. Prem Kumar Dhumal, inaugurated the laboratory-cum-office building of Krishi Vigyan Kendra, Rampur (Una) of CSK Himachal Pradesh Krishi Vishvavidyalaya, Palampur on 20 March 2002.



H.P. Chief Minister Prof. Prem Kumar Dhumal inaugurates Lab cum Office building of KVK, Rampura, Una

A Kisan Mela was also organized, which was attended by 3,000 farmers, comprising mostly women-farmers.

Kerala Agricultural University, Thrissur

Embryo Transfer in Malabari Goats

Birth of kids through embryo-transfer technology in goats was reported for the first time in Kerala in the ICAR Network Project on Embryo Transfer, Department of Animal Reproduction, College of Veterinary and Animal Sciences, Kerala Agricultural University, Mannuthy. The embryos were collected surgically from the uterus of superovulated Malabari goats (donor) on day 6 of the pregnancy and two good-quality embryos were deposited in the uterus of a recipient goat.

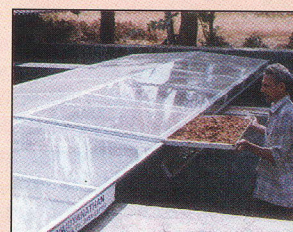


Kids born by embryo transfer along with the mother goat

Premature regression of corpus luteum is a major problem affecting embryo yield on uterine collection of embryos in Malabari goats. Owing to this problem, embryos suitable for freezing could not be collected from 50% of superovulated Malabari goats. These embryos escape from uterus and get degenerated due to deficiency of progesterone secreted by corpus luteum. This particular donor goat also showed premature regression of corpus luteum, but good-quality embryos could be collected from this animal successfully under progesterone support. This is the first report of this nature in India.

Solar Drier System Developed

A solar drier system for drying organic wastes including seafood wastes like prawn waste, kitchen waste, slaughter-house and hatchery wastes has been developed under the National Agricultural Technology Project (NATP) at the Centre for Pig Production and Research, Kerala Agricultural University, Thrissur. The capacity of the system is 150 kg/day. The system helps dry various organic wastes, for converting them to valuable feed, especially pig-feed. The speedy drying prevents the decomposition of various food wastes, thereby enabling their storage and later use as animal feed.



Solar drier developed at KAU

Marathwada Agricultural University, Parbhani

Post-graduate Programme in Agricultural Biotechnology

The Department of Biotechnology, GOI, approved the M.Sc. programme in Agricultural Biotechnology at the institute for the period 2001-02. Eight students have been admitted. From the next year onwards the students will be enrolled through All-India competition.

Export of Gerbera to Holland

The university has a well-developed Tissue Culture Laboratory for micropropagation of plant species. It has introduced 2 varieties of Gerbera, Kozak and Venus, which have been multiplied and several thousand plantlets have been produced. Recently 3,000 plantlets have been dispatched to Holland.

Mahatma Phule Krishi Vidyapeeth, Rahuri

Agricultural Technology Information Centre

The newly constructed building of ATIC is located near the entrance gate of this university at Rahuri. It is a single-window service for delivery, dissemination and its supporting system of various innovative and farm-worth technologies, evolved at the university and its affiliated organizations.



Agricultural Technology Information Centre, Rahuri

Recently a telephonic Helpline service has also been started by the university for providing guidance to farmers on telephone.

Hi-Tech Floriculture Project

The Hi-Tech Floriculture Project established at Agricultural Centre, Pune is the first of its kind and a model of demonstration of greenhouse technology. A polyhouse of 1 ha, worth Rs. 3 crores has been constructed, and crop cultivation technology for roses, gerbera, carnation and capsicum is being developed. This unit is equipped with facilities of pre-cooling and cold storage along with refrigerated van for transfer of produce to the market. The emphasis is laid on the harvest as well as post-harvest handling and marketing of flowers and vegetables for getting higher returns to producers.



Maharashtra Governor Dr P.C. Alexander visiting Hi-tech floriculture project, Pune

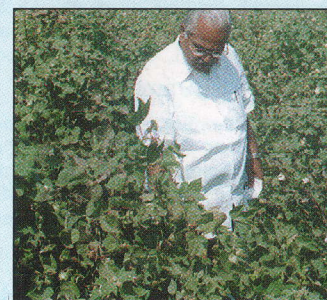
Establishment of Biotechnology Centre

Biotechnology with its vast potential and challenges is important for agricultural development. This university has developed biotechnological competence in plant-tissue culture, molecular biology, biocontrol and biofertilizers. The recently established Biotechnology Centre at Rahuri will help in carrying out genetic

analysis of different species, solving problems beyond the scope of conventional breeding like interspecific and intergeneric crosses, and the introgression of desirable genes as well as genetic manipulation of plants for resistance to biotic and abiotic stresses. The work has already been initiated on characterization of crop varieties, hybrids and parents, as well as microorganisms released by this university by DNA fingerprinting, map-based cloning of resistant genes, marker-assisted selection and development of transgenics in chickpea, pigeonpea and cotton.

IPM on Unirrigated Cotton in Tribal Areas

Excessive use of pesticides in cotton ecosystem has led to many problems like elimination of natural enemies and development of resistance to commonly used pesticides, resulting in failure of crop-protection technology. Therefore the effective module that uses minimum amount of insecticide along with other techniques was put up for test on farmers' fields. During 2001-02 season, a



Visit of Dr S.N. Puri, Vice-Chancellor to IPM in Rainfed Cotton at village Budki

village Budki in Dhule district of Maharashtra was selected for large-scale technology validation of IPM module on 63 ha, including more than 61 farm families. The village is 100% Adivasi with their own language, and represents an identical cotton-growing situation. The IPM module consisted of timely sowing (12-15 June), selection of hybrid (NHH 44), insecticide-treated seeds (imidacloprid 10 g/kg seed), border row of maize and cowpea every 10 rows of cotton, and a row of *Setaria* sp. Other IPM components imposed were pheromone traps @ 5/ha on day 45, release of *Trichogramma* @ 1.5 lakhs/ha on days 50 and 60; NSE 5% spraying at 70, 80 and 90 days and HaNPV spray @ 250 LE/ha on day 110. Spectacular success was achieved as the IPM plants produced average seed-cotton yield of 1,950 kg/ha compared with 1,025 kg/ha in non-IPM plots. With the expenditure of Rs. 1,800-2,000/ha on pest management, farmers have additional income of Rs. 14,000-15,000/ha.

CONVOCATION NEWS

Maharana Pratap University of Agriculture and Technology, Udaipur

First Convocation of MPUAT, Udaipur

The first convocation of the newly created university in Rajasthan state was held on 16 March 2002. His Excellency Justice Shri Anshuman Singh, Governor of Rajasthan and Chancellor of the University, conferred degrees to 203 graduates, 174 post-graduates and 39 Ph.D. students of the university. He also presented Gold Medals to 40 students.



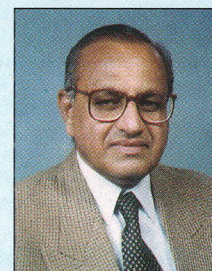
His Excellency Justice Shri Anshuman Singh, Governor of Rajasthan, at the first convocation

AWARDS AND HONOURS

Acharya N.G. Ranga Agricultural University, Hyderabad

Padma Shri Award to Dr I.V. Subba Rao

Dr I.V. Subba Rao, Vice-Chancellor, Acharya N.G. Ranga Agricultural University (ANGRAU), has been awarded the prestigious national award Padma Shri for his outstanding contribution in Agriculture. Dr Subba Rao received the award from the President of India, Dr K.R. Narayanan on 27 March 2002.



Dr I.V. Subba Rao

Dr Rao has also received several awards in recognition of his outstanding contribution by various organizations.

- Rotary International Man of the year 1985, Best Service Award.
- Conferred the title 'Rythu Bandhave' by NGOs and farmers.
- 'Vijaya Shree Award', 1977, by Indian International Friendship Society.
- 'Indian 2000 Millennium Award', 1999 by International Association of Educators for World Peace (IAEWP), affiliated to United Nations'

ECOSOC, UNPP, UNCED, UNICEF and Indian Institute of Ecology and Environment.

- 'Karshaka Ratna', by Satya Bharathi, a social and voluntary organization.
- 'Dr Nannapaneni Narasimha Rao Memorial Award (first)'.

Dr Panjabrao Deshmukh Krishi Vidyapeeth, Akola

Shri Hari Krishna Shastri Memorial Award to Dr K.B. Wanjari

The Indian Agricultural Research Institute (IARI), New Delhi, felicitated Dr K.B. Wanjari, Senior Research Scientist (Pulses) at Dr Panjabrao Deshmukh Krishi Vidyapeeth, Akola, for his outstanding research contributions with the award of Shri Hari Krishna Shastri Memorial Award for the year 2001, at its convocation held on 8 February 2002.

Dr L.D. Meshram Honoured

All-India Co-ordinated Cotton Improvement Project recently held the workshop from 22 to 24 March 2002 at CICR, Nagpur. In this workshop Dr L.D. Meshram, Senior Research Scientist (Cotton) was honoured with Dr A.B. Joshi Award for the year 1999-2000 for his extra-ordinary work in cotton improvement. The award comprises a Gold Medal, Rs. 10,000 and a scroll of honour.

G.B. Pant University of Agriculture and Technology, Pantnagar

- Dr Y.P.S. Rathi, Professor and Head, Department of Plant Pathology, was elected Fellow of BIOVED Society on 16 February 2002 for his outstanding contribution to Plant Pathology.

Visit Abroad: Dr R.S. Chauhan, National Fellow, was invited to deliver a lecture on 'Herbal immunomodulation, an alternative to antibiotics in 21st century', at the Universities of Wageningen and Utrecht, Netherlands. Dr Chauhan has also been nominated as the representative of Wageningen University in India. The Indian students seeking admission/fellowship in the University of Wageningen may send their application through Dr Chauhan and also get information from him.

Pantnagar Students Outshine at COMET: The papers presented by Ms Roma Gupta and Mr Shobhit Sinha, both third year Mechanical Engineering students of the College of Technology, bagged the first and third prizes respectively in the All-India Technical Paper Contest at the Conference of Mechanical Engineering and Technology (COMET), held at ITB/HU on 2-3 February 2002. The papers were on Supply Chain Management and Vapour Compression Absorption Cycle.

Indian Agricultural Research Institute, New Delhi

Dr S.K. Mishra, Senior Scientist, Division of Genetics, Indian Agricultural Research Institute, New Delhi, has been awarded the 'Dr B.P. Pal Memorial Award, 2001' for his outstanding contributions in the field of Genetics and Plant Breeding. The award was presented on the occasion of the Fortieth Convocation of IARI, New Delhi held on 8 February 2002.

Recently Dr Mishra has been awarded also the Fellowship of Bioved Research Society, Allahabad for his outstanding contributions in Genetics and Plant Breeding.



Dr S.K. Mishra

Kerala Agricultural University, Thrissur

Malcom S. Adiseshiah Award

Dr K. Vijaykumar, Assistant Professor, Department of Preventive Medicine, College of Veterinary and Animal Sciences, Kerala Agricultural University has secured the Malcom S. Adiseshiah award instituted by Tamil Nadu Veterinary and Animal Sciences University. He received the award for his work on the diagnosis and prophylaxis of ovine toxoplasmosis.

Marathwada Agricultural University, Parbhani

ASPEE Foundation Scholarship

Shri Satish Deshpande, Ph.D. student of the Department of Agricultural Botany, has bagged the Senior Research Fellowship, and Miss Yogita Deshmukh and Miss Rupali Choudhary, M.Sc. students of Agricultural Biotechnology, secured the Junior Research Fellowships of ASPEE Foundation through an all-India competition.

Dr K.P. Gore, Head, Department of Agricultural Engineering, MAU, Parbhani was felicitated with a special award for significant contributions in education and research in Soil and Water Management at the Annual Conference of Association of Agricultural Engineering, New Delhi, held during 26-30 January 2002 at IIT, Kharagpur.

SIGNIFICANT EVENTS

G.B. Pant University of Agriculture and Technology, Pantnagar

Pantvarsity Honoured by ICAR

The Indian Council of Agricultural Research, New Delhi, has honoured Pantvarsity with a plaque of honour for its excellent academic standard. This year 45 students of the university qualified the ICAR Junior Research Fellowship examination. Besides, a good number of Pantvarsity students qualified GATE and CSIR scholarship examinations too.

Kerala Agricultural University, Thrissur

KAU Emerges as an Overall Champion at AGRUNIFEST 2001

The Kerala Agricultural University (KAU), Thrissur, which hosted the third Inter-State Agricultural University Youth Festival, has won the rolling trophy for the overall championship, securing 66 points. Assam Agricultural University (AUA) and Chaudhary Charan Singh Haryana Agricultural University (CSSHAU), emerged the second and third with 63 and 45 points respectively.

Marathwada Agricultural University, Parbhani

Human Values in Higher Education

Under the study programme of MAU lecture series on 'Human values in higher education', a lecture by Shri Ramdas Dange, former Principal, Mahila Mahavidyalaya, Parbhani, on 'Religion and science' was delivered on 2 January 2002, and a lecture on 'Globalization and human values' was delivered by the eminent thinker Shri Kishanrao Deshmukh on 28 January 2002 at Agriculture College auditorium, Parbhani. Similarly, Shri Madhav Ajegaonkar, Shri Gangaprasad Agrawal and Shri Balasaheb Bhardre delivered lectures on 1, 13 and 25 February 2002 respectively on themes 'Values in Dnyaneshwari', 'Values in agricultural research' and 'Gram-swarajya'.

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To,

From:

Executive Secretary

Indian Agricultural Universities Association

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