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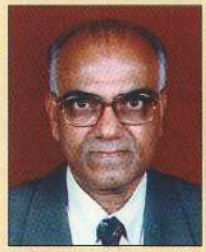
SPOT NEWS

Dr M. Mahadevappa honoured with Padma Shri



Dr M. Mahadevappa

Dr M. Mahadevappa, former VC, UAS, Dharwad has been short-listed for conferment of Padma Shri by the President of India. Born in 1937 in Madapura village in Chamarajanagar district of Karnataka, Dr Mahadevappa did his B.Sc. from Agricultural College, Hebbal and got his doctorate from Agricultural College, Coimbatore. He started his career at the CFTRI, Mysore; continued his research at Mandya in active collaboration with IRRI, Manila; and dedicated his entire career to the cause of rice improvement and sustained food security to the farmers. He guided 41 M.Sc. and Ph.D. students. Being known to the farming and scientific community as Rice Mahadevappa, is a tribute to his life dedicated to rice. He evolved two hybrids, Karnataka Rice Hybrid 1 and 2.

Dr Mahadevappa published more than 300 articles and presented 31 papers at conferences in the USA, Cuba, the former USSR, China, Japan, Philippines, Australia, Kenya and various European countries.

Dr Mahadevappa is the recipient of numerous awards, including Watumull (International) Foundation of Hawai, the Hooker Award, Sir Chhoturam National Award and Rajyotsava Award. He served as the Chairman, Agricultural Scientists Recruitment Board and currently is involved in Seed Village Project as adviser.

PROMISING TECHNOLOGY

RWC wins King Baudouin Award

Dr Mangla Rai, Secretary, DARE and DG, ICAR receiving award on behalf of RWC

In recognition of its role in charting a course toward more ecology-friendly, higher-producing and cost effective agriculture among the resource-poor farmers of South Asia, the Rice-Wheat Consortium for the Indo-Gangetic Plains (RWC) was awarded the King Baudouin prize 2003-04 on *No- Till technology in rice-wheat on farmers' fields*, by the global science and development community. The ceremony was attended by 1,000 international agricultural research and development specialists in Mexico City, Mexico.

Rice Wheat consortium (RWC), which Dr R.K. Gupta coordinates through CIMMYT office India for the Indo-Gangetic Plains, is an eco regional program of CGIAR, which includes the National Agricultural Research Systems of Bangladesh, India, Nepal and Pakistan; international centers of the CGIAR (CIMMYT, IRRI, ICRISAT, CIP and IWMI) and other advanced international institutions (Cornell University, IAC, Wageningen, IACR, Rothamsted Research, CABI-UK, CSIRO, ACIAR and the IAEA).

On this achievement the support and endless contribution of all the above mentioned Institutions and NARS and SAUs in the mentioned countries and Indian State Agriculture Universities: Haryana Agriculture University, G.B. Pant University, Rajindra Agriculture University, Banaras Agricultural University, Punjab Agriculture University and many others, is duly appreciated and acknowledged.

"The impact is tremendous. We're talking about a region that cuts across four countries Bangladesh, India, Nepal and Pakistan- and is home to hundreds of millions, many of whom live in extreme poverty," says Dr Mangala Rai, Director General of the Indian Council of Agricultural Research and member of the RWC steering committee, who accepted the award on behalf of his colleagues on 27 October 2004 at Mexico. "Consortium efforts have already benefited 2,50,000 farm households region-wide. Impact down the road could be in line of the Green Revolution of the 1970s."

A negative consequence is that water tables across South Asia are dropping fast from excessive water being drawn for irrigation and degraded soils are becoming common as farmers apply more and more fertilizer to obtain good harvests.

In response to the situation, the consortium promotes numerous ecological farming practices that save time, fuel, water and other inputs and foster more resilient cropping systems. **One such practice - zero-till: sowing wheat seed directly into rice fields after rice harvest, without plowing at all**- was used on nearly 1.2 million hectares in 2003-04, up from practically nothing just a few years ago. Net benefits in India and Pakistan, the major players through higher yields and lower land preparation costs, amounted to more than USD 100 million in the winter season of 2003 alone. The practice saves more than 50 litres of diesel fuel per hectare totaling 75 million litres across the region, equal to more than USD 40 million in aggregate savings and also helps avoid the release of huge amounts of harmful greenhouse gases.

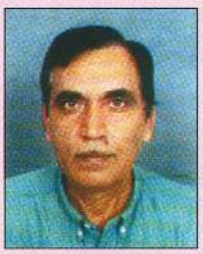
(RWC, CIMMYT, NASC, Pusa, Delhi)

Junagadh Agricultural University, Junagadh

1. *Rural transporter:* The University has developed a Rural transporter, which is a two-wheeler having a versatile hitching arrangement that can be quickly fitted to any bicycle. It can carry 120 kg weight with a speed of 10 to 12 km/h on kaccha or metalled road. It can accommodate bulky material up to 1 cubic meter. Its cost is Rs 1,500.
2. *Agricultural residue shredder:* The farmers burn most of the agricultural residues on the field after harvesting the crops, resulting in losses of organic matter and fuel, and creation of environmental pollution. By shredding these residues can be converted into compost, white coal, cattle feed, fuel, manure, mulcher and raw material for industries. This machine can be operated with 5 to 6 hp diesel engine, shredder electric motor or tractor PTO shaft It consumes 1 litre diesel/hr. The stalks of crops like castor, cotton and pigeonpea can be shredded up to the length of 10-75 mm. Its shredding capacity is 200 kg/hr, and it reduces the shredded material to one-fifth the original volume. The machine with compact diesel engine costs Rs 40,000.

NEW VCs

Dr R.P.S. Ahlawat takes over as VC, NAU, Navsari


Dr R.P.S. Ahlawat

Dr R.P.S. Ahlawat was born in April 1945 in dist. Meerut. He studied in G.B. Pant University of Agriculture and Technology, Pantnagar. He secured first class in M.Sc. and did his Doctorate in Agronomy.

He joined the university as Senior Research Assistant in 1965. Later he joined Tarai Development Corporation and then Gujarat Agricultural University. He was selected Associate Director of Research (equivalent to Professor) at the age of 33. Throughout his career he remained associated with research.

In 2004, when Dr Ahlawat was Director of Research and Dean, Post-Graduate Studies, the university was split into three, and he was named the Vice-Chancellor of NAU, Navsari on 1 May 2004.

Dr M.C. Varshneya takes over as VC, AAU, Anand


Dr M.C. Varshneya

Dr M.C. Varshneya is the first Vice-Chancellor of Anand Agricultural University, Anand, established on 1 May 2004 after trifurcation of Gujarat Agricultural University. The University was inducted into IAUA as its 42nd regular member on 13 January 2005. Dr Varshneya completed his M.Sc. from Agra University and got his Ph.D. in Agricultural Meteorology from University of Nebraska, in the USA. He attended numerous short-term courses in Nuclear Physics, Solid State Physics, Agro-Meteorology and Crop Modelling etc. He has 38 years of experience in teaching, research and extension education. Dr Varshneya published 8 books, 37 book chapters, 44 research papers, 13 general articles and presented 10 papers at seminars. He has been on various important societies or committees. He guided 70 M.Sc. (Agric.), 2 M. Tech (Agric. Engng) and 6 B.Tech (Agric. Engng) students and evaluated 3 Ph.D. (Agric.) theses. Dr Varshneya is an internationally recognized authority in crop modelling. He has been the recipient of numerous national and international fellowships and awards. He is also the author of textbooks for under-graduate and postgraduate students.

Dr. B.K. Kikani VC, JAU, Junagadh


Dr B.K. Kikani

Dr B.K. Kikani joined as Vice-Chancellor of Junagadh Agricultural University on 1 May 2004. In 1966 he started working as Agricultural Supervisor and in 1971was selected Assistant Plant Pathologist He continued learning and obtained his M.Sc. in Plant Pathology in 1976 in first division and Ph.D in Plant Pathology (Entomology as minor subject) in 1985 from College of Agriculture Junagadh. He was appointed Associate Professor in 1981. For many years Dr Kikani worked as Zonal Leader, looking after 21 research centres located in 6 districts. He handled administrative work, seed production, farm development, work coordination and process implementation. Dr Kikani rose to the position of Professor and Head of Plant Pathology in 2001. He was the Director of Research when the Gujarat Agricultural University was bifurcated and the Junagadh Agricultural University was established.

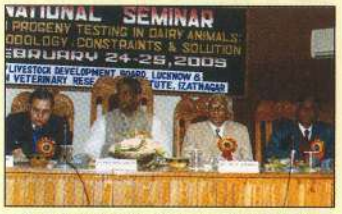
He has authored 5 research papers for international journals and 11 for national journals. He is a member of 11 national and state level organizations. He also published 300 articles in Gujarati and some in local newspaper besides having delivering 43 All India Radio talks and appearing on television thrice on agricultural subjects. Many of his programmes have been successfully implemented in Saurashtra Agro Climatic Zone. He has been behind many modern faculties developed for research and teaching work.

Focus on Universities - Achievements and Events

DEEMED UNIVERSITY

INDIAN VETERINARY RESEARCH INSTITUTE, IZATNAGAR

Field progeny testing in dairy animals



Shri Virendra Singh, Animal Husbandry Minister and Dr M.P. Yadav, Dir. IVRI

A 2-day national seminar on field progeny testing in dairy animals:methodology, constraints and solutions was organized at IVRI, Izatnagar, from 24 to 25 February 2005. About 200 participants from across the country took part. Speaking at the inaugural function as the Chief Guest, Shri Virendra Singh, Animal Husbandry Minister of Uttar Pradesh Government informed that the milk production per day per cow is 2.7 litres and per buffalo 4.25 litres though per crossbred is 6.2 litres in Uttar Pradesh.Which should increase to 8 litres for making livestock profitable. He further informed that out of our 4 crore cows and buffaloes, 25 lakhs are infertile. The problem of feed and fodder was also outlined by Shri Virendra Singh.

Ms Neeta Chaudhary, Joint Secretary, Agriculture Ministry, said that employment generation as well as testing of dairy animals are the important areas that need to be looked into to enable the animal husbandry sector to grow.

Dr M.P. Yadav, Director, IVRI, briefed the gathering about achievements of the institute and said that countries like Israel, Brazil and Bulgaria have developed the breeds of Indian cows for their own benefit.

CADRAD gets ISO certificate

The Centre for Animal Disease Research and Diagnosis (CADRAD), IVRI, Izatnagar, has been awarded with ISO 9001: 2000 certificate by the International Certificate Services Asia (P) Ltd for quality management system. The certificate was given by Shri R N Singh, Regional Manager of the ICS to Dr M.P. Yadav, Director, IVRI and Dr R S Chauhan, Joint Director, CADRAD.

UNIVERSITIES

DR BALASAHEB SAWANT KONKAN KRISHI VIDYAPEETH, DAPOLI

Dr S.S. Magar visits China

A delegation of agricultural experts from India, led by Union Minister of Agriculture. Shri Sharad Pawar, visited the Peoples' Republic of China during 28 March-2 April 2005. He was accompanied by Dr S.S. Magar, VC; Dr Ayyappan, DDG and Dr H.S. Nainawatee, ADG, ICAR, New Delhi, Smt Neerja Rajkumar (Department of AH & D) and Anita Choudhary, JS (Department of Food), Government of India, New Delhi.

The delegation visited Chinese Academy of Agricultural Sciences and Biotechnology Research Institute, Beijing; Beijing Glorious Land Agricultural Demonstration base; Water Buffalo Research Institute and Fishery-related projects at Nanning; the world of flower in Chencun, Shende city and Tropical Fruit Planting base, Guangziou. They met Shri Wang Jiarni, Minister, International Liaison Department of CPC Central Committee; Shri D.U. Qinglin, Minister of Agriculture, Shri Hui Lingyu, Vice-Premier of the PRC; Leaders of the Government of Guangxi Autonomous Region and leaders of Guangdong Provincial Government, and discussed the issues of bilateral interest. This visit was to form a base for discussion with the Prime Minister of China, during his visit of India, scheduled in April this year.

Student ranked first in GATE 2005

Shri Ravindra Jambhekar, a student of College of Agricultural Engineering and Technology under DBSKKV, Dapoli secured 99.84 % marks in GATE 2005 and ranked first at the national level, and 18 students from the college passed the test with distinction.

Silver Jubilee Convocation

The Silver Jubilee Convocation of DBSKKV, Dapoli was held on 25 March 2005. Shri Balasaheb Thorat, Minister for Agriculture, Government of Maharashtra, presided over the function. Shri Shivajirao Bhosale, the well-known speaker, former VC, Dr Babasaheb Ambedkar Marathwada University, Aurangabad attended the function as chief guest and delivered convocation address. In all 502 students were conferred with the degree.

ANAND AGRICULTURAL UNIVERSITY, ANAND

President visits new university

Dr APJ Abdul Kalam, His Excellency the President of India, graced AAU, Anand with his presence on 14 December 2004. He inaugurated an experimental plant for processing of jatropha, and sanctioned, a research project to develop post-harvest processing of jatropha seeds for production of biodiesel.

New varieties released

Pearlmillet *AFB 2:* The new variety selected from a local genotype Rajka Bajra has been released recently for entire forage bajra-growing areas of Gujarat. The variety is meant for multicut management and gives more green forage, dry matter and crude protein yield. Its seed-production ability is also good. It shows negligible incidence of pests and diseases. It is suited for lighter type of sandy and sandy loam soils.

Rice *GR 12:* It was developed at the Rice Research Station, AAU, Nawagam. The variety is resistant to bacterial leaf blight and stem rot diseases, having superior grain quality and high yielding ability.

Forage Pearlmillet *GFB 1:* It has greater shelf life and less infestation of shootfly and Mylloceros weevil.

Chilli *GVC 101 and GVC 121:* These varieties have greater shelf life and are resistant to pests, besides having less capsaicin content.

Cucumber *GC 1:* It has long, tender, attractive fruits.

Muskmelon *GMM 3:* It is a high-yielding variety with attractive green colour of rind and sweet pulp.

Brinjal *GOB 1:* Its fruits are attractive in size, shape and colour with lower incidence of little leaf disease and pests.

Tomato *GT 2:* Its fruits are attractive, having red colour, round shape and longer shelf life, and it shows less incidence of diseases.

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

Borlaug provides 'Nobel' touch to 22nd Convocation


Dr P.I. Gautam, VC and other members at dais during 22 Convention

The Nobel Laureate, chief architect of Green Revolution and a pioneer wheat breeder, Dr Norman Ernst Borlaug, mesmerized scientists, students and farmers through his intellectually stirring convocation address on the occasions of 22nd Convocation of GBPUAT. Speaking in pin-drop silence despite the presence of 5,000 persons in the convocation pandal, Dr Borlaug narrated the historical milestones in agricultural research and development, that led to Green Revolution in India and other parts of South Asia. He declared, 'We have the technology available to feed even 10 billion people, what is needed is the single-minded

devotion and enthusiasm along with political commitment to make the world hunger-free'.

Shri Sudarshan Agarwal, Governor of Uttaranchal and Chancellor of the university, presided over the function, in which Chief Minister of Uttaranchal, Shri N.D. Tiwari, was present as Guest of Honour along with a number of cabinet ministers of state as well as central government, members of State Assembly and senior administrative officers of the State and Centre besides special guests and invitees Shri Agarwal conferred degree of Doctor of Science *(Honoris Causa)* on distinguished personalities, such as Dr Montek Singh Ahluwalia, Deputy Chairman of Planning Commission, Government of India; Justice J.S. Verma, former Chief Justice of India; Dr Mangala Rai, Secretary, Department of Agricultural Education and Research and Director-General, ICAR, New Delhi; Dr R.A. Mashelkar, Director-General, CSIR, New Delhi; and Shri N.D. Tewari, Chief Minister of Uttaranchal.

INDIRA GANDHI KRISHI VISHWAVIDYALAYA, RAIPUR

VC gets honorary rank of NCC Colonel

The honorary rank of NCC Colonel was bestowed upon Dr C.R. Harza, VC, IGKV Raipur on 3 March 2005 by Rear Admiral Sanjiv Kapoor, AVSM, ADG (A) NCC.

Dr C.R. Harza honorared as NCC Colonel

Varieties released

Three new varieties viz. *(i) Para (I.M. 9214 10) of peas, (ii) Indira Alsi (I.L.C.76)* and *Kartika of linseed* and *(iii) Indria Kundru-5* were released by this university after approval in the meeting of State Seed Sub-committee held on 22 February 2005.

JAWAHARLAL NEHRU KRISHI VISHWA VIDYALAYA, JABALPUR

New crop varieties developed

(i) **Wheat *JW 3020:*** Duration 120-130 days, yield 16-18 q/ha (rainfed) and 30-35q/ha (limited irrigation) Ears, white, long, square, glumes glabrous, culm thick, non-lodging, 1000-seed weight 42 g, grains amber, shining, protein content 11.87%; good chapati-making quality and resistant to all rusts, high temperature and low moistures stress.

(ii) **Wheat *JW 1142:*** Duration 119 days; yield 45-50 q/ha; ears medium long, compact with smooth glumes; high hectolitre weight, high protein content; resistant to stem, leaf and stripe rust and insect/ pests.

(iii) **Barley *JB 58:*** Duration 125 days; yield 35.5 q/ha; plant height 66 cm, ear colour at maturity yellow, ear shape parallel and dense; awn medium long; grain light brown; test weight 40.3 g; husk adherence medium; resistant to all rusts.

(iv) **Chickpea *JG 63:*** Duration 110-120 days; yield 21-25 q/ha; semi-erect with light green foliage, pubescent, stem purple. Plant height 42-70 cm Seed colour yellowish brown, test weight 160-180g resistant to vascular wilt and dry root rot; less incidence of pod borer. Recommended for all over the state.

(v) **Chickpea *JG 412:*** Duration 100 days; extra early, yield 18-20 q/ha, semi-erect, dark plant, large flower, pod medium bold, seed bold, test weight 240-260 g; plant height 30-40 cm, non-lodging and shattering.

(vi) **Urid *JU 86:*** Duration 65 days, yield 12-14 q/ha, semi-spreading plant, dark green leaves, pod medium 4-4.5 cm, brownish black, medium in size, test weight 30-35 g. Seed shining black with greenish tinge. Resistant to lodging and shattering, moderately resistant to powdery mildew and tolerant to major pests.

(vii) **Gobhi Sarson *Brassica napus Teri Uttam:*** Duration 130-140 days; early maturing; yield 15-17 q/ha; erect compact plant type, height 125-130 cm; primary branches 5-6, secondary branches 6-7, siliqua on main branch 40-46, siliqua length 6-6.8 cm, siliqua beak long and pointed; seed colour brown, test weight 3.2-3.5 g. Oil content 42-44%, glucosinolate content 10-25 mg. erusic acid 02%, oleic acid 76%, nutritionally improved. Resistant to white rust and tolerant to sclerotinia, shattering and lodging.

(viii) **Mustard *JM 2:*** Duration 135-138 days; yield 15-30 q/ha; height 165-170 cm, primary branching. 4-5/plant with dichotomous habit. Secondary branches 6-7, flower yellow, siliquae/plant 190-200, seed blackish brown and round, test weight 4.5-5.2g, oil content 40%. Recommended for Chhattisgarh and Central zones and areas of hot spot of white rust. Tolerant to blight, sclerotinia and shattering and is mildly infected with mustard aphid. Suitable for early and timely sown conditions.

(ix) **Mustard *JM 3:*** Duration 130-132 days; yield 15-25 q/ha, primary branches 6-8, secondary branches 10-14, siliquae/plant 180-200, seeds blackish brown, round, test weight 4.5 g bold seeded, oil content 40%; tolerant to blight and mustard aphid.

(x) **Safflower *JSF 97:*** Duration 132 days, yield 15 q/ha; plant height 90 cm, spineless, flowers yellow at blooming and orange at maturity, bold seed, containing 30% oil and 15.7% protein. Resistant to lodging and shattering, moderately tolerant to alternaria wilt and aphid.

(xi) **Safflower *JSF 99:*** Duration 115-120 days; extra early; yield 11-12 q/ha plant, height 50-60 cm, semi- spiny; capitulum big, test weight 60-65 g; oil content 28-29%; moderately tolerant to alternaria, rust, lodging and drought.

(xii) **Jowar *JJ 1022:*** Duration 101-107 days; yield 30-35 q/ha, ear short to medium, semi-compact with long peduncle, club shaped; glumes straw coloured at maturity, grains medium bold, round, pearly white, awnless. Adapted to Jhabua hills, Satpura plateau and Nimar valley of MP. Resistant to shoot fly and stem borer, moderately resistant to leaf spot and grain mould, non-lodging and non-shattering. High-quality fodder. Dual purpose variety.

(xiii) **Berseem *JB 5:*** Duration 185-195 days, yield 655 GFY, 6.5-7 q/ha seed yield and 104 of dry matter. Profuse branching from the base, dark greenish leaves, average plant height 52.2 cm, pale yellow medium seed, test weight 2.45 g, oval shaped elongated inflorescence, length 1.6-2.1 cm well adapted to M.P., U.P., Gujarat and Maharashtra. Resistant to root rot and moderately resistant to stem rot.

(xiv) **Oat *JO 1:*** Duration 140-145 days, yield 585 q/ha green fodder and 109 q/ha dry matter. Leaf broad and long with profuse tillers at base, ready for first cut in 60-65 days. Relatively high protein content suitable for Central Zone of the country for multi-cut system.

(xv) **Safed Musli *JSM 405:*** Duration 95-105 days, yield 22-24 q/ha, flowering nodes 15, anthers yellow, tuber purple, 5-7.5 cm and cylindrical with blunt tip, saponine content 1.25%.

College of Horticulture inaugurated

Amidst the festivity and massive gathering of local farmers, State ministers, scientists and students, the newly constructed college as well as the hostel building of KNK College of Horticulture, Mandsaur was inaugurated by Dr Balram Jakhar, Governor and Chancellor of JNKVV on 21 March 2005.

Dr Balram Jakhar, HE Governor and Chancellor JNKVV, Dr D.P. Singh VC at inauguration of college of Horticulture

KERALA AGRICULTURAL UNIVERSITY, THRISSUR

High-yielding varieties of crops released for cultivation

Rice: VTL 6 new high-yielding rice for pokkali ecosystem, is the first semi-tall, non-lodging, high-yielding variety, evolved at Rice Research Station, Vyttila. It has multiple tolerance to the stresses like salinity, acidity and submergence. The variety is meant to rejuvenate the pokkali cultivation in the only natural rice tract of Kerala having organic farming. The variety is a hybrid derivative from Cheruvirippu IR-5 Jaya.

It takes 75-80 days for 50% flowering and has 115-120 cm height and seed duration of 105-110 days. Its potential yield is 4.5-5.0

tonnes/ha, with an average grain yield of 3.5-4.0 tonnes/ha without fertilizer application and plant-protection chemicals. The rice recovery is 76% with excellent cooking quality. Due to short stature, it can be used for exploring the possibility of mechanical harvesting. Its introduction would be a boon to pokkali farmers in easy harvest and stubble removal after rice crop for selective farming of the succeeding prawn crop, which is an integral part of pokkali farming system.

VTL 6

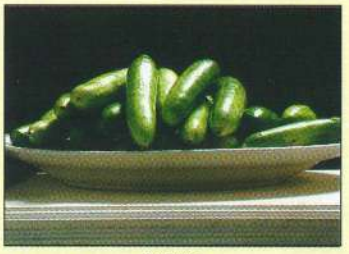
Snake gourd *Manusree:* Manusree is a new high-yielding snake gourd variety developed in 2004 at Agricultural Research Station, Mannuthy. It has good market preference due to its attractive, uniform, medium long (65-70 cm) hite fruits with green marking at the pedicel end, weighing 750-800 g and being ready for harvest a fortnight earlier than other released varieties. It has a yield potential of 60 tonnes/ha, and ideal for cultivation in summer rice fallows of Ernakulam, Thrissur and Palakkad districts.

Manusree

Pineapple *Amritha:* Amritha is a high-yielding hybrid pineapple, evolved from Kew, pliqueen varieties developed at Pineapple Research Station, Vellannikkara. The ripe fruits have an attractive golden colour, good flavour and taste with lesser acidity (0.2%) and higher sugar content (18.6 TSS). It is suitable for commercial large-scale cultivation and export. This variety has a yield potential of 85 tonnes/ha.

Amritha

Ivy gourd *Sulabha:* The ivy gourd Sulabha is high-yielding with long fruits. The average fruit length is 9.25 cm and fruit weight 18.48 g at edible maturity. The fruit is cylindrical and pale green with continuous striations. The leaves are typically trilobed. On an average, each plant produces 1048 fruits/year. This can be successfully cultivated in the central zone of Kerala. The variety is suited for cooking, pickling and salad purposes.



Sulabha

It comes to flowering 37 days after planting, and first harvest can be taken in 45-50 days. It produces female flowers in the leaf axils and gives an average yield of 60 tonnes/ha/year. The variety was developed at the Department of Olericulture, College of Horticulture, Vellanikkara.

Ridge gourd *Deepthi:* Deepthi, the high-yielding ridge-gourd variety, developed at the Department of Olericulture, College of Horticulture, has been released for the commercial cultivation in Central Zone of Kerala, comprising Thrissur, Ernakulam and Palakkad districts.

Deepthi

This variety can be successfully cultivated during September-December and January-April by sowing seeds in pits taken at a spacing of 2 m x 2 m. It gives an average yield of 12.67 tonnes/ha and has field resistance to diseases like mosaic and downy mildew.

MARATHWADA AGRICULTURAL UNIVERSITY, PARBHANI

Precision farming: resource conservation

A national seminar on "Resource conservation and precision farming was organized by the Department of Agricultural Engineering, College of Agriculture during 18-19 January 2005.

The following recommendations were made:-

- There is an urgent need to develop a network system between the regional institutes and the organization for generating long database with respect to natural resources and parameters like soil, land-use, climate, energy, surface and ground water.
- The network needs to be co-ordinated by agreed identified institutes in the region for which appropriate work-plan and financial supporting mechanism can be developed.
- Conservation of natural resources like land, water and energy should get top priority. The programme should be implemented by social organizations, government, non-government agencies and the students of SAUs.
- Considering the future needs of the country, the education, research and extension programmes should be geared up to develop agricultural information system required for adoption of precision farming technology. In all the SAUs a specialized course on precision technology and its application should be introduced.
- Precision farming technology should be evolved to solve more difficult problems like precise prediction of rainfall, flood and drought and their efficient management.
- Agro-service centres should be developed at the village level and they should be generally manned by enthusiastic, trained and skilled personnel like agricultural engineering graduates.
- They should be supported with appropriate mechanism for providing quality goods such as fertilizer, pesticides and precision equipment etc.
- These centres should be linked with local Krishi Vigyan Kendras for updating the technology base.
- The government should provide adequate incentives to users of precision farming technology, some of whom are already subsidized.
- Government should vigourously pursue crop insurance proposals.
- Economical precision technology for water harvesting in rural and urban areas should be developed and implemented.
- All out efforts should be made to develop affordable and economical methods for using renewable energy sources in farming systems.
- A National Institute on Precision Farming should be established, where technocrats like agricultural engineers should get priority and others should be linked with this national institute.
- Specialized staff in Agronomy. Soils, Plant Protection, Home Science, Agricultural Engineering should be compulsorily provided at all Krishi Vigyan Kendras or Extension Centres.

Dr J.S. Samra, DDG (NRM), ICAR New Delhi releasing proceedings of National Seminar

World Consumer Day celebration

World Consumer Day was celebrated by the Department of Family Resource Management on 15 March 2005 at Lohgaon (Thakurbua).

Celebration of World Consumer Day

MAHARANA PRATAP UNIVERSITY OF AGRICULTURE AND TECHNOLOGY, UDAIPUR

Pratap Mungphali identified

A groundnut variety Pratap Mungphali 2 was identified at the meeting of State Varietal Evaluation Committee. Its dry-pod-yield potential of 2,505 kg/ha is superior to Jl 24 (2003 kg/ha). The kernel yield 1,707 kg/ha compared with that of 1340 kg/ha of JL 24. The variety has 50% oil content. It is moderately tolerant to early leaf spot, late leaf spot, peanut bud necrosis diseases and insects like Spodoptera litura, leaf minor and thrips.

Varieties Released

Horsegram *Pratap Kulthi1 (AK 42):* An early-maturing (80-90 days), brown-seeded variety, having yielded potential of 0.7-1.1 tonnes/ha seed and 1.8-2.2 tonnes/ha dry fodder, containing 25-28% protein.

Transfer of Technology

Energy conservation devices

Under PCRA-sponsored project, 450 durable cook stoves were installed in villages Dangio ki Toos, Ghanoti, Sohan Kheda, Jhadole, Gogunda etc. The stove can save 500-kg/day wood. This cook-stove has 1-KW power rating with 26% thermal efficiency.

A 5 KW improved community cook-stove having 41% thermal efficiency has been developed for meeting cooking energy requirement of dhabas, hotels or dharmashalas.

A 10 kW power rating cook-stove (industrial improved furnace) for industrial level has been designed to evaporate 1 million litres HCl in a batch. This furnace has 41% thermal efficiency.

Biomass gasifier-cum-LDO based hot-air generator for drying 1 tonne dicalcuim phosphate in a batch has been installed. Its biomass consumption is 40 kg/ha, and it has 85% overall efficiency in the extraction of process heat.

An industrial-level 100 kg/hr open-core downdraft biomass gasifier for providing 2-lakh kcal heat/hr has been designed and installed at an industry. The gasifier is working at 85% thermal efficiency. An agro-processing technique for aonla utilization includes 100 kg/hr capacity stone-extracting machine, 50 kg/hr aonla pricking unit and 1 tonne capacity solar tunnel dryer for drying aonla pulp in 1 solar day.

N.D. UNIVERSITY OF AGRICULTURE AND TECHNOLOGY, FAIZABAD

New high-yielding Varieties developed

Rice *NDR 8002:* This variety, having 135 days of maturity and higher grain yield (40-45 q/ha), is resistant to white/ brown planthopper and leaf blast. It is suitable for late-sown condition of rainfed lowland areas. It is recommended for eastern U.P., West Bengal, Orissa and Chhattisgarh. It has better export quality.

Narendra Rice 2026: It was developed by the university and released by State Varietal Release Committee, Government of U.P. It is an early-medium variety of 110-115 days duration, resistant to brown spot and sheath rot, with milling recovery 67.2% and grain yield of 45-50 q/ha.

Rice hybrid Narendra Usar Shanker Dhan 3: This has been recently released by the State Varietal Release Committee, Government of U.P. This variety is well suited for saline alkali soil of the state. It is a medium-duration variety of 130-135 days, resistant to major diseases, insect-pests and lodging, having yield potentia of 50-55 q/ha under saline sodic and 70-75 q/ha under normal soil situations. The variety is well suited to rice-wheat cropping system prevalent in north India.

Narendra Usar Shanker Dhan3

Wheat

Narendra Wheat 1067: This variety was developed by the university and released by the State Varietal Release Committee, Government of UP. Its maturity period is 120-125 days and average grain yield 50-60 q/ha. It is resistant to brown rust, lodging and shattering; and is suitable for saline sodic conditions and timely sown, irrigated and high fertility situations.

Mustard

Narendra Swarana Rai 8 (NDYR 8): This variety was developed at the university and released by the Government of UP. It has 132-135 days of maturity period, yield potential of 25-30 q/ha and 45.69% oil content. It is tolerant to white rust and alternaria blight and is recommended for whole UP.

Narendra Swarana Rai 8

Notification of released varieties

In exercise of the power confirmed by Section 5 of the Seed Act, 1966 (54 of 1966), the Central Government notified two varieties of crops developed by NDUAT scientists, viz. Nagendra Barley 1173 and Nagendra Sanai 1 for whole of India for 15 years from the date of publication of the notification in the official gazette.

Narendra Arhar 2 (NDA 98-1): This pigeonpea variety developed through selection has been found suitable for cultivation during rainy season (kharif) in Uttar Pradesh, Bihar, Jharkhand, West Bengal and Orissa. The genotype has established stable and significant superiority of 25% higher yield than popular ruling variety Bahar and Narendra Arhar-1. It matures in 240-250 days, and has yield potential of 25-30 q/ha. It is tolerant to wilt and resistant to Phytophthora blight. It has added superiority of bolder seed size (13-13.5 g/100 seed). It is suitable for sole and intercropping with blackgram, greengram, jowar and bajra. It has 5% higher dal recovery than popular variety Bahar, with good cooking quality.

NDA 98 1

Narendra Hybrid Arhar 8 (NDPCH 8): CMS based hybrid development through cross with CMS GT 288 A and NDAW 1003-9 has been identified as significantly high yielder than the varieties under popular cultivation in Gujarat. It has yielded more than 33.33 q/ha. It is resistant to wilt and has bolder seed size.


NDPCH 8

Masoor

Narendra Masoor 1: This masoor (Lentil) variety developed through pedigree selection from cross Precoz x L-9-12. It matures in 120-130 days, and has yield potential of 18-22 q/ha. It is resistant to rust and tolerant to wilt and root rot. It has erect plant type, compact branching, light green foliage, medium, bold seed (2.6 g/100 seed) It is suitable for normal sowing and is tolerant to soil salinity. The seed is dull brown. It is recommended for sole cropping.


Narendra Masoor 1

Narendra Masoor 2 (NDL 94): This masoor variety developed through pedigree selection from the cross DLG-105 x PL 406 has been identified for irrigated, rainfed, sole and intercrop cultivation in U.P, Bihar, Jharkhand, West Bengal, and Orissa. The variety matures in 125-130 days and has yield potential of 20-25 q/ha. It is resistant to wilt; rust and root rot and gives 21% higher yield than the popular varieties. The Plant is semi-erect, 40-45 cm high and has profuse branching. It has medium bold seed (2.25 g/100 seed) and is tolerant to soil alkalinity.


Narendra Masoor 2

Biochemistry of Aonla

An experiment was conducted on biochemistry of aonla (Embilica officinalis Gaertn) fruits for evaluating the biochemical parameters at various stages till harvest in 5 varieties, viz. Chakaiya, Kanchan, NA 6, NA 7 and NA 10. Maximum ascorbic acid content was noticed in NA 10 (692.10 mg/100 g), followed by NA 6 (664.70 mg/100 g). Maximum crude fibre content was recorded in Chakaiya (1.43 %) followed by Kanchan (1.33 %), and minimum content in NA-6 (0.92 %) Chakiya is recommended for preparation of anola pickle, whereas

NA 6 is the best variety for the preparation of aonla laddoo, chutney and dry powder.

Biochemistry evaluation of muskmelon

Diverse clones of 11 muskmelon strains (DM 1, MHY 5, MAU 5, XHM, NDM 18, NDM 21, PB 5, PMM 96-20, MM 28 and PMM 97-10) were selected for evaluating the biochemical parameters in fresh fruits and seeds, which may be proved as the best source of edible oil in future. On the basis of biochemical evaluation and organoleptic quality, MAU 5, XHM and PB 5 were rated superior.

PUNJAB AGRICULTURAL UNIVERSITY, LUDHIANA

Kisan Mela

Dr K.S. Aulakh presenting Shield to Captain Amarinder Singh, CM

A 2-day Kisan Mela held at PAU was inaugurated on 4 March 2005 by Captain Amarinder Singh, Chief Minister of Punjab. He said that Punjab is mainly an agricultural state, of which more than 70% people are residing in villages and have adopted agriculture as their main occupation. He said that the economic status of Punjab is going down day by day because of the high cost of cultivation and less profit. To improve their economic condition, the CM advised the farmers to diversify some area of cultivated land from wheat-rice crop cycle to some other profitable crops like maize, cotton, oilseeds and pulses. He suggested diversification of crops so that the farmers can avoid extra burden of installing submersible pumps used for irrigating rice. He assured them that the Government would try to fix minimum support price for other crops. Besides, he advised the young farmers and children of farming community to work hard to improve their economic as well as social status.

Captain Amarinder Singh honoured three progressive farmers Sardar Mohinder Singh Sidhu (Agriculture), Sardar Harbans Singh (Animal husbandry) and Sardar Daljit Singh Gill (Horticulture) - for their best achievements in the respective fields.

New varieties

Pear *Punjab Nectar:* A semi-soft pear, a new variety developed under the guidance of Dr Amrik Singh Sandhu, Director of Extension Education, has been approved for cultivation in the meeting of the State Variety Approval Committee held on 11 January 2005 under the chairmanship of Dr Kulbir Singh, Director of Horticulture, Punjab. This variety is much better than the earlier variety Punjab Beauty in taste. The size of the fruit is total and erect early in maturing and its weight is approximately 138 g, soluble solids 13.6%, and acidity 0.21%. Its preservance and processing is also praise-worthy. It is recommended for cultivation in whole of Punjab except in polluted cities.

Carrot *PC 34:* A new variety of carrot, PC 34, evolved by Dr A.S. Sidhu, Head, Department of Vegetable Crops and Dr D.S. Cheema, Senior Vegetable Botanist, was approved by State Variety Approval Committee held on 11 January 2005 under the Chairmanship of Dr Kulbir Singh, Director Horticulture, Punjab, for general cultivation in Punjab State. Its foliage is dark green, and roots red, long (25 cm) with a small core (0.95 cm). This variety has excellent quality characters, i.e. TSS (9.80%), juice yield (480 ml/kg), B-carotene (8.86 ml /100 g) and total sugars (5.81 g /100 g). It recorded a total yield of 51 tonnes/ha.

VC, PAU as Honorary Colonel

Governor Gen. S.F. Rodrigues Honours Dr K.S. Aulakh

Punjab Governor, Gen. S.F. Rodrigues (retd) bestowed the honorary rank of a National Cadet Corps (NCC) Colonel on VC of PAU, Dr K.S. Aulakh, for the period of his tenure at a ceremony held at Punjab Raj Bhawan, Chandigarh on 26 February 2005.

It is the first time in the history of PAU that its VC has been bestowed with such a prestigious honour in the armed forces, the Colonel of regiment is an honour normally conferred upon distinguished and senior officers.

SHER-E-KASHMIR UNIVERSITY OF AGRICULTURAL SCIENCES AND TECHNOLOGY, JAMMU

Faculty improvement training programme

Faculty of Veterinary Science and Animal Husbandry, SKUAST-Jammu organized a 21-day faculty improvement training programme on "Advances in animal health and production with special reference to northern hilly area" for their teachers. This training programme was co-sponsored by CSIR, New Delhi and ICMR, New Delhi. A total of 44 teachers (including 5 from other universities) were imparted training.

Inaugurating the training programme Lt. Gen. (retd) S K Sinha, PVSM, H.E. the Governor of J & K and Hon'ble Chancellor of this university, said that linkage between man and animals in India has attained spiritual, emotional, nutrient and health dimensions over the centuries, emphasizing the importance of veterinary science and animal husbandry for the economy of the state. He urged the veterinary and agricultural scientists to share their knowledge and research for securing better environment for livestock.

Deputy Chief Minister Shri Mangat Ram said that India has rich livestock potential, which has been sustaining the humanity for thousands of years.

Vice-Chancellor, Prof. Nagendra Sharma, said that the recent advances made in the diagnosis and treatment of animal diseases and animal production are required to be highlighted at every stage. He said that the course would provide an opportunity for exchanging their knowledge and skills with visiting scientists. He said the training programme would also help focus attention towards conservation and improvement of farm animals and the issues related to animal health.

Research on sheep and goats

Training programme on "Emerging diseases of sheep and goats"

A 3-day training programme on 'Emerging diseases of sheep and goats' for the veterinary assistant surgeons of Sheep Husbandry Department, Jammu was organized by FVSC and AH w.e.f. 22.03.2005.

Recommendations

1. To undertake research on vaccinology and vaccine production on a large scale to meet the requirements of sheep-farmers.
2. To identify specific area-related problems of sheep and goats to provide better management practices, to minimize the use of medicines.
3. The state-line department and university should work together to diminish the parasitic load in sheep and goats.
4. To critically evaluate local preparations of meat products.

UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE

New varieties recommended for release

As a result of continuous research, a total of 10 new varieties of 6 different crops were recommended for release for general cultivation by the farmers.

Paddy *IET 14845:* It is a medium-tall variety with a duration of 145-150 days and average yield of 50 q/ha compared with the check Phalguna (46 q/ha) and is resistant to gall midge. It was identified at Mangalore and recommended for cultivation in lowlands of coastal zone.

Paddy *MTU 1001:* It is a medium-duration, semi-tall, variety maturing in about 130-135 days with long and bold grains, tolerant to both BPH and blast, recommended for Zones 6 and 7. The variety is suitable for cultivation both in *kharif* and summer. It has a yield potential of 6.0 to 6.5 tonnes/ha and has recorded 21.5% higher yield the check IR 30864.

Paddy *MTU 1010:* It is a short-duration, dwarf variety with a maturity period of 120 days. The grains are long and slender. It is tolerant to both BPH and blast. It is suitable for cultivation both in Kharif and summer and is recommended for cultivation in zones 6 and 7. It has an average yield potential of 5.5-6.0 tonnes/ha and gives 15% higher yield than the check Rasi.

Ragi *GPU 48:* It is a short-duration variety, which matures in 100

days, gives 22% higher yield (37 q/ha) than GPU-26 (31q/ha) and has profuse tillering. It is tolerant to blast, ideal for late sowing under rainfed conditions and suitable for catch-cropping under irrigated conditions. The variety has been identified at GKVK for release in zones 4, 5, 6 and 7.

Pigeonpea *BRG 2:* It is a new variety identified at GKVK for late-sown conditions with a duration of 145 days, which recorded a grain yield of 13 q/ha compared with the check TTB 7 (12 q/ha). It matures 10-15 days earlier than TTB 7. The variety has been recommended for release in Zone 5.

Pigeonpea *ICP 7035:* It is a dual-purpose, medium-duration (190-205 days) variety, yielding equal to TTb 7 identified from GKVK for cultivation in SMD-prone areas of Zone 5.

Groundnut *Co 86032:* It a mid-late maturing variety, compared with the check TMV 2 (11 q/ha) identified at Chintamani with an average pod yield of 14 q/ha under rainfed condition. It is resistant to tikka, leaf spot and leaf rust. It is recommended for cultivation in Zones 4 and 5.

Sugarcane *Co 86032:* It is a mid-late maturing variety, identified as superior to Co 7804, whichhas recorded a cane yield of 172 tonnes/ha and sugar yield of 25 tonnes/ha, being 14.5 % and 21 % better than Co 7804. It is recommended for cultivation in Zone 6.

Castor *DCH 32:* It is a hybrid with a duration of 160-180 days, a yield of 20-24 q/ha and oil content of 48% compared with the check GCH 4 (15 q/ha and 47% oil content) recommended for cultivation in Zones 4 and 5.

Castor *DCS 9 (Jyothi):* It is a variety with maturity duration of 120-150 days, yield potential of 15 to 20 q/ha and oil content of 49% compared with the check Aruna (11 q/ha and 47% oil content), recommended for cultivation in *kharif* season in Zones 4 and 5.

AWARDS AND RECOGNITION

INDIAN AGRICULTURAL RESEARCH INSTITUTE, NEW DELHI

Dr D.V. Singh, Head, Division of Plant Pathology, IARI, New Delhi has been nominated as member on the Board of Governors of IIT, Roorkee for a period of 3 years with effect from 20 January 2005.

Dr D.V. Singh

ACHARYA N.G. RANGA AGRICULTURAL UNIVERSITY, HYDERABAD

All India Performance Award for ICAR's JRF-2004

ANGRAU again received (first in 1999-2000) the All-India Performance award for ICAR's Junior Research Fellowship 2004, for securing the second highest number of JRF in the All India Combined Competitive Examination and admission to Deemed Universities, Central Universities and State Agricultural Universities, 2004.

Dr S. Radhu Vardhan receiving all-India performace award

Dr S. Raghu Vardhan Reddy, Vice-Chancellor, received the Award during VC's conference held at Mumbai on 4 February 2005.

Young Scientist Award

Dr D. Nagalakshmi, Assistant Professor (Animal Nutrition), College of Veterinary Science, Rajendranagar received Dr Gowri Ganguli Memorial Young Scientist Award on 5 January 2005 at the 92nd Indian Science Congress, held at NIRMA, Ahmedabad. She received, the award for her research work on animal nutrition, feed and fodder technologies. She is also the recipient of Young Scientist Award of National Academy of Agricultural Sciences (NAAS) for the biennium 2001-2002 and Lal Bahadur Shastri Young Scientist Award of the ICAR for 2001-2002.

Dr Nagalakshmi, receiving Dr Gouri Ganguli Memorial Young Scientist award

DR BALASAHEB SAWANT KONKAN KRISHI VIDYAPEETH, DAPOLI

Dr K.D. Kokate honoured with Dr G.S. Vidyarthi Memorial Award 2005

Dr K.D. Kokate, Director of Extension Education, DBSKKV, Dapoli was honoured by the Indian Society of Extension Education, New Delhi with Dr G. S. Vidyarthi Memorial Award, 2005.

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

Dr S.P. Singh, Professor and Head, Department of Public Health of the College of Veterinary and Animal Sciences, was awarded the IAVPHS Fellowship at the conference held at PAU, Ludhiana on 9 February 2005.

Dr R.S. Gupta, Professor and Head, Department of Microbiology has been admitted as National Fellow of the National Academy of Veterinary Sciences (India).

KERALA AGRICULTURAL UNIVERSITY, THRISSUR

National Recognition

For excellent academic performance, the KAU has been chosen for the third time as the Best Agricultural University among the 40 SAUs by the ICAR, based on the performance of the students in the examination. The award was received by Dr K.V. Peter, Vice-Chancellor and the Deans of various faculties from Shri Sharad Pawar, Minister for Agriculture, Government of India. The award consisted of a medal, certificate and a cash component of Rs 5 lakhs.

MARATHWADA AGRICULTURAL UNIVERSITY, PARBHANI

Dr V.M. Pawar bags prestigious project award of USDA Training Programme

An innovatively planned, need-based project by Dr V.M. Pawar, Associate Professor, College of Food Technology, MAU, Parbhani entitled 'Sustainable export potential of Alphonso mango from India to USA', was considered the best on 9 June 2004 at Cornell University during the training programme. Dr James E. Shanahan, a faculty member, USDA presented the award in the presence of Dr W. Raniria Coffman, Director, International Programme Chair, Plant Breeding.

Dr V.M. Pawar gets Best Project Award from Cornell University, New York

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