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PROMISING TECHNOLOGY

Modified Atmosphere Packaging for Better Keeping Quality of Guava Fruits

A special polymer film (BOPP) was used for Modified Atmosphere technique for packaging of guava (winter crop) in 2003. 'Allahabad Safeda' and 'Sangam' cultivars of guava were sealed in the specially designed MA packages without the application of any chemical preservatives. The MA-packaged fruits retained orchard freshness even beyond 22 days compared with only 7 days for control samples at ambient temperature (12-25°). MA packaging has been specially designed to establish optimum-package air composition automatically through respiration of the packaged fruit and selective gas permeation through packaging film. The MA packages can be used for extending the shelf-life of guava three times at the ambient temperature (12-25°). With this technology, orchadists can store fruits safely in air-cooled storages in farms during the glut, and can market them during the lean periods at remunerative prices. This would avoid distress sale of fruits by orchadists. In addition, orchard-fresh fruits would be available in the market for longer duration. Large-scale experiments have been planned for mangoes.

(Allahabad Agricultural University, Allahabad)

NEW VCs

Dr R. P. Singh, V.C. of MPUAT, Udaipur

Dr R.P. Singh has taken over as the new V.C. of MPUAT, Udaipur on 1 April 2003. Born on 3 July 1939, he took M.Sc. in Agriculture (1962) and Ph.D. in Agricultural Economics (1967) from BHU with distinctions. He is the Chairman of the Narendra Deva Institute for Development of Agriculture and Rural Upliftment, Lucknow, since April 2002. He was Director of Extension for 18 years and was also Pro-Vice-Chancellor of N.D. University of Agriculture and Technology, Faizabad, till his retirement on 30 June 2000. Dr R.P. Singh started his career as Research Officer in Agricultural Economics at the BHU. He is recipient of Lal Bahadur Shastri Memorial Award (1988), Encouragement Award for Transfer of Agricultural Technology (1989), and first Acharya Narendra Deva Memorial



Dr R.P. Singh

Award (1993) for excellent contribution in the field of Transfer of Technology; National Extension Fellow Award by the Indian Society of Extension Education (1995), besides being the Fellow of the National Academy of Agricultural Sciences since January 2002. He delivered many keynote, inaugural, plenary and other invited lectures and chaired more than 35 major national and international conferences, symposia, seminars, workshops etc. He has been the Chairman of Quinquennial Review Team (ICAR), Member of Board of Management of Rajasthan Agricultural University, High-level Review Committees, Standing Policy Planning Committee, and Working Group of Extension for formulation of Eighth Five Year Plan. He has published 300 titles including 10 books, 101 research papers, 35 research reports, 181 extension papers/articles etc. He had guided 25 M.Sc. or Ph.D. students. Dr Singh had visited the UK, USA, Holland, France, Italy, Malaysia, Singapore, Thailand and Kenya for various assignments or for professional lectures besides being member of Indian delegations.

Sardar Vallabh Bhai Patel University of Agriculture and Technology, Meerut (U.P.) (inducted from 25 April 2003)

Dr P.P. Singh took over on 24 September 2002 as the founder Vice-Chancellor of Sardar Vallabh Bhai Patel University of Agriculture and Technology, Meerut (U.P.). He is a renowned agronomist. Born on 5 January



Dr P.P. Singh

1940, he completed his M.Sc. (Agric.) and Ph.D. (Agronomy) from the IARI, New Delhi, and Post-Doctorate from the University of Hawaii, USA. Dr Singh started his career as Assistant Professor (Agronomy) and rose to the position of the Head of the Department of Agronomy, and worked as the Dean, Students' Welfare and Director of Extension for 5 years at G.B. Pant University of Agriculture and Technology, Pantnagar. He spent 32 years, teaching under-graduate and postgraduate students, besides working on sugarcane agronomy, weed control and soil-fertility management at the all-India level. He worked as P.I. (Agronomy) of Sugarcane Project under the ICAR for 12 years, Weed Control Project jointly supported by the ICAR and United States Department of Agriculture for 4 years, and Mega project sponsored by the IRRI, Philippines for 3 years. Dr P.P. Singh was local Co-ordinator of Sugarcane Research for 24 years at the university level. He received best-paper award of Sugarcane Technologists' Association of India and Joint Team award from the USDA, IRRI, Philippines, and the Best Worker award from Farmers' Forum of Khatima (U.P.). Dr Singh was Senior Technical Expert (Agric.) in World Bank Project for a year before joining as Vice-Chancellor. He has guided 15 Ph.D. and 19 M.Sc. students and has published 156 research and popular articles in the Indian and

international journals.

Dr V.M. Pawar gets Second Term as V.C. of MAU, Parbhani

Dr V.M. Pawar has joined as Vice-Chancellor, MAU, Parbhani, on 2 August 2000 for a 3-year tenure, for the second term, due to excellent progress of the university under his guidance. Born on 23 August 1947, Dr Pawar had his education at the College of Agriculture, Pune, and



Dr V.M. Pawar

subsequently M.Sc. at the Indian Agricultural Research Institute, New Delhi. Throughout a meritorious student, Dr Pawar did his Ph.D. in 1974 and post-doctoral studies at the Institute of Virology, Oxford, U.K. in 1979-80. He started his career as Assistant Professor of Entomology and rose to the position of Associate Dean and Principal, Director of Extension Education and Dean, Faculty of Agriculture and Director of Instructions, Mahatma Phule Krishi Vidyapeeth, Rahuri. Dr Pawar is the recipient of Young Scientist Medal, Hexamar Award, ICAR/IARI Fellowships, Commonwealth Fellowship and several Merit Certificates. During his stay in the U.K., he visited several well-known laboratories and harnessed linkages. He has been an active member of the various professional societies in India and abroad. Dr Pawar guided 11 Ph.D. and 19 M.Sc. students, and published more than 125 research papers, and 45 popular articles in English and Marathi, and also co-authored Handbook of Pesticides.

Focus on Universities - Achievements and Events

UNIVERSITIES

ASSAM AGRICULTURAL UNIVERSITY, JORHAT

ATIC and Video Conferencing Facility Inaugurated

The ICAR-sponsored Agricultural Technology Information Centre (ATIC) and video conferencing facility installed at the ATIC building of AAU, Jorhat was inaugurated on 22 January 2003 by Shri Tarun Gogoi, Hon'ble Chief Minister of Assam. The centre is the first of its kind in the NE region. In his inaugural address, the Chief Minister pointed out that the fruits of agricultural research should reach the farmers as rapidly as possible. The video conferencing facility will provide easier interaction of AAU with different public sector organizations, besides providing a base for the cyber-extension service to be undertaken in the university in due course. This facility is first of its kind among the agricultural universities in the NE region and second in the country.

Agri-Clinic at RARS, N. Lakhimpur Established

An Agri-Clinic was established at the RARS, N. Lakhimpur on

26 March 2003. A Phone-in programme was launched to give first-hand solutions to farmers' problems. The facility is available on Monday, Wednesday and Friday from 11.00 a.m. to 1.00 p.m. on Phone no. 222448.

Herbal Cure of Aflatoxin

A local herb, Andrographis paniculata, has given good results in detoxifying or counteracting aflatoxins in the oilseeds and in the poultry and livestock feeds based on nutritious coarse cereals. The use of the herb @ 100 mg/kg in poultry feed could counteract the growth of aflatoxin-producing fungus up to 56.48% and aflatoxin level up to 58.93%.

ACHARYA N.G. RANGA AGRICULTURAL UNIVERSITY, HYDERABAD

Agriculture Policies for the 21 Century - from Vision to Action

Acharya N.G. Ranga Agricultural University organized the Choudhary Charan Singh Birth Centenary Celebrations and a 2-day

commemmorative workshop on 'Agricultural Policies for the 21 Century: from Vision to Action', in collaboration with the International Food Policy Research Institute, USA on 15-16 April 2003, at the university auditorium, Rajendranagar.



C.C.S. Birth Centenary Celebrations at ANGRAU, Hyderabad

Dr Ajit Singh, the then Hon'ble Union Minister for Agriculture, inaugurated the Centenary Celebrations, as well as the Workshop and delivered the inaugural address. Hon'ble Chief Minister of Andhra Pradesh, Shri N. Chandrababu Naidu was the Chief Guest, whereas Shri Vadde Sobhanadreeswara Rao, Hon'ble Minister for Agriculture, Government of Andhra Pradesh, presided over the inaugural function.

ATIC Building Inaugurated

The new building for Agricultural Technology and Information Centre, named after Choudhary Charan Singh was inaugurated on 15 April 2003 at Rajendranagar by Shri N.Chandrababu Naidu, Hon'ble Chief Minister of Andhra Pradesh. in the



C.C.S. ATIC building at ANGRAU, Hyderabad

presence of Dr Ajit Singh, the then Union Minister for Agriculture, Government of India, Shri Vadde Sobhanadreeswara Rao, Hon'ble Minister for Agriculture, Government of Andhra Pradesh; Dr I. V. Subba Rao, the then Vice-Chancellor, ANGRAU; and Members of the Board of Management, ANGRAU were other dignitaries.

BIDHAN CHANDRA KRISHI VISHVAVIDYALAYA, KALYANI

Yellow-mite Infestation in Jute in NE India

Jute is an important industrial fibre crop of the north -

eastern India. Its early - sown crop is severely affected by yellow mite [Polyphagotarsonemus latus (Banks)]. The yellow mite has been observed to subdue ther insect pests such as apion, bihar hairy caterpillar and semilooper. The use of



Yellow-mite infested jute plant

insecticides, especially chlorinated hydrocarbons, was found to eliminate natural enemies of mites.

Reduction of High Arsenic Content

Options for minimization of the arsenic input in soil, crop or animal continuum through contaminated ground-water irrigation were studied at the Department of Agricultural Chemistry and Soil Science, Faculty of Agriculture, BCKV. The aim was to find phytoremediation of arsenic contamination in

irrigation water and soil. Some of the important ready-to-use findings are enumerated below.

- Soil has been demonstrated to serve as an effective sink for arsenic under irrigation with contaminated ground water.
 There is a need to prevent toxin from entering the surface water bodies.
- + Soil amelioration with incorporated organic manures facilitates the binding of arsenic in the soil matrix and retards the transmission of toxin up in the food web.
- + Several farmer-attractive or remunerative cropping sequences have been developed, designed primarily to take off partially the pressure on the contaminated ground-water resources for irrigation, especially during the lean period of ground-water recharge.
- Inclusion of pulses, other legumes, green-manure crops or selected vegetables along with organic manure incorporation has been found helpful in moderating arsenic build-up in the soil and plant parts.
- + Generally, the arsenic accumulation in plant parts decreases in the order: root>stem >leaf>economic produce.
- Organo-arsenic complexation with humic or fulvic colloids of the native soil and the incorporated organic manures has been noted to moderate the hazards of arsenic toxicity in soil-crop system.
- + The ability of some blue-green algae (BGA), *Anabaena* sp. and *Nostoc* sp., and four different types of bacteria has been demonstrated for decontaminating arsenic.
- + The major intake of arsenic by farm animals is through feed sources, and the contribution of drinking water is rather small.
- + Growth of rice plant was restricted in pots where arsenic was applied at and above the rate of 30 mg/kg in pot-culture experiment.
- + Many wild species such as *Ageratum* sp., *Fimbristylis* sp., *Lanta camara, Croton* sp. etc. are found to accumulate arsenic in modest amounts, and can be used for phytoremediation.

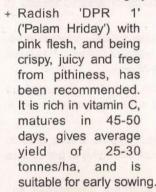
CH. SARVAN KUMAR KRISHI VISHWAVIDYALAYA, PALAMPUR

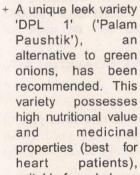
Crop Varieties Released

In its silver jubilee year, CSK V. Palampur has developed 12 varieties of different crops for the farmers of the state. These varieties have been approved for general cultivation by the State Seed Subcommittee.

- + Wheat 'HPW 184' ('Chandrika') has been recommended for cultivation under timely sown rainfed and irrigated areas in the lower and mid-hill region. This variety possesses high degree of resistance to yellow and brown rusts, besides being responsive to fertilizer application, and having 12% protein content.
- + Rajmash 'SRC 74' ('Kailash') has found favour with the farmers of Kinnaur. It must be sown by May end.
- + Cowpea 'C 475' ('Dhaula Lobiya'), a white-seeded variety having resistance to Cercospora leaf spot and viral diseases, has been recommended for low-hill areas. It matures in 80-85 days and has synchronous maturity.

- + Broccoli 'DPGB 12' ('Palam Haritika'). 'DYPgB 1' ('Palam Kanchan') and 'DPPB 1' ('Palampur Vichitra') have been recommended for growing during rabi in the mid and low hills, and during summers in high hills and dry temperate zone.
- + 'Palam Vichitra' is a high-yielding variety, which has tight. purple compact, head with nutritional and medicinal properties, besides having ornamental appeal. It takes 115-120 days from transplanting to first harvest, with average yield of 22.5-25 tonnes/ha.







'Palam Haritika' green sprouting broccoli



'Palam Vichitra' purple heading broccoli



'Palam Hriday' radish



'Palam Paushtik' leek

suitable for salad, soup and cooking. It takes 140-150 days to reach marketable stage and gives average yield of 30-35 tonnes/ha.

BALASAHEB SAWANT KONKAN KRISHI VIDYAPEETH, DAPOLI

New Varieties Released

Coconut D x T

A new hybrid coconut variety D x T ('Choughat Green Dwarf' x 'West Coast Tall') has been released during 2003 for Maharashtra. The dwarf is the female parent whereas tall is the male parent. This variety was evolved through AICRP on Palms at the Regional Coconut Research Station, Bhatye, dist. Ratnagiri. The fruits are oval and yellow.

It is a semi-tall, regular bearer with 11 to 14 bunches (average 12.50) and average yield of 140 nuts per palm per year. This is an early-bearing (4.5 to 5 years), high-yielding variety, and easy for hybridization, due to its dwarf female parent.

Nutmeg 'Konkan Swad'

The university has released a high-yielding nutmeg variety 'Konkan Swad' during 2003 through selection. This is adapted to southern Konkan region. It has been evolved after experimentation for 8 years at the Regional Coconut Research Station, Bhatye, dist. Ratnagiri. It gives 2.63 kg dry nuts (761 fruits) per tree per year. The average dry-fruit weight is 4.03 g and average mace yield is 0.52 g/fruit. The variety closely resembles local nutmeg types. It is the third high-yielding variety released in the country.

Grand Success in GATE and JRF 2003

Shri Devidas Patvalekar, a fourth year student of College of Agricultural Engineering Technology, Dapoli, has secured all-India first rank in GATE 2003 with 99.85% marks. Nine students out of 12 secured more than 90% in this test. Miss Deepali Narvankar and Bhushan Malandkar secured second and third ranks in the all-India JRF 2003 examination respectively. This college has won first and second



Mr Devidas Patvalekar

awards in state-level Engineering project competition (Dipex-2002 and Dipex-2003) for 2 consecutive years.

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

Varieties Released

'Pant Sovbean 1241'

'Pant Soybean 1241', a multiple-diseaseresistant variety of sovbean developed at Pantnagar university, has been released for commercial cultivation in Tarai and Bhabar regions of Uttaranchal and its neighbouring



'PS 1241' Soybean

parts of Uttar Pradesh. During the past few years fungal complex (premature drying of plants) was so severe that area under soybean crop was drastically reduced, up to 80%. Being resistant to fungal complex, yellow mosaic virus, bacterial pustules and charcoal rot, 'Pant Soybean 1241' is of considerable importance for the soybean growers of this area. This variety has been developed through hybridization ('PK 1039' x 'PK 327'), followed by pedigree method. It matures in about 121 days and is quite distinct with tan pod colour, having 3 seeds/pod, and semi-dwarf tall plants. It yields up to 36.0 g/ha. With emerging seed demand, this variety is becoming very popular in Tarai and Bhabar regions.

'Pant Ses 1'

Dhaincha 'Pant Ses1' has been released for green-manuring by Uttaranchal by the State Seed Variety Release Committee. It fits well in the rice-wheat crop rotation system and thus will

promote organic farming of rice in the state. This variety can be sown in the first week of May or the crop may be ploughed and incorporated into the soil at 45 or 60 days after sowing. It gives a green biomass yield of 2.3 and 4.2 tonnes/ha at 45 and 60 days respectively and accumulates nitrogen at the rate of 180 kg/ha.

MAHARANA PRATAP UNIVERSITY OF AGRICULTURE AND TECHNOLOGY, UDAIPUR

Varieties Released

Recently MPUAT has released the following high-yielding varieties of maize, jowar, kangni and cotton for cultivation.

'Pratap Hybrid Maize 1' ('EH 50802')

It is an extra early-maturing white-seeded single-cross hybrid with ability to escape terminal drought and with a yield potential of 35-38 tonnes/ha in rainfed areas of Rajasthan. It is tolerant to downy mildew, ost-flowering stock-rot and stem-borer.



'Pratap Hybrid Maize1'

'Pratap Jowar 1430' ('SPV 1430')

It is a dual-purpose sorghum, maturing in 90-95 days with a grain-yield potential of 30-35 tonnes/ha and multiple resistance to diseases and tolerance to stemborer, midge and earhead bug.

'Pratap Kangni' ('SR 51')

It is a tall (120 \pm 10 cm), dual - purpose foxtail millet variety with broad leaves, having semicompact panicle. It is extra-early maturing (67 \pm 3 days), bold cereamish-seeded and tolerant to diseases and insect pests. It yields 1.6-1.8 tonnes/



'Pratap Jowar 1430'



'Pratap Kangni SR 51'

ha of grain and more than 5 tonnes/ha of dry fodder.

'Pratap Kapi 1' ('REDV 7')

It is an early maturing (230-240 days) variety suitable for rainfed areas of Rajasthan. It is free from bacterial leaf blight, Alternaria leaf blight and leaf curl virus under natural conditions. It is moderately



'Pratap Kapi 1' Cotton

resistant to sucking pests and bollworms of cotton.

MARATHWADA AGRICULTURAL UNIVERSITY, PARBHANI

Exhibition at Joint AGRESCO

An exhibition was arranged from 29 to 31 June 2003 at the joint AGRESCO Meeting held at MPKV, Rahuri. Hon'ble Shri Govindraoji Adik, Agricultural Minister of the Maharashtra State graced the occasion in the milieu of Vice-Chancellors of SAUs of



Shri Govindraoji Adik, Hon'ble Minister for Agriculture (Maharashtra) visitng the exhibition

the State, Directors of MCAER, Agril., Commissioner, scientists, students and farmers.

MAHATMA PHULE KRISHI VIDYAPEETH, RAHURI

A Joint AGRESCO Meeting of all four agricultural universities of Maharashtra and State Department of Agriculture was held during 30 May to 1 June 2003 at Rahuri for finalization of recommendations, to be passed on to extension agencies an



Shri Govindraoji Adik, Hon'ble Minister of Agriculture, Maharashtra delivering inaugural Speech

extension agencies and State Agricultural Department for adoption at field level.

New Varieties Released

Sorghum 'Phule Amruta' ('RSSV 9'): It gives 17.6% more green-forage yield (5-6 tonnes/ha) than the check 'Ruchira' (3.5-4.0 tonnes/ha), is tolerant to shootfly, and has high T.S.S. (Brix 18.7-22.0%).

Soybean 'Phule Kalyani' ('DS 228'): It is less susceptible to rust and has high yield potential (2.3-2.4 tonnes/ha), being 25% more than of 'PK 1029' and 29% more than of 'JS 335'.

Cotton 'JLA 794': It is a rainfed cotton with high yield potential of 0.8-1.0 tonnes/ha, which is 40.37% more than of 'Y 1'.

Okra 'Phule Utkarsh' ('GK IV-3-3-3'): It is a high-yielding (23 tonnes/ha) variety, giving 43.26% more than Arka Anamika (16.12 tonnes/ha), is tolerant to yellow-vein mosaic virus, has good fruit quality, and is early maturing (first harvest at 49-52 days).

Frenchbean 'Phule Suyash' ('GK 7'): It has high yield potential of 16.78 tonnes/ha, giving 57.66% higher yield than 'Contender' (10.64 tonnes/ha), besides good pod quality and early maturity (70-80 days).

Pomegranate 'Phule Arakta' (No. 11/3 (303)): Its aril is blood red. This has high yield potential (29.83 kg/plant), is less susceptible to fruits spots and thrips, is soft seeded and sweet, and is suitable for export.

Pomegranate 'Bhagava' (recommended variety): It has bold and attractive arils. Its fruits are saffron coloured and mature within 180 - 190 days, with average yield of 30 kg fruits per tree. Its fruits are bigger in size, sweet, less susceptible to fruit spots and thrips, and are suitable for export.

Felicitation Function for Dr Mangala Rai

In India 65% of the population depends upon agriculture and it is the need of the time of globalization of the world to devote the agricultural scientists for need - based research and development in agriculture, said Dr Mangala Rai, Secretary, DARE and Director-General, ICAR, New Delhi. He expressed these views during the



Dr Mangala Rai, Secretary (DARE) and Director-General, ICAR, New Delhi, at the Felicitation Function. Others present on dais are Vice-Chancellors of four agricultural universities of the State, Agriculture Secretary and Agriculture Commissioner of Department of Agriculture, Maharashtra.

state-level meeting on Increasing the efficiency and effectiveness of agricultural universities, organized by State Department of Agriculture at the Mahatma Phule Krishi Vidyapeeth, Rahuri on 9 June 2003. He asserted that as the biotechnology research requires huge investment, all the State agricultural universities should work together. He said that the SAUs need to identify their weaknesses and strengths, and avail of all possible opportunities to reorient their policies and programmes. There is a need to identify the kind of entrepreneurship required and formulate training programmes to develop entrepreneur skills in rural youth. Dr Rai elaborated his views on human resource development, organic farming, contract research, conservation of biodiversity, and collaboration by universities, and stressed that Maharashtra should become a model state, setting example for other states of India. Dr Rai also inaugurated the International Students' Hostel, recently constructed at the MPKV, Rahuri.

The Vice-Chancellors of all SAUs of the State, Dr S.N. Puri (Rahuri), Dr S.S. Magar (Dapoli), Dr V.M. Pawar (Parbhani) and Dr S.A. Nimbalkar (Akola) and the Commissioner of Agriculture Dr S.K. Goyal presented the reports of the respective institutes.

N.D. UNIVERSITY OF AGRICULTURE AND TECHNOLOGY, FAIZABAD

New Variety Released

Urdbean genotype 'NDU 99-2', developed by the team of pulse research group of the university, has been identified by the Central Variety Identification Committee at its meeting held on 8 May 2003 at the GAU, Vadodara. This variety has stable yield, superior to that of the popular variety of the zone and best check 'Pant U 19'. The genotype has added superiority for bolder seed size (95.2 g/100 seeds) and resistance to MYMV and CLS both, which has been incorporated in the national crossing programme as donor for MYKV and CLS.

University Launches its Website

N.D. University of Agriculture and Technology, Kumarganj, Faizabad (U.P.) has launched its website www.nduat.nic.in. The site will be updated fortnightly.

PUNJAB AGRICULTURAL UNIVERSITY, LUDHIANA

Delegation from Sri Lanka

A high-level delegation from Sri Lanka led by Shri Dhanusena Hetiaracchi, Secretary, Ministry of Agriculture and Livestock, visited the Punjab Agricultural University, Ludhiana on 9 May 2003 to explore the possibility of benefiting from scientific expertise in teaching, research and extension. He signed a MoU with the ICAR for 2 years.

RAJENDRA AGRICULTURAL UNIVERSITY, PUSA (SAMASTIPUR)

Extension of Research and Agrotechnology to Farmers

Sugarcane: Two new sugarcane varieties have been released, 'BO 136' and 'BO 137', having mid-late maturity, average yield of 72 and 85 tonnes/ha, and sucrose 16.4 and 16.5% respectively. Their ration crop gives an average yield of 68 and 73 tonnes/ha with 16.6 and 16.8% sucrose in the juice respectively. They give 10 to 15 tonnes/ha higher yield than the popular varieties of midlate maturity group, and additional gross income of Rs 8,000/ha. These varieties are also tolerant to major diseases and pests.

Sweet Potato: An early-bulking sweet-potato variety, 'Rajendra Shakarkand 92', has been released for commercial cultivation. The average yield in multilocational trials was 24 tonnes/ha after 120 days of planting. This variety is suitable for flood-prone and diara areas of north and south Bihar, where food and green fodder for human and livestock are much needed in a shorter time after the flood water recedes.

Potato: A new potato variety, 'Rajendra Aloo 3', a clonal selection resembling 'Kufri Kuber' was released for commercial cultivation. It is of medium maturity, requiring 75-85 days. It produces large, light yellow and smooth-skinned tuber with fleet eyes. The flesh is yellowish, waxy in texture and it is easy to cook. Average tuber yield is 22.5-25 tonnes/ha. It is moderately resistant to late blight and leaf spot diseases. This variety is superior to 'Rajendra Aloo 1' and 'Rajendra Aloo 2', released earlier, in cooking quality and tuber yield.

A Superior Scented Rice Strain Identified: A superior scented rice strain 'RAU 3002' ('Super Katarni') having long, slender grain of 11 mm length has been identified and recommended by the Research Council for cultivation in rice-growing belt of Bhagalpur and Munger districts of Bihar. The average yield is 30 q/ha. It is being evaluated in other fine rice-growing areas of the state before releasing for commercial cultivation.

Zinc Deficiency in Soils: Most of the soil types in Bihar have become deficient in zinc availability for the growing crops. Basal soil application of 25 kg zinc sulphate/ha every year for short-duration crops under such a situation has been recommended. For rice-wheat cropping system or for long-duration crops like sugarcane, however, the basal soil application of 50 kg zinc sulphate/ha in alternate year is recommended. The cost of the zinc sulphate fertilizer can be saved if it is applied in the soil along with 50 q FYM or compost. If zinc-deficiency symptoms appear on the standing crop, 2 to 3 foliar sprays of 0.5% zinc sulphate + 0.25% slaked lime at 10-day interval is recommended. This technology improves the crop yield up to 50%, besides the quality of the produce and health of the soil for sustainable crop production.

Sulphur Deficiency in Soils: More than 10 to 50% soils of Bihar have been found deficient in available sulphur. Intensive cropping, cultivation of high-yielding crop varieties and application of sulphur-free high-analysis fertilizers have further aggravated the problem. Soil application of sulphur in the form of phospho-gypsum or single superphosphate @ 40 kg/ha for short-duration crops (pulses, oilseeds etc.) @ 60 kg/ha for rice-wheat cropping system and 80 kg/ha for long-duration crops (sugarcane) every year will take care of sulphur deficiency in soils. This technology not only enhances the crop yield from 10 to 40% but also improves the quality of produce and maintains the health as well.

S.K. UNIVERSITY OF AGRICULTURAL SCIENCES AND TECHNOLOGY, JAMMU

IAUA National Symposium

Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu (SKUAST-J) organized a 2-day National Symposium (20-21 March 2003) on sustainability of agricultural production and value addition in the context of WTO, in collaboration with the Agricultural Indian Universities Association. The symposium was inaugurated by Jenab Mufti Mohd. Sayeed,



Hon'ble Minister for Agriculture Production, Animal Husbandry and Cooperative (third from left) presiding over the concluding session of the national symposium. Sitting on the chairs are (L to R): Commissioner-cum-Secretary, Agric. Production Dep., Hon'ble Minister of State for Agric., Hon'ble Minister for Agric. Production, Animal Husbandry and Cooperative, J&K State, and Vice-Chancellor

Dr Rangil Singh, Director (Research) and Organizing

Secretary of the symposium welcomming the

delegates. Sitting on the chairs (L & R) are: Dr S.B.

Singh, VC, CSAUAT, Kanpur and President, IAUA.

Jenab Mangat Ram Sharma, Hon'ble Dy Chief

Minister, and Jenab Mufti Mohd. Syeed, Hon'ble Chief

Hon'ble Chief Minister of J&K. The valedictory function was chaired by Hon'ble Minister for Agricultural Production, Animal Husbandry and Cooperative, J&K State. Hon'ble Minister for Agriculture, J&K and Commissioner-cum-Secretary to the Government, Department of Agricultural Production also graced the function. Jenab H.U. Khan, Hon'ble Vice-Chancellor of this university, while concluding the proceedings of the deliberations, highlighted the impact points emerging from the discussions:

+ Reduction in production costs, improvement in quality of agricultural produce and processing, and facilities with

infrastructure need priority attention.

- + Specific land-use systems of western Himalayas must take into account quality and size of land holding, degrading soil fertility, low soil temperature, high rainfall and soil erosion.
- + Rainfed areas, not suited

Minister, J & K, State crop production, should be developed as pasture and grazing lands for livestock production. This will help in raising the economic status of the farmers.

- + Farm machinery like seed-cum-fertilizer drill, which help in timely sowing and fertilizer placement, needs to be popularized.
- + The contingent plans for aberrant weather conditions need to be developed well in advance and also some policy issues like improvement in credit availability, extension of crop insurance schemes to rainfed crops etc. need to be taken.
- + Benefits should be derived from the advancements in transgenic technology in insect/pest resistance, reduction in post-harvest losses and development of value-added food products with special reference to improvement in the quantity and quality of oils, proteins and vitamins.
- + Since genetic engineering and biotechnology are quite

expensive, a joint approach for development of transgenics among agricultural and traditional universities should be followed.

- + Research and development should lay emphasis on preharvest management, primary processing, diversified use of products/bio-products and creation of new markets.
- + To meet WTO obligations in the years to come, the politicians, bureaucrats and technocrats need to join hands for reduction in the cost of production, sustainable production and value addition, to cater to the needs of domestic and international
- + For resource conservation technology in agriculture, the participatory approach of farmers or warabandi system of irrigation need to be adopted with the help of line departments.

CONVOCATION NEWS

UNIVERSITY OF AGRICULTURAL SCIENCES, DHARWAD

17th Convocation at UAS, Dharwad

Seventeenth convocation of the University of Agricultural Sciences, Dharwad was held on 30th May 2003. Shri T.N. Chaturvedi, the Governor of Karnataka and the Chancellor of the University presided over the function and confirmed the degrees to the graduates. Shri V.S. Koujalagi, Minister for Agriculture, Government of Karnataka and the Pro-Chancellor of the university graced the occasion.

Prof. Goverdhan Mehta. Director, Indian Institute of Science, Bangalore was the Chief Guest, who delivered the convocation address. In his address he emphasized the need to have second revolution in the country advanced on knowledge and technology.

During the convocation 25 Ph.D., 165 M.Sc. and 270 B.Sc. degrees, were

Shri T.N. Chaturvedi, Governor of Karnataka and Chancellor of UAS, Dharwad confirming the degrees. In photo (form L to R): Dr S.A. Patil, Vice-Chancellor, UAS, Dharwad, Shri V.S. Koujalagi, Minister for Agriculture, Government of Karnataka and Pro-Chancellor of University, and Prof. Goberdhan Mehta, Director, IIS, Bangalore.

awarded. Gold medals to 78 and cash awards to 9 outstanding students were given. Dr S.A. Patil, Vice-Chancellor, UAS, Dharwad welcomed the guests and presented the highlights of the activities of the university.

AWARDS AND RECOGNITION

MAHARANA PRATAP UNIVERSITY OF AGRICULTURE AND TECHNOLOGY, UDAIPUR

Dr D.K. Misra Memorial Lecture Award to Dr R.P. Singh

The Indian Society of Extension Education (ISEE) conferred on Dr R.P. Singh, Vice-Chancellor, MPUAT, Udaipur, the prestigious Dr D.K. Misra Memorial Award on the occasion of the National Seminar Extension strategy for promoting development



Dr R.P. Singh

initiatives among farming community' held during 18-20 June 2003 at the G.B. Pant University of Agriculture and Technology, Pantnagar (Uttaranchal). This award was conferred upon him for delivering a lecture on 'Technology transfer: approaches and challenges for Indian agriculture' and for his excellent contributions in transfer of agricultural technology. The award carries a certificate, a signia and a token amount of Rs 7,000.

VC of the Year Award 2002 to Dr R.P. Singh

Dr R.P. Singh, Vice-Chancellor, MPUAT, Udaipur was honoured with the Vice-Chancellor of the Year Award 2002, by the World Institution Building Programme and the International Association of Educators for World Peace, a Non-Government Organization affiliate of United Nations Economic and Social Council for his outstanding contribution in educational planning and administration. This award was conferred on the occasion of World Environment Day, 5 June 2003.



Dr R.P. Singh

INDIAN AGRICULTURAL RESEARCH INSTITUTE, NEW DELHI

Dr K.N. Singh Memorial Award to Dr Baldeo Singh

The Indian Society of Extension Education conferred on Dr Baldeo Singh, Head, Division of Agricultural Extension, the Dr K.N. Singh Memorial Award on the occasion of the National Seminar on Extension strategy for promoting development initiatives among farming community', held GBPUAT, Pantnagar



Dr Baldeo Singh receiving Dr K.N. Singh Memorial Award from Dr P.L. Gautam, VC, GBPUAT, Pannagar during National Seminar of ISEE

(Uttaranchal), from 18 to 20 June 2003. This award was conferred upon him for all-round excellence achieved in Extension research.

MARATHWADA AGRICULTURAL UNIVERSITY, PARBHANI

Dr Shirshikar Receives HARD Award

Dr Shrikant Prabhakar Shirshikar, Pathologist, Oilseeds Research Station, MAU, Latur, has been bestowed with the Hexamar Agricultural Research and Development Foundation Mumbai Award for 2001-02 for outstanding research on the Integrated disease management of sunflower. The award was given by the Indian Society of Oilseeds Research, Hyderabad on 28 January 2003. The downy mildew disease has been a bottleneck in crop improvement of sunflower. Dr Shirshikar's contributions through extensive screening of germplasm and evaluation has led to the identification of downy mildew-resistant parental lines, which have formed the basis for development of hybrids in sunflower.

PUNJAB AGRICULTURAL UNIVERSITY, LUDHIANA

Fellowship to Prof. Sehgal

Prof. V.K. Sehgal, Senior Research Engineer and former Head of the Department of Processing and Agricultural Structures, has been granted Fellowship by the Indian Society of Agricultural Engineers at its Thirty-seventh Convention, held recently at the Maharana Pratap University of Agriculture and Technology, Udaipur. He was awarded for his contribution in the field of post-harvest technology. He has been instrumental in developing several technologies and processes equipments, that have been adopted by the farmers and entrepreneurs for value addition, reduction of post-harvest losses and employment generation.

Editor (Punjabi) gets Poetry Award

Shri Gurbhajan Gill, Editor (Punjabi) in Communication Centre of the PAU was awarded Prof. Puran Singh Memorial Poetry Award by the Triveni Kala Sangam, New Delhi. The award consisting of Rs 21,000, a shawl and a citation, was presented by S. Sukhdev Singh Dhindsa, Minister for Fertilizer and Chemicals, Government of India, New Delhi. Shri Gurbhajan Gill has published Punjabi poetry books Shisha Jhood Bolda Hai, Har Dhukhda Pind Mera Hai, Bol Mitti Diya Bawya and Agan Katha. Besides, he has two compilations of his ghazals. His book Bol Mitte Diya Bawya is prescribed as a textbook for B.A. (Honours) class of the Guru Nanak Dev University, Amritsar.

Dr H. N. Khajuria, Meritorious Teacher of the Year

Dr H. N. Khajuria, Professor of Forestry, has been selected for the Meritorious Teacher Award for 2002. Dr Khajuria has won the Indo-French Cultural Exchange Fellowship for carrying out specialized studies at Bordeaux (France) for a year. Under USAID-sponsored Faculty Improvement Programme, the PAU deputed him for training at North Carolina State University, Raleigh, USA, in Forest Tree Improvement. The Foundation of Technical Institute, Ministry of Higher Education and Scientific Research, Government of Iraq also sought his expertise for 2 years for developing Technical Institutes in Agriculture in their course curricula and infrastructure. The award, with citation and cash prize of Rs 5,000, will be conferred on Dr Khajuria in the next university convocation.

UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE

Sardar Patel Outstanding ICAR Institution Award, 2001

The Sardar Patel Outstanding ICAR Institution Award for the year 2001 was bestowed upon the University of Agricultural Sciences, Bangalore, on 16 July 2002 by Shri Ajit Singh, Union Minister of Agriculture.



Dr A.M. Krishnappa, V.C receiving the award

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