



IAUA NEWS

QUARTERLY NEWSLETTER OF INDIAN AGRICULTURAL UNIVERSITIES ASSOCIATION

VOLUME 1 No. 2

JANUARY-MARCH 2001

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PROMISING TECHNOLOGIES

Improved Technology for Quality BGA Biofertilizer

The production technology has been substantially improved with introduction of new, cheap and easily available carrier material (Multani mitti or clay) that support higher microbial load with longer shelf life thus considerably reducing the quantity of inoculum per unit area (from 12-15 kg of soil based BGA biofertilizer/ha, the newly developed material required is only 1 kg/ha). The production is carried out in concrete tanks in a polyhouse under semi controlled conditions which reduces contamination from dirt and insects. The algal cultures are multiplied on mass scale, harvested and later mixed with the carrier in definite quantities thus assuring the quality of the product. The production can be achieved under such conditions in 7-12 days on an average depending upon the temperature conditions and production can be carried out throughout the year. This method ensures effective quality control, reduction in handling cost and storage and is commercially viable.



Polyhouse production unit of BGA biofertilizer under semicontrolled conditions (IARI)



Inside view of the polyhouse

New Unsaturated Fatty Acid Isolated

A new unsaturated fatty acid [(Z)-6-methyl 1-12 Meptadecenoic acid], isolated for the first time from essential oil of *Ageratum conyzoides*, was evaluated for insect growth regulatory activity against the 5th instar nymphs of *Schisocerca gregaria*. It caused 70% mortality at 10 µg/nymph, and 90% mortality at 20µg/nymph. More than half of the mortality observed occurred within the first 72 hrs after injection.

(Indian Agricultural Research Institute, New Delhi)

Rice Varieties for Stressed Situations

Submergence Tolerant Lines

Every year, on an average, five lakh hectares of sali rice area are devastated by the recurrent floods in Assam. Four promising submergence tolerant lines namely TTB 202-3, TTB 202-4, TTB 202-16, and TTB 202-25 have been developed and recommended to the farmers for growing in the chronically flood affected areas. These lines, under actual flood situations in the farmers' field recorded survival score of more than 70% after 15 days of submergence with water column of about 1 m depth above the crop canopy and yielded 4-5 tonnes per hectare.



Screening for submergence tolerant rice varieties

Lines for Delayed Planting

The recurrent flood and several other problems compel a large group of farmers in Assam to delay the planting of winter rice (sali) by aged seedlings. Breeding programme to develop high yielding rice varieties with staggering ability in planting led to development of four high yielding rice cultures viz., TTB 283-38-3, TTB 283-126, TTB 285-714 and TTB 286-371 which are suitable for growing under delayed planting conditions with seedling age up to about 70 days without significant reduction in grain yield. These varieties have recorded yields of 4-5 tonnes per hectare in the farmers' field when planted with 70 days old seedlings in the last week of August. (Assam Agricultural University, Jorhat)



Rice variety TTB 3-38-3 planted on 29 August with 75 days old seedlings

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Resource Conservation Technology (RCT)

Pantvarsi in association with Rice-Wheat Consortium, CIMMYT, India Office, organised demonstrations on RCT especially on zero-tillage and Rice-Wheat drilling on permanent beds in farmers' participatory mode over an area of more than 2,500 acres around KVK, Ghaziabad, U.P. The practice aims at reducing tillage, increases fertilizer use efficiency, saves seed, prevents soil cracking, promotes microbial activity, saves 30% water, lessens weeds germination and growth and finally improves yields. This practice also promotes crop diversification particularly during monsoon season and crop intensification during transition period between wheat and rice. The conservation tillage will prove to reduce cost of cultivation by 20-25%. Direct seeding of rice or transplanting rice on raised beds avoids puddling, induces efficient water use and improves rain water conservation. Dr J.B. Chowdhury, VC, Pantnagar University organised a visit



Bumper rice and wheat crops on raised bed system



New zero-till cum bed planter with the shaper placed in front of it

of Nobel Laureate, Dr Norman E. Borlaug, accompanied by Dr A. Alam, DDG (Engg.), ICAR and Dr R.K. Gupta, Regional facilitator, R-W Consortium, on the demonstration-sites of RCT at Kallugarhi and Matiyala villages on 12 March, 2001. Dr Borlaug praised the agri-engineers of Pantvarsi for developing the Pantnagar zero-till ferti-seed drill cum bed planter which is now being manufactured by a number of Indian firms and distributed under strict monitoring of Pantvarsi. The equipment was put to rigorous testing on farmers' fields in Uttar Pradesh, Haryana and Punjab.



Prof. Norman Borlaug in discussion with scientists and farmers on the benefits of RCTs

Metal Tolerant Bacteria to Clean-up Environment

A significant gene pool of Ni^{2+} , Ca^{2+} , Mg^{2+} , and Cr^{3+} resistant growth promoting fluorescent pseudomonads has been developed. These metal tolerant strains can withstand up to 400gm concentration of these metals. Molecular dissection revealed that these characters are plasmid borne in the organisms. These plasmids are non-transferable to normal rhizosphere flora, however, selective transformation could be achieved.

Once characterized these gene(s) can be exploited to develop strain(s) in a desired combination for different metals and will be used as growth promotory bioinoculants for polluted and degraded lands. (G.B. Pant University of Agric. & Tech., Pantnagar)

Vaccines Released

The following vaccines have been developed by the Vaccine Research Centre (viral vaccine) for Animal Health studies:

Inactivated Infectious Bursal Disease Vaccine

Vaccine is cost-effective since single vaccination protects the chicks against IBD. So far 9.70 Lakh doses of vaccine have been produced and supplied to poultry farmers, and 64,000 chicks at the Poultry Research Station, Nandanam could be immunized.

Inactivated Leechi Disease Vaccine (Hydropericardium Syndrome Vaccine)

It is a liver homogenate based vaccine and incorporates the local isolate, 302000 doses of Leechi vaccine were produced and supplied to broiler growing areas of Tamil Nadu.

Oil Adjuvant for Ranikhet Disease - Live Vaccine

Oil adjuvant is to be used as a diluent for RD live vaccine at the time of vaccination. Escape of live virus from trapping environment results in early active immunity. The remaining live virus, which is killed in the oil, released from it continuously at a certain rate, acts as a booster. So far 15,46,000 doses of RD adjuvant have been supplied.

Black Quarter Vaccine

Vaccine for Black Quarter has been prepared after intensive research, for about 6 years. The cost of newly produced vaccine is Re 1.00 per dose for cattle and for sheep and goats it is 50 paise per dose.

Trivalent Leptospira (Inactivated) Vaccine for Bovines

A trivalent leptospira vaccine has been developed controlling leptospirosis disease in dairy cattle. There are hundreds of leptospiral strains involved in producing the disease. This new vaccine prevents Leptospiral abortion, infertility, stillbirth and loss of milk production in dairy cattle. It helps in the control of transmission of this disease from cattle to other livestock and human beings. Besides it has no side effects when used in cattle.

(Tamil Nadu Veterinary & Animal Sciences University, Chennai)

SCIENTISTS IN NEW POSITION



Dr M. Mahadevappa takes over as ASRB Chairman

Dr M. Mahadevappa (ex-President of the IAUA and former Vice-Chancellor of UAS, Dharwad) is a distinguished plant breeder, and specially a rice scientist. He had developed nine improved rice varieties and two hybrids for cultivation in Karnataka. He also pioneered in New Rice Rotation Cropping Pattern and Integrated Parthenium Weed Management (IPWM). He is author of 12 books, about 200 research and 120 popular articles. He has 31 international presentations to his credit.

He worked as visiting scientist for nearly two and a half years at the IRRI, Manila and toured 21 countries for paper presentation and interaction with international scientists as the member of the high power team from India. He was bestowed international Watumull Foundation Award 1987 - Hawaii; besides Sir M. Visvesvaraya Memorial Award 1999, Hooker Award, IARI, New Delhi and best Agricultural Scientist Award for the year 2000, and at the State level Rajyotsana award 1984 and two University Awards.

He is a fellow and member of about 15 prestigious State Boards/Organisation/Council/Task Force including Governing Body of the ICAR Society, New Delhi.

Dr R. Prabakaran becomes Member of Executive Committee of the IAUA

Dr R. Prabakaran, Vice Chancellor of the Tamil Nadu Veterinary and Animal Sciences University, Chennai has been nominated as the member of the Executive Committee of the Indian Agricultural Universities Association from 16 February 2001. He is an expert in Animal Husbandry Economics. During his professional career he has completed 33 Research Projects and published 67 research papers.



Dr G.B. Singh takes over as VC, JNKVV, Jabalpur



Dr Gajendra Bahadur Singh, former Deputy Director General (NRM), Indian Council of Agricultural Research, New Delhi and an eminent Agronomist, took over as Vice Chancellor of Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur on December 4, 2000. Dr Singh established the ICAR Research Complex at Gangtok, Sikkim and served as Joint Director and Director, ICAR Research Complex of N.E.H. Region. He served as ADG (Agronomy), ICAR; Director, IISR (Lucknow). He also had a 2 year stint with the International Council for Research in Agroforestry (ICRAF), Nairobi, Kenya as visiting Scientist and Coordinator for East Africa programme. He has been president of Indian Society of Agronomy 1984-88, Indian Society of Weed-1991-94 and Association of Sugarcane Technologists of India. Dr Singh has many honours and awards to his credit including Gold Medal ISA and Fakhruddin Ali Ahmed Award for outstanding Agricultural Research in tribal areas-1980-81 and ICAR Award for leading best Research Team-1982-83. He has 180 research papers, five book chapters and nine books/bulletins to his credit.



Dr S. Ayyappan joins as Director CIFE, Mumbai

Dr S. Ayyappan a renowned Fisheries Expert takes over as Director, CIFE, Mumbai from 16 June 2000. Earlier he was Director CIFA, Bhubaneswar. He has the distinction of improving the work-culture at both the places and has to his credit many gold medals and recognitions for his work. He is the President of the Indian Fisheries Association and member of many national and international professional Societies/Associations. He has 100 publications to his credit.

FOCUS ON UNIVERSITIES - ACHIEVEMENTS AND EVENTS

DEEMED UNIVERSITIES (NATIONAL INSTITUTES)

Central Institute of Fisheries Education, Mumbai

Symposium on Fishery Technologies and their Commercialisation

A National Symposium on Fishery Technologies and their commercialisation was organised by Central Institute of Fisheries Education, Mumbai in collaboration with the Indian Fisheries Association from 11-12 January, 2001. The Symposium was inaugurated by Dr Debendra Pradhan, Hon'ble Union Minister of State for Agriculture.

The following publication and cassette were released on this occasion.

Books (Bilingual): Fishing Craft and Gears, Fish Processing and Indian Freshwater Crab.

Booklets : Freshwater Prawn Farming, Food Products from Fish & Prawn, Brackishwater (Marathi) Prawn farming, Circular Hatchery and Composite Fish Culture.

Cassette : *Matsya ani Jhinga Palan* (in Marathi).

A total of 56 papers were presented in this Symposium.



Dr Debendra Pradhan, Hon'ble Union Minister of State for Agriculture speaking on the occasion of National Symposium on Fishery Technologies and their commercialisation

Training on Seafood for Fisherwomen

A special training programme on sea food preparation i.e. fish papad, fish chakli, fish sandwich, prawn pickle was organised for the fisherwomen of Versova village during 22-27 January, 2001. In this programme 21 fisherwomen were trained on the preparations.

Training Programme on Brood Stock Management and Genetic Selection in Fish Seed Production

A training programme on "Brood Stock Management and Genetic Selection in Fish Seed Production" was organised from 12 February to 3 March, 2001 under ICAR Centre of Advanced Studies. 15 trainees from various institutes and colleges attended the programme. Dr (Mrs) Rupa Shah, Vice Chancellor, SNDT University was the Chief Guest at the inaugural function.



Training programme organised for Versova fisherwomen on sea food

Iranian Delegation Visits CIFE Centre – Kakinada



Course on digital imaging and graphics at CIFE, Mumbai

A six member Iranian delegation, led by Dr A. Hamid Yazadani Jahromi, visited the CIFE's Kakinada Centre on 12 February, 2001. The team also visited the Centre's Freshwater fish farm at Balabhadrapuram and also some private sector freshwater prawn culture farms in the area.

Training Programme on Agriculture and Trade – CIFE, Lucknow

The Lucknow Centre of CIFE, Chinhath, in collaboration with Institute of Agriculture and Environment, a non-government organization, recently organized a short term training programme on Aquaculture and Trade during 11-17 February, 2001 which was attended by fish farmers of Uttar Pradesh. Latest fisheries technology available to the fish culturists like : fish culture, prawn culture, fish seed production and pearl culture was explained to help generate self employment among rural youth apart from increasing the fish production and the income of fish farmers.

Course on Digital Imaging and Graphics

A short course on Digital Imaging and Graphics, first of its kind in ICAR inaugurated by Dr S.D. Tripathi, Ex-Director, CIFE was organised by CIFE, Mumbai from 26 February to 3 March, 2001. The course covered Corel Draw and Photoshop besides graphic design concepts, digital photography and preparation of exhibition material. Dr A.G. Sawant, Member, ASRB was the Chief Guest at the Valedictory function.

Indian Agricultural Research Institute, New Delhi

IARI Hosts 88th Session of Indian Science Congress



Shri Atal Behari Vajpayee, inaugurating the Indian Science Congress

IARI hosted the 88th Session of the Indian Science Congress at its campus from 3-7 January, 2001. The congress was inaugurated by the Hon'ble Prime Minister of India, Shri Atal Behari Vajpayee on January 3, 2001. In his inaugural address, the Prime Minister called upon the Indian scientists to meet the nation's food and nutritional needs without harming the environment. The theme of the congress was Food, Nutrition and Environmental Security.



Inauguration of Indian Science Congress on January 3, 2001 at IARI by the Prime Minister of India. On his left are Dr R.S. Paroda, DG ICAR and General President for the 88th Session of Indian Science Congress and on his right are Shri M.M. Joshi, Minister of HRD; Shri Nitish Kumar, Minister of Agriculture and Dr Panjab Singh, Director IARI

Dr Panjab Singh, Director, IARI welcomed the chief guest and other participants. Speaking on this occasion, Shri Nitish Kumar, Hon'ble Union Minister for Agriculture, said that besides green, the country had also attained white, yellow and blue revolutions, thus providing our people the much needed household food security. He stressed the need for a "Rainbow Revolution" to meet our future demands successfully. Dr Murlu Manohar Joshi, Hon'ble Union Minister for Human Resource Development, Science and Technology and Ocean Development, and Smt. Sheila Dikshit, Hon'ble Chief Minister, Delhi, also addressed the congress, Dr R.S. Paroda, General President of the 88th Session of the Indian Science Congress reminded the gathering that science and research must relate to specific needs of the poor, and ensure maximum returns per unit of investment and time. More than 3500 delegates including 100 delegates from abroad attended the congress. The congress was also attended by farmers and science students. As part of the congress, an exhibition on "Agrovision 2001" was organised.

Indian Veterinary Research Institute, Izatnagar (Uttar Pradesh)

Hon'ble Union Minister of State for Agriculture, Department of Animal Husbandry, Dairying and Agricultural Research and Education, Dr Debendra Pradhan visited the Indian Veterinary Research Institute, Izatnagar on 9 March 2001.

He visited the National Biotechnology Centre, referral Polyclinic Modular Laboratory, Central Instrumentation Facility, Computer Centre, Dairy Farm, National Library of Veterinary Science and Animal Genetic Division. He also visited the IVRI Regional Campus, Mukteswar on 10 March 2001.

Eighth Annual Convention of ISVI and B

The Eighth Annual Convention of Indian Society for Veterinary Immunology and Biotechnology and National Symposium on the "Role of Veterinary Immunology in Livestock Health and Production in India in the 21st Century" was organized at the IVRI, Izatnagar

from 15 to 17 March, 2001. Speaking at the Valedictory function, Hon'ble Minister of State for Petroleum and Natural Gas and Parliamentary Affairs, Shri Santosh Gangwar said the Scientists and the researchers ought to chalk out the priorities in connection with future research work to compete with the technologies of the advanced countries.

Dr Mahendra Pal Yadav, Director, IVRI said that the young scientists of the Immunology discipline should ensure that our livestock remain in their best possible health, because livestock is the lifeline of our country and has contributed significantly to the Economy.

UNIVERSITIES

Tamil Nadu Veterinary and Animal Sciences University – Chennai

Workshop on Hygienic Food for Next Millennium

A two day workshop on "Hygienic Food for Next Millennium" sponsored by the Ministry of Agriculture, Government of India, New Delhi, was organised by the Directorate of Extension Education, Tamil Nadu Veterinary and Animal Sciences University, Chennai on 4-5 January, 2001 at Madras Veterinary College Chennai, in which 135 delegates participated.

Hon'ble Minister for Animal Husbandry, Shri Pulavar Senguttuvan, Government of Tamil Nadu, presided over the inaugural function and released the souvenir on "Hygienic Food for Next Millennium" and a book on "Murrel Culture". Dr R. Prabaharan, Vice Chancellor, Tamil Nadu Veterinary and Animal Sciences University delivered the inaugural address.

The workshop consisted of technical sessions on dairy and dairy products, meat and meat products and fish and fisheries products. In addition to the key-note address and lead paper at each of the session, 25 technical papers were presented.

National Science Day 2001

The National Science Day for 2001 sponsored by the Department of Biotechnology, Government of India, New Delhi, was celebrated by the Department of Animal Biotechnology, Madras Veterinary College on 20 February, 2001. The theme of the Day was "Information Technology in Science Education".

An essay and debate competition was organised for school students on that day. Eighty-eight students from eleven schools participated in these competitions and 12 students won prizes. Besides a science exhibition was arranged.

NSS Special Camp for Fisherwomen

NSS Unit of Fisheries College and Research Institute conducted a special camp at Punnakayal during 26 January to 7 March, 2001. Hon'ble Minister for Fisheries, Tmt. Jenifer Chandran inaugurated the camp and Thiru. B. Thomas Fernando, village President, Harbour Committee delivered the felicitation address.

On 27 February, 2001, 33 Fisherwomen participated in a discussion on women development through self help group and various schemes offered by social departments of the Government of Tamil Nadu.

On 28 February, 2001 demonstration of fish pickle preparation and hygienic practices of fishes were conducted. 60 fisherwomen participated in these demonstrations.

Animal Diseases Diagnostic Kits Developed

The following kits have been developed by the Vaccine Research Centre (Viral Vaccine) of the Tamil Nadu Veterinary and Animal Sciences University.

- ◆ *Infections Bursal Disease:* Agar gel immunodiffusion test (IBD-AGID) kit.

This kit is used for seromonitoring. In old chicks the maternal antibody level can be assessed and vaccination can be planned using this kit.

- ◆ *Ranikhet Disease:* Haemagglutination Inhibition Test (RDHI) Kit. This is mainly used for regular assessment of antibody level against Ranikhet disease.

- ◆ *Portable Counter Immune Electrophoresis Kit:* operational both on AC and DC and can be used for diagnosis of viral diseases.

- ◆ *Blue Tongue:* agar gel immune diffusion test kit. This is the latest kit developed by the Centre for BTV antigen and antibody detection.

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

Directorate of Placement Established

The University imparts job oriented education in the fields of Agriculture, Animal Science, Veterinary Science, Home Science and Agricultural Engineering. The duty of the University towards its students does not end here itself but extends in finding suitable employment also for its Alumni so that their training and abilities are utilized for the national benefits.

New Varieties of Urd Bean Developed

Two Urd varieties Azad Urd 2 and Shekhar 2 have been released. Azad Urd 2 (KU-91) is high yielding (8-10 g/ha) bold and black seeded variety suitable for spring. This variety possesses resistance against Yellow Mosaic Virus and is tolerant to root rot and leaf wrinkle disease. Shekhar 2 (KU-300) is a high yielding (8-10 g/ha) bold and green seeded yellow mosaic resistance mung bean. This variety is suitable for spring as well as *Kharif*.

(Contribution: Dr I.P.S. Malik and A.S. Rathi)

New Tomato and Table Pea Variety Developed

KS 118 in tomato and powdery mildew resistant table pea KS 245 were identified at XIX All India Group Meeting of Vegetable Research Workers held at the Indian Institute of Vegetable Research, Varanasi from 15-18 January, 2001.

KS 118 has a built in yield potential of 30-35 tonnes/ha. The fruits of this variety are attractive, round, red and the number of fruits per plant is more. Table pea pods are medium long, straight, well filled, tight and with a yield potential of 8-9 tonnes green pods.

Bullock-Driven Tractor

Shekhar tractor weighs 165 kgs and has a wheel cost of additional Rs. 8,000/- all implements needed have been manufactured to go with it. They are easy to fit as a single person can attach an implement to it in just 5-7 minutes. With it, one can use implements like cultivator, disk harrow, plough, leveler, patella, seed-drill and even trolley. The University has already started its manufacture and sale. Through the efforts of Kanpur Gaushala Society, the Uttar Pradesh Government is also considering to allow 50% subsidy for the poor farmers.

(Contribution: S/Shri S.P. Singh, F.K. Singh, Yogendra Srivastava; Supervision: Dr V.S. Verma, HOD, Agronomy)



Bullock Driven Tractor

G.B. Pant University of Agriculture & Technology – Pantnagar

Uttaranchal Governor Inaugurated Fish Seed Hatchery

His Excellency, the Governor of Uttaranchal, Shri Surjeet Singh Barnala on 16 February 2001 inaugurated the Fish Seed Hatchery in the College of Fisheries.

He said that the farmers of the State will be greatly benefited by this hatchery and the State will also earn substantial revenue. Uttaranchal has many lakes, all the big rivers and their tributaries and the suitable environment that must be utilized for varied fish culture.



His Excellency, the Governor of Uttaranchal, Shri Surjeet Singh Barnala inaugurating the fish seed hatchery at GBPUAT, Pantnagar

Tie-up with Rabo Bank and IDFC

Pantvarsity entered into a strategic cooperation agreement with Rabo Bank and IDFC to capitalize growth of agribiotechnology and to focus on the development of academic intellectual property in food and agriculture and bio-sciences. An MOU was signed by the three parties on 2 March 2001 in the presence of Shri Nityanand Swamy, Chief Minister of Uttaranchal. Present on the occasion were Mr Rik Van Slingelandi, Chairman of the Managing Board, Rabo Bank International; Mr Rana Kapoor, Managing Director, Rabo India; Mr Nasser Munjee, Managing Director, IDFC; Mr Ajay Vikram Singh, Chief Secretary, Government of Uttaranchal; Dr J.B. Chowdhury, Vice Chancellor of Pant University and senior officials of the three organizations and the Uttaranchal Government. Rabo India, is a subsidiary of the specialist Dutch Rabo Bank. The IDFC is a specialized financial intermediary promoted, inter alia, by the Government of India with a mission to lead private capital to commercially viable infrastructure projects and to provide a strong policy advisory role to Government.



Dr J.B. Chowdhury, Vice-Chancellor, signing the MoU with Rabo Bank and IDFC. Sitting with him are the Chairman, Rabo Bank International and the Chief Minister of Uttaranchal

Collaboration with IRRI, Philippines

The G.B. Pant University of Agriculture and Technology, Pantnagar, and the International Rice Research Institute, Los Baños, Laguna, Philippines, have signed a memorandum of understanding to collaborate in Ph.D. thesis research related to rice and rice-based farming system. The MOU has been signed between the Vice Chancellor of Pantvarsity, Dr J. B. Chowdhury and the Director General of IRRI Philippines, Dr Ronald P. Cantrell. The MoU will facilitate Ph.D. researchers to complete their course work at Pantnagar and to conduct thesis research at IRRI or vice-versa or both at the IRRI to build up their capabilities in rice and rice-based farming systems research.

Sher-e-Kashmir University of Agricultural Science & Technology Srinagar, (Kashmir)

Crop, Vegetables and Fruit Varieties Developed

Crop	Variety	Yield Potential	Features
Rice	SKAU-429 (Kohsaar)	4.0-4.5 tonnes/ha, yield superiority	Cold tolerant, early maturing and moderately resistant to blast
Wheat	SWI-8 (Singchen)	3.5-4.0 tonnes/ha, straw 9.0-9.5 tonnes/ha	Resistant to yellow rust, lodging ear cockle and moderately resistant to loose smut
Barley	SBL-4 (Nurboo)	3.8 tonnes/ha	Altitudinal tolerance 3550m, suitable for cold arid agro climatic region of Leh
			Altitudinal tolerance 3550m, moderately resistant to yellow rust
			VEGETABLES
Turnip	SKUAST-5 (Nageen)	36 tonnes/ha	1. Suitable as <i>rabi</i> crop in the valley and summer crop in high hills
			2. Suitable for growing in Poly houses in valley and cold arid regions
			3. Suitable for irrigated fields, roots are tender and sweet, pure white with good cooking quality
			4. Rich in ascorbic acid, moderately sweet and free from pungency
Carrot	SKUA C-41	25 tonnes/ha, superior	Early-maturing, resistant to frost and early bolting, roots are tender, sweet. Recommended for sale. High in TSS and good in ascorbic acid
			FRUITS
Walnut	1. SKAU-0004 (HAM DAN)	Nut weight 14 gm with 54% shelling-avg. nut yield 15 kg Tree ⁻¹	Semi Dwarf
	2. SKAU-0017	Nut weight 21 gm with 52% shelling-avg. nut yield 30 kg Tree ⁻¹	Semi Dwarf
Apple	HS-9 (AKBAR)	Average fruit yield 24 kg Tree ⁻¹ of 16-20 years of age	Fruit medium – large in size, red coloured, matures in 157 days after full bloom

Indian Agricultural Research Institute, New Delhi



39th Convocation of IARI

The Thirty-ninth Convocation of the Indian Agricultural Research Institute was held on 30 March, 2001. The Chief Guest, Shri Nitish Kumar, Hon'ble Union Minister of Agriculture and Railways in his

convocation address stressed the need to move towards household food and nutritional security. He said that the Government had already announced the National Agriculture Policy which sets a target of 4 per cent growth in Agriculture. He stressed the need to strengthen scientific infrastructure and human resource to meet daunting challenges that are emerging. He also addressed some of the emerging concerns on WTO, marketing and pricing.

As a part of the Convocation Week, the 31st Lal Bahadur Shastri Memorial Lecture was delivered by Prof. R.B. Singh, Assistant Director General and FAO Regional Representative for Asia and the Pacific Region on 29 March



Prof. R.B. Singh delivering the 31st Lal Bahadur Shastri Memorial lecture

2001 on the topic "Who Will Feed India - the Small Farmers". The lecture was presided over by Dr D.N. Tewari, Member, Planning Commission. In his lecture, Prof. Singh highlighted the role of small and marginal farmers in contributing to the overall food production of the country, and stressed the need to empower them to free the country from hunger and poverty.

Acharya N.G. Ranga Agricultural University - Hyderabad

Dr A. Venkataraman, Member Agriculture and Irrigation, State Planning Commission, Tamil Nadu, while delivering the Convocation Address at the 33rd Annual Convocation of the Acharya N.G. Ranga Agricultural University on 16 February, 2001, said that "to achieve a desirable rate of 7 per cent annual growth in the national economy, agriculture must register a growth rate of not less than 4 per cent. But the present growth rate is around 2 per cent and it is on the declining trend."

Dr C. Rangarajan, Governor of Andhra Pradesh and Chancellor of the University, conferred degrees on the Graduates, Post Graduates both at Masters and Doctoral levels, besides presenting Gold Medals and Awards to meritorious students and the outstanding faculty. The Acharya N.G. Ranga Young Scientist Award of ANGRAU, which was instituted for the first time in the University in connection with the Birth Centenary of Prof N.G. Ranga was also presented.

Dr I.V. Subba Rao, Vice Chancellor, ANGRAU, presented a brief report, highlighting major accomplishments and activities of the University during 1999-2000. He stated that the University got the Best Institution (Best Agricultural University) Award for the year 1999 from ICAR for its outstanding contributions to Agricultural Research, Education and service to farmers.

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



His Excellency Chancellor and Governor of U.P. Dr Vishnukant Shastri being honoured by the Vice Chancellor Dr S.B. Singh

The Eighth Convocation of Chandra Shekhar Azad University of Agriculture and Technology, Kanpur was held on 24 March 2001 at Kanpur Campus. The Convocation was presided over by His Excellency Chancellor of the University and Governor, Uttar Pradesh, Dr Vishnukant Shastri. Hon'ble Agriculture Minister, Uttar Pradesh, Shri Diwakar Vikram Singh was the Chief Guest.

Special Convocation at Raj Bhawan

The University organized a Special Convocation on 7 March, 2001 at Raj Bhawan, Lucknow, to award Honorary Degree of D.Sc to Dr Norman E Borlaug, an eminent international scientist, former Director, International Maize and Wheat Improvement Centre (CIMMYT), Mexico and Nobel Laureate.



Nobel Laureate Dr Norman E. Borlaug being conferred upon the Honorary Degree of D.Sc. by H.E. Chancellor Dr Vishnukant Shastri

AWARDS AND HONOURS

Indian Agricultural Research Institute, New Delhi

Best Faculty Award

Five faculty members, namely, Dr K.V.B.R. Tilak, Head Division of Microbiology, Dr Prajneshu, Principal Scientist, Dr Baldeo Singh, Head, Division of Agricultural Extension; Dr I.P.S. Ahlawat, Sr. Scientist, Division of Agronomy and Dr M.C. Jain, Head Division of Environmental Science were awarded Best Faculty Awards for their outstanding contributions to teaching.



Dr K.V.B.R. Tilak



Dr Baldeo Singh



Dr M.C. Jain



Dr S.M.S. Tomar

B.P. Pal Award

The Sixth B.P. Pal Award for the year 2000 was awarded to Dr S.M.S. Tomar, Sr. Scientist, Division of Genetics, for his outstanding work on "Development of Rust Resistant Wheat Varieties for Rainfed Areas in Central India".

Indian Veterinary Research Institute, Izatnagar

Young Scientists Award

The Young Scientists Award of ISVIS was conferred on Dr Manoj Kumar.

CCS Haryana Agricultural University, Hisar

Hari Krishna Shastri Memorial Award

The first Hari Krishna Shastri Memorial Award was awarded to Dr D.P. Singh, Professor of Agronomy for his outstanding work on "Soil-Crop-Water-Atmospheric Relations and Integrated Farming Systems".

CULTURAL EVENTS

Acharya N.G. Ranga Agricultural University : Hyderabad

The ANGRAU team won record second time among State Agriculture University the Merit Trophy at the 2nd National Youth Parliament Competition and 11 students of Bapatla Campus received individual prizes at a special function organized by the Ministry of Parliamentary Affairs, GOI on 17 January, 2001 at New Delhi.

National Agriculture Fair on WTO and Indian Agriculture

ANGRAU Organized a National Agriculture Fair for four days from 1-4 March 2001 on the theme 'WTO and Indian Agriculture in 21st Century.' Sri Vadde Sobhanadreeswara Rao, Hon'ble Minister for Agriculture and Horticulture, Government of Andhra Pradesh, inaugurated the fair. A Souvenir was brought out on the occasion.

The Fair provided an excellent opportunity to the farmers, entrepreneurs, processors, exporters, policy-makers and administrators to interact with the scientists, experts, input agencies, to understand the implications of WTO and the type of change required in the technology to produce what can be marketed and to know the standards of various commodities for export.

Central Agricultural University, Imphal

Cultural Troupe Adjudged 2nd Best

The CAU, Imphal troupe among the eight participants was adjudged the 2nd best in the cultural event organized during the 88th Session of Indian Science Congress held from 3-7 January 2001 at Indian Agricultural Research Institute, New Delhi.



Cultural troupe from CAU Imphal performing during 88th Indian Science Congress

The cultural contingent (16 students : 12 girls & 4 boys) of CAU, Imphal presented two dances i.e. Manipur Dance (Thougal Jagoi) and Bamboo Dance in the evening of 6th January 2001. In this programme only those Agricultural University troupes participated which won many medals in various competitions of 'Millenium Agri Uni Fest, 2000, held from 14-18 October 2000 at Assam Agricultural University, Jorhat.

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From:
Executive Secretary
Indian Agricultural Universities Association
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