



NEWS LETTER

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IAUA

Indian Agricultural Universities Association

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Promising Technologies

Fruit based carbonated drinks

Fruit based carbonated drinks made from fresh fruits of aonla, grape, jamun and lime, are refreshing natural healthy drinks containing no artificial colour, flavour or essence. At present, these beverages are produced on the commercial line and sold through the canteen of Lal Bahadur Shastri Centre and Agricultural Technology Information Centre in the campus, under the brand name of "Pusa Fruit Drinks". The technology for their preparation is available for commercialization.



"Pusa Drinks" of aonla, grape, jamun and lime with natural colour, flavour and essence

High yielding wheat lines

To achieve quantum jump in wheat productivity new plant types have been designed combining negatively correlated yield components (high tillering with high grain weight and high grain weight with high grain number per ear). The yield components have been successfully combined in genotypes DL 1266-1, DL 1266-2, DL 1266-6 and DL 1280-1, resulting in very high yields.

(Indian Agricultural Research Institute, New Delhi)

Indian Agricultural Universities Association - Brief History

The Indian Agricultural Universities Association is a registered society. All the thirty-five Agricultural Universities in the country, including 4 deemed to be Universities of the ICAR (IARI, New Delhi, IVRI, Izatnagar, NDRI, Karnal and CIFE, Mumbai) are its members.

The main objective of the Association is to promote agricultural research, education and extension in universities and states, and thereby rural development in the country.

Vice-Chancellors of all the Agricultural Universities constitute its "General Body". The General Body meets once a year for deciding agenda for the next convention, and also for approval of its audited accounts, budget estimates for the next financial year and election of office bearers. The "Executive Committee" of the Association consists of President, Vice-

President, Secretary-Treasurer and 3 members. They meet in every quarter.

The office of the Association is manned by an Executive Secretary.

The Association organizes annual Convention. This is hosted by one of its member Universities on the theme selected by the General Body.

The Association has been bringing out a journal of the IAUA annually since 1987, to exchange and promote ideas, as this may help improve norms and standards in education, research and extension in Agricultural Universities and also act as a bureau of information to facilitate communication.

The main source of income of the Association is through the subscription from Agricultural Universities.

IAUA : Strengthening up to 2020

- Creating IAUA Website
- To initiate international collaboration: to get in touch with International Agricultural Universities/Associations in different countries for collaboration.
- IAUA to act as Liaison Centre on behalf of Agricultural Universities.
- To help inter-University collaborations.
- To serve as a sale counter for priced publications of Agricultural Universities.
- To serve as a sale/distribution centre for information brochures from Agricultural Universities.

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NEW EXECUTIVE COMMITTEE TAKES OVER FROM 28th NOVEMBER 2000



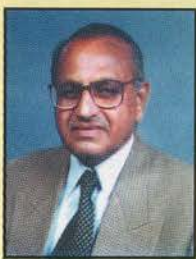
Dr J.B. Chowdhury
President, IAUA

Dr J.B. Chowdhury, Vice-Chancellor, Govind Ballabh Pant University of Agriculture and Technology, Pantnagar, is a renowned plant geneticist and biotechnologist. Recently Ministry of Science and Technology, Government of India, has appointed him as the Chairman of the Task Force on Agricultural Biotechnology and Member of Biotechnology Research and Promotion Committee. Dr Chowdhury is also the member of the Indian Council of Agricultural Research Society and of the Governing Body of the ICAR.



Dr Panjab Singh
Vice President, IAUA

Dr Panjab Singh, Director, Indian Agricultural Research Institute (IARI), New Delhi is a agricultural scientist of international repute. He had worked as the FAO's Regional Plant Production and Protection Officer at Bangkok, and as the FAO's Regional Coordinator, Temperate Asia Pasture and Fodder Network. He has authored about 300 publications, including books. He is also the President, Indian Society of Agricultural Sciences.



Dr I.V. Subha Rao
Secretary - Treasurer

Dr I. V. Subba Rao, Vice-Chancellor, Acharya N.G. Ranga Agricultural University, Rajendranagar, Hyderabad is a renowned soil scientist.



Dr M.Y. Kamal
Member

Dr M. Y. Kamal, Vice-Chancellor of Sher-e-Kashmir University of Agricultural Sciences and Technology, Shalimar Campus, Srinagar (Kashmir), is an internationally renowned fisheries expert. He held several positions including Assistant Director General (Fisheries) in the ICAR.



Dr S.B. Singh
Member

Dr S. B. Singh, Vice-Chancellor of Chandrashekhar Azad University of Agriculture and Technology, Kanpur, Uttar Pradesh, is a renowned geneticist and plant breeder. He did commendable job in managing Trai Development Seed Corporation of Uttar Pradesh.



Dr K. N. Shyamsundaram Nair
Member

Dr K. N. Shyamsundaram Nair, Vice-Chancellor, Kerala Agricultural University, Thrissur, Kerala, is a renowned Farm Management Economist and fellow of M.S. Swaminathan Research Foundation. He is an expert in Sustainable Agriculture and Rural Development and had been member (Agri.), State Planning Board, Government of Kerala.



Dr R.P. Singh
Executive Secretary

Dr R. P. Singh (Former Head, Division of Agronomy, IARI, New Delhi) "Farming System Specialist" and "Rice Wheat" expert joins as Executive Secretary.

FOCUS ON UNIVERSITIES : Achievements and Events

DEEMED UNIVERSITIES (NATIONAL INSTITUTES)

● Central Institute of Fisheries Education, Mumbai

Fish farmers meet at CIFE, Rohtak

Three best farmers were awarded cash prize of Rs 1,000 Rs 750 and Rs 500. A running trophy was also given to the Fisheries Development Officer of the district, to which the best fish farmer belonged.

An exhibition was also organized on this occasion by the CIFE for the benefit of fish farmers.



Dr. S. Ayyapan, Director (center) addressing to farmers during the meet at Rohtak



Dr. S. Ayyappan, Director explaining the exhibits to Hon'ble Union Minister of Agriculture Shri Nitish Kumar

Matsya Darshan inaugurated

Museum of CIFE was inaugurated on 15 December 2000 by Hon'ble Union Minister of Agriculture Shri Nitish Kumar. The museum houses a variety of freshwater and marine fishes, crustaceans, corals, shells etc. Different types of crafts and gears are also on display. The museum provides information about fisheries of India through display panels. It is very useful and informative to school / college students, fisheries enthusiasts and general public.

Indian Agricultural Research Institute, New Delhi

Varieties released

WHEAT

HD 2733 was released for timely sown areas of the North Eastern Plains Zone. This is resistant to brown and yellow rusts and its yield potential is 5.5 tonnes

HW 2044 (Kurinji) was released for the Southern Hills Zone for restricted irrigation and medium to high fertility areas.

HD 2687 variety resistant to rust diseases with yield potential of 6.0-6.5 tonnes/ha, is suitable for timely sown irrigated areas of the North-Western Plains.

RICE

PNR 519, an early maturing, high yielding with superior grain quality variety has been released for coastal saline and irrigated areas. The variety is suited for rainfed upland situation.

Pusa 44 rice variety possessing long slender grains released for Karnataka and Kerala, yields 6.0-7.0 tonnes/ha. It is suitable for mechanical harvesting.



High yielding HD 2733 wheat



Smt. Shiela Dikshit, Chief Minister of Delhi addressing farmers on the occasion of the World Food Day on 16 October 2000 (left). Dr Panjab Singh, Director, IARI, New Delhi (right)

World Food Day

16 October 2000 was celebrated as the "World Food Day" which was attended by a large number of farmers. Smt. Sheila Dikshit, Hon'ble Chief Minister of Delhi inaugurated the function.

The Chief Minister lauded contributions of the scientists and farmers. She advised the farmers to use low-cost technologies.

Advanced Centre for Plant Virology

Advanced Centre for Plant Virology in the Division of Plant Pathology, IARI, was inaugurated by Shri Nitish Kumar, Hon'ble Union Minister for Agriculture. The Centre is well equipped to provide a base for research in plant virology and will establish close linkages with national and international laboratories.



Advanced centre on Plant Virology being inaugurated by Hon'ble Minister for Agriculture, Shri Nitish Kumar.

● **Indian Veterinary Research Institute, Izatnagar (Uttar Pradesh)**

RAPD-PCR fingerprinting for *Pasteurella multocida* isolates

For Indian Buffalo, Polymerase chain reaction (PCR) fingerprinting is a new typing system. This has been adopted to detect inter-or intra-strain variations within species/serotypes of *P. multocida*, causing haemorrhagic septicaemia

ELISA for diagnosis of caprine paratuberculosis (*Johne's disease*)

An ELISA test using protoplasmic antigenic preparation on serum samples preabsorbed with *Mycobacterium phlei* has been standardized. The absorption of serum with *M. phlei* enhanced specificity of the test. The *absorbed* - ELISA showed sensitivity to 70% and specificity to 92%. This test can be used for infected flocks for *Johne's disease*.

AGRICULTURAL UNIVERSITIES

□ **Chaudhary Charan Singh Haryana Agricultural University, Hisar**

Assisted Reproductive Technology test in buffaloes

"Assisted Reproductive Technology" has been successfully tried on buffaloes and their heifers at village Dahima. This village has been adopted by the university under the Technology Assessment and Refinement (TAR) programme of the Central Government. Eleven heifers and 10 buffaloes came to "Heat" within 48 to 72 hours of withdrawal of the treatment.

Plant clinic

CCS Haryana Agricultural University has established a Plant Clinic at its main campus to cater to the needs of

farmers in respect of diagnosis of various crop diseases and solving their other farming related problems. Constructed at a cost of nearly Rs 26 lakh, the clinic has been dedicated to farmers by the Haryana Chief Minister, Shri Om Prakash Chautala, on 24 December 2000.

Focus on management studies

Presently for business management studies specialization is being offered in marketing, finance and agri-business, but shortly new disciplines like human resource management, production management and information management would be added to its course tally.

□ **Dr Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli**

Revised plant protection schedule for mango

The mango crop of the Konkan region suffered heavily every year due to mango hoppers and powdery mildew. The revised schedule for effective control of this is as follows :

- ▲ First spraying by the end of September or first fortnight of October may be made with Sypermethrin 25 EC-3 ml or Evaporate 20 EC-5 ml / or Decamethrin 2.8 EC-9m in 10 liters of water. The spraying should be done at the time of vegetative flush after monsoon on stem branches and leaves.
- ▲ Second spraying is required in December just before flowering with Endosulfan 35 EC-15 ml or Carbaryl wettable powder - 50 WDP-20 gm in 10 liters of water. The spraying should be done at the time of flowering; add 20 g of wettable sulphur 80% or 10 gm of Carbendazim in spray suspension.
- ▲ Third spraying is needed two weeks after the second with Methyl demeton 25 EC-12 ml in 10 liters of water. Add fungicides into spray as given below.
- ▲ Fourth spraying should be two weeks after the third with Fenthoate 50 EC-10 ml or Phosalone 35 - 15 ml or Quinalphos 25 EC-20 ml in 10 liters of water. Add fungicides into spray as given above.
- ▲ Fifth spraying is needed two weeks after the fourth with Monocrotophos 36 EC-11 ml or Dimethoate 30 EC-10 ml in 10 liters of water. Add fungicides into the spray as given above.

- ▲ Sixth spraying is required two weeks after the fifth with any insecticide as mentioned above for first to fourth spraying. Add fungicides into the spray suspension as given above.

Cure for sapota seed borer

Sapota seed borer a new pest has been recorded in Thane district of Maharashtra recently. The incidence resulted in heavy losses. The University has made recommendations for its control as following :

- ▲ Keep the orchards clean and follow proper pruning.
- ▲ Collect and destroy all fallen infested fruits by burning.
- ▲ Plough the soil in the orchards so as to destroy larval and pupal stages of the pest which are exposed and eaten up by birds.
- ▲ Apply 30 kg of 4 per cent Endosulfan dust or 5 percent Carbaryl dust/ ha in soil to destroy soil larval and pupal stages of pest.
- ▲ Spray the orchards with 0.05 per cent Endosulfan 35 EC or 0.1 per cent Melathion 50 EC or 0.2 per cent Carbaryl 50 WDP at fortnightly intervals at the time of flowering and when fruits are smaller in size.

Contribution from Home Science

The significant researches brought out as following in the last quarter of the year :

(i) For dyeing of wool, Kesula flowers provide yellow to yellow-orange and dark rust colour shades while Dhavdi flowers give beige and brownish grey green colour.

(ii) Indigenous practices in human nutrition identified and scientifically validated are as follows :

- ▲ Hot raab prepared by jaggery, wheat flour and ghee given to pregnant ladies just before delivery to facilitate easy child birth.
- ▲ Ladoos prepared from eatable gum, sonth, singhara, dry coconut, black pepper, almond and ghee are given in the morning after 10 days of delivery for good health of the mother.

- ▲ Peepla mool powder is given in hot water or milk in the morning for increase in milk secretion.
- ▲ Turmeric paste prepared in ghee and sugar is given for strengthening bones and to provide relief from joint pains.
- ▲ For smooth and easy teething of baby, tamarind or raw mango is rubbed in the mouth.
- ▲ To control diarrhoea among children afeem + water, sangri cooked with bajra flour, lemon tea, paste of mango guthli and sag boiled in milk or water is given.
- ▲ To control stomach worms, neem leaves or flowers boiled in water are given.
- ▲ Indigenous food for Vit. A and Iron deficiency includes Khakhra, Ladoo Kesar and Mathri etc.

University of Agricultural Sciences, Bangalore

- ▲ Drum-seeder for direct sowing of rice resulted in 20% higher yield as compared to transplanted rice.
- ▲ Shorter duration Ragi variety GPU 28 yielded 30% higher and has been found resistant to neck-blast.
- ▲ Yield increases noticed in Karnataka with hybrid rice KRHS2 over Jaya



Farmers at GPU-28, Ragi plot during "Krishi Mela" at WAS, GKVK, Karnataka

Taluk	Area (in ha)	No. of farmers involved	Yield kg/ha		% increase
			Demons.	Check	
Mandya	16	17	7625	6050	26.0
Pandavapura	6	9	7175	5875	20.4
S.R. Patna	4	5	7065	5688	24.2
Maddur	5	4	8000	6000	33.3
K.R. Pet	5	5	5938	3175	87.0
Malavalli	5	5	6325	4075	55.2
Nagamanagala	2	5	9770	6690	46.3
Total (Mean)	43	50	7413	5663	38.3

University of Agricultural Sciences - Dharwad

Farmer managed small scale irrigation project - Chikkapadasalgi Barrage in Karnataka

Success story : To overcome problems of drought, local people in the region organized themselves voluntarily under the leadership of the progressive farmer cum social worker, Sri Siddu Nyamagouda, to start a farmers co-operative organization called 'Krishan Theera Ryot Sangha'. They constructed Chikkapadasalgi barrage during 1987-89. A unique feature of the barrage that the amount required for construction was mobilized by beneficiaries themselves. Main source of contributions were from farmer-beneficiaries (40%), and machinery and human labour contribution was by beneficiaries (13.22%), CAPART, New Delhi (35.11%) and donations from public associations (10.58%). Beneficiaries as well as non-beneficiaries in the area came forward in thousands and rendered shramdan.

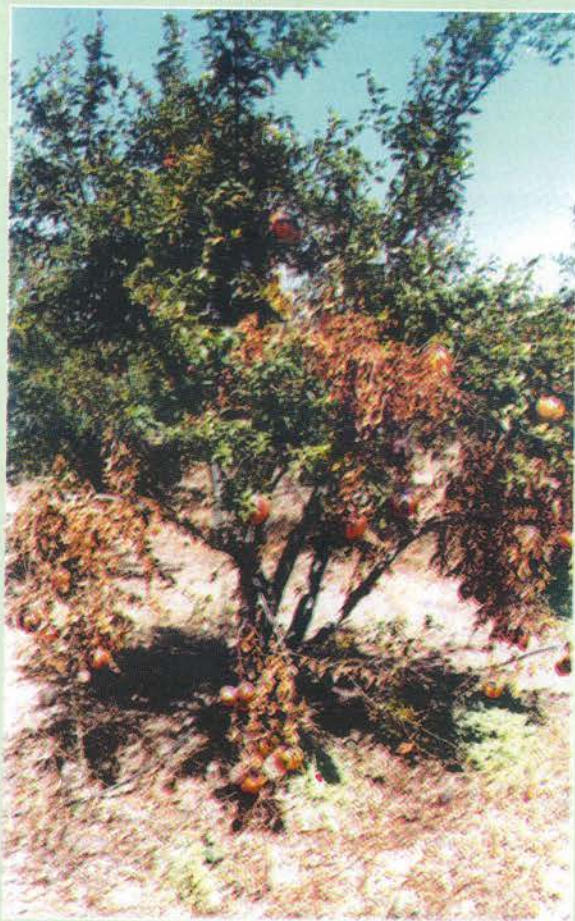
This barrage is a concrete masonry dam having a length of 430 m and height of 8m. The reservoir created by the barrage has a width of 0.45 km and length of 45 km, with a storage capacity of 2.8 thousand million cubic feet (TMC).



A panoramic view of the Chikkapadasalgi barrage across river Krishna in Karnataka

The project was completed within a record 11 months at a cost of Rs 10 million. The total command area of the barrage was 17,200 ha in 1997. The total number of farmer-beneficiaries was 6,424 in 1989, of which 4,582 were small and marginal farmers and 1,032 were large farmers. The barrage reservoir caters to irrigation and drinking water needs of 26 villages and Jamakhandi town.

Alarming spread of Pomegranate wilt (*Ceratocystis imbricata*) in India



Pomegranate wilted plant

In recent years, pomegranate is affected by wilt disease in Karnataka and Maharashtra. Initial symptoms of the disease are yellowing and wilting of leaves on either one or several branches leading to death of the affected plants in a few weeks. Cross sectioned diseased plants revealed brown discoloration in the outer xylem from roots to main trunk. A survey was carried out in 1,506 locations of states on wilt incidence during 1996 to 2000. The severity of pomegranate wilt ranged from 1.63 to 80%. In 184 locations, plants were also infested with shot hole borer (*Xyleborus fornicatus*). Within the field, the pathogen could spread from plant to plant through irrigation, implements and root contact. The wilt severity is comparatively more in deep black soils.



Brown discoloration



Pomegranate wilted pathogen *Ceratocystis imbricata*

AWARDS & HONOURS

● Indian Veterinary Research Institute, Izatnagar

Dr Harendra Kumar, Scientist was bestowed "Prof. Nils Lagerlef Memorial Award" for the Best Research Paper on Animal Reproduction for the year 1998 by the Indian Society for the study of Animal Reproduction at its XVI Annual Convention.

Dr O. P. Paliwal, Head, Division of Pathology was bestowed "Fellow of Indian Association of Veterinary Pathologists FIAVP-1999" in recognition of his significant contribution to the profession in general and Pathology in particular.

Dr A. K. Sharma, Sr. Scientist was given "Dr C.M. Singh Award", a certificate and Gold Medal for his best article "Progressive feed deprivation in goats: Clinics-haematological and biochemical alterations" published in the Indian Journal of Veterinary Pathology.

Dr M. P. Yadav, Director, IVRI, has been elected as Fellow of the National Academy of Agricultural Sciences, New Delhi.

● CCS Haryana Agricultural University, Hisar

Dr S. K. Bhatia, Prof. of Animal Nutrition was selected for prestigious recognition an Award of Rs. 50,000 and a Gold Medal for his contribution to Animal Sciences by National Academy of Agricultural Sciences.

Dr K. R. Dadarwal, Dean College of Basic Sciences and Humanities was elected President for the year 2001 of the Association of Microbiologists of India (AMI). Drs J. S. Duhan and J.S. Malik bagged "Young Scientist Award" and Drs Meenakshi, Urvashi & Neeraj Sharma bagged the best poster award.

Dr L. S. Kaushik, Prof. and Head, Department of Mathematics and Statistics, has been re-elected as Secretary of Society of Statistics, Computer and Applications, (SSCA) for the 3rd consecutive term.

Dr Neelam Khetarpaul, Prof. and Head, Foods and Nutrition Department has been awarded with a "Distinguished Teacher Award".

Dr D. P. Singh, Prof. of Agronomy, has been elected fellow by the Indian Society of Agronomy (ISA).



Dr A. R. Singh

□ Marathwada Agricultural University - Parbhani

Dr A. R. Singh, Soybean Breeder, All India coordinated Research Project on Soybean, Main Centre at Marathwada Agricultural University, Parbhani, Maharashtra has been selected for the prestigious Dr B. R. Ekbote Award-2000 for his significant contribution in the field of Botany with special reference to soybean breeding. Four varieties of Soybean - MAUS-1, MAUS-2, MAUS-32 and MAUS-47 were released for cultivation in the state of Maharashtra, Madhya Pradesh, Rajasthan, Gujarat, Uttar Pradesh, Tamil Nadu, Andhra Pradesh and Karnataka.

CONVOCATION

Address by Union Agriculture Minister at CIFE, Mumbai

The Fifth Convocation of Central Institute of Fisheries Education was held on 15th December, 2000 at the Institute's premises. Shri Nitish Kumar, Union Minister of Agriculture in his Convocation address highlighted salient features of the first ever National Agricultural Policy (NAP) which spells out the direction in which the Government and the country have to proceed for development of sustainable agriculture and the new major schemes which the Ministry of Agriculture proposes to take up for supporting the establishment of network of Agri-clinics and Agri-business centres in the country by agriculture graduates. The honorary D.Sc. degree (Honoris causa) for the first time in the history of this University was conferred on Prof. Kullil Hameed Alikunhi, Padamshree Prof. Narayana Balakrishnan Nair and Dr Shanti Lal Mehta by Hon'ble Minister Shri Nitish Kumar. He also presented Dr Hiralal Chaudhary gold medals and C.V. K. Kulkarni gold medals to the most successful students in each of the academic programmes. Shri Nitish Kumar presented the Samman Patra (Best Farmer Award) to Shri Vasantha Kumar and Shri Manmohan Agarwal, progressive fish farmers from Andhra Pradesh and Madhya Pradesh, respectively. On this occasion the Hon'ble Union Minister of Agriculture released CIFE publications namely Bhartiya Matsyiki - Indian Fisheries (bilingual book); Jalchari - Annual Hindi Magazine; Institute's Information Bulletin and CIFE Alumni - 2000 (D.F.Sc).



Students receiving Gold Medal and Certificate from Hon'ble Union Minister of Agriculture Shri Nitish Kumar

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