

IAUA



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CONTENTS

Spot News

Padma Vibhushan Dr R.S. Paroda
Padma Shri Dr J.S.P. Yadav

New Vcs

Dr N.N. Singh, VC, BAU, Ranchi
Prof. Suresh S. Honnappagol, VC,
KVAFSU, Bidar
Dr B.S. Bisht, VC, GBPUAT, Pantnagar

Focus on Universities

Deemed Universities

IARI, New Delhi
IVRI, Izatnagar
A Profile: IVRI, Izatnagar

Universities

AAU, Anand
BAU, Ranchi
GBPUAT, Pantnagar
JAU, Junagadh
KVAFSU, Bidar
PAU, Ludhiana
SVBPUAT, Meerut

Awards and Recognition

ANGRAU, Hyderabad
WBUAFS, Kolkata
Forthcoming events
SVBPUAT, Meerut

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SPOT NEWS

Life-time Achievement Award to Dr R.S. Paroda

Padma Vibhushan Dr R.S. Paroda, Chairman, Trust for Advancement of Agricultural Sciences, was given the Life-time Achievement Award for his valuable contributions towards growth and development of agriculture, on 19 September 2008. The award was presented by the Chief guest, Dr Somnath Chatterjee, Hon'ble Speaker of Indian Parliament.

Dr Rajendra Singh Paroda, an accomplished plant breeder, geneticist of international repute and an able research administrator, made significant contributions to crop improvement, and worked towards strengthening the national agricultural research system in India as well as in Central Asian-countries and the Caucasus. He was instrumental in establishing Asia Pacific Seed Association and Asia Pacific Association of Agricultural Research Institutions, besides being the main architect of the world's three largest and most modern national gene banks. Under his direction as Director-General, Indian Council of Agricultural Research & Secretary, DARE, the Council attained new heights with massive expansion of infrastructure, formulation of long-term priorities and programmes in the form of vision documents and management reforms.

A scientist par excellence and an outstanding administrator, he also played global role in FAO and CGIAR systems, which helped the farmers and agriculture around the world. He also chaired Global Forum on Agricultural Research during 1998-2001. With work as his driving passion, as Chairman, Trust for Advancement of Agricultural Sciences, he is linking science to society and working for Evergreen Revolution.



Dr Paroda receiving the award

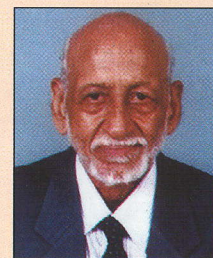
International Honour to Dr J.S.P. Yadav

Padma Shri Dr J.S.P. Yadav, an eminent soil scientist was elected as honorary member of the International Union of Soil Sciences in 2008. Born on 30 July 1922, he had a brilliant academic career throughout, and occupied important positions including Chairman, ASRB; Vice-Chancellor, H.A.U., Hisar; Coordinator and Director, CSSRI Karnal, and Senior Research Officer (Soils), Forest Research Institute, Dehra Dun. Dr Yadav made outstanding contributions especially in the areas of soil and water management for crop production.

He steered successfully multi-disciplinary research on water management and soil salinity under AICRP at a number of locations representing varied agro-climatic situations of India, leading to efficient and economic use of land and water resources. Appropriate techniques for correct diagnosis of salt-affected soils of Indian Gangetic Plains and their reclamation were standardized. Based on an intensive investigation, a salinity-cum-alkali scale was developed to evaluate these problem soils for crop response, which proved of immense practical applicability. In an Operational Research Project in seven villages of Karnal district, lush green crops of rice and wheat could be grown at numerous farmers' fields of highly deteriorated barren alkali lands. These successful efforts prompted the state governments of Punjab, Haryana and Uttar Pradesh to undertake massive reclamation programmes with substantial additional annual production of foodgrains. The research work initiated on afforestation of alkali lands provided impetus for adoption of forestry or agroforestry for rehabilitation of degraded sodic land.

Dr Yadav has to his credit more than 250 publications including research papers in foreign and Indian journals. In view of his significant contributions, Dr Yadav was conferred Padma Shri by the Government of India. He is recipient, singly or jointly, of several awards such as Guinness Award of Commonwealth Scientific Association, Hari Om Trust Award, Dr Rajendra Prasad Award, Brandis and Schlich Memorial Prizes, Honorary Member of Indian Society of Soil Science and Soil Conservation Society of India, Golden Jubilee honour of Indian Society of Soil Science, USAID award for superior performance, appreciation from All India Pensioners' Association for meritorious ICAR service, Samaj Gaurav Samman National Award, Indira Gandhi National Award, and D.Sc. (h.c.) from GBPUAT. He is Fellow of several scientific academies and societies including Chemical Society, London; National Academy of Sciences, India and National Academy of Agricultural Sciences. He has been President of five national professional societies related to Soil Science, Water Management, Agriculture, and Salinity.

He is Editor of National Academy of Agricultural Sciences. He has widely travelled and has been expert consultant of FAO, USAID, UNDP, UN-ESCAP, World Bank, WAPCOS, AFC, PPCL and United Rice Land Ltd.



Dr J.S.P. Yadav

Dr N.N. Singh, VC, BAU, Ranchi gets second term

Dr N.N. Singh, VC, BAU, Ranchi was given second term of 3 years w.e.f. 18.8.2008 in recognition of his efforts to improve the quality of education and research in the university and taking the university to new heights. He is a renowned maize specialist, having spent 23 years in maize breeding. The varieties developed by him are cultivated in large areas at present. Dr Singh has also served as Director, Irrigated Agro-Ecosystem in World Bank-aided N.A.T. project and as Project Director, Directorate of Maize, I.A.R.I., New Delhi. Under his leadership maize production tripled and productivity doubled.



Dr N.N. Singh

Prof. Suresh S. Honnappagol, VC, KVAFSU, Bidar

Prof. Suresh S. Honnappagol joined KVAFSU, Bidar as its new VC on 25 July 2008. He was born on 21 July 1959. He did his BVSc and MVSc from UAS, Bangalore. He served the university in various capacities, viz. Professor and Head (3 years), Director of Instruction (6 years), Registrar (3 years), Director of Research (10 months), and Comptroller (4 months). He is Fellow of ISSAR and NAVSc. He has 1 international, 9 national, 3 state, 2 district and 4 institutional awards to his credit. He is member of academic council of ANGRAU, Hyderabad and TANVASU, Chennai; Scientific Advisory committee, ICAR; and SVVU, Tirupati. He visited 5 US universities in connection with academic and research activities.



Prof. Suresh S. Honnappagol

Dr B.S. Bisht, VC, GBPUAT, Pantnagar

Dr B.S. Bisht joined as VC, GBPUAT, Pantnagar, on 8 August 2008. He had a long distinguished professional career as Scientist, Senior Scientist and Principal Scientist at CIAE Bhopal; Project Co-ordinator of All India Research Project of ICAR; Director, CIPHET, Ludhiana, Zonal Co-ordinator, Krishi Vigyan Kendra in North Zone at Ludhiana; and Assistant Director-General (Human Resource Development), ICAR, New Delhi.



Dr B.S. Bisht

He was born in village Timali of Almora district on 15 June 1951. He did his graduation and post-graduation from GBPUAT, Pantnagar, and was University Merit Scholar for 3 years. He completed PG Programme in Management in 1982 from Indian Institute of Management, Ahmedabad, receiving Ponds (India) Industrial Merit Scholar award for academic excellence. Later, he obtained doctoral degree in Industrial Engineering and Management from Indian Institute of Technology, Kharagpur.

Dr Bisht has been instrumental in developing two national-level research institutes and several All India Research Schemes. He also guided 100 students for their masters and Ph.D. thesis work in various universities. He has been on the Board of CBSC, has served many important committees of the Bureau of Indian Standards; Boards of AICTE, CCSHAU, Hisar; KAU, Thrissur, MPUAT, Udaipur; National Horticultural Research and Development Foundation; and universities at Navsari and Anand. He has also been an expert member for Project Approval Committee of Ministry of Food Processing Industries, Government of India. At ICAR for 7 years, he was responsible for designing, implementing and monitoring human resource-development programmes towards academic excellence and R&D.

Focus on Universities : Achievements and Events

DEEMED UNIVERSITIES

INDIAN AGRICULTURAL RESEARCH INSTITUTE, NEW DELHI

Golden Jubilee Celebration of Post-Graduate School

On 22 August 1958, Indian Agricultural Research Institute, New Delhi was declared deemed-to-be university under UGC Act, 1956 and was authorised to award post-graduate degrees of Master of Science and Doctor of Philosophy in agricultural sciences and its related basic disciplines. Post Graduate School celebrated its Golden Jubilee on 22 August 2008 in Dr B.P. Pal Auditorium of the institute. On this occasion Dr M.S. Swaminathan, Member Parliament (Rajya Sabha) & Chairman, M.S. Swaminathan Research Foundation, Chennai, delivered Golden Jubilee Lecture on 'Higher education in agricultural sciences in India: 50 years and beyond'. Dr Mangala Rai, Director-General, ICAR & Secretary, DARE, Government of India, presided over the function. Dr S.A. Patil, Director, IARI, Dr H.S. Gaur, Dean & Joint Director (Edn), highlighted the significant contributions of IARI during the last 50 years.



Dr M.S. Swaminathan

In an inspiring lecture, Dr Swaminathan highlighted the origin and development of agricultural education at PG School. He mentioned that human-resource development for scientific agriculture has been a very important contribution of IARI. Had PG School not existed, the country would not have progressed so fast in the development of a national grid of agricultural universities and of competent scientists for various ICAR institutes and projects. By linking research, education and extension training in a mutually supportive manner, PG School became the flagship of education for agricultural advancement and agrarian prosperity. As a matter of great concern he mentioned that Indian Agriculture is at the cross-roads. On the one

hand, we have enormous untapped production reservoir even at the currently available levels of technology; on the other, the cost, risk and return structure of farming is becoming adverse, with the result that nearly 40% of the farmers interviewed by NSSO would like to quit farming if there were other alternatives. Young men and women, even those educated at agricultural universities, do not wish to take to farming as a career. Self-employment opportunities like Agri-clinics and Agri-business centres have not proved attractive to farm graduates. It is however clear that it is only a technological upgrading of farm operations that can help improve the productivity, profitability and sustainability of small holdings. Over 80% of our farmers belong to the small and marginal farmer categories and unless IARI helps in bringing about a small farm-management revolution, our agriculture will tend to make inadequate progress in relation to the growing demands for farm products both as a result of increase in population as well as improvement in purchasing power. One of our great challenges is to create more jobs in the farm and non-farm sectors. Modern industry promotes jobless growth; only agriculture can stimulate job-led growth. Therefore, accelerated agricultural progress is vital both for food and livelihood security. We should accord the highest priority to agricultural research, education, extension and development. The IARI can accelerate the dissemination of information relevant to scientific agriculture by combining distance-education techniques with conventional pedagogic methods.

Release of Publication Advances in Post-Graduate Research

A publication entitled *Advances in Post-Graduate Research for Improving Agricultural Growth and Prosperity* was released by the chief guest. It contains research contributions of the students for the period 1996-2007. The research findings embodied in 816 M.Sc. and



1,067 Ph.D. theses submitted in 23 disciplines during 1996 to 2007 have been reviewed and conceptually summarized to derive logical conclusions and strategies.

PG students' debate

Involving the participation of PG students of IARI, a debate was organised on: 'Does higher education in agriculture fulfill career aspirations today?' Dr S.P. Tiwari, Deputy Director-General (Edn), ICAR, was the chief guest. The Judging Committee with Dr Parmatma Singh, former VC, RAU, Bikaner, as its chairman, adjudged Shri Manoj Kumar, Ph.D. (SSAC), Shri Mohd Jameel, M.Sc. (PHT) and Shri Abhinav, Ph.D. (Genetics) as winners of the first, second and third prizes, respectively.

P.G. School Golden Jubilee Exhibition

Dr S.P. Tiwari, DDG (Edn), also inaugurated the Post-Graduate School Golden Jubilee Exhibition, which was depicting significant achievements of the PG School discipline-wise in the field of education and training activities. Dr M.S. Swaminathan, Dr Mangala Rai and other dignitaries also visited and appreciated the exhibition.

Inauguration of IARI central museum

Dr M.S. Swaminathan also inaugurated the IARI central museum located at the IARI Library, where Dr Mangala Rai, Dr S.A. Patil and various other dignitaries were present. The museum has been fully renovated with all modern technologies including a very attractive scroller of the history of IARI. School-wise significant research achievements of the institute have been shown in a very informative manner.

Teachers' day celebrations

The Teachers' Day was celebrated jointly by the PG School and the Genetics Club, IARI on 5 September 2008 in Dr B.P. Pal Auditorium. Dr K.V. Prabhu, Head, Division of Genetics, welcomed the guests, whereas Dr H.S. Gaur, Dean & Joint Director (Education), highlighted the significance of the Teachers' Day and the lecture series. Dr S.A. Patil introduced Dr Agnes M. Rimando, Research Chemist, Department of Agriculture, University of Mississippi, USA. Dr Rimando delivered a special lecture on 'Pterostilbene: pharmacological properties, identification in blueberries and engineering its production in plants.' She focussed on the health benefits of a natural compound pterostilbene, used in drugs and medicines as dietary supplement and similar compounds, as that may serve as biopesticide, highlighting its biological activities such as antioxidant, plant protectant, chemopreventive activity of cancer by inhibitory effect, antihyperglycemic activity, peroxisome proliferator activity etc. Lipid-lowering effect of this compound has received worldwide media coverage, and has been touted as a "breaking medical news". Dr S.A. Patil appreciated the work of Dr Rimando and elaborated the use of several berries and medicinal plants used in ayurvedic medicines whose chemistry needs to be analysed. He emphasized the need to understand the chemical properties of various cultivable and wild plants for which India is known as a rich source.

INDIAN VETERINARY RESEARCH INSTITUTE, IZATNAGAR

Faculty-development programme on Education Methodology

A 6-day faculty-development programme on "Education methodology and instructional technology" was held at Izatnagar during 4-9 July 2008. The programme was inaugurated by Dr S.P.S. Aheawat, Director and VC, IVRI,

which was jointly organized by IVRI and National Academy of Agricultural Research Management, Hyderabad, and attended by 25 scientists from various divisions of the institute.

National seminar on Mycotoxins

A 2-day national seminar-cum-workshop on 'Current status, diagnosis and management of mycotoxicosis in livestock and poultry' was held during 10-11 July 2008 at Izatnagar to find out a solution for the control of economically important aspect of mycotoxicosis.

On this occasion, Padma Vibhushan Dr R.B. Singh former Chairman, ASRB, and Member, National Commission on Farmers, New Delhi, was the chief guest. In his address, he remarked that the country is again facing the shortage of food and food security as was in sixties. Besides, the safe upkeep and storage of food and ingredients is another concern. In the coming years, livestock production will be the most important agricultural sector in terms of added value. The combination of higher demand, more people and less space is leading rapidly to a global transformation of the livestock sector.

Dr S.P.S. Ahlawat stated that mycotoxicosis had gained immense importance in recent years due to detection of considerable amount of mycotoxins in feed-stuffs, cereals and a wide variety of plant and animal products. The agro-climatic conditions in India are highly conducive for contamination with fungi and mycotoxins.

As the Guest of Honour, Dr W.S. Lakra, Director, National Bureau of Fisheries Genetic Resources, Lucknow, emphasized the problem of aflatoxicosis in fishes such as rainbow trout. The other Guest of Honour, Prof. N.S. Agar, University of Sydney, Australia, laid stress on the significance of practical training, assignments and group discussions in the teaching methodology. Four eminent scientists, viz. Dr Prabhakar Dwivedi, Dr T.S. John, Dr K.C. Verma and Dr S.K. Chattopadhyay, who have contributed significantly in the field of mycotoxicosis research, were honoured by I.A.V.P., Izatnagar Chapter and Dr C.M. Singh Endowment Trust. More than 100 delegates participated from all over the country, and more than 50 farmers from Bareilly district, participated in it.

National workshop on Bioinformatics

A 3-day national workshop-cum-training programme on Bioinformatics was organized during 26-28 August 2008 at Bioinformatics Centre (DISC), Izatnagar. The workshop sponsored by Department of Biotechnology, Ministry of Science and Technology, Government of India, New Delhi, was attended by 47 participants, including scientists, university teachers and researchers from different parts of the country.

Inaugurating the workshop, Dr R.M. Acharya, former Deputy Director-General (Animal Science), ICAR, New Delhi, stressed the vital role of bioinformatics in biological research and briefed about the burgeoning field of bioinformatics and how the information is represented and transmitted in biological systems starting at the molecular level. The research in genomics, proteomics, drug designing etc. involves a huge amount of information, which demands computational techniques, statistical tools and other related databases for managing and analyzing the information to solve complex biological problems.

Dr S.P.S. Ahlawat, VC, stressed the need to develop e-learning, e-extension, e-nutrition, e-livestock farming, health coverage etc., which may provide accurate data-based statistics about the livestock population, diseases and other livestock-related information.

The Guest of Honour, Dr Kiran Singh, former Dy Director-General (AS), ICAR, New Delhi, expressed his happiness over the remarkable achievements of IVRI. He also appreciated the efforts of Director for the overall development of the institute.

Dr Rajendra Singh, Course Director of the workshop, briefed about the workshop-cum-training programme and laid emphasis on the development of newer statistical techniques, algorithms etc. to provide viable solutions to the problems posed by new central dogma of biology.

In the concluding session, the Chief Guest, Dr M.C. Sharma, Director, Central Institute for Research on Goat, Makhdoom, Mathura gave away certificates to the participants.



Dr R.M. Acharya lighting the lamp

A Profile

INDIAN VETERINARY RESEARCH INSTITUTE, IZATNAGAR

Indian Veterinary Research Institute has a pioneering role in transforming the academic spectrum of veterinary education in the country. It has the distinction of being the first veterinary university (Deemed to be) in India. This premier research institute with its Deemed-to-be-University status is renowned for its contribution to basic and applied research on all aspects of livestock health, production and technology as well as post-graduate education in important branches of Veterinary and Animal Sciences. It is committed to invocation and effectiveness in research, education and outreach programmes that are responsive to the needs of veterinary and animal science sector to serve the livestock owners in the nation.



Administrative building

Setting up

In recognition of long and sustained contribution in Animal Health, Animal Production, Animal Products Technology, and Basic and Social Sciences through post-graduate education and research programmes, the Ministry of Education, Government of India, vide letter No.F.9-1/103 U.3/001, Ministry of Education & Culture (Dep. of Education), dated 16.11.1983 on the recommendation of University Grants Commission declared the Indian Veterinary Research Institute as Deemed-to-be a University as per section 3 of the UGC Act, 1956.

Major goals

- To impart post-graduate education to meritorious candidates in different disciplines of veterinary and animal sciences including frontier areas such as biotechnology, immunology etc.
- To make veterinary and animal science post-graduate education responsive to the growing and changing needs of the society, especially the aspirations of the livestock owners of farming community.
- To establish a dynamic system of veterinary and animal science education to train highly skilled and competent manpower to address the challenging tasks with new emerging areas of research, teaching, extension and industry.
- To formulate courses of current and future relevance to build a strong academic foundation for the scientific and technical manpower generated by the deemed university.

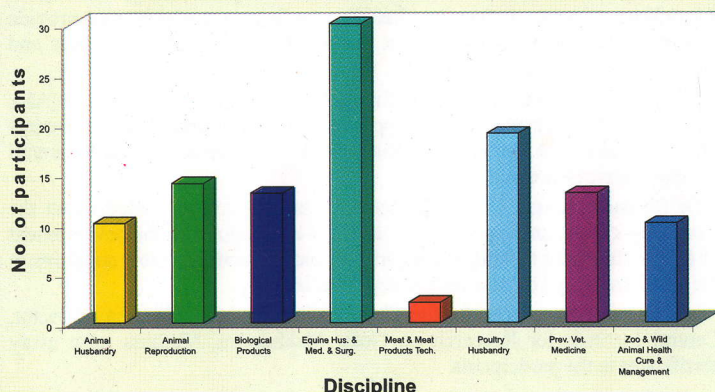
National diploma courses

Besides teaching programmes for M.V.Sc. & Ph.D. students, this deemed university runs specialized teaching and training programmes for National Diploma Courses of 10 months duration in nine disciplines, viz. Preventive Veterinary Medicine, Animal Husbandry, Veterinary Biological Products, Animal Reproduction, Poultry Husbandry, Equine Husbandry, Medicine and Management, Meat and Meat Products Technology, and Fodder and Feed Technology. The National Diplomas in Equine Husbandry, and Medicine and Surgery are offered mainly to army officers to provide the latest advances in health, breeding and management of equines of relevance to the armed forces. Since the last 5 years, 124 students including in-service candidates have successfully completed these courses.



Special convocation at IVRI, Izatnagar

National Diploma Courses from 2001-02 to 2005-06



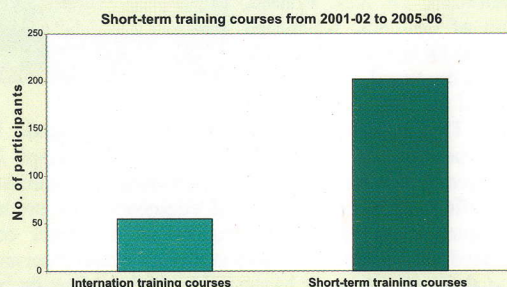
Short-term training courses

The institute has achieved excellence in research and teaching. The deemed university has organized and conducted some highly specialized Short-term Training Courses to provide information on the recent advances and hands-on training to the students and in-service candidates. Total 202 students along with in-service candidates have successfully completed these training courses since the last 5 years.

- Production of Poultry Vaccine: RD (F), RD (M) and Fowl Pox.
- Technology of vaccine production for economically important bacterial diseases: HS/BQ/Enterotoxaemia Anthrax.
- Production and standardization of brucella and salmonella antigens.
- Technology for production of sheep pox and swine fever vaccines.
- Conventional and molecular techniques for diagnosis of important bacterial diseases of animals.
- Diagnosis and control of important poultry diseases.
- International training in molecular biology and biotechnology techniques in animal research.
- Radiology.
- Anesthesia and pain management in animals.
- Fracture management in animals.
- Molecular techniques for livestock-genome analysis.
- Diagnosis and control of important emerging zoonoses.
- Recent advances in diagnosis of some parasitic diseases.
- Advanced molecular tools for diagnosis of bacterial diseases.
- Laboratory diagnosis of animal diseases and zoonoses.
- Advances in management technologies for livestock production.
- Mycotoxin and other feed poisons and their diagnosis.
- ISO certification of veterinary diagnostic laboratories.
- Histopathology as an aid in diagnosis of animal diseases.
- Diagnosis of brucellosis and IBR.
- Diagnosis of campylobacteriosis and trichomonosis.
- Diagnosis of tuberculosis and Johns disease.
- Assurance of veterinary biologicals.
- Epidemiological tools in diagnosis, prevention and control of animal diseases.
- Isolation and characterization of mycoplasma infections in livestock and poultry (international course).
- Production and testing of animal vaccines.



Visit of Dr Bujarburuah to lab



Main achievements

The institute has completed 117 years of dedicated service to livestock at global level and 114 years of its education and training activity at national and international levels. The first training programme was organized for the field veterinarians on general principles of therapeutics in 1890. A scheme for regular training of officers from Army, Civil and Veterinary Departments was initiated in 1904 in the area of Comparative Pathology and Bacteriology.

Later, these training programmes were reoriented and refresher courses in Veterinary science were reorganized as National Diploma and Certificate Courses to cater to the demands of state universities and departments. The education and training activities of the institute since its inception had been integrated with its primary responsibility of conducting research in Veterinary Science and Animal Husbandry with transfer of technology developed to field veterinarians and industries engaged in commercial production for veterinary science and animal husbandry.

The university has produced human resource for technological advances made in disease diagnosis that helped in combating heavy mortality and morbidity losses due to

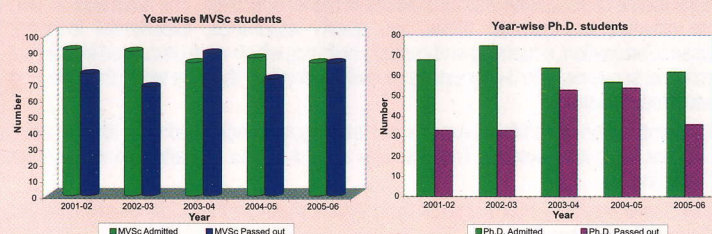
several diseases in livestock. More than 44 immuno-biologicals against many bacterial, viral and parasitic diseases have been developed. Quick diagnostic kits for important diseases have been standardized for field use, resulting in early diagnosis of the disease and timely adoption of control measures. Significant success was achieved in developing indigenous drugs and surgical techniques. Formulation of livestock and poultry feed rations with locally available ingredients and non-conventional feeds helped in meeting the minimum available nutrient requirements of the animals during severe drought and flood calamities.



Dr Bujarbaruah, DDG (AS) to lab

As growing population needs optimum utilization of livestock resources, animal health is important for improved productivity. In the changed economic scenario support of research will be forthcoming by largescale participation of private entrepreneurs in veterinary pharmaceutical industries and animal feed-processing units. There is now wide open international market for the export of biologicals, pharmaceuticals and livestock products. Advanced technologies or tools can be exploited for producing effective and economical immuno-biologicals and disease diagnostics. This around development would certainly pave the way for large-scale rural employment.

The university with its reputation for quality education offers Master's degree in 23 disciplines and Doctoral programme in 20 disciplines. Under the aegis of new set-up, 433 M.V.Sc. and 326 Ph.D. students were admitted since last 5 years, and 409 M.V.Sc. and 246 Ph.D. have successfully completed the courses.



Future perspective plan till 2020

Research priorities

The future perspective plan till 2020 of the institute aims to meet the anticipated demands of the nation. The programmes identified would broadly cover the following topics:

- Surveillance, creation of databank and forecasting system of animal diseases.
- Development of quick and precise methodologies including kits for diagnosis of diseases or conditions, and package of practices for optimum animal health.
- Improvement of immunoprophylactics and use of biotechnological tools in evolving vaccines for important diseases of livestock and poultry.
- Pharmacological evaluation of herbs or plant products and promotion of ethno-veterinary medicine.
- Genetic studies on disease resistance in domestic species of livestock.
- Development of techniques for multiple ovulations, embryo transfer, *in-vitro* fertilization and cloning of embryos.
- Development of reasonably economic diets and feeding schedules for SPF, pets, sick farm animals and captive wildlife.
- Processing and preservation of meat, using cutting-edge technologies.

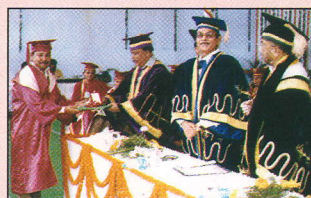
Linkages and international collaborations

The plan document lays greater emphasis on developing strong linkages with national and international R&D institutions on one hand and with beneficiaries, the farmers or industry on the other, for effective implementation of identified programmes. The support of NGOs and AH Departments in States or Union Territories will be solicited for implementation of developmental programmes and transfer of technologies.

The students from abroad are also admitted in this Deemed University. They apply for M.V.Sc. and Ph.D. programmes through ICAR-CARP Plan, Indo-Cultural Exchange Programme and DARE etc. Students from Sri Lanka, Vietnam, South Africa, Iran, Ethiopia, Nigeria and, Nepal



International training on Molecular Biology and Biotechnology techniques



Sixth convocation at IVRI

have been awarded degrees for these programmes. Some participants from Canada, Afghanistan, Philippines, Mauritius, Indonesia, Cuba, Myanmar, Thailand etc. participated in short-term training courses in the last 5 years.

Human Resource Development

The emphasis on HRD programmes for the coming decades would be in the following directions:

- Post-graduate programmes for manpower development in education and research.
- Manpower development in veterinary administration.
- Specialist cadre training
- Continuing veterinary education through short-term training courses.
- For improvement of training programmes, strengthening in the following areas is envisaged:



Group of International trainees

- Training of trainers
- Learning-resource centre based on information technology.
- Link-teaching programme.
- Upgradation of students' amenities, library services, courses curriculum and teaching aids.

Thus effective implementation of suggested programmes would doubtless enable India to develop newer cost-effective, farmer-friendly, ecologically acceptable and sustainable strategies to combat dreadful animal diseases and to augment livestock or poultry production, thus meeting the future challenges in the fields of animal health, production and fulfilling the mandate to act as national referral centre for veterinary type-cultures, disease diagnosis, biologicals and immuno-diagnostics etc.

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UNIVERSITIES

ANAND AGRICULTURAL UNIVERSITY, ANAND

Krushi mahotsav

For enlightenment of farming community, 'Krushi Mahotsav-2008', a doorstep extension-modus operandi of State Government visionary programme, was launched from 7.5.2008 to 5.6.2008 throughout the state.



Its focus was mainly on the initiatives to promote innovative technologies adhering to the principle of "More crop and income per hectare." The main themes were Drip irrigation, Agricultural marketing system and Child health-care.

There were 227 Krushi Rathes. Almost 1 lakh officials of 15 development departments including 502 scientists of Anand Agricultural University were actively involved in the campaign.

During the Campaign, soil samples were collected and Soil Health Cards and Kisan Credit Cards were distributed to the farmers, whereas agriculture, horticulture, animal husbandry and shramyogi kits were distributed to the villagers below poverty line. Water-conservation works like khet talavdi, bori bandhs, check dams, village ponds etc. were undertaken in the villages with the participation of rural youth and farmers. Special efforts for promotion of drip-irrigation system were made. The students of AAU undertook mass animal vaccination. Different government schemes like Wadi Yojna, Gokul Gram, Jyoti Gram, E-Gram, Tirth Gram etc. were executed during the campaign. 'Khedut Margdarshika Bhag-4 Rajya Sarkar ni Sahay Yojna' was prepared and distributed to all the villages.

The important activities carried out by AAU scientists during Krushi Mahotsav-2008 in middle Gujarat are as under:

Dist.	Villages covered	Krushi shibir	Farmers' training	Village meetings	Guidance to farmers by scientists
Ahmedabad	539	8(5262)	5(31,596)	561	71,599
Anand	365	6(13,000)	3(25,384)	365	57,653
Dahod	702	6(14,100)	5(23,016)	702	115,875
Kheda	640	9(7,970)	7(19,508)	636	77,779
Pmahal	1,194	9(1,405)	1(18,800)	1,156	89,206
Baroda	1,386	11(5,575)	3(50,522)	1,535	77,855
Total	4,826	49(47,312)	24(168,826)	4,955	489,967

BIRSA AGRICULTURAL UNIVERSITY, RANCHI

Raise agricultural produce, exhorts Swaminathan

Renowned agricultural scientist, Dr M.S Swaminathan, said that the insurgency in the state can be checked greatly by increasing the income of farmers and adoption of latest

production technologies as well as through generation of income in agriculture, horticulture, dairy, animal husbandry and fisheries. Talking to media persons at BAU on 19 December 2007, he said that Jharkhand has great potential for agriculture and allied activities. There is urgent need to tap that potential to improve the living standards of farmers.

The state is gifted with sufficient rain water, which varies from 1,200 to 1,400 mm annually. However, the unchecked run-off was fast eroding the top soil, making fertile lands barren. Water-harvesting techniques had to be used, and major emphasis has to be laid on conserving water to maintain sustainable growth of agriculture in the state.

Earlier, giving a special lecture on 'Indian Agriculture Today', Dr Swaminathan said that Indian agriculture is at the crossroads. In one sense we have been very successful in increasing the production of basic staples like rice and wheat, on the other the consumption capacity on the part of the economically underprivileged sections of the society is not improving. He emphasized that self-help groups should be encouraged to bolster cooperative farming in the country. He appealed to the younger generation, saying, "Do not treat cultivation as inferior work. You should adopt it as a profession". He added that recent findings bring home the alarming fact that 40 per cent of cultivators in the country would prefer to quit farming if they had an alternative opportunity. "If that happens, what happens to food security?" He asked while warning "the nightmarish experience of famine and rising prices would bring the whole economy down".

Dr N.N. Singh, VC, welcomed Dr Swaminathan. Other eminent persons present were Ms Mabel Rebello, Shri Saryu Rai, MLA, Swami Shashankamand, Shri Ashok Kumar Singh, Member, Board of Revenue, Shri A.K. Sarkar, Principal Secretary, Agriculture; and Dr Suman Sahai, Chairperson, Gene Campaign. Shri M.K. Mandal, former Chief Secretary, Jharkhand proposed a vote of thanks.

32nd IAUA VCs' Conference

Inaugurating the 2-day 32nd Annual Convention of Indian Agricultural Universities Association at BAU on 20 December 2007, Hon'ble Syed Sibtey Razi, Governor and Chancellor of Universities of Jharkhand, said that the slowdown in agricultural growth has become a major cause of concern, although it provides livelihood to more than 70% of the rural people and remains vital for food security. He said that food security and sustainability, which has been one of the major goals to keep agriculture sector out of danger zone, seems to have been fulfilled. However, this feel-good factor seems to be a myth, as we see new and bigger challenges emerging in this most vulnerable sector. Share of agriculture in country's GDP in fact declined from 48% in 1950 to 19% in 2007.

The Chancellor further said that the increase in economic integration of the Indian economy with the global processes has brought considerable challenges at the door of its agricultural sector. A number of major crops have witnessed a decline in productivity growth, and side-by-side, the Indian agriculture is facing unfair competition from cheap imports, which has posed a major threat to the livelihood of the farming community.

In his address, Prof. M.P. Yadav, President of IAUA and VC, Sardar Vallabh Bhai Patel University of Agriculture and Technology, Meerut, said that more than 50% posts of scientists have been lying vacant in agricultural universities of the country, affecting adversely the growth of this sector. He appealed the state governments to impose 1 per cent tax at all agricultural marketing yards to be used for teaching, research and extension activities in these universities. He stressed the need to extend the retirement age of the VC to 70 years; presently it varies from state to state. He said the processing of agricultural produce deserves due attention, because the post-harvest loss in the country has gone to Rs 80,000 crore per annum and only 2% produce in the country is being processed. Dr N.N. Singh, VC, BAU, welcomed the guests. Besides, IAUA VCs, the first lady of the state Mrs Chand Farhana ji and Principal Secretary to the Governor, Shri Amit Khare, were also present on the occasion.

Farmer-led innovation for sustainable agriculture

Dr R.S. Paroda, former Director-General of ICAR, is of the firm view that agricultural scientists need to engage themselves in researches where these actually matter—the field of farmers. Addressing the inaugural session of the 2-day symposium on 'Farmer-led innovations for sustainable agriculture' at BAU during 1-4 December 2007, Dr Paroda said the farmers have a long experience of farming practices, which need to be properly documented for possible further improvement. He stressed that food processing is the need of the hour. At the same time the role of intermediaries should be minimized if not altogether eliminated. The agricultural scientists need to go to the farmers, to learn about practices as well as crops grown by them. Dr Paroda also inaugurated Centre for Agribusiness Management, where a 2-year full-time MBA course has been launched.

Dr. S Nagarajan, Chairperson of Protection of Plant Varieties and Farmers Rights



Authority, said that most farmers were not getting the reward for the innovations made by them in their own fields. It is the agricultural scientists instead who take the credit. Researches made by the farmers need to be recognized by the government and they should also be rewarded for their innovative feats. He appealed to develop and protect medicinal plants in the tribal regions of the state.

Dr N.N. Singh, VC, too addressed the delegates present at the symposium.

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

North Zone VCs' meet

The meeting of North Zone Vice-Chancellors was organized by Pantnagar university from 3 to 5 September 2008. The valedictory session was organized at College of Agri-Business Management under the Chairmanship of Dr V.K. Suri, VC of Kanpur University. On this occasion Dr Dayanand Deogaonkar, Secretary General, Association of Indian Universities and Dr Basant Ram, VC, NDUAT, Faizabad were also present along with the host VC, Dr B.S. Bisht. This meet was represented by the VCs or their nominees from 20 universities of the zone. The major theme of discussion was Innovations in higher education. The meet was divided into different sub-thematic areas, viz. quality assurance, experiential learning, distance education, e-learning and capacity building, which were discussed in different technical sessions. The 3-day extensive deliberations by the VCs led to the following recommendations:

- A combination of traditional experiential learning approach need to be introduced in higher education system. The teachers should act as facilitators in experiential learning.
- End-to-end pilot plant projects run by the students under the guidance of the faculty should be launched.
- Teachers' capacity building is necessary through training and development of skills, including motivational skills, through participation.
- While deliberating on distance learning, and e-learning, the conference recommended that for monitoring the quality of programmes a mechanism should be in place.
- New programmes on distance education should be launched only after in-depth planning and preparation.
- A minimum entry-level standard should also be adopted while enrolling the students for distance and e-learning programmes.
- The institutions should identify gaps in their system and should structure their activities accordingly.
- The institutions should provide an enabling environment as a pre-requisite to capacity building.
- Selection and promotion of the teaching faculty and capacity-building record of the candidates should also be considered along with research publications.
- Evaluation of HRD requirement and preparedness to meet them, and creation of database of status and resource allocation to education in different Five-Year Plans by the universities is needed for a vision document on higher education for the country.
- The syllabus should be revised every 3 to 5 years.
- The autonomy of the university and constitution of an autonomous education commission consisting of academicians should be ensured.

JUNAGADH AGRICULTURAL UNIVERSITY, JUNAGADH

AICTE accreditation for agricultural engineering education

The College of Agricultural Engineering and Technology was established as one of the constituent colleges of then Gujarat Agricultural University at Junagadh. The college was accredited by ICAR in 1997 and the graduates produced by the college get placement through campus interviews. There has been 100% placement from the college during the last 7 years. The AICTE-NBA, New Delhi has accredited B.Tech. (Agricultural Engineering) programme of the university for 5 years and M.Tech. (Agricultural Engineering) programme in farm machinery and power for 3 years with effect from 19 July 2008. So far, only 3 agricultural engineering colleges in our country have received AICTE-NBA accreditation, and this university is the fourth.



Dr R.S. Paroda and Dr S. Nagarajan at BAU



Meeting of North Zone Vice-Chancellors



College of Agricultural Engineering

KARNATAKA VETERINARY, ANIMAL AND FISHERIES SCIENCES UNIVERSITY, BIDAR

The following programmes were organized by the university as a part of transfer of technology.

Training programme on "Aquaculture"

A training programme on "Culture of carps and freshwater prawn" was organised by Directorate of Extension at Livestock Research and Information Centre, Deoni, district Bidar during 16-18 July 2008. The programme was inaugurated by Shri Revu Naik Belamagi, Minister for Animal Husbandry, Government of Karnataka. Dr S. Mallikarjunappa, Acting VC, and Dr H. Shivananda Murthy, Director of Extension, were present. Total 45 farmers from Bidar and Gulbarga districts attended and benefited from the programme.



Training programme on bakery products

A training programme on "Preparation of bakery products and ragi products" for the benefit of farm women on 11 July at 2008 was organized at Dairy Science College, Hebbal, Bangalore. The programme was inaugurated by Prof. S. Mallikarjunappa, Acting VC Dr H. Shivananda Murthy, Extension; Dr B.V. Venkateshaiah, Dean, Dairy Science College, Bangalore; Dr S. Yathiraj, Dean, Veterinary College, Bangalore, and Dr Renuka Prasad, Director, IAH & VB were also present. Total 50 farm women of Bangalore Rural and Chikkaballapur districts were trained through practical demonstrations during the programme.



Field day on Bio-village

A field day on the concept of Bio-village depicting integrated farming systems such as rearing of Deoni cows, turkey, emu, fish culture, green-fodder production and other related aspects were organised at Livestock Research and Information Centre, Deoni, on 14 September 2008. Prof. Suresh S. Honnappagol, VC; Dr H. Shivananda Murthy, Dr M. Devaraj, Registrar; and Dr S.M. Usturge, Director of Instruction (PGS), attended the programme. About 250 farmers participated and were benefited from the field day.



PUNJAB AGRICULTURAL UNIVERSITY, LUDHIANA

Agricultural education policy

A 2-day Brain-storming session (8-9 March 2008) on Agricultural Education Policy was held at PAU, Ludhiana. About 30 VCs and their representatives attended the event, which was inaugurated by Dr Jai Rup Singh, VC, Guru Nanak Dev University, Amritsar, and was presided by Dr S.A. Patil, President, IAUA and Director, IARI, New Delhi.

The following recommendations emerged from the eight sessions:

- There is absolute need to introduce agricultural education right from the school level upward, culminating into vocational courses, with emphasis on deliverables in each course.
- The states may be encouraged to set up Board of Higher Education in Agriculture for improving the quality of education.
- The SAUs should make efforts to improve the entry of students from rural areas in agricultural programmes by reserving of seats for them in agricultural education through legislation.
- Admission to agricultural programmes in all the private and public institutions should be through common entrance test.
- There is need to monitor the teaching quality and evaluation, and to re-consider internal evaluation as existed before shifting to external evaluation.
- The course curriculum should be made demand-driven to prepare the students to face the newly emerging challenges and should lay due emphasis on practicals.
- The SAUs should have greater option in diverse range of relevant courses for the students, viz Biotechnology, Nanotechnology, Information and communication technology, Space, IPR, WTO, Agri-business etc.
- For quality education, thrust should be given on Human Resource Development in cutting-edge technology areas as it used to be in the 1970s. No post should be kept vacant.
- There is need to establish relation or collaboration with traditional universities, IITs, IISc., IIMs and industry for perfect, wide-range, updated education.
- There should also be a separate policy on fisheries, livestock and animal

husbandry education, integrating education, research and extension.

- Accreditation process needs to be speeded up and extended to private agricultural colleges. Simultaneously agricultural universities should be equipped to handle the affiliation of private agricultural colleges to maintain the academic standards.
- Evaluation system should be a combination of both external and internal assessment with 50 % weightage to each. As this is recently recommended, it may be reviewed after a gap of some period.
- There is a great need of open-door policy to encourage the students and teachers from basic sciences to join agricultural universities and their admission to the agricultural PG courses.

Employment opportunities for women

A research project entitled "An integrated approach to provide employment opportunities to women" worth Rs 54.96 lacs has been sanctioned to College of Home Science by Department of Biotechnology, Ministry of Science and Technology, Government of India, to empower rural women for large-scale propagation of tissue culture of sugarcane, floriculture, cultivation of button mushrooms and organic cultivation of seasonal vegetables.



Exhibition at Mini Farm Women Fair

Engineering students at Moscow universities

Two groups of students from College of Agricultural Engineering attended 2-weeks training programme in Russia. One group of six students, viz. Aman Ahuja, Gagandeep Singh, Gursharan Singh, Rohit Aggarwal, Saket Goyal and Udit Narula, visited Moscow State University of Environmental Engineering, and the other group of five students, viz. Gurpreet Singh, Rajat Gupta, Sugandha, Vandana Kochhar and Vikas Tiwari, was at Moscow State Agro-engineering University (MSAU), Moscow, during this summer. Dr M.S. Kang, VC, had nominated the groups and advised the students to learn maximum from such training for their professional career development. Er. Vishal Bector and Dr A.K. Singh, who coordinated the training and accompanied the two groups to MSUEE and MSAU respectively, elaborated the contents of trainings. The training comprised mainly of field visits, laboratory classes and on-site observations, practical exercises in the area of agriculture and environmental engineering pertaining to conservation of overall ecological system and agro-engineering industries. The students visited and experienced the learning interactions with Russian engineers and professionals at Russia's first pumping water plant, pump stations, agricultural processing industries, irrigation facilities and technologies in Russia, Water-treatment plant, green-houses, dairy industries, community centre of innovation for soybean and various laboratory classes for their skill development Mr Dmitry V. Kozlov, Rector, MSUEE, visited the PAU in March and met Dr M.S. Kang. They discussed the possibility of having greater collaborative activities in the area of academic and research excellence like faculty exchange, post-graduate research projects, faculty research projects, and distance learning programmes through virtual class-rooms etc. at the two institutions. The details for more activities under the programme are being worked out.



SARDAR VALLABH BHAI PATEL UNIVERSITY OF AGRICULTURE AND TECHNOLOGY, MEERUT

New Varieties

Vallabh Urd 1

The variety Vallabh Urd 1 was developed through mutation breeding of Pant Urd 19, a popular variety in western Uttar Pradesh, by using gamma irradiation. Pigmentation on stem and branches can be used as a marker for maintaining seed purity. It is of 50 cm height, flowers in 50 days and matures in 84 days in rainy (kharif) season. The plant bears 110 pods and 6-7 seeds per pod. Seeds are bolder (4.1g/100 seeds) than of the prevailing varieties of the crop in the zone. The variety Vallabh Urd 1 expressed moderate resistance to insects and pests. It was found resistant to all the common diseases of the area, i.e. yellow mosaic virus, Cercospora leaf-spot, Macrophomina blight, Anthracnose and bacterial leaf-spot. Therefore, Vallabh Urd 1 was identified as a broad-based resistant variety in AICRP trials. The variety also expressed



Mature plant of Vallabh Urd 1

resistance to these diseases in Standard Varietal Trials conducted at RATDS centres of Uttar Pradesh. Its average yield is 10, 69 kg/ha, which is 16.29% higher than that of the best check Uttara. It was identified for release in western Uttar Pradesh, Haryana, Punjab, Rajasthan, Himachal Pradesh, Uttarakhand and Jammu & Kashmir, at MULLARP Annual Group Meet held on 2-4 May 2008 at SDAU, Sardar Krushinagar, Gujarat.

Vallabh Basmati -22 (MAUB-162)

The rice variety MAUB-162 (IET-19492) has been developed at SVBPUAT, Meerut from a cross of P 1121xType 3 followed by pedigree selection. The variety is suitable for irrigated ecosystem (all under Agri-Export Zone for basmati rice) in areas of north western India designated under geographical indication for basmati rice. It is a photosensitive genotype of evolved type basmati rice. The variety is erect and of short stature a 90 cm high. It is a semi-dwarf and lodging-resistant variety, flowering in 115 days. Unlike other basmati rice varieties, it has compact panicle, which is completely exerted. It has small awns. It can be easily distinguished with the help of pinkish apiculus at the time of maturity. The average yield is 36.21 q/ha, which is 27.87 % higher than of Tarori basmati. Being dwarf, it utilizes fertilizers more efficiently, resulting into higher yields at low cost. It also requires less water and performs well under aerobic conditions. The variety expressed all the quality characters of scented rice accepted in the global market; and therefore, it is suitable for export. Test weight is 21g with kernel length 7.45 mm. Kernel breadth is 1.72 mm with length: /breadth ratio 4.33. Hulling and milling recovery is 60% and 69.37% respectively. Head-rice recovery of the variety is 52.01%. The 100 g long cylinder kernels require 250 g water for cooking. Kernel length after cooking is 14.8 mm, which is more than that of traditional-type Tarori basmati. The variety expressed excellent quality characteristics during evaluation at both the quality-testing laboratories located at DRR, Hyderabad, (A.P.) and CRRI, Cuttack (Orissa). Also, in the panel test at both these laboratories it received excellent acceptability ratings on account of its appearance, aroma, elongation and flaky texture on cooking for all the 3 years required for evaluation under AICRP trials. The rice cooks excellent and remains soft and flaky after cooking. The variety is resistant to gall midge and moderately resistant to RTD, neck blast and bacterial leaf blight (BLB), the common diseases of the zone. It was identified in the 43rd Annual Rice Group Meeting held at IGKV, Raipur during 12-14 April -2008, for release in U.P. and Haryana for export.



MAUB-162 (IET 19492)

valuable contribution is evident by the sharp increase in productivity of the majority crops due to the development of new varieties or hybrids, production and protection technologies, and dissemination of improved technologies to the farming community. The university has developed 60 crop varieties in the last 5 years and the foodgrain production in the state has increased by 44% from 136.97 lakh tonnes in 2003-04 to 196.61 lakh tonnes in 2007-08. Similarly, the food grain productivity for the same period increased by 33% from 1212 kg / ha to 2667 kg / ha. The university is the first in the country to develop rice hybrids (APHR 1 and APHR 2). The rice varieties developed by this university have gained farmers' acceptance in Andhra Pradesh, 14 other states and also in four neighbouring countries, almost saturating 25% of rice area in the country. It is also known for the quality of human resource produced in different disciplines. Its alumni have manned important positions in national and international organizations.

The ANGRAU is the first in the country to introduce Rural Agricultural Work Experience Programme for the final year under-graduate students to get an insight into the conditions existing in rural farm situations. Farmers of the state are continuously sensitized for adoption of improved varieties and technologies through a number of extension measures including village adoption. It is also the first in the country to establish District Agricultural Advisory and Transfer of Technology Centres in each district of the state.

WEST BENGAL UNIVERSITY OF ANIMAL AND FISHERY SCIENCES, KOLKATA

Jawaharlal Nehru Post-graduate Agricultural Research Award-2007

Dr Samit Kumar Nandi, Lecturer Senior Scale, Department of Veterinary Surgery and Radiology, WBUAFS, Kolkata was awarded the prestigious Jawaharlal Nehru Post-graduate Agricultural Research Award-2007 of the ICAR, New Delhi. The research work originated from his Ph.D. thesis on 'Studies on ceramic biomaterials in segmental bone healing as well as local drug delivery system in osteomyelitis' under the guidance of Prof. Dipak Kumar De, presently Dean, Faculty of Veterinary and Animal Sciences, and active collaboration with Bioceramic and Coating Division, Central Glass and Ceramic Research Institute, Jadavpur, Kolkata. The award was presented to Dr Nandi by Shri Sharad Pawar, Minister of Agriculture, Government of India, in the presence of Dr Mangala Rai, Director-General, ICAR, at the Award Ceremony-2007 on 16 July 2008, the ICAR foundation day.



Dr S.K. Nandi receiving Jawaharlal Nehru award

The award was presented to Dr Nandi by Shri Sharad Pawar, Minister of Agriculture, Government of India, in the presence of Dr Mangala Rai, Director-General, ICAR, at the Award Ceremony-2007 on 16 July 2008, the ICAR foundation day.

FORTHCOMING EVENT

SARDAR VALLABH BHAI PATEL UNIVERSITY OF AGRICULTURE AND TECHNOLOGY, MEERUT

The university is planning to organize an international conference on 'Current trends in biotechnology and implications in agriculture' during 19-21 February 2009. The conference will cover major themes such as: Plant biotechnology, Animal biotechnology, Microbial biotechnology, Industrial biotechnology, Bioinformatics, Genomics and proteomics, Food biotechnology, Environmental biotechnology, Bio-resource conservation, Nano-biotechnology, IPR, Bio-safety, Ethics and Policy issues. The last date of abstract submission is 25 November 2008. The university website is www.svbpm Meerut.ac.in.

Foreign visits of scientists

(i) Prof. S.K. Bhatnagar, Head (Cell Biology), College of Biotechnology, convened the session on "Charales : from stoneworts to molecular tools" of 11th International Conference on Applied Phycology held on 21-27 June 2008, at National University of Ireland, Galway, Ireland. He presented the sessional keynote, emphasizing that the members of order Charales are helpful in bioremediation, contain anti-oxidative enzymes like land plants and are the best tool for Nano-technological studies.



Prof. S.K. Bhatnagar

(ii) Prof. Devi Singh, Dean, College of Biotechnology, participated in a series of mini and major symposia in annual meeting of American Society of Plant Biologists held on 27 June 2008 at Merida, Mexico. He presented a paper on 'Inter-SSR and SSR-based molecular profiling of basmati and non-basmati indica rice' and visited CIMMYT, Mexico also.

AWARDS AND RECOGNITION

ACHARYA N.G. RANGA AGRICULTURAL UNIVERSITY, RAJENDRANAGAR, HYDERABAD

Sardar Patel Outstanding ICAR Institution Award-2007

The Sardar Patel Outstanding ICAR Institution Award-2007 was bestowed upon ANGRAU, Rajendranagar, Hyderabad, in recognition of its contribution in agricultural development in Andhra Pradesh.

The university is the largest premier agricultural university, and its highly



VC, Dr P Raghava Reddy, receiving Sardar Patel ICAR Outstanding Institution -2007 award from Union Minister for Agriculture

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