Research Round Up

Bidhan Chandra Krishi Viswavidyalaya (BCKV)

The university established in 1974, has completed four decades of its existence as the pioneer institute of Agricultural Education, Research and Extension. The main objective of this Viswavidyalaya is to provide facilities for the study of Agriculture, Horticulture and Agricultural Engineering. It is also to conduct researches in these sciences and undertake the educational and extension programmes in agriculture among the rural clientele base, keeping in view the requirements of the state.

Achievement

The University carries out location specific researches in all three major agro climatic zones, constituting its present jurisdiction, namely, red and laterite, new alluvial and coastal saline zone.

Major Achievements/Research Findings

Maintenance of large repository of genetic resources Developed number of promising varieties/hybrids for large-scale cultivation in the state Standardization of agro-techniques of different crops for sustainable production Region-specific development of INM, IPM and IDM module with successful dissemination among the stakeholders Development of weather-based pest and disease forewarning system Popularization of zero-energy cool chambers for short-term storage of horticultural crops Large-scale production and distribution of microbial bioagents, organic manures and mushroom spawn to the stakeholders Production and distribution of 236 t quality seeds (Foundation/ Certified / TL) of paddy, wheat, oilseeds and pulses.

Research Recognitions

Niche Area of Excellence in Arsenic Management Options – ICAR Quality Control Laboratory for horticultural crops- Ministry of Food Processing, GOI Export Testing Laboratory- APEDA Pesticide residue analysis in sugars and arsenic contamination of the food-chain –WHO Regional Analytical Quality Control Laboratory of Medicinal and Aromatic Plants Leaf Tissue Analysis Laboratory, Disease Forecasting Unit, Plant Health Clinic and Bio-Control Laboratory-NHM Water Management & bio-remediation of heavy metals, arsenic/fluoride in soil and water-Indo-US Knowledge Initiative in Agriculture (AKI) (in process) Farmers' Participatory Action Research Programme-Ministry of Water Resources, GOI. Organic Farming- Ministry of Agriculture, GOI Demonstration, Extension and Training on Water Management Technology (TOT), GOINAIP (Component 4) on Basic & Strategic Research on "Arsenic in Food-Chain: Cause, Effect and Mitigation" (Lead Centre) and "Endocrine Profiles and Characterization of Candidate Genes Influencing Prolificacy in Black Bengal Goat" (Co-operating Centre).

Vision for Agricultural Research Thrust

Strengthening of agro-climatic situation-specific research Research focus on conservation, characterization and utilization of diverse genotypes of plants and microbes More research programme in farmer-scientist participatory mode Refinement of water management practices Value-addition and quality assurance to crops for export competitiveness Consortium mode of interdisciplinary research.

Patent Achieved by Fishery Scientist of RRS, NAZ

Patent has been granted by the Patent Office Govt. of India for "Underwater water sampler for collecting water sample for Limnological work (Patent No. 203213 (318/ CAL/2001) dt. 31-5-2001) in the name of Bidhan Chandra Krishi Viswavidyalaya . The sampler has been invented by Dr. Mrinal Dasgupta, Reader (Research) in Fishery, Regional Research Station (New Alluvial Zone), Bidhan Chandra Krishi Viswavidyalaya, Gayespur, Nadia, West Bengal. The sampler is easily portable, simple and inexpensive. It enables sampling of water from different layers of water column without disturbing its properties or composition.Other Patent applications in the name of Bidhan Chandra Krishi Viswavidyalaya on inventions made by Dr. Mrinal Dasgupta are on Underwater Soil Sampler (Patent application No. 133/ KOL/2004. Dt.23-3-2004) and Underwater Water Sampler (Patent application No. 635/KOL/2005, Dt. 20-7-2005). Financial assistance for filing the patent applications has been provided by Technology Information Forcasting Assessment Centre (TIFAC), Department of Science and Technology, Govt. of India. Patent Information Centre, Department of Science and Technology, Govt. of West Bengal helped in processing the patent applications.

New Patent in the Name of Bidhan Chandra Krishi Viswavidyalaya

Patent on another Underwater Water Sampler (different design) invented by Dr. M. Dasgupta, Associate Professor (Research) in Fishery, RRS (NAZ), BCKV has been granted in 2010 by the Patent Office, Govt. of India. (Patent No. Patent No. 244244).

Technology Developed for Increasing Productivity of Acid Soil Regions of the State

Prof. Biswapati Mandal of this directorate with a team of researchers developed technology for increasing productiviyty of otherwisely low productive vast area of land under acid soil regions of the state. The team has proved that by using a locally available low cost material viz., basic slag (80 mesh) - a waste product of steel industry, in line at the rate of 1/5 to 1/10th of lime requirement (LR) of the soils the yield of rapeseed and wheat could be increased by 30-40% over the control (no basic slag). This has been validated through a large number of trials in the farmers' fields all over the vast acidic red and lateritic tract of the state. It ensures an additional net return of Rs.3,500 to Rs.5,500 (approx.) per hectare and thus greatly benefits particularly the resource-poor backward class farmers. This team has also screened out a few varieties of the crops more suited in the tract for better yield. It is encouraging that the Dept. of Agriculture, Govt. of India has accepted the technology for nationwide adoption for improving the productivity of vast area (12 m. hectares) of agricultural land in the acid soil regions of the country.

Faculty of Horticulture

The Faculty of Horticulture was established in 1996 with five departments namely, the Department of Floriculture & Landscaping, the Department of Fruits & Orchard Management, the Department of Post Harvest Technology, the Department of Spices & Plantation Crops, and the Department of Vegetable Crops. The objective of creation of the faculty was to initiate education and training in horticulture, to conduct need based research for the development of horticulture in West Bengal and to disseminate the technology for growing horticultural crops and post harvest management of horticultural produce.Initially the faculty functioned with very limited space within the Faculty of Agriculture but now is housed in the newly constructed faculty building at Mohanpur. The instructional facilities available include one Horticultural Farm at Mondouri and one nursery at Jagulia. The UG classes are held at Jagulia where a small Instructional Farm is also maintained. The 150 acre farm at Mondouri that is the 'Horticultural Research Station' provides facilities for practical and project works of M. Sc. and Ph. D. students for all the five departments under this faculty.

In floriculture, significant work was done on many commerical crops like Marigold, Chrysanthemum, Gladiolus, Gerbera, Tuberose, Annuals etc. Standardization of agro-technology for improved production, qualitative improvement as well as development of new varieties were taken up.