Green Harvest

Agriculture Newsletter

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School of Agriculture
Swami Vivekananda University
Barrackpore, West Bengal, 700121, India
www.swamivivekanandauniversity.com

About School of Agriculture

The 2020-founded School of Agriculture strives for academic and scientific excellence. The school offers bachelor's degree programs in agriculture, agricultural engineering, and master's degree programs in agribusiness management. In accordance with the Indian Council of Agricultural Research's (ICAR) requirements, the school has created dynamic and targeted curricula to produce skilled workers for academics, agro-based industries, and extension-oriented applications.

Hands-on-training programmes/ Workshops and conference

Training program on *"Mango Grafting*

The training program on *"Mango Grafting"* was successfully organized by Mohanpur Gram Panchayat, Barrackpore, in collaboration with Swami Vivekananda University, Barrackpore. The primary objective of the program was to enhance the technical knowledge and practical skills of local farmers, students, and horticulture enthusiasts in the field of fruit crop propagation, focusing particularly on mango grafting techniques.

A total of 40 participants actively took part in the program, which included theoretical sessions, live demonstrations, and hands-on practical exercises. The inaugural session highlighted the importance of grafting as an effective method of clonal propagation to ensure varietal uniformity, early fruiting, and quality production of mangoes.

Expert trainers and faculty members from the Department of Agriculture, Swami Vivekananda University delivered lectures on various aspects, including:

- Selection of rootstock and scion materials
- Compatibility between grafting components
- Seasonal timing and environmental conditions for successful grafting
- Tools, techniques, and aftercare management

The practical session was the key highlight of the program, where participants were guided to perform softwood and veneer grafting under expert supervision. Participants gained first-hand experience in making precise cuts, joining scion and rootstock, tying methods, and maintaining graft unions. The session also covered the post-grafting care and management of young grafted plants to improve success rates.

Overall, the training program served as a valuable capacity-building initiative**,** strengthening the collaboration between local governance bodies and academic institutions to promote sustainable horticultural practices and improve the livelihood of local farmers.

Expert lecture on "crop improvement"

The Department of Agriculture, Swami Vivekananda University, Barrackpore, organized an Expert Lecture on 22nd August, 2025, which was graced by Prof. M. C. Kharkwal, Former Principal Scientist, ICAR–IARI, New Delhi. The session was conducted in recognition of his outstanding contributions to the field of crop improvement and in honor of his Lifetime Breeders Achievement Award.

During the lecture, Prof. Kharkwal shared his extensive experience and insights into the principles and modern approaches of plant breeding, highlighting key milestones in the development of improved crop varieties in India. He discussed the significance of genetic diversity, hybridization techniques, mutation breeding, and molecular tools in achieving higher yield potential and resilience in crops.

Students and faculty members from the Department of Agriculture actively interacted with Prof. Kharkwal, gaining valuable knowledge about the evolution of breeding programs, the challenges in current crop improvement research, and the future prospects of sustainable agriculture.

The session served as an inspirational platform for young agricultural students and researchers, motivating them to pursue excellence in the field of plant breeding and genetics. The Department expressed deep gratitude to Prof. Kharkwal for his enlightening address and for sharing his lifelong experience dedicated to advancing Indian agriculture.

the importance of collaboration between academia, industry, and government for the future growth and innovation in Indian agriculture.

Ongoing Research

Field Demonstration on Jute Harvesting and Retting

The M.Sc. (Agriculture) Agronomy students of Swami Vivekananda University, Barrackpore successfully conducted a field trial and demonstration on jute harvesting and retting techniques at the University Farm during the third week of July, 2025.

The objective of the activity was to provide hands-on exposure to the scientific methods of jute fiber production right from maturity assessment and harvesting to retting and fiber extraction. Students were guided by faculty members in identifying the optimum stage for harvest based on crop age and pod maturity indicators.

During the demonstration, the students showcased the step-by-step process of harvesting jute plants, followed by bundling, immersion, and controlled retting practices to ensure better fiber quality and luster. Emphasis was placed on eco-friendly retting methods, water management, and post-retting fiber extraction techniques.

The exercise provided students with practical insights into one of the most important natural fiber crops of India and helped bridge the gap between theoretical learning and field application.

Overall, the demonstration served as an excellent experiential learning opportunity, strengthening students' understanding of jute agronomy, post-harvest management, and sustainable fiber production practices.

Social outreach Programme

Soil Test Report Distribution

A social outreach program titled "Soil Test Report Distribution" was successfully organized on 9th September 2025 at Mohanpur Village, Barrackpore, by the 7th semester B.Sc. (Agriculture) students of Swami Vivekananda University, Barrackpore. The initiative aimed to promote scientific soil

management and sustainable agricultural practices among local farmers.

As part of the program, students collected soil samples from farmers' fields and conducted a comprehensive soil analysis in the university laboratory. The analyzed parameters included soil pH, electrical conductivity (EC), and nutrient status (major and minor nutrients). Based on the test results, individual soil health reports were prepared and distributed to the farmers during the outreach event.

Students explained the importance of soil testing and guided farmers on appropriate fertilizer recommendations and nutrient management strategies to enhance soil fertility and crop productivity. They emphasized the role of balanced fertilization in maintaining long-term soil health and preventing environmental degradation.

The event served as an excellent platform for knowledge exchange between students and farmers, bridging the gap between academic learning and field-level application. It also strengthened the university's commitment to community service and agricultural development through practical extension activities.

Overall, the program was highly appreciated by the farmers of Mohanpur village and demonstrated the students' dedication towards improving soil health awareness and sustainable farming practices in the region.

List of publications

Faculty members of School of Agriculture have published 5 articles in international reputed journals, under the SVU affiliation.

Thakur, S., Sinha, A., & Bag, A. G. (2025). From Crisis to Opportunity: Utilizing Treated Wastewater in Agriculture. *Water, Air, & Soil Pollution*, *236*(11), 1-31.

Ahmed, B., Dutta, S., Atta, K., & Barman, M. (2025). Unraveling the Molecular Response: Transcriptomics Analysis of Heat Shocked Bemisia tabaci (Asia II 5 Biotype). *Ecological Genetics and Genomics*, 100386.

Patra, S. K., Sengupta, S., Poddar, R., Pati, S., & Ray, R. (2025). Exploring the efficacy of moringa and neem leaf extracts for enhancing growth, yield, nutritional quality and economics of eggplants (Solanum melongena L.). *Biological Agriculture & Horticulture*, 1-17.

Sen, P., Ansari, R., Chatterjee, A., Mondal, B., Sengupta, S., Ghorai, S., ... & Hazra, S. (2025). Directed mutagenesis vis-à-vis crispr/cas in improving medicinal plants: a review and bibliometric analysis. *Journal of Crop Science and Biotechnology*, 1-22.

Mandal, J., Sengupta, S., Bhattacharyya, K., Golui, D., Hutchinson, S. M., & Wood, M. D. (2025). Predicting the Permissible Limit of Arsenic in Irrigation Water for Rice Cultivation. *ACS ES&T Water*.

Committee & Editorial Board