

Green Harvest

Agriculture Newsletter

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School of Agriculture

Swami Vivekananda University

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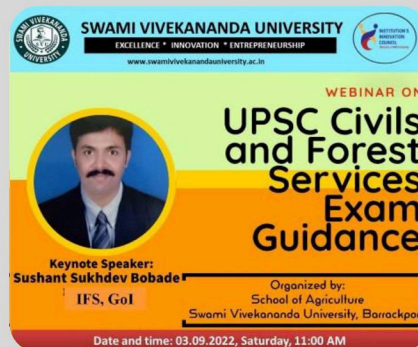
About School of Agriculture

The School of Agriculture, established in 2020, aims at achieving excellence in academics and research. Bachelor's degree courses in Agriculture, Agricultural engineering and Master's degree course in Agribusiness management are offered by the School. The school has designed dynamic and focused curricula as per the guidelines of Indian Council of Agricultural Research (ICAR) to develop well-trained manpower for academics, agro-based industry and extension oriented applications.

Workshops/Conference

The School of Agriculture had organised an invited talk with Mr. Sushant Sukhdev Bobade, IFS, on September 3, 2022 on the topic of "UPSC Civil and Forest Service Exam Guidance" to about 93 student participants of Swami Vivekananda University. In this talk, he briefly discussed about strategies to clear the UPSC forest and civil service examinations as techniques and strategies that are equally important as knowledge in any UPSC exam.

Overwhelming responses were obtained from the attending students, and the webinar ended with an excellent interaction session with the speaker, which not only enriched the knowledge of



the students but also provided guidance to help UPSC aspirants.

Development of low cost Rain Gauge

Swami Vivekananda University provided an opportunity to create of an extremely affordable, low-capacity (up to 10 cm), non-recording type rain gauge. This rain gauge was skilfully designed by the agricultural engineering students under the guidance of the faculty. The designed rain gauge performs identically to the 'Symon's gauge'



(a rain gauge that is commonly used in India by the Indian Meteorological Department) and its manufacturing expenses are less than 100 rupees.



Practical experience in field

Rice cultivation was carried out by B.Sc. agriculture students under the supervision of faculty members. Students prepared nursery beds and the main field for kharif rice transplanting. They worked on nutrient management, irrigation, weed control, grain harvesting and threshing. They gained field experience and applied their theoretical crop cultivation knowledge.



Technical Training Visit

The representative student and faculty members of the School of agriculture participated in the NASSCOM & Ingreens organized AgriGate



2022 on 27th September 2022 at Biswa Bangla Convention centre, Newtown, Kolkata. There was a special stall for the university where the participants illustrated their technical skills through models. The day-long event aimed to connect more than 500 plus Senior stakeholders of the Agri & Food ecosystem from India & Abroad viz; Policy Makers (Department & Directorate, Agri, Horti, Fishery, Animal Husbandry) from across the country, International Start-ups' & Institutions (Domestic Start-ups, Banks, Fintech Co.'s, Insurance co.'s, Investors (PE/VC) , OEM Manufacturers, Agri & Food Corporates, Agri Universities, FPOs, Students & other PSUs and Agencies to connect, collaborate and co-create new age Agri tech solutions for ushering in the next Agricultural revolution. The students had active interactions with the entrepreneurs, got acquainted with different skills that can strengthen their knowledge to the future of agriculture and ensure their optimistic future.



Hands on training on Oyster Mushroom cultivation

The students of B.Sc. Agriculture were given hands on training on Oyster mushroom production. *Pleurotus ostreatus*, the oyster mushroom, oyster

fungus, or hiratake, is a common edible mushroom. Oyster mushroom can be grown in the plains and in temperatures ranging from 22 to 35 degrees centigrade. Mushroom, which is pure vegetarian food, is good for diabetic patients. It also has other medicinal properties. It is good for stomach-related ailments like gastric ulcer and has high fibre content and no sugar. It is also rich in protein. Mushroom



cultivation has become a profitable business with the produce fetching good returns in the market. Many exotic preparations are made from them like soup, pickles, vegetables etc. But its consumption is still confined to urban and semi-urban population.

Mushroom cultivation has been declared as a major thrust area by Govt. of India. However, there is huge demand supply gap. Day by day there is continuous increase in the demand of mushroom which denotes that there is huge market potential in near future. Mushroom cultivation can be a labour-intensive activity. Therefore, it will serve as means of generating employment, particularly for rural women and youths in order to raise their social status. Mushroom growing is eco-friendly as it involves recycling of plant wastes to produce rich food and the spent mushroom substrate can be used to produce organic manure.

Visit to a commercial Polyhouse



A visit was organized on December 12, 2022 to Tapan Agro Polyhouse at Madhyamgram. The students witnessed commercial farming under Hi-Tech Polyhouse. As technology is evolving everyday, drastic changes have been seen in the art of farming as well. Polyhouse has evolved the way of traditional farming in India and presented new opportunities to get better and more yields even in off-seasons while utilising fewer resources. A polyhouse works on the concept of a greenhouse that lets in light and traps heat inside. But instead of glass, it is made from polythene sheets or flexible plastic sheets. It is an excellent example of precision farming, the utilization of resources is efficient, and the quality of the harvest is high. Mr. Tapan Biswas and Swapan Biswas, the owners of the Polyhouse, produces different types of cut flowers, exotic vegetables, and fruits. Their vision towards Vanilla cultivation is noteworthy. They just have to keep check on the temperature inside the poly-house. If it is too warm inside, then sprinkler and fogger is used to cool down the temperature. At other times, when it is cooler outside and warmer inside, all is needed is simply open the door. Hence, polyhouse farming in India has vast opportunities for commercial growers.

Academic- Industrial Collaboration

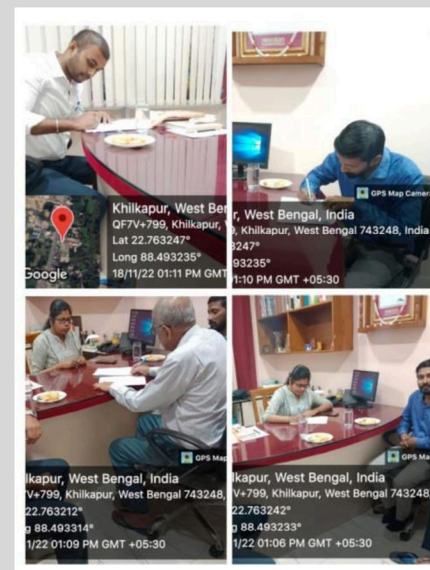
Swami Vivekananda University entered into a Memorandum of Understanding with Debgiri Agro Products Private Limited, Barasat, West Bengal on 18th November, 2022 with common goals related to research activities in the area of agricultural and social science and seek to develop collaborations and exchange between themselves in the areas of shared research interest and expertise. The MOU explores possibilities

between the parties on possible collaborations on various scientific publications, research projects, field trials, joint organizations of seminars and conferences, exchange and trainings of researchers, faculties, final year students and trainees benefitting both the organizations. The MOU was signed in presence of Prof. (Dr.) Subrata Kumar Dey, honorable Vice Chancellor of Swami Vivekananda

University, Barrackpore, Mrs. Debdrita Giri, Director of Debgiri Agro Products Private Limited, Dr. Tanmoy Sarkar, HOD, School of Agriculture, Swami Vivekananda University, Dr. Suprabuddha Kundu, Assistant Professor, Swami Vivekananda University, and Dr. Mohit Kumar Singh, advisor of Debgiri Agro Products Pvt Limited and Mrs. Pampi Bhattacharya, HR, Debgiri Agro Products Pvt Limited.

Extracurricular activities by the students

Swami Vivekananda University (SVU) organized **Annual Sports** during 1-2nd December, 2022. Students from School of Agriculture actively



participated in outdoor games such as Cricket, Football, Badminton, and indoor games such as Chess and Carrom. **Winter Fest** is the inter-departmental cultural completion organized by cultural club, SVU during 12-16th December, 2022. Several students actively participated in singing and dancing competition. These kinds of extra-curricular activities benefited the students with an all-round development



Novel Technological Nuances

School of Agriculture is continuously striving and trying to bring forward novel agro-technologies for social upliftment.

Drone technology for augmenting Indian agriculture

India's economy is mostly based on agriculture. Despite the growing importance of agriculture in the country, the industry is still lagging behind in terms of technical development, which consequently affects the quality and quantity of



agricultural products. Unmanned aerial vehicles, or drones, are utilised widely in various industries, but their use in the agriculture sector is still in its infancy in India. However, this emerging technology, due to its unprecedented nature of speeding up processes and improving farmer productivity, is widely used for spraying fertiliser, aerial surveillance, crop monitoring, land inspection, mapping, looking for damaged or rotting crops, and many others. Despite its numerous applications, drones have a long way to go before becoming a common piece of farming equipment. Moreover, there is a need to create or update laws governing drone use, and more study is needed to determine how well they perform specific activities. Farmers can use drones in a variety of ways, but before spending money on pricey equipment, it's crucial to understand their capabilities and limitations.

List of publications

Faculty members of School of Agriculture have published articles of international repute and also in newspaper under the SVU affiliation.



1. Patra, S. K., **Sengupta, S.**, Poddar, R., & Bhattacharyya, K. (2022). Improving the growth, yield, and quality of ginger (*Zingiber officinale* Rosc.) through irrigation and nutrient management: a study from an Inceptisol of India. *Water SA*, 48(4), 487-498.

2. Nayak, P. P., **Nandi, S.**, Bhunia, K., & Datta, A. K. (2022). Modelling the extraction process parameters of amorphous silica-rich rice husk ash using hybrid RSM– BPANN– MOGA optimization technique. *Materials Chemistry and Physics*, 293, 126944.

3. Banerjee, P., **Bhattacharya, P.**, Kumari, V. V., Bera, A., & Nath, R. (2023). Modification in bio-physical properties of spring-summer black gram [*Vigna mungo* (L.) Hepper] through optimization of sowing dates and nutrient management towards sustainability. *Field Crops Research*, 291, 108767.

4. **Sengupta, S.**, Roychowdhury, T., Phonglosa, A., & Mandal, J. (2022). Arsenic Contamination in Rice and the Possible Mitigation Options. In *Global Arsenic Hazard* (pp. 35-48). Springer, Cham.

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