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DBT-STAR Scheme 2025

REPORT

DEPARTMENT: BIOTECHNOLOGY

TITLE	Hands-on training program "Commercial plant tissue culture-Micropropagation"
ACTIVITY TYPE	Hands-on training program
YEAR/SEMESTER	2026/ VI Semester
DATE OF EVENT	18.03.2026
VENUE	Department of Horticulture, University of Agricultural Sciences, GKVK, Bangalore
ORGANISED BY	Department of Biotechnology
RESOURCE PERSON (with designation and affiliation)	1) Dr. K.N. Srinivasappa, Professor and Head, Department of Horticulture, In charge-M&AP Section Ph.D. (Horticulture) Plantation, Medicinal, Aromatic and Spices crops, GKVK campus, Bangalore-560 065 2) Ms. Shanthala, Research scholar, Department of Horticulture, GKVK, Bangalore
FACULTY INCHARGE/EVENT COORDINATOR	Mrs. Mamatha J, Associate Professor; Dr. Kavisa Ghosh, Assistant Professor
TARGET AUDIENCE	UG VI Semester- Biotechnology Students
NUMBER OF BENEFICIARIES	35

The objectives of the Programme:

The VI Semester undergraduate Biotechnology students participated in a one day hands-on training program on Commercial Plant Tissue Culture through an academic visit to the Department of Horticulture, University of Agricultural Sciences, GKVK, Bangalore. The primary objective of this programme was to provide students with experiential learning opportunities in plant tissue culture techniques and greenhouse management. By engaging directly with a premier horticultural research facility, the programme aimed to bridge theoretical knowledge with practical applications, enhance understanding of commercial tissue culture practices, and expose students to the translational aspects of biotechnology in agriculture.

Highlights of the Programme:

During the visit, students explored the plant tissue culture facility where they observed ongoing research and commercial propagation of *Anthurium* and two banana plant varieties. The faculty and technical staff demonstrated the step-by-step process of micropropagation, including explant preparation, sterilization, initiation, multiplication, and acclimatization. Students gained insights into the critical parameters that determine success in tissue culture, such as aseptic techniques, media composition, and environmental control. The greenhouse facility provided a complementary perspective, showcasing the acclimatization and hardening of tissue-cultured plants under controlled conditions. The integration of research and commercial practices was a highlight, as it illustrated how scientific innovation translates into scalable agricultural solutions.

The outcome of the programme:

The outcome of the programme was multifold. Students developed a deeper appreciation of the role of biotechnology in horticulture and agriculture, particularly in enhancing crop quality, disease resistance, and productivity. They acquired practical exposure to tissue culture methodologies, reinforcing classroom learning with hands-on observation. The visit also broadened their understanding of career opportunities in plant biotechnology, agribusiness, and research. Importantly, the programme fostered critical thinking about sustainability and commercialization, encouraging students to envision biotechnology not only as a scientific discipline but also as a driver of societal and economic impact. Overall, the workshop successfully met its objectives by equipping students with knowledge, inspiration, and practical awareness that will strengthen their academic and professional journey.

Department of Horticulture, greenhouse, University of Agricultural Sciences, GKVK, Bangalore

Resource person explaining about different stages of micro-propagation of banana tissue culture

Plant tissue culture lab

Students working with micro-propagated banana plants and transferring to hardening trays

Head of the Department **DBT-STAR Coordinator** **Vice Principal** **Principal**

Attachments

Sl. NO	Document	(✔) mark (if attached)
1	Brochure of the event	NA
2	Circular of the event (For training/ workshop/guest lecture/FDP)	NA
3	Geo-tagged photos/ Screen Shots (Save as separate photos)	Yes
4	Attendance sheet with signature of the attendees	Yes
5	Copy of the Certificate/E-cerfiticate issued	NA
6	Feedback Forms (For training/ workshop/Guest lecture/FDP)	NA