

EBO-405 PLANT TISSUE CULTURE

Unit-I

- Plant cell and tissue culture: Introduction, History, Scope, Concept of Cellular differentiation, Totipotency and Applications.
- Laboratory organization, Media Preparation and sterilization techniques.
- Types of culture, Callus and its Types, micropropagation.
- Somatic Hybridization, protoplast isolation, fusion and culture, Hybrid selection regeneration.

Unit-II

- Clonal propagation, Artificial seed production and Biotechnological production of plant Secondary metabolites.
- Transgenic plants and Crop Protection: Pathogen and Herbicide Resistant plants, Oxidative stress and Salt stress resistant plants
- Molecular farming: Production of Antibodies, Vaccines, Polymers and Bioplastic.
- Germplasm storage and Cryopreservation