1. Record Nr. UNINA9910578687303321

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| Titolo | Commercial Scale Tissue Culture for Horticulture and Plantation Crops / / edited by Shubhpriya Gupta, Preeti Chaturvedi |
| Pubbl/distr/stampa | Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2022 |
| ISBN | 981-19-0055-8 |
| Edizione | [1st ed. 2022.] |
| Descrizione fisica | 1 online resource (338 pages) |
| Collana | Biomedical and Life Sciences Series |
| Disciplina | 306.4409113 |
| Soggetti | Plant biotechnology<br>Plants - Development<br>Plant physiology<br>Botanical chemistry<br>Plant Biotechnology<br>Plant Development<br>Plant Physiology<br>Plant Biochemistry |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di bibliografia | Includes bibliographical references. |
| Nota di contenuto | Chapter 1. Improved sterilization techniques for successful in vitro micropropagation -- Chapter 2. Selection and preparation of explants for the clonal propagation of horticultural plants in plant factory systems -- Chapter 3. Use of alternative components in cost-effective media for mass production of clonal plants -- Chapter 4. Novel plant growth regulators in in vitro establishment of horticulture and plantation crops -- Chapter 5. Potential role and utilization of Piriformospora indica: fungal endophytes in commercial plant tissue culture -- Chapter 6. Application of biostimulants in establishing and acclimatizing in vitro-raised plants -- Chapter 7. Nanomaterials and plant tissue culture: Developmental path and contradictory facts -- Chapter 8. Somatic embryogenesis in cashew (Anacardium occidentale L.) -- Chapter 9. Somatic embryogenesis and plant regeneration in horticultural crops -- Chapter 10. Prospect and commercial production of economically important plant mulberry (Morus sp.) towards the upliftment of rural economy -- Chapter 11. Assessing the genetic |

stability of in vitro raised plants -- Chapter 12. Improvement of plant survival and expediting acclimatization process -- Chapter 13. Evaluation of genetic stability of in vitro raised orchids using molecular based markers -- Chapter 14. Recent in-vitro propagation advances in Genus Paphiopedilum – Lady Slipper Orchids.

Sommario/riassunto

This edited book is focusing on the novel and innovative procedures in tissue culture for large scale production of plantation and horticulture crops. It is bringing out a comprehensive collection of information on commercial scale tissue culture with the objective of producing high quality, disease-free and uniform planting material. Developing low cost commercial tissue culture can be one of the best possible way to attain the goal of sustainable agriculture. Tissue culture provides a means for rapid clonal propagation of desired cultivars, and a mechanism for somatic hybridization and in vitro selection of novel genotypes. Application of plant tissue culture technology in horticulture and plantation crops provides an efficient method to improve the quality and nutrition of the crops. This book includes a description of highly efficient, low cost in vitro regeneration protocols of important plantation and horticulture crops with a detailed guideline to establish a commercial plant tissue culture facility including certification, packaging and transportation of plantlets. The book discusses somatic embryogenesis, virus elimination, genetic transformation, protoplast fusion, haploid production, coculture of endophytic fungi, effects of light and ionizing radiation as well as the application of bioreactors. This book is useful for a wide range of readers such as, academicians, students, research scientists, horticulturists, agriculturists, industrial entrepreneurs, and agro-industry employees.