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Nota di contenuto	1. Thidiazuron: Modulator of Morphogenesis in Vitro -- 2. TDZ - Mode of Action, Use and Potential in Agriculture -- 3. TDZ-Induced Morphogenesis Pathways in Woody Plant Culture -- 4. Thidiazuron in Micropropagation of Aroid Plants -- 5. Use of TDZ for Micropropagation of Some Mediterranean Crop Species -- 6. Thidiazuron in Micropropagation of Small Fruits -- 7. TDZ in Cereal Gametic Embryogenesis -- 8. Preconditioning of Nodal Explants in Thidiazuron Supplemented Liquid Media Improves Shoot Multiplication in Pterocarpus Marsupium (Roxb) -- 9. Application of Thidiazuron in the Micropropagation of Fagaceae -- 10. In Vitro Morphogenesis of Woody Plants Using Thidiazuron -- 11. Thidiazuron Influenced Morphogenesis in Some Medicinal Plants -- 12. In vitro Morphogenesis

of Some Himalayan Flora using TDZ - A Potential Plant Growth Regulator -- 13. Thidiazuron Induced Protocorm-Like Bodies in Orchid: Progress and Prospects -- 14. Thidiazuron (TDZ): A Callus Minimizer for In Vitro Plant Production -- 15. The Applications of TDZ in Medicinal Plant Tissue Culture -- 16. Factors Affecting Thidiazuron-Induced Direct Somatic Embryogenesis of PHALAENOPSIS Aphrodite -- 17. TDZ Induced Diverse In vitro Responses in Some Economically Important Plants -- 18. Regulation of Morphogenesis and Improvement in shoot Multiplication in Vitex Species Using Thidiazuron -- 19. TDZ-Induced Regeneration in Stevia rebaudiana Berteri: An Important Natural Sweetener -- 20. Shoot Organogenesis of Aloe Plants with Emphasis on TDZ -- 21. Morphogenic Potential of Different Explants of Broccoli (*Brassica oleracea* L. var. *italica*): important "nutrient rich" Vegetable, using Thidiazuron. -- 22. Thidiazuron: A Potent Phytohormone for in Vitro Regeneration -- 23. TDZ-Induced Plant Regeneration in *Jatropha curcas*: a promising Biofuel Plant -- 24. Role of Thidiazuron in Modulation of Shoot Multiplication Rate in Micropropagation of *Rauvolfia* Species -- 25. Effect of TDZ on Various Plant Cultures -- 26. Role of Thidiazuron in Tissue Culture of Orchids -- 27. Thidiazuron as an Elicitor in The Production of Secondary Metabolite -- 28. Thidiazuron: An Effective Plant Growth Regulator on In Vitro Cloning of Slow Growing Economic Rattan Palms in Southern Western Ghats for Eco-Restoration and Consistent Utilisation.

Sommario/riassunto

Plant biotechnology is a most interesting branch for academicians and researchers in recent past. Now days, it becomes a very useful tool in agriculture and medicine and is regarded as a popular area of research especially in biological sciences because it makes an integral use of biochemistry, molecular biology and engineering sciences in order to achieve technological application of cultured tissues, cell and microbes. Plant tissue culture (PTC) refers to a technique of cultivation of plant cells and other parts on artificial nutrient medium in controlled environment under aseptic conditions. PTC requires various nutrients, pH, carbon source, gelling agent, temperature, photoperiod, humidity etc. and most importantly the judicious use of plant growth regulators. Various natural, adenine and phenyl urea derivatives are employed for the induction and proliferation of different types of explants. Several phenyl urea derivatives were evaluated and it was observed that thidiazuron (n-phenyl-N"-1,2,3- thiazol-5-urea) was found to be the most active among the plant growth regulators. Thidiazuron (TDZ) was initially developed as a cotton defoliant and showed high cytokinin like activity. In some examples, its activity was 100 times more than BA in tobacco callus assay and produces more number of shoots in cultures than Zeatin and 2iP. TDZ also showed major breakthrough in tissue culture of various recalcitrant legumes and woody species. For the last two decades, number of laboratories has been working on TDZ with different aspect and number of publications has come out. To the best of our knowledge, there is no comprehensive edited volume on this particular topic. Hence th,e edited volume is a deed to consolidate the scattered information on role of TDZ in plant tissue culture and genetic manipulations that would hopefully prove informative to various researches. Thidiazuron: From Urea Derivative to Plant Growth Regulator compiles various aspects of TDZ in Plant Tissue Culture with profitable implications. The book will provides basic material for academicians and researchers who want to initiate work in this fascinating area of research. The book will contain 26 chapters compiled by International dignitaries and thus giving a holistic view to the edited volume.
