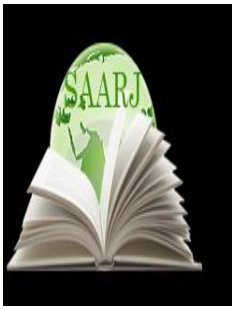

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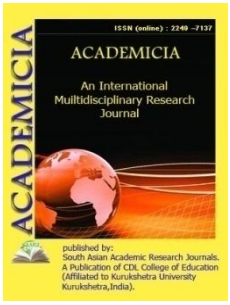

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AN ANALYSIS OF PLANT TISSUE CULTURE

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ABSTRACT

Forestry, Agriculture, horticulture and plant breeding have all made extensive use of plant tissue culture. It's a kind of applied biotechnology that's utilized for things like plant mass propagation, viral eradication, secondary metabolite synthesis, and in-vitro cloning. Plant tissue culture has recently been utilized for short and medium term conservation, also known as slow growth, and cryopreservation, also known as long term conservation, of endangered plant species. These techniques had been effectively employed to preserve plant species with refractory seeds or dormant seeds, and they outperformed traditional conservation approaches. Plant tissue cultures are a useful tool for studying cell wall production in live cells. Tissue cultures also offer cells and culture media, which may be readily separated to isolate enzymes and cell wall polymers for future research. Tissue cultures with treachery element differentiation or extracellular lignin production have yielded valuable data on a variety of xylem and lignin-related topics. This paper also discusses several aspects of Plant Tissue Culture.

KEYWORDS: *Agriculture, Conservation, Cytokinin, Plant, Tissue Culture.*

REFERENCES:

1. R. D. Illg, “Plant tissue culture techniques,” Mem. Inst. Oswaldo Cruz, 1991, doi: 10.1590/s0074-02761991000600008.
2. C. R. Singh, “Review on Problems and its Remedy in Plant Tissue Culture,” Asian J. Biol. Sci., 2018, doi: 10.3923/ajbs.2018.165.172.
3. G. K. Sharma, S. Jagetiya, and R. Dashora, “General Techniques of Plant Tissue Culture,” Book, 2015.

4. S. Bhatia, "Plant Tissue Culture," in Modern Applications of Plant Biotechnology in Pharmaceutical Sciences, 2015.

5. R. García-Gonzáles, K. Quiroz, B. Carrasco, and P. Caligari, "Plant tissue culture: Current status, opportunities and challenges," Cienc. e Investig. Agrar., 2010, doi: 10.4067/s0718-16202010000300001.

6. M. Dorris, "What is Plant Tissue Culture?," J. Bromel. Soc., 2010.

7. K. Yadav, N. Singh, and S. Verma, "Plant tissue culture: a biotechnological tool for solving the problem of propagation of multipurpose endangered medicinal plants in India," J. Agric. Technol., 2012.

8. M. K. Rai et al., "The role of abscisic acid in plant tissue culture: A review of recent progress," Plant Cell, Tissue and Organ Culture. 2011, doi: 10.1007/s11240-011-9923-9.

9. H. R. Dagla, "Plant tissue culture: Historical developments and applied aspects," Resonance, 2012, doi: 10.1007/s12045-012-0086-8.

10. O. M. Oseni, V. Pande, and T. K. Nailwal, "A Review on Plant Tissue Culture, A Technique for Propagation and Conservation of Endangered Plant Species," Int. J. Curr. Microbiol. Appl. Sci., 2018, doi: 10.20546/ijcmas.2018.707.438.