

Date palm, a dynamic tree in arid and semi-arid areas, subjects tissue culture for reproduction, facing challenges like fungal contamination. The impact of various pH levels on contaminated fungal growth and explants in vitro was investigated in this research. Through morphological and molecular analyses, three fungi, *Alternaria alternata, Chaetomium globosum*, and *Nigrospora osmanthi*, were identified within the tissue culture, with *A. alternata* being the most prevalent. Significant differences in radial growth and dry weight of these fungi were observed across different pH levels, whereas shoot growth in date palm tissue culture remained unaffected. This study includes understanding the interactions between pH levels and fungi, highlights the importance of understanding the conditions of date palm tissue culture, by illuminating the behavior of fungi in plant tissue cultures, this study contributes to the extensive understanding of cultivation practices in agricultural settings.

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