

**EVALUATION OF A SURFACE STERILIZATION TECHNIQUE
FOR IN-VITRO PROPAGATION OF CARDAMOM**

(Elettaria cardamomum)



BY

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ABSTRACT

Cardamom (*Elettaria cardamomum*) the “queen of spices” is a universal table condiment belongs to family *Zingiberaceae*. It is usually cultivated through seed and vegetative means that are slow and time consuming. Tissue culture methods are considered more efficient for mass propagation. The present study was initiated to develop a protocol for surface sterilization techniques for in-vitro propagation of cardamom through the suckers. The suckers were surface sterilized using 70% Clorox, 1g/l Captan, and detergent (Dettol).

Murashige and Skoog medium was used as the basal medium. Completely randomized design was conducted to test the effect of Captan fungicide. Captan dipping period of 30 minutes, 45 minutes, 60 minutes, and 75 minutes were tested. Fungal contamination percentage, bacterial contamination percentage, tissue browning, green appearance, and number of shoots were assessed for testing the effect of Captan and optimization of surface sterilization protocols. The surface sterilization procedures were effective but there was no significant difference among Captan dipping period for the parameters evaluated.

Keywords: Cardamom, in-vitro propagation, surface sterilization, Captan, fungal contamination, bacterial contamination, browning scale

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