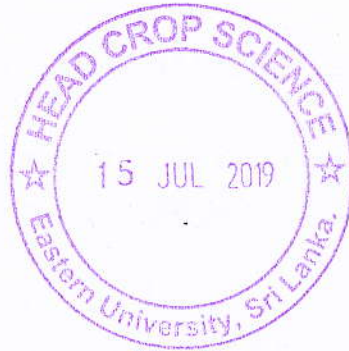


**EFFECT OF IBA ON THE FORMATION OF *IN VITRO*  
ADVENTITIOUS ROOTS FROM TUBER AND STEM  
SEGMENTS OF POTATO (*Solanum tuberosum* L.)**



**BY**

**SACHITHANANTHAM KIRIJA DEVI**



Library,  
Eastern University, Sri Lanka

**DEPARTMENT OF CROP SCIENCE**

**FACULTY OF AGRICULTURE**

**EASTERN UNIVERSITY**

**SRI LANKA**

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## ABSTRACT

Potential for mutation breeding of potato are offered by using adventitious buds that arise from adventitious roots of *in vitro* explants of tuber disc and stem segments to produce a very high mutation frequency and reduced chimerism for plant development. In experiment I, the tuber discs were cultured in MS medium supplemented with the different concentrations of IBA (0, 5, 15, 25, 50 mg/l) to induce adventitious roots. And experiment II, stem cuttings without nodes were taken from stock plantlets then cultured in MS medium supplemented with different concentration of IBA (0, 5, 15, 25, and 40, 60 mg/l) to promote adventitious roots. Days for root formation, root length, number of roots, and diameter of roots were recorded in both experiments. The results revealed that 25 mg/l IBA concentration was favorable concentration for root formation from tuber disc in *in vitro* method.

And in stem segments among six concentration of IBA, 40 mg/l concentrations showed the highest (60%) root formation and 15 roots per explants was observed. And also, the days taken for root formation was 14. Hence, 25 mg/l IBA concentration showed 55% of root formation, 12 roots per plant, root length (12.5 mg/l). Hence, it could be stated in potato variety granola, IBA concentration range between 25 mg/l - 40 mg/l favorable concentration for adventitious root formation from stem segments.

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