

Poster

**CALLUS INDUCTION AND PLANT REGENERATION IN POMEGRANATE
(*PUNICA GRANATUM L.*) USING LEAF EXPLANTS**

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ABSTRACT

Leaves taken from *in vitro* germinated pomegranate seedlings were used as explants. Leaf explants inoculated in MS medium supplemented with various concentrations of Benzyl amino purine (BAP) and Naphthalene acetic acid (NAA) were used for callus induction. After two months, maximum callus induction was observed in medium containing 4 mg/L BAP with 0.2 mg/L NAA. The high growth rate of callus and highest number of shoots (5 shoots per explants) were obtained by transferring calli to the media containing 0.5 mg/L BAP in light condition. Among the treatments used in rooting experiments, from *in vitro* raised shoots cultured in MS medium containing 4 mg/L Indol butyric acid (IBA) had the maximum number of roots. *In vitro* rooted plantlets were acclimatized for three months in poly bags containing sand and compost (3:1) mixture under green house conditions. One week after potting, Albert fertilizer mixture was sprayed weekly and 80% of plants were survived. Acclimatized plants were planted in Plant Virus Indexing Centre, Homagama and Agriculture research station Kalpitiya. Flower initiation was observed 8 months after field planting and fruit setting continued.