

Research News

***IN VITRO* REGENERATION OF CHRYSANTHEMUM
(*CHRYSANTHEMUM MORIFOLIUM* L.) USING NODAL
SEGMENTS AND IMMATURE FLOWER BUDS**

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Chrysanthemum (*Chrysanthemum morifolium* L.) usually considered an herbaceous perennial is commonly known as Autumn Queen belongs to the family Asteraceae. It is highly valued as a cut flower worldwide with its diverse floral types and colours. Chrysanthemum has been cultivated for more than 2,000 years and today, it is the world's second most economically important floricultural crop. Chrysanthemum cut and pot plant species are usually propagated by cuttings and suckers but these vegetative propagation practices are time consuming and laborious. This experiment aims to find out the effect of different concentrations of growth regulators and their combinations on the establishment, shoot multiplication and rooting of micro shoots of chrysanthemum. Nodal segments and immature flower buds were used as explants. Experiment was conducted at the plant tissue culture laboratory, Agriculture Research and Development Centre (ARDC), Sita Eliya during February of 2013 to January of 2014. Two cultivars of chrysanthemum namely Ferry green and Sputnik yellow were selected from three months old chrysanthemum plants grown at the glass house of ARDC, Sita Eliya and nodal segments and immature flower buds (three days old) were collected as explants for this experiment. The explants were prepared following standard procedure and were cultured in three different solid MS media having different hormone combinations. Using nodal segments limited number of micro shoots produced per explant but with flower buds (10-15) highest micro shoots could be produced. Use of flower bud as explants with developed culture media high quality planting materials could be produced. The best establishment medium was MS + 1 mg/l BAP, 0.1 mg/l IAA than other two treatments. Highest numbers of shoots were produced in MS + 1 mg/l BAP, 0.1 mg/l IAA, 0.2 mg/l GA₃. Best root initiation medium was MS + charcoal.