

## EFFECT OF IBA ON ROOTING BEHAVIOUR IN ROSE SCENTED GERANIUM (*PELARGONIUM GRAVEOLENS* L.CV. BOURBON) IN DIFFERENT SEASONS UNDER HILL AND MOUNTAIN AGRO-ECOSYSTEM OF GARHWAL HIMALAYA

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**ABSTRACT:** The study was conducted on vegetative propagation of *Pelargonium graveolens* (cv. Bourbon) at the nursery stage in Garhwal Himalayan region of Uttarakhand. The juvenile and mature cuttings having 3-5 buds were used for the experiment during three different seasons (post monsoon, spring and winter). The cuttings of the Geranium were treated with five concentrations of IBA (200, 400, 600, 800, 1000 ppm) to check the best fit concentration with respect to its rooting behavior. It was observed that the rooting response of *Pelargonium graveolens* varied with the concentration of IBA, season and the nature of cutting. The maximum sprouting (93.6%), rooting (87.5%) and number of roots per cutting (6.5) were recorded in the juvenile cuttings treated with 600ppm of IBA solution in post monsoon season whereas root length (5.8cm) recorded to be highest in 800ppm of IBA solution. In the same season the performance of mature cutting treated with IBA showed highest sprouting (61.7%), rooting (56.9%), and number of roots per cutting (3.5) and root length (4.9 cm) in 800ppm solution of IBA. Among different concentrations 600ppm of IBA in juvenile cuttings and 800ppm of IBM in mature cuttings was most effective. The IBA treated juvenile cuttings showed the order of progress as 600ppm > 800ppm > 400ppm > 200ppm > 1000ppm > control whereas mature cuttings showed the order of 800ppm > 600ppm > 1000ppm > 400ppm > 200ppm > control. The rooting behavior exhibited best results in the post monsoon season followed by spring and winter.

**Key Words:** Juvenile cutting, Mature cutting, Indole-3-Butyric Acid, Sprouting percentage.