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**Research Article**

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# Effect of various plant growth promoters and growing conditions on flowering of *Dendrobium* cv. EARSAKUL

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**ABSTRACT :** The investigation on 'Flowering response of *Dendrobium* cv. EARSAKUL to plant growth promoters in different growing conditions' was conducted at College of Horticulture, Vellanikkara, Kerala. Results revealed that, among plant growth promoters, the treatment POP + OM + VW + PGPRES + Bone meal + GR (T<sub>4</sub>) resulted in longer spike (31.34 cm), more flower count (6.54) and longer vase life (30.00 days), whereas, the treatment NPK + GR + OM + VW + PGPRES + Bone meal (T<sub>6</sub>) was the best with respect to time taken for first flower opening (14.52 days) and number of spikes per plant (2.62) in six month old plants. In three year old plants, the treatment POP + OM + VW + PGPRES + Bone meal + GR (T<sub>4</sub>) was the best with respect to time taken for flowering (283.91 days), days to last flower opening (10.98 days), number of spikes (2.63) and vase life (28.26 days), whereas, length of the spike (30.46 cm) and number of flowers (5.08) were the highest in the treatment NPK + GR + OM + VW + PGPRES + Bone meal (T<sub>6</sub>). Among three systems of growing, top ventilated polyhouse (S<sub>2</sub>) had maximum influence on flower characters. In interaction, the combination of POP + OM + VW + PGPRES + Bone meal + GR (T<sub>4</sub>) and top ventilated polyhouse (S<sub>2</sub>) was significantly superior in flower characters irrespective of the age of the plants.

**KEY WORDS :** *Dendrobium* cv. EARSAKUL, Three growing systems, Nutrients, *Piriformospora indica*, Flowering

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