Influence of Plant Growth Promoters and Systems of Growing on Physiological Parameters of *Dendrobium* cv. Earsakul

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ABSTRACT

Dendrobium is an important orchid for cut flower and potted plant production. The study on 'Growth and physiological response of *Dendrobium* cv. Earsakul in different growing conditions' was conducted at College of Horticulture, Vellanikkara, Kerala. The experimental results revealed that, among physiological parameters, leaf area was highest in the treatment POP + OM + VW + PGPRE + Bone meal + GR in both stages of plants. Rate of photosynthesis and transpiration rate during day time were highest in the treatment POP + OM + VW + PGPRE + Bone meal in six month old plants. Rate of transpiration during day time was highest in the treatment NPK + GR + OM + VW+ PGPRE + Bone meal in three year old plants. Among the three systems of growing, maximum values for physiological parameters were recorded in top ventilated polyhouse (S_2). The interaction of plant growth promoters and systems of growing had significant effect on physiological parameters.

Key words : *Dendrobium* cv. Earsakul, Inorganic nutrients, Plant Growth Promoting Root Endophyte (*Piriformospora indica*) and growing systems.