P158

Growth of Two Cultivars of *Phalaenopsis* at Two Growth Stages as Affected by Nutrient Solution

Seung Jae Hwang* and Byoung Ryong Jeong

Dept. of Horticulture, Division of Applied Life Science, Graduate School, Gyeongsang National University, Jinju 660-701, Korea

The study was conducted to examine the effect of five nutrient solutions on the growth of two cultivars at two growth stages of *Phalaenopsis*. Potted *Phalaenopsis* JMP 77 x Phal. Reugrih Stripe and Dtps. City Girl M-2 x Dtps. [City Girl x (Love Street x Spot Jason)] M51, each of two and eight months old clonal micropropagules, were cultured with inorganic nutrient solutions formulated by Ross, Ichihashi, Sonneveld, and Peter's fertilizer. Conventional commercial solid fertilizer was used as the control. Plants of both cultivars were potted in 7.5 cm (two months old plants) and 10 cm (eight months old plants) plastic pots filled with 100% sphagnum moss on June 10, 2002. Plants were irrigated with either water (solid fertilizer treatment) or one of the nutrient solutions when water potential of the medium reached to -20 kPa. Mean daily air temperature and RH in a greenhouse were measured as 24.6°C and 75%, respectively. Plant growth was measured at 86 days after planting. pH of the nutrient solutions measured to be in the range of 5.7 and 6.4. Number of leaves, root length and total fresh weight of eight months old 'Dtps. City Girl M-2 x Dtps. [City Girl x (Love Street x Spot Jason)] M51' were significantly greater in the Ichihashi solution treatment than those in the other treatments. No. of leaves, leaf length, and leaf width of both cultivars of two months old plants were the greatest in the solid fertilizer treatment. Treatment effect was more pronounced in 'Dtps. City Girl M-2 x Dtps. [City Girl x (Love Street x Spot Jason)] M51' and in eight months old plants.