A study of Drip Tricke Fertilization for *Phalaenopsis*

Sheng-Shyan Lo and An-Pang Lin[1]

Abstract

Using the drip trickle system could acurately irrigate *Phalaenopsis* around the root side to reduce the loss of water and fertilizer, easily calculate the amount of irrigation needed to improve efficiency of water and fertilizier usage.

The fertilizers used were urea, calcium bimonohydrate and potassium chloride, which consisted of seven different N—P—K concentrations, including 100—50—100ppm(as the control), 50—50—100ppm, 200—50—100ppm, 100—25—100ppm, 100—100—100ppm, 100—50—50ppm and 100—50—200ppm by dripping once every 10 days,three times per month, and so a total of 36 times and 1440 litters for a year, for applying to 40 plants. Polypropylene foam was used as the culture medium.

The results showed the application of 200ppm of N could grow the *Phalaenopsis* to 6 pieces of leaves per plant, increasing the leaves area by 386.4% of its original plant, and having 0.032mg chlorophyll in leaf; which made less brown roots, more numbers and bigger size of flowers, longer and bigger peduncles than the control.

The using of 25ppm of P could promote numbers of leaf and flower length and size of peduncle, size of flower and thickness of petal significantly superior comparaed to the control. While applying concentration of K higher than 200ppm ,which lowered the qualities according to the mentioned characters , were not able to beer recommended. The feasible K concentration was 50—100ppm.

Key words : Phalaenopsis, Fertilization, Trickle irrigation, Polypropylene foam.

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[1]Assistant Horticulturist and senior Research Scientist of Taitang DAIS.