The Vegetative Propagation Technology of *Eustoma*©

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INTRODUCTION

About 15 years ago, the cut flower *Eustoma* started to become popular in Japan. However, the stability of the floral color, especially the colors of bicolor types of *Eustoma* were not stable because *Eustoma* is propagated from seeds. For the purpose of developing a stable method of vegetative propagation of *Eustoma*, both tissue culture and cutting methods were examined. By way of those experiments, we found the change of the floral color was mainly due to environmental conditions (not due to the propagation method). But tissue culture is a useful method for this species, and cutting propagation is a useful method for propagating rare selections of *Eustoma*.

The characteristics of our propagation method of *Eustoma* are as follows:

1) For shoot tip culture, a basal medium containing half concentration of Murashige and Skoog's (1962) medium inorganic salts, 30 $g \cdot L^{-1}$ of glucose, 4 $g \cdot L^{-1}$ Gellum gum, pH5.8, and phytohormone free is suitable. After 60 days, buds sprouted and shoots were formed.
2) For the leaf culture, a basal medium with 0.5 mg·L·BA is suitable. After 50 days, many adventitious shoots were formed. For the stem culture, a basal medium with 0.05 $mg \cdot L^{-1}$ BA is suitable. After 40 days, 3 to 10 adventitious shoots were formed.
3) The shoots resulting from (1) and (2) of more than l cm can form roots by rooting in sand or rock wool under 85% shade.
4) Buds which develop from the stock base after cutting the flower can be used for multiplication also, as in (3), and can be stored about 30 days at 2 ºC in a refrigerator.
5) The flowers resulting from (1) to (4) appear to have no inferior quality and showed no variation.

With these methods described above, it is easy to multiply and maintain the F_1 strains or newly bred cultivars.

LITERATURE CITED

Murashige T. and **Skoog F.** 1962. A revised medium for rapid growth and bioassay with tobacco tissue cultures. Plant Physiol. 15:473-497.