

Cyclamen Seedling Production by Tissue Culture

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INTRODUCTION

Cyclamen are mainly propagated from seed. However, uniformity of the important characteristics, such as color and type of flower, is poor because of the complexity of inheritance. Although numerous attempts have been made using in vitro culture techniques over a long period, these trials have not been successful, especially in large-scale culture. Recently, we solved the problems associated with tissue culture and achieved large-scale culture. We now aim to commercialize cyclamen seedlings produced by our tissue-culture methods.

CHARACTERISTICS OF THE MICROPROPAGATION SYSTEM

- 1) Only the leaf is used, thus no damage is sustained by the stock plant and cultivation may be started at any time.
- 2) We have developed two propagation methods, somatic embryo (SE) culture and adventitious bud (AB) culture:

	<u>SE culture</u>	<u>AB culture</u>
Process:	callus formation/multiplication ↓ SE formation ↓ plant regeneration ↓ explant	AB formation ↓ AB multiplication ↓ AB growth ↓ rooting
Advantage:	(I) morphologically similar to seed origin (II) low cost	(I) available with most cultivars and lines

FUTURE PLANS

- 1) Micropropagation of existing cultivars, new cultivars, favorite selections, local selections, stock plants, seed propagation, and F₁ seed plants.
- 2) Marketing of the cyclamen seedling, 'Victoria'.
- 3) Division of the production system into culture, growing on, and sales divisions.