

Nurseryman's Breeding and Tissue Culture of Ornamental Trees[©]

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INTRODUCTION

Plant lover preferences for ornamental plants changes continually and nurseryman have to breed new plants to meet changing consumer needs. The shortening of propagation process of new plants from development to sale is an important factor to boost consumption of nursery plants. In this respect, tissue culture is a powerful tool for the quick propagation of new plants. Because of this advantage it is important to strengthen the environment for the usage of tissue culture by nurseryman. The private enterprises in Hokkaido, Japan, established a contract clonal-propagation system for ornamental trees. This specialized system for propagating a wide range but in small quantities encourages breeding by nurseryman.

THE CONTRACT CLONAL PROPAGATION SYSTEM OF ORNAMENTAL TREES

At Akabira Orchid Co. in Hokkaido, Japan, lilac (*Syringa vulgaris* L.), hardy kiwi (*Actinidia arguta* (Sieb. et Zucc.) Planch. ex Miq.), *Hydrangea* species, *Lonicera caerulea* L. subsp. *edulis* (Turcz.) Hulten var. *emphyllocalyx* (Maxim.) Nakai., *Sasa* species, *Rubus* species, white birch *Betula mandshurica* var. *japonica* (syn. *B. platyphylla* var. *japonica*), smoke bush (*Cotinus coggygia* Scop.), Juneberry (*Amelanchier canadensis* Med.), and other ornamental trees have been propagated by order from nurserymen (Fig. 1). In this system, the client or nurseryman gathers new explants from the selected individual in the early spring, and mails this to Akabira Orchid Co. Ltd. Within 1 year, plantlets proliferated by tissue culture in culture bottles or plug trays are sent to the client (Fig. 2).



Figure 1. Tissue culture in Akabira Orchid Co.



Figure 2. Plantlets of *Lonicera caerulea* L. subsp. *edulis* (Turcz.) Hulten var. *emphyllocalyx* (Maxim.) Nakai.