

A Novel Technique for Mass Propagation and Production of Miniature Pot Plants of Mountain Laurel (*Kalmia latifolia*)[©]

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A novel technique for mass propagation and production of miniature pot plants of mountain laurel (*Kalmia latifolia*) was developed using a tissue culture technique and a plant growth retardant. Juvenile shoot apices that were excised from mother plants in a glasshouse were surface sterilized and used for tissue culture. Woody Plant Medium supplemented with $1 \text{ mg}\cdot\text{L}^{-1}$ of N^6 -(2-isopentenyl)-adenine was adequate for mass propagation of transferable shoots. Shoots taken from flasks were immersed in $100 \text{ mg}\cdot\text{L}^{-1}$ indolebutyric acid for 3 h to promote rooting and then transplanted to a potting mixture of peat moss, vermiculite, and perlite (8 : 1 : 1, by volume) in a 128-cell tray for acclimatization. Miniature pot plants with a number of flower buds were successfully produced by spraying the transplanted seedlings with $20 \text{ mg}\cdot\text{L}^{-1}$ growth retardant (Paclobutrazol), followed by another spray at $200 \text{ mg}\cdot\text{L}^{-1}$ 20 days later (Fig. 1). Excessive fertilization suppressed formation of flower buds and enhanced emergence of dwarf leaves. The suppression of plant growth by the Paclobutrazol treatment was recovered by an application of gibberellic acid, indicating that the miniaturization of plants was due to inhibition of gibberellin biosynthesis in the plants.



Figure 1. Produced plants by ordinary method (left) and novel method (right).