

Regional Adaptation of the Genus *Cypripedium* in Korea and Micropropagation with Seed

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Cypripedium is an orchid genus of over 50 species widely distributed in the northern temperate zone, with a few taxa extending central America and the Himalayas and the southwesternmost tip of China in Asia. Of the known species approximately two thirds are found in China. In Korea, 4 species were reported to find with rare popularity ; *C. macranthos*, *C. guttatum*, *C. japonicum*, and *C. calceolus*. The seed has a firm brown fusiform testa with an opening at one end where the micropyle of the ovule was situated. *Cypripedium* has small, fusiform, wind-dispersed seeds that weigh about 1~2 µg and range from 0.1 to 2 mm long and 0.07 to 0.4 mm across. The germination of *Cypripedium* was previously thought to be hard to cultivate in one's garden and impossible to propagate artificially, nowadays lab-propagated seedlings are readily available in EU or United States. We had already reported the successful micropropagation of lady's slipper orchids with green pod sowing methods. The collected *Cypripedium* species and hybrids were planted in Korea National Arboretum (KNA) on Oct. 2018. The 11 species including *C. candidum* and the 31 hybrids such as *C. Ingrid* were introduced from Germany with CITES certification. The lady's slipper orchids bloomed on May to June, and the flowers were pollinated in the same species or hybrids to get seeds for *in vitro* germination on 2~3 days after fully flowering. The green pods were collected after 49~70 days after pollination. The 6 species of *Cypripedium* seeds were easily germinated on the POM within 70 days after sowing, and the 12 hybrids PLBs were observed with small roots. We had established the scheme of lady's slipper orchids germination in 3 months with green pods, and get the possibility of seedling in 10 months of sowing *in vitro*.

Key words: Lady's slipper orchid, *C. macranthos* SW, Germination

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