IN VITRO PROPAGATION OF THE *Paphiopedilum hirsutissimum* (LINDL. EX HOOK.) STEIN

Pham Anh Tam, Nguyen Duc Thang,

Dang Trong Luong, Mai Duc Chung

Summary

Paphiopedilum hirsutissimum (Lindl. Ex Hook.) Stein. is an endangered tropical terrestrial orchid threatened with extinction due to over-collection and loss of suitable habitats. Asymbiotic germination provides a useful way to re-establish plants in the wild (conservation) and for commercial propagation. Pretreatment of the mature seeds with $HgCl_2$ for 15 min were most suitable for increasing germination percentage. The seeds were the optimum for culture *in vitro*, the seed germination reached on KC medium containing 30 g/l sucrose and 1.0 g/l activated charcoal (AC). Knudson C medium supplemented with 0.5 mg/l BAP, 10% CW, and 1.0 g/l AC was suitable for the first sub-culture of plantlets. KC medium supplemented with KC 0.6 mg/l α-NAA**,** 30 g/l sucrose, 10% CW, 1.0 g/l AC, 6.5 g/l agar, pH=5.8, was suitable for about 2-cm plantlets growth *in vitro*. The plantlets 2.5 cm in height or taller were transplanted in dry seaweed.

Keywords: *Paphiopedilum hirsutissimum (Lindl. Ex Hook.) Stein, in vitro rapid micropropagation, KC medium.*