EVALUATION THE POSSIBILITY OF TWENTY COMBINATION DENDROBIUM MINI CROSS-BREEDING

Nguyen Van Vinh, Tran Hong Anh, Bui Minh Tri, Bui Van Le

Summary

In this study, 20 combination Dendrobium mini cross-breeding have taken from cross-breeding among 15 varieties of Dendrobium mini orchid have been observed the pollination process, fruit-bearing process, the development of fruit and the time that fruit can be harvested to evaluate the ability to pollinate. Sowing the seeds and observing the seed germination under in vitro conditions to evaluate quality of the ability to pollinate. The result of hybridization process show that the time that flowers completely wilt from 6 to 20 days. Specially, the flower of combination Dendrobium mini cross-breeding DM25 x DM26 does not wilt but the peduncle of the flower had been bulge to date 45 and fell out. Among 20 combinations Dendrobium mini cross-breeding just have 15 cross-breeding create fruits with fruit ratio is from 25 to 100% and the time to harvest fruits are from 65 to 80 days. After 75 days pollination, the development of fruit has the variety with the length of fruits from 3.07 to 5.83 cm, diameter of fruits from 1.10 to 1.53 cm, weight of fruits from 2.33 – 4.23 g. The result show that the shape of fruits has been divided into two groups: (1) long fruit, big bulge in the middle, straight and great weight; (2) short fruit, slim, small diameter fruit and low fruit weight. Almost fruits of generality of hybrid combinations have seed. However, the fruits of combination Dendrobium mini cross-breeding DM24 x DM01 and DM15 x DM25 does not have seeds with frequency 50 % to 66.67 %. The colour of cross – breeding seeds is white or yellow. Yellow seeds have germination times from 25 – 26 days and high germination rate from 70 – 97%. Conversely, white seeds have long germination times from 31 – 34 days and low germination rate from 24 – 28%.

Key word: Dendrobium mini orchid, orchid hybrid, cross-breeding, ability to pollinate, sowing orchid seeds.