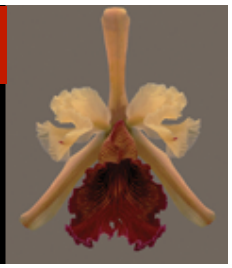

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In vitro seed propagation of *Phalaenopsis gigantea*, an endangered orchid species

Medium preference was investigated for *in vitro* seed propagation of wild orchid *Phalaenopsis gigantea* with the aim of *ex situ* biodiversity conservation. Four different basal media namely half-strength Murashige & Skoog (1/2MS), Knudson C(KC), Experimental Ernst Robert (XER) and New Dagoshima Medium (NDM) were tested for germination, protocorm growth and for the proliferation of protocorms. At 70 days after culture (DAC), higher percentages of seed germination were observed on 1/2MS, XER and NDM (88.09. 95.66 and 92.62 %, respectively) media and the least was on KC medium (30.08%). Addition of complex additive coconut water(CW) or peptone to 1/2MS basal medium increased significantly the seed germination but no effect was observed when added to XER and NDM basal media. The results also showed that the best overall germination was occurred in seeds from 170 days after pollination (DAP) capsules and no germination was observed in seeds collected from 100 DAP capsules. Considering the growth indices (GI) of protocorms and the percentage of protocorms producing minimum one leaf and one root, XER media supplemented with potato extract (PE 10, 15 or 25%) or sugar (sucrose, fructose or glucose) alone, showed better performance than those media supplemented with both PE and sugar. For the proliferation of *P. gigantea* protocorms, the highest percentage of proliferating protocorms occurred on NDM media containing 0.5 mg/L BA plus NAA at concentrations 1.0, 3.0 and 5.0 mg/L, respectively.