Abstract

Paraphalaenopsis serpentilingua is a rare orchid with restricted habitat endemic to Kalimantan. Furthermore, this prestigious species also has commercial value, as a parent for breeding. Research on the growth of Paraphalaenopsis serpentilingua by in vitro culture was done to increase the quality of explants to support conservation purpose. Combination between foliar fertilizer with organic matter in media was treated on the growth of protocorm like bodies (plb) of Paraphalaenopsis serpentilingua. The result showed that combination of foliar fertilizer Hyponex 25-5-20 + peptone 2g/l gave better effect to the first root emerged, number of roots, and height explant at 32 week after transplanting. Combination of foliar fertilizer Hyponex 6.5-6-19 + peptone 2g/l provide better effect to the first leaf initiation, number of leaf, number of root, and leaf area at 32nd week after transplanting. Addition of peptone 2 g/l provide positive effect to the growth of explants Paraphalaenopsis serpentilingua. However, addition of banana 20 g/l and sweet potato 15 g/l inhibited growth of the protocorm.