

Randomly Amplified Polymorphic DNA(RAPD) Markers for Identification and Genetic Diversity Analysis of *Anthurium* Cultivars¹

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Summary

Fifteen *Anthurium* cultivars collected for the breeding program of Taiwan Agriculture Research Institute were evaluated by randomly amplified polymorphic DNA(RAPD) technique. Objectives were to assess genetic diversity within the cultivars and survey the identification markers. Twenty-four DNA fragments derived from eight primers are polymorphic and can be used to distinguish the fourteen cultivars. A dendrogram generated by UPGMA(Un-weighted Pair-group Mean Arithmetic) cluster analysis from 160 RAPD fragments that all amplified by eight primers, divided the fifteen cultivars onto three main groups. The first group comprised eight cultivars, all with red spathe. The second group comprised six cultivars that mainly original derived from the breeder of Hawaii. The fourteen cultivars within these two groups, belonging to *Anthurium andraeanum*, while only with one cultivar "Southern Blush" in the third group, is a hybrid from *A. andraeanum* X *A. amnicola*. The results suggest that RAPD markers are useful in current breeding program of *Anthurium*, and allowing the identification within different cultivars as well as the estimation the genetic similarity among genotypes, which will be valuable in selecting the best parents and to obtain new combinations.

Key words : *Anthurium* , Breeding, Random Amplified Polymorphic DNA(RAPD), Identification, Genetic diversity

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