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Genetic Relationship of Melon (*Cucumis melo* L.) by SSR Marker Technique

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Abstract

Melon (*Cucumis melo* L.) is an economically important plant in Cucurbitaceae family. It showed several morphology as fruit shape, texture, fruit color, flesh color, aroma and disease resistance. The objective of this experiment was to study on genetic relationship of melon among 15 samples using SSR markers. There are 21 of 50 SSR markers were able to amplify by PCR. The PCR product was showed 28 bands totally. There are only 9 bands (32.14%) from 9 markers were polymorphic. Among the other markers, 12 markers were show monomorphic band. Similarity index ranged from 0.29-1.00. Cluster analysis of all samples was created by unweighted pair group method with arithmetic mean (UPGMA) method based on genetic similarity indexes indicated that there are 3 clusters related to plant morphology. The SSR marker is useful for analysis of genetic relationship of melon and also for melon breeding in future.

Keywords: *Cucumis melo* L., SSR marker, Genetic relationship