

GENETIC DIVERSITY OF 24 PEPPERS CULTIVARS (*Capsicum* ssp.) BASED ON PHENOTYPE AND GENOTYPE

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Summary

Genetic diversity is not only condition for plants being adapted to different environments but also is an initial valuable material source for breeders breeding new cultivars. Using molecular markers is a prerequisite for evaluating genotypes. To breed with more efficiency, twenty four chili cultivars including introduced and local cultivars were evaluated genetic diversity based on both phenotype and genotype. The agronomic traits were analyzed by ANOVA, heritability, genetic advance. The results revealed that the heritability and genetic advance are high for all traits.. These revealed that these traits are relatv stable, and highly effective in selection. Cluster analysis combined with heritability and genetic coefficients, it showed that only 3 traits as fruit weight and ratio length/width in fruit are important traits. Based on three important traits and maturity, pest resistance, six promising cultivars were selected such as AVPP0023 (84.02 g), AVPP9905 (19.35 g) và VI044941 (13.85 g). For SSR marker, the polymorphic information (PIC) ranged from 0.47 to 0.84 with an average of 0.7. A total of 40 alleles were detected, an average of 5.71 alleles on a locus. These cultivars are classified into 11 groups by UPGMA method based on molecular data.

Keywords: *Capsicum*, Genetic diversity, PCA, Pepper, SSR.