

Genetic Diversity of Korean Local Collected Adlay (*Coix lachryma* L.) Genotypes using AFLP

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Objective

The objective of this study was conducted to evaluate on genetic diversity of Korean local adlay (*Coix lachryma* L.) germplasm.

Materials and Methods

- ▷ Plant materials : young leaf of collected adlay 32 cultivars.
- ▷ DNA extraction : plant genomic DNA extraction miniprep system (VIOGENE)
- ▷ AFLP : AFLP small genome primer kit (Invitrogen) and silver staining
- ▷ Analysis : NTSYS program, UPGMA

Results and Discussion

The 32 collected adlay (*Coix lachryma* L.) were analyzed with the amplified fragment length polymorphism (AFLP) approach. Total number of AFLP products from twelve selective primer combinations was 881. The number of polymorphic fragments by individual primer combinations greatly varied from 51 to 4 and the average polymorphic fragments per primer combinations was 25.3%. The range of AFLP products was investigated from 850 bp to 100bp.

In the polymorphic tree, one major cluster and two small clusters. The major cluster (A) comprised of 27 genotypes. The (B) cluster was contained two cultivars. The third cluster (C) was constituted two genotypes, while Geochanggabuk did not hold in any group.

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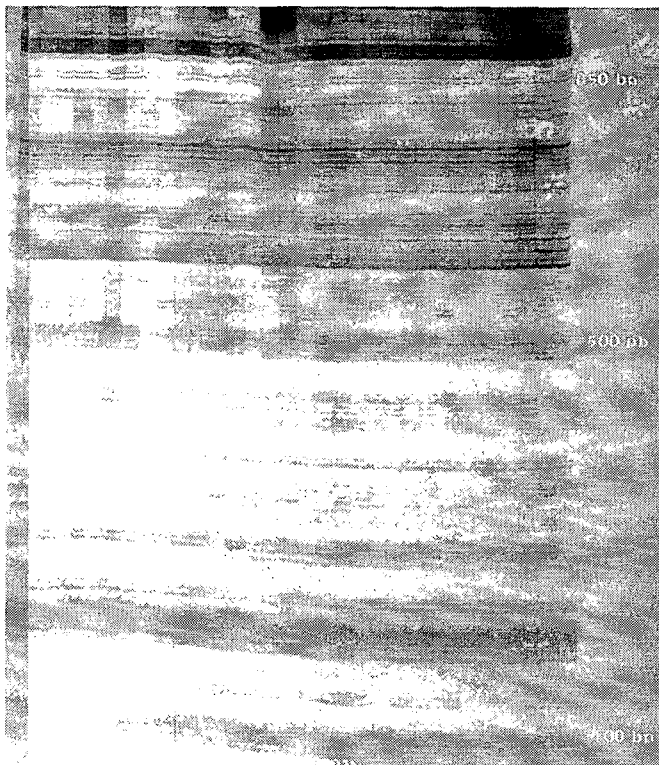


Fig. 1. AFLP profiles of 32 cultivar of adlay
 Amplification products generated by
EcoR I -AC and *Mes* I -CAC primer
 combination.

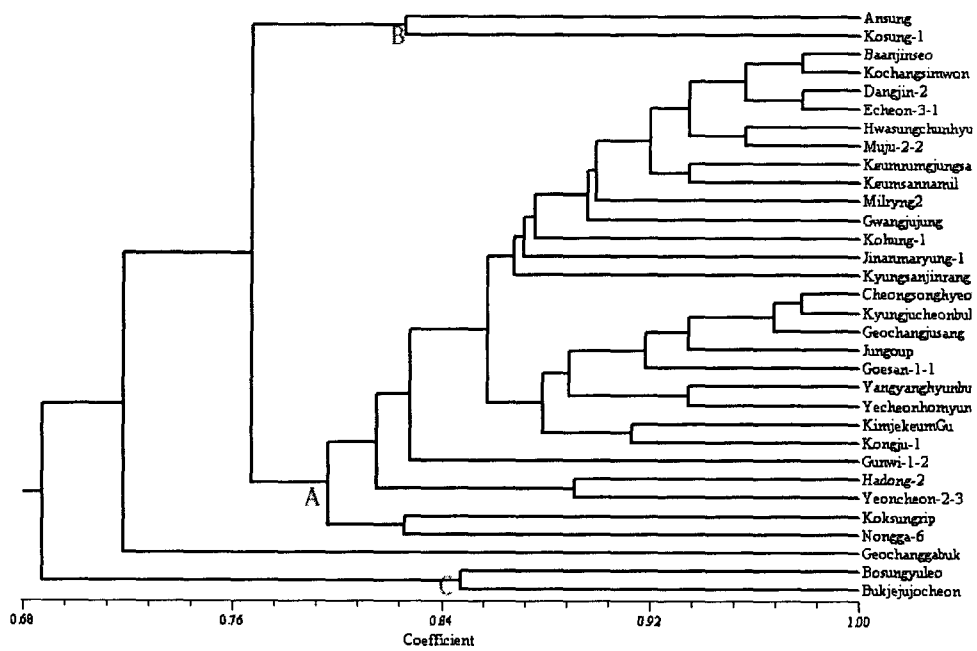


Fig. 2. Dendrogram of 32 adlay germplasm developed from AFLP data using UPGMA.