GENETIC DIVERSITY OF COMMON BEAN (*Phaseolus vulgaris* L.) GERMPLASM COLLECTED FROM UVA REGION BASED ON RANDOM AMPLIFIED POLYMORPHIC DNA MARKERS

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ABSTRACT

Common Bean (*Phaseolus vulgaris* L.) improvement can be enhanced by knowledge of the genetic diversity available between and within local and regional gene banks. Genetic diversity of the available common bean gene pool in Uva region was investigated using Random Amplified Polymorphic DNA markers. A total nineteen common bean varieties (2 traditional varieties, 14 farmer selected varieties and 3 recommended varieties) were used for the evaluation using seven RAPD markers: (OPR11, OPR12, OPAB14, OPAH13, OPAK7, OPAL12 and OPAM11). None of the marker produced clearly visible amplified DNA bands, but single smeared band was generated in some DNA samples which the size is around 400 bp. Possible reasons for the absence of amplified products were identified as poor quality template DNA, lower amounts of DNA present in samples and presence of PCR inhibitors such as proteins and RNAs in reaction. As the DNA extracted from common bean germplasm is not in required amount and highly purified form, PCR is failed.

Key Words: Common Bean, Genetic diversity, *Phaseolus vulgaris* L., RAPD markers