



Genetic characterization of green bean (*Phaseolus vulgaris*) genotypes from eastern Turkey

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ABSTRACT. Green bean genotypes collected from eastern Turkey were characterized using simple sequence repeat (SSR) markers and morphological traits. Among 12 SSR markers, 10 produced successful amplifications and revealed DNA polymorphisms that were subsequently used to assess genetic relatedness of the genotypes. Based on the number of alleles generated and the probability of identity values, the most informative SSR loci were PVGLND5, PVMEIG, PV-ag001, and PV-ag004. Probably, due to the inbreeding nature of beans, the heterozygosity observed within genotypes was low at most of the SSR loci. The UPGMA dendrogram constructed based on the SSR data yielded two major clusters. The overall genetic distance was around 98%, among the genotypes. This information can be used to help select Turkish green bean lines.

Key words: Bean; Simple sequence repeat; Genetic resources; Genetic characterization