

THE DNA CHARACTERIZATIONS OF COMMON BEAN (PHASELOUS VULGARIS L.) WITH MICROSATELLITE MARKERS

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Abstract

The role of molecular markers is helpful for the different characterization, while is Kosovo`s common bean is the first analysis that has been done. As plant material have been used common bean (*Phaseolus Vulgaris* L.). It has been selected 35 accessions from the Kosovo National Gene Bank, 2 varieties from the Hungary and 1 variety from the USA. Altogether were 38 common beans, while 37 had white seed excluding the Hungarian variety Rocco. Although have been used 6 primers BM 221, BM 236, BM 240, BM275, BM 278, BM 287 and the primer M13. The DNA has been isolated from the fresh young leaves (Qiagen Plant DNeasy Mini Kit Protocol, Handbook). The result based on the Simple Sequence Repeat has been showed that 5 out of 6 primers have been producing the amplification, while the primer BM 278 did not produce any amplification. Also in the result from the simple sequence repeat has been found that accession from the eight clusters (I-VIII). The clustering proved that there are differences between the genotypes belonging to distinct groups. For example the accession KS26SHF10 (II) has been differentiated from all samples in group I but not from the samples in the group II. The cluster I includes 18 samples while was the largest group, whereas the cluster VIII is the smallest group with only one Hungarian variety Rocco. The applied of the simple sequence repeat markers has been showed low level of polymorphism in the analyzed samples set, the value of heterozygosity ranged between 0 - 0.265. In the loci BM240 and BM278 the samples has been proved to be homozygous. The highest heterozygosity index was obtained in locus BM275.

Keywords: *molecular markers, accession and primers.*