

Variability and inbreeding depression studies in segregating population of pearl millet [*Pennisetum glaucum* (L.) R. Br.] for dual purpose

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ABSTRACT

An evaluation was undertaken to study the breeding value of the F_2 population of six crosses (IP 20381 x PT 5665, IP 20381 x GP15071, IP 20381 x IP 19125, IP 20381 x IP20350, IP 20334 x IP 20350 and IP 19125 x GP 16239). Mean performance, variability, heritability, genetic advance and inbreeding depression were estimated for stover cum grain yield and six associating traits *viz.*, plant height (cm), number of tillers per plant, number of productive tillers per plant, number of leaves per plant, leaf length (cm) and panicle length (cm). The results revealed that the cross IP 20381 x IP 19125 was found suitable for fodder improvement, IP 20334 x IP 20350 for grain improvement and IP 20381 x GP 1507 for dual purpose. The high estimates of heritability and genetic advance for almost all characters indicated the presence of additive gene action and hence selection for these traits could be effective in improving stover and grain yield of pearl millet.

Key words : Pearl millet, variability, heritability, genetic advance, inbreeding depression, dual purpose