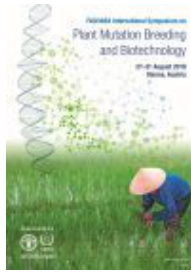


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EVALUATION OF BRACHIARIA RUZIZIENSIS AND BRACHIARIA BRIZANTHA MUTANTS ON FIELD ESTABLISHMENT, DIVERSITY AND PERFORMANCE

Poor nutrition is one of the major constraints for livestock productivity in Kenya and this is due to recurrent droughts affecting the plants used as fodder. These pasture deficiencies can be mitigated by breeding and selecting highly nutritive pastures that are drought tolerant. *Brachiaria* spp. is a perennial drought tolerant grass. It has been introduced in Latin America, Southeast Asia, and northern Australia where it has revolutionized grassland farming and animal production. The potential of *Brachiaria* spp. in its native land remains unexploited. Seeds of two landraces of *Brachiaria ruziziensis* (KE and BE) and one of *B. brizantha* (LE) were irradiated using gamma rays at different doses (10, 20, 30 and 40 Gy) with the objective of identifying agronomically desirable *Brachiaria* mutants. The M1 plants were observed and from M2 to M6 generations selections were performed for agronomic characteristics. At M5 selected plants were established in randomized complete block design in three replications at different locations. Phenotypic data on germination, nutrition, and yield were collected and analysed. The dry matter yield was significantly enhanced in mutants exposed to 40 Gy. Nine M6 mutant lines were selected. The selected mutants have been isolated and their seeds bulked. The mutant seeds are recommended for adaptability and stability studies in different agro-ecological zones in Kenya. The selected genotypes are valuable genetic resources for genetic enhancement and breeding.

Country or International Organization

KENYA

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