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## CHARACTERIZATION OF REMARKABLE MUTANTS AND ECOTYPES OF BRACHIARIA (UROCHLOA SPP.) AND NEW COLLECTIONS OF FORAGE GRASSES FROM KENYA.

Native Kenya brachiaria grasses (= *Urochloa* spp.) samples and their radiation-induced mutants are cultivated in the experimental field at the Beef Research Centre, Nakuru, Kenya for genetic improvement to increase productivity of smallholder dairy farms. The aim of the present work was to collect new samples of germplasm, characterize ecotypes and mutants. Non-irradiated controls and mutant lines of *Urochloa brizantha*, ecotype Lanet, *U. ruziziensis*, ecotype Busia, and *U. ruziziensis*, ecotype Kisii were analysed. Fertile samples of all analysed plants and new collected germplasm from the Nyanza and Rift Valley regions were deposited at the Nairobi National Museum Herbarium. Lanet is the most difficult ecotype to pull up, it has a uniform morphology, hard and glabrous plants, however, hairy mutants have been developed. Busia control has greenish leaves with 19–33 x 0.5–0.8 cm, rough-haired on the adaxial surface and uncommon axillary inflorescence. Busia mutants have yellowish leaves, ca. 8 x 1.7 cm, hairy, soft trichomes, longer internodes, common axillary inflorescence and a great variety of stamen colours. The Kisii ecotype has the greatest morphological variation, and the mutant plants are almost impossible to pull up. Indications for cross-contamination between these mutants were found. This could be due to the presence of many granivorous birds, which cause seed dispersal of *Urochloa* species. Mutants form great swards and have remarkable features: vivid green and soft leaf blades, long, stems rooting at lower nodes and late flowering. Busia and Kisii mutants were selected because Lanet is highly lignified and shows a tendency to spread out of control. Little is known on the reproductive capacity of these mutants, so the consequent effects on the wild diversity and dispersal outside the trial should be further investigated. Moreover, five new accessions of the *Urochloa* spp., and two other species were collected.

### Country or International Organization

Kenya

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**Track Classification:** Enhancing agricultural biodiversity through new mutation induction techniques