Abstract:

This paper describes a completely randomized block experiment that was laid out on four terraces at the Kabete campus, Kenya, to test the suitability of seven plant spp. (Tripsacum laxum, Brachiaria decumbens, Panicum trichocladium, Pennisetum purpureum, Setaria anceps, Brachiaria humidicola and Panicum coloratum var. Makarikariense) for riser stabilization and fodder production. A further treatment, stone pitching, was used as a control. The trial was started in the short rains of 1982 and the land between the risers was cropped, with maize, beans or sunflowers, for the next 12 seasons. In three seasons the rains failed and in four seasons the rains were poor. Observations were made of plant cover and persistence and fodder yields were measured. The impact of the fodder on the adjacent crops was assessed by measuring crop yields in the adjacent rows. The results show that of the fodder grasses that were most vigorous and productive, (P. purpureum and T. laxum) caused greatest depression in crop yield. In seasons of low rainfall, the control showed significantly better crop yield mainly due to lack of competition for water. Of the grasses tested, B. decumbens exhibited best cover and persistence. The costs and benefits of bench-type terracing in terms of loss of cropping area and gain in fodder area are briefly discussed.