

Summary

The Brazilian state of Minas Gerais is well-known for its milk production, which is also the main economic activity in the region of Campos da Mantiqueira, despite the low quality and productivity of native pastures, the prolonged dry periods, the low soil mulch, and other physical limitations of these soils (Cambisols and Latosols) that favor erosion. Therefore the potential of *Brachiaria brizantha* cv. Marandú and *Andropogon gayanus* cv. Planaltina to reduce soil erosion was assessed. The improvement of native pastures by introducing *A. gayanus* in Cambisols and *B. brizantha* in Latosols, soil scarification, and application of lime and fertilizers gave good results regarding pasture development. But in the Cambisol, even the best soil mulch achieved throughout the study was not sufficient to reduce soil losses caused by erosion to limits considered admissible within the concept of sustainability.