

Summary

Between February 1995 and October 1997, the effect of applying several sources of phosphorus (P) on the recovery of degraded *Brachiaria brizantha* cv. Marandu pastures, on yellow Latosols, was evaluated at the experimental field of the Brazilian Agricultural Research Enterprise (Embrapa-Rondônia), in Porto Velho, Brazil. Main plots consisted of the following sources of P: triple superphosphate (TSP), simple superphosphate (SSP), and partially acidulated natural phosphate (PANP). Subplots included rates of 0, 50, and 100 kg/ha of P_2O_5 . Before applying P, the vegetation was removed by two passes of the rake. Regardless of the source used, P application favored pasture recovery, especially DM production (1.3 t/ha for the check compared with > 2 t/ha with the application of TSP and SSP). The best results were obtained with the application of 100 kg/ha of TSP. The application of P did not affect tissue contents of CP, Ca, P, or K in this grass species.