

# Summary

The effects of burning and mechanical mowing on soil pH, organic matter content, phosphorus, potassium, and aluminum concentrations, as well as management practices of native pastures in the well-drained savannas of Brazil's Amazon region was evaluated at the Embrapa experiment station in Amapa, over a 7-year period. Burning and mechanical mowing were performed at two different times, September and November, and with three application frequencies (annual, biennial, and triennial). A randomized block experiment design, arranged in split plots, was used with three replications. The results showed that, despite the statistical differences found, the use of burning and mechanical mowing as management practices in native pastures caused low, quantitative variations in the soil characteristics analyzed. The effect of application time on experiment results was generally more important than that of management practices or application frequency. On the other hand, the soil parameters studied tended to respond differently to management practices, showing erratic results. The efficient use of burning and mechanical mowing as management practices in native pastures, in Brazil's Amazonian savannas, should be mainly based on ecological principles and environment-related social issues and not only aim to improve general soil properties.