



Evaluation of traditional fire management in the Brazilian Cerrado

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ABSTRACT – Fire is a natural component of ecosystems and has been widely used by indigenous peoples in the management of tropical savannas. However, in recent decades, public policies aimed at the exclusion of fire have suppressed the use of burns and the related traditional knowledge has begun to be lost. Recently, traditional management has been valued again, being restored and applied as a strategy for protection against forest fires and management of natural resources by indigenous brigades hired by Ibama / Prevfogo. In the Brazilian Cerrado, this traditional knowledge recommends a concentrated fire regime between March and May, with some regional variations. Among the main management objectives was the increase in the amount of edible fruits and animals. The present work aims to evaluate if these objectives were achieved, after 03 years of implementation of this traditional regime in 16 Indigenous Lands. The evaluated fruits were *Hancornia speciosa* (mangaba), *Byrsonima* sp. (muricis), *Anacardium occidentale* (cajuí), *Mouriri pusa* (puçá), *Caryocar brasiliense* (pequi) and *Pouteria ramiflora* (veadeira). The animals evaluated were from the families Cervidae (deers), Canidae (wolves and foxes), Tinamidae (partridges) and Dasypodidae (armadillos); as well as the anteater (*Myrmecophaga tridactyla*), emu (*Rhea americana*), tapir (*Tapirus terrestris*) and seriema (*Cariama cristata*) species. The effects on the flora were evaluated by the proportion of reproductive individuals and the fruit yield per plant. The fauna effects were assessed by the frequency of traces. The traditionally managed areas (prescribed burns) were compared with areas hit by wildfires and areas subject to fire exclusion. In the managed areas, all plants showed better reproductive rates than the other treatments, except *H. speciosa*, which presented better results with the exclusion of fire. In relation to the animals, half of them preferred the managed areas and the other half preferred the areas excluded from fire. No animals or plants presented better results in areas affected by wildfires. The results show that traditional management was efficient to increase fruit and game production for the studied indigenous communities, validating the traditional use of fire for these purposes.

Keywords: integrated fire management, prescribed burning, traditional knowledge, indigenous communities, natural resources, food security.