

Diagnosis and Potential Socioeconomic and Environmental Impacts of Pasture Death in the Western Brazilian Amazon

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Cattle ranching accounts for approximately 75% of the 1,420,300 hectares of deforested areas in Acre (9.3%), being responsible for the biggest changes in the natural ecosystems in the State. As a result, ranching has been the focus of a heated debate regarding the environmental and socioeconomic impacts of the conversion of vast areas of forest of high biodiversity to a grass monoculture, mainly of *Brachiaria brizantha* cv. Marandu. In 1994, farmers observed that Marandu pastures were dying in Acre. Since 1998, the areas affected by the problem in Acre expanded rapidly, causing total pasture degradation in some farms. As the cost of recovering or reforming degraded pastures is two to three times that of clearing new areas of forest and forming new pastures, this problem is creating strong pressure from the landowners to clear more forest, and an economically and environmentally viable solution to this problem is urgently required. The hypothesis proposed to explain the death of pastures so far are: 1) the establishment of this grass on Ultisols, of high clay content, subject to waterlogging during their rainy season, which causes stress on the plants, owing to the accumulation of toxic elements and favours the proliferation of parasitic micro-organisms that turn pathogenic; 2) pasture degradation due to overgrazing, which causes compaction, erosion and loss of soil fertility; and; 3) the proliferation of spittle-bug species, heretofore not registered as pests in the region.

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