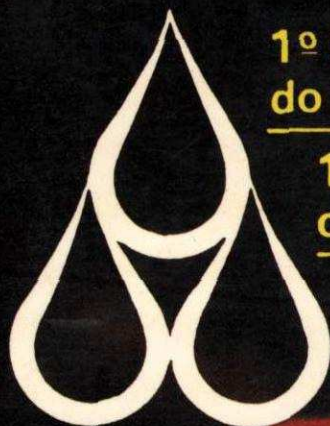




Empresa Brasileira de Pesquisa Agropecuária - EMBRAPA
Vinculada ao Ministério da Agricultura
Centro de Pesquisa Agropecuária do Trópico Úmido - CPATU



**1º Simpósio
do Trópico Úmido**

**1st Symposium
on the Humid Tropics**

**1º Simpósio
del Trópico Humedo**

**RESUMOS
ABSTRACT
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FOREST DEVELOPMENT FOLLOWING PASTURE USE IN THE
NORTH OF PARÁ, BRAZIL

Robert Buschbacher¹, Christopher Uhler² and
Emanuel Adilson Souza Serrão³

Over the past 20 years, large areas of the Amazon Basin have been converted to pasture. Normally, after four to eight years of use, Amazon pastures are abandoned because of problems with weed competition, insect attack, and nutrient availability (particularly phosphorus). At present the amount of abandoned pasture land probably exceeds the amount of land in active use and there is much debate about the residual productive capacity of these abandoned lands.

A study was carried out to determine the rate at which these abandoned Amazon pasture lands return to rain forest through a study of vegetation biomass, structure, and composition on 17 abandoned pastures in the environs of Paragominas, Pará. This report provides a comparison of forest regrowth on three of those sites. The sites chosen for comparison were all abandoned eight years before but differed markedly in land use history: one had poor grass establishment from the beginning and was only used lightly; the second was periodically burned and weeded before abandonment; the third was repeatedly burned and weeded and then bulldozed before being eventually abandoned.

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These different land-use histories had drastic effects on biomass accumulation and species diversity. Total biomass accumulation after eight years was 81 t/ha in the low-use site, 42 t/ha in the medium-use site, and 7 t/ha in the intensive use site. Accordingly, the Shannon-Weiner species diversity index (H') also declined with increasing use-intensity from 0.94 (low-use) to 0.33 (high-use).

The overall conclusion to be drawn from this study is that rainforest clearing for pasture development does not necessarily preclude the possibility of rapid rainforest regeneration after abandonment, but that the rate of recovery will be inversely proportional to the intensity of pasture use.