



RECUPERAÇÃO DE ÁREAS DEGRADADAS E ABANDONADAS, ATRAVÉS DE SISTEMAS DE POLICULTIVO

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DISEASES IN USEFUL PLANTS CULTIVATED IN POLY CULTURE SYSTEMS

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1. INTRODUCTION

In Amazon region, the conditions of high temperature and humidity are extremely favorable to disease attack. In this region all attempts to introduce monoculture systems with perennial species have failed, which in the majority of cases, be attributed to the incidence of diseases: the rubber trees destroyed by *Microcyclus ulei* and the cocoa trees by *Crinipellis perniciosa*.

Rubber trees and cupuaçu trees intersperse in the natural habitat with other species, which are not hosts to their parasites. This make their dispersal more difficult, reducing the intensity of the disease attack. The ideal would be a plantation of economically interesting species in mixed cropping systems, where non host species act as barriers to impede their dispersion, minimizing the risks of failure.

2. MATERIAL AND METHODS

The entire experimental area of the project ENV.23/2, was observed in intervalls of 2 months to evaluate the incidence of diseases on all species of useful plants.

3. RESULTS

In cupuaçu, the attack of witche's broom (*Crinipellis perniciosa*) is extremely low and was controlled by pruning, removing each 2 months the seized shoots.

In citrus, there were incidences of fungi *Septobasidium pseudopedicelatum* and *S. saccardinum* in stems and branches and of *Phytophthora* spp. in the trunk near the soil and in the roots, controlled by painting of trunk with copper-based fungicides.

In rubber trees, the incidence of *Microcyclus ulei* was controlled by crown budding (changing the canopy of the clone Fx 4098 by canopy of the clone PA31-resistant).

Coconut was attack of *Corticium penicillatum* without causing damage.

Brazil nut have been attacked by a new disease in the region, whose pathogen was not yet identified.

4. DISCUSSION

In established mixed cropping and monoculture systems, the incidence of diseases has been extremely low. In most cases there was no need of using fungicides. Until now, there were no differences in the intensity of occurring diseases between the mixed cropping and monoculture systems, probably because the plots size (32 x 48m²) is to small to evaluate this problem. However, in relation to areas of production within the region, the intensity of diseases in the experimental area has also been lower, probably because the plants are better fed and the experimental area is found distant from other plantations, therefore less exposed to inoculation.

In the experimental area occurred the first attack observed in the region of *Corticium penicillatum* in coconut and of the new disease in brazil nut. In primary and secondary forest there exists wild host species of a number of pathogens. The installation of cultivated areas close to or in deforested areas within the forest, facilitates the attack and appearance of new parasites. This in part explains the appearance of new pathogens, mentioned before in the experimental area.