

Development and production of coconut palm (*Cocos nucifera* L.) in an agroforestry system

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The nutrient demands of coconut palms are extremely high for the plant development and fruit production, a great problem for their cultivation on poor and acid *terra firme* sites in Amazonia. With the inoculation of VA-mycorrhizal fungi (VAMF), a better use of nutrients by the crop plants was expected. The coconut palms were planted in a system together with orange, cupuaçu, rubber tree, paricá and in the first year also with the annual crops manioc, maize and beans. In the fourth year the paricá was substituted by mahogany, louro pirarucu and jacareúba. At the same time, lemon and papaya were planted between the rows. This system was implemented with two different levels of fertilization, the first level received three times more fertilizer than the second (I and II), and each level with and without VAMF inoculation. The following parameters were measured: the girth of the stem until the third year, the length of the fourth leaf in the first and second year, the quantity of new leaves in the second and third year, the length of the ninth leaf in the third year, and since the fourth year the number of fruits. The plants, which received the higher level of fertilizer, presented a faster development and a production about 500% superior to the production of the lower level. The inoculation with VAMF did not show any effect on the evaluated parameters.