

SUSTAINABLE FOREST MANAGEMENT FOR SMALL FARMERS IN ACRE STATE IN THE BRAZILIAN AMAZON

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This paper has the aim of presenting a forest management system to be applied on small farms, especially in the settlement projects of the Brazilian Amazon. The proposed forest management system was designed to generate a new source of family income and to maintain the structure and biodiversity of the legal forest reserves. The system is new in three main characteristics: the use of short cycles in the management of tropical forest, the low harvesting intensity and environmental impact and the direct involvement of the local population in all forest management activities. It is based on a minimum felling cycle of ten years and an annual harvest of 5-10 m³ ha⁻¹ of timber. Trees were directionally felled to facilitate their transport and minimise damage to the forest. After felling the tree, the conversion of logs to planks was performed in the forest. The logs were converted by chainsaw or one-man sawmills into planks, boards or other products according to the characteristics of the timber and market demand. The conversion yielded of around 50%. The skidding of the planks was performed by the "zorra" from the felled tree to the main skid trail and a wagon pulled by one ox skidded the planks from the main skid trail to the border of the secondary roads. The studies indicate that the conversion of the logs to planks was the most expensive and labour demanding operation and the total production costs were between US \$ 33.5 and US \$ 35.5 per cubic metre of sawn planks at the road-side before transport to the market.