



**ECONOMIC EVALUATION OF TIMBER AND NON-TIMBER FOREST PRODUCTS OF IN YUCATÁN STATE, MÉXICO: A CASE STUDY OF *Cordia DODECANDRA* (CIRICOTE) TREE**

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**ABSTRACT**

This study is concerned with comparisons between timber and fruit production from Ciricote tree (*Cordia dodecandra*) in agroforestry scheme in Yucatán Península, México. The Mexican Department of Forestry (CONAFOR) is now encouraging research programs on reforestation with native tree species in order to increase farmers' income and reduce deforestation and soil degradation. One eligible species for reforestation is the multi-purpose tree Ciricote. In order to assess the market potential and to compare the economic benefits of fruits and timber for rural households, an economic evaluation was undertaken from the household level up to the local first-level of buyers. The methodology used for this purpose was the Cost-Benefit-Analysis (CBA), using for decision criterias: Net Present Value (NPV), Internal Rate of Return (IRR) and Benefit Cost Rate (BCR). The financial analysis for a 25 and 40 years rotation period shows that timber production presents higher net present value and benefit cost rate than fruit production. Only for a 60 year period and a discount rate higher than 9%, fruit production presents a higher NPV than timber production. With regard to the value chains for timber and fruit production great differences can be observed. The timber value chain has more actors involved than the fruit production value chain, therefore the transaction costs in lumber industry are higher. Nevertheless timber has higher market than fruit. Approximately 1000 m<sup>3</sup> of timber are demanded by the market which means that there is a potential demand of 300 has of ciricote tree. The price of ciricote timber could be reached 45 pesos/board feet vs 30 pesos/board feet of mahogany (*Swietenia macrophylla*). The price of ciricote fruit is 1,5 pesos/kilo and the potential market for fruit production (22 900 kg of raw fruits) will be covered with 6.0 – 7.0 ha ha of ciricote for fruit production. It was found that the additional income from other sources is very important for maya peasants due to participation

in farm as well as non-farm activities. Farm households diversify their economic activities in order to cope with crop shortfalls and to overcome credit and land market constraints. Ciricote based agroforestry systems contribute to income and risk minimization by diversification of crops.

**Key words:** *Cordia dodecandra* (ciricote), agroforestry, cost benefit analysis, timber, nontimber forest products, maya peasants.