

## ABSTRACT

Coconut based intercropping have been promoted by the government agencies mainly due to its agronomic and economic advantages. Although a number of programmes have been implemented by relevant agencies to promote the coconut based intercropping. The intended results have not been reached and it remains less than 25% level of adoption. Therefore, this study aimed at understanding the factors affecting adoption of intercropping under coconut. The study covered 75 randomly selected coconut lands in the coconut triangle, and data were collected by using ethnographic interviews and a pre-tested structured questionnaire. Ethnographic Decision Tree Modeling (EDTM), Chi-square test and binary logistic regression model were used to test the relevant hypotheses. The EDTM analysis revealed that land size of the grower, availability of incentives, farmer groups, training and price of intercrops were major influential factors to make decision for adoption of intercropping under coconut. The main constraints in adoption were unstable price of intercrops and lack of knowledge. The result of the EDTM showed the model was able to predict the growers' decision making with good accuracy of 84%. The Chi-square test revealed that government influence is significantly affected ( $P < 0.1$ ) to make decision for continuation of coconut based intercropping. The binary logistic model identified grower's age, land size, shortage of labour, market accessibility of intercrops and influence by other growers in the area are significantly ( $P < 0.1$ ) influenced for continuation of coconut based intercropping. The study generates meaningful implications to be used by the relevant stakeholders and policymakers in Sri Lanka.

**Keywords:** Coconut based intercropping, Ethnographic Decision Tree Modeling