

Analysis of Factors Affecting for Decision of Intercropping Pepper by Tea Small Holders in Yatinuwara DS Division

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Introduction

In Sri Lanka tea small holders in the mid country had been traditionally intercropping pepper, coffee and clove with tea for a long time. Among these, pepper is the most compatible crop with any category of tea in the mid and low elevations. The intercropping of two or more crops on the same land has a number of advantages such as better land utilization and reduced risk of dependence on a single crop. This study analyses the factors determining the adoption of tea based pepper intercropping and determine whether the income is affected by intercropping pepper in tea lands in mid country wet zone at small holder level.

Methodology

Simple random sample of 80 tea small holders was selected from Yatinuwara Divisional Secretariat Division of Kandy District and data were collected by using a pretested questionnaire. Secondary data were collected from Tea Small Holding Authority, Department of Export Agriculture and tea small holding societies in the area.

Binary logistic model was used to achieve the objective of factors determining the Adoption of tea/pepper intercropping in Yatinuwara Divisional Secretariat division at small holder level.

Ordinary Least Square method has been employed to estimate the parameters of the multiple regression equation which was used to determine whether the income of tea smallholders is affected by intercropping pepper in tea lands.

Results and discussion

The following logistic model was developed with the factors associated with adoption of tea/pepper intercropping.

$$\text{ADOPT} = 4.276 - 0.0000071^{**}\text{TEA} - 0.1967\text{FAM} + 0.8759^{**}\text{LE} + 0.0856^{*}\text{EXP} \\ - 0.5669^{**}\text{EDU} + 0.01533\text{AGE} + 1.726^{*}\text{GEN} + 3.055^{**}\text{LAB}$$

****5% significant level *10% significant level**

Factors such as family size and agrochemical usage not have significant effect on annual income of the tea small holders.

Conclusions

The analysis clearly showed that small holders who gain lower income by tea mono-cropping were highly adapted for tea/pepper intercropping. It implies that lower income generated by tea mono-cropping has encouraged the decision of intercropping pepper with tea. Results proved that most of the tea small holders who had prior experience on tea cultivation tend to intercrop pepper in their tea lands. Therefore, intercropping pepper with tea can be considered as a traditional cultivation practiced by the farmers. It implies that good experience on farming of both crops was highly favourable for intercropping. According to the multiple regression model, intercropping pepper with tea was negatively affected for the total family income of the farmers. It implies that limitation of technical knowledge was the main problem subsequently faced by tea small holders who had adopted tea – pepper intercropping in the area. Results indicate that there is need for both income support through farm subsidies or incentives and more user friendly agricultural extension services, if tea - pepper intercropping is to be adopted more widely in the area.

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