

## **Farm Households' Willingness to Pay for Sustainable Soil Fertility Management in Vadamradchy South West Division of Jaffna, Sri Lanka**

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This study investigates the farm household's willingness to pay for sustainable soil fertility management attributes and find the socioeconomic and demographic factors that influence the soil fertility management in red onion farms in the Vadamradchy south west division of the Jaffna district. Applying only chemical fertilizer excessively in agricultural farms for a longer period leads to soil fertility degradation and underground water pollution and thus becomes an obstacle to achieve sustainable development goals. Sustainable soil fertility management attributes considered in this study are increase in yield, micronutrients, water holding capacity, soil porosity, beneficial nematodes in the soil and cost of production. For this study, 170 farm households were randomly selected from Vadamradchy south west division and data were collected by interviewing them using a structured questionnaire. Choice modeling was employed, and a conditional logit model was developed to estimate willingness to pay for sustainable soil fertility management attributes. This study shows that farm households are willing to pay more for a big increase in yield that is a significant benefit to the farmers in the short term. On average, farm households are willing to pay around 10, 800 rupees per lacham for a big increase in yield by practicing sustainable soil fertility management. Farm households are willing to pay less for the attributes that provide significant benefits in the long term. Farm households are willing to pay around 920 rupees and 1900 rupees per lacham for a small increase in micronutrients and a big increase in porosity respectively. Farmland ownership, farmer education level and farm extent positively influence the willingness to pay for sustainable soil fertility management. The findings of this study would be useful to policymakers to formulate programs that promote sustainable soil fertility management.

**Keywords:** Choice Modeling, Conditional Logit Model, Soil Fertility, Willingness to pay