IDENTIFICATION OF PERCEPTION AND ADAPTATION TO CLIMATE CHANGE BY TEA SMALLHOLDERS IN RATHNAPURA DISTRICT

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ABSTRACT

As all other agricultural crops, tea cultivation also cannot escape from the consequences of climate change. In Sri Lankan context, majority of tea production is by smallholders and thus tea smallholders' perception on climate change and possible adaptations to it are crucial for the future of the tea industry of Sri Lanka. Therefore, this study attempted to identify the major factors influencing the perception and the adaptation to climate change among tea smallholders over 5 tea inspector ranges in Rathnapura District. The interviews were conducted with 160 smallholders and collected data was analyzed using Two Step Heckman's probit model. First, whether smallholders perceiving the climate change and then responding to those changes through the adaptation were considered in the two steps of the model. The results revealed that, the majority of smallholders in Rathnapura District have perceived the changes in climate. Farmers' perception on climate change was significantly related to the gender, crop type (mono cropping), and Education level, awareness of the weather forecast and frequency of usage of communication channels. These factors positively affect the perception and use of print media as communication channel has decreased the perception level of smallholders. According to their responses, factors affecting the level of adaptation to the climate change are yield, land extent, labor use and temperature change. Further, yield and temperature changes have positive impact on the use of adaptation measures by smallholders. Furthermore land extent and family labor involvement in tea cultivation have negativity affected on adaptation to the climate change. It can be concluded that the perception on climate change and the use of adaptation measures by tea smallholders in Rathnapura District can be increased by strengthening the awareness programs and extension services.

Keywords: Adaptation, Climate change, Perception, Smallholders, Tea cultivation