

## **Adoption of Machinery in Tea Cultivation and Management by Tea Small Holders in Kalutara District**

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Use of machinery is a vital investment to enhance the productivity and overall performance of the tea industry. It is considered to be a better solution for the problems of labor shortage and high cost of production. The purpose of this study was to identify the factors affecting the adoption level of machinery. A sample of 154 tea small holders in Kalutara district was selected using multistage sampling technique. Data were collected using structured questionnaire and by interviewing the tea small holders at their residences. Data were analyzed using descriptive techniques as well as a Tobit regression model. According to the results of the descriptive analysis, overall adoption level of machineries is 12.73%. Small holders have higher adoption regarding pruning machine (29.22%) and TR1 selective tea harvester (20.13%) while lower adoption on Holing machine (7.14%), Fuel operated plucking machine (5.19%) and Battery operated plucking machine (1.95%). The Tobit regression analysis revealed that farming experience, gender, family labor, information by TRI, land ownership and yield positively affect the adoption level while educational level of the farmer, age of the farmer and time spending in the tea land negatively affect the adoption level of machinery. Therefore, more attention should be given on these significant variables to find the appropriate strategies for increasing the machinery usage by tea small holders in the study area. Awareness programs on machineries should be arranged frequently to improve the knowledge and awareness of the tea small holders in Kalutara district.

*Keywords:* Adoption level of machinery, Holing machine, Plucking machines, Pruning machine, Tea small holding sector