

**PARACHUTE TRANSPLANTING TECHNOLOGY ADOPTION
AMONG PADDY FARMERS IN MANMUNAI WEST DS DIVISION,
BATTICALOA DISTRICT**



BY

K.Kamsiga



FTC358

Main Library, Eastern University, Sri Lanka

Department of Biosystems Technology

Faculty of Technology,

Eastern University, Sri Lanka

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ABSTRACT

Rice is the staple crop of more than half of the world's population. In Sri Lanka, it is especially important for rural lives in agricultural areas like Batticaloa. However, farmers in the region face challenges such as high labor costs, water scarcity, and climate change, making conventional transplanting unsustainable. Parachute Transplanting Technology (PTT) is a low-cost and labor-saving modern technology. However, its adoption in Batticaloa remains limited, with a lack of empirical evidence explaining the influencing factors. This study evaluated the extent of PTT adoption and highlighted key socioeconomic and institutional factors that drive adoption decisions. A cross-sectional survey was administered to 100 randomly chosen paddy farmers from five Grama Niladhari divisions. Data were collected through a structured questionnaire and analyzed using descriptive statistics, chi-square tests, and correlation analysis using SPSS and Excel. The findings showed a 65% adoption rate. PTT enhanced production by 866.08 kg per acre and decreased cultivation costs by an average of Rs. 13,253.85 per acre. Higher educational attainment, training participation, and positive perception significantly influenced adoption, while larger family size showed a negative correlation with adoption. In contrast, gender, age, and land size were not significant determinants. Farmers showed a high level of awareness (94%) and a very favorable perception (mean = 4.52). However, major barriers included high initial costs (25.7%), a lack of knowledge or information (combined 31.4%), and time restrictions (20%). The study concludes that PTT is an effective and practical technology for raising profitability and productivity. To promote sustainable rice production in Batticaloa, the findings suggest specific extension policies that enhance farmer education, increase practical training, enhance information transmission, and enable reasonably priced equipment availability.

Keywords: Adoption, Batticaloa District, paddy farmers, Parachute transplanting technology, sustainable paddy cultivation

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