

**POOR ADAPTATION OF PARACHUTE TECHNOLOGY AMONG
FARMERS UNDER THE MINOR IRRIGATION SYSTEM IN THE
ANURADHAPURA DISTRICT**

B.A.M.A.P. Samarasena, G.A.S. Ginigaddara and A.N. Kodithuwakku

*Department of Agricultural Systems, Faculty of Agriculture, Rajarata University of
Sri Lanka, Anuradhapura, Sri Lanka.*

Agriculturists have been promoting parachute seedling transplanting technology as a potential solution to enhance productivity in paddy cultivation. However, adoption rates of this technology remain low. This study aimed to examine the factors influencing the adoption of parachute seedling technology among randomly selected 267 farmers in the *Anuradhapura* district, which includes 30 current adopters, 34 discontinued adopters, and 203 non-adopters. Data were collected through face-to-face interviews using a structured questionnaire across four Agricultural Instructor ranges: *Anuradhapura*, *Eleyapattuwa*, *Rabewa*, and, *Medawachchiya*, and were analyzed using descriptive statistics and linear regression analysis with SPSS software. The study found that the age groups 35-45 and 46-56 have the highest engagement with parachute technology. In terms of gender, 90% of current adopters are male. According to the results, farmers with secondary school education exhibit the highest adoption rates. In contrast, those with vocational education have the lowest and farmers with the lowest education levels show the highest proportion of non-adopters (30%). Although 90% of farmers recognize the higher yields of the parachute method over traditional broadcasting, several barriers hinder adoption, including a lack of knowledge (35%), high tray costs (77%), no government subsidies (66%), inadequate water (76%), unpredictable rainfall (64%), limited time for establishing *yaya* (92%), and nursery maintenance difficulties (65%). Resource availability significantly impacts adoption, with tray availability ($p=0.019$) and labor requirements ($p=0.001$) identified as critical factors. Despite the technology's benefits such as reduced seed usage, lower water requirements, and technical feasibility, its adoption in the *Anuradhapura* district is constrained by knowledge gaps, high costs, and limited resources (labor, water, and time). Addressing these issues through targeted interventions and resource support could significantly enhance adoption rates and improve agricultural productivity in the region.

Keywords: Adoption barriers, Resource availability, Traditional broadcasting