

DOES THE ADOPTION OF SUSTAINABLE AGRICULTURAL PRACTICES INCREASE FARMERS' RESILIENCE CAPACITY IN MIXED FARMING SYSTEM? A CASE OF MAHAWELI SYSTEM H, SRI LANKA

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Mixed farming is one of the prominent farming methods in the dry zone of Sri Lanka. Particularly, these farming systems are subjected to high risk and uncertainty which resulted in poor productivity, food insecurity, and less sustainability. Hence, this study attempted to investigate the adoption of sustainable practices and their impact on farmers' resilience in the mixed farming system. A survey was employed to gather data from 100 randomly selected farmers in the *Mahaweli* system H. The level of adoption of sustainable agricultural practices was analysed descriptively using a five-point Likert scale. A logistic regression model was used to determine the factors affecting adoption. The sustainable Livelihood Security Index (SLSI) was computed using 13 variables representing economic, social, and environmental indicators. Principle Component Analysis and linear weighted scores were occupied to develop the SLSI using normalized variables. The Farmer Resilience Index (FRI) had 18 parameters and 55 variables under four dimensions, namely, economic, social, technical, and physical. According to descriptive statistics, 67% of the respondents were adopters while 33% were non-adopters of sustainable agricultural practices. Further, gender, access to extension services, and access to credit were the significant factors ($p < 0.10$) affecting the adoption of sustainable agricultural practices. According to SLSI, 3% of the respondents were highly sustainable while 28% and 69% were moderately and vulnerably sustainable, respectively. Moreover, all the respondents were low resilience in terms of FRI. A weak positive correlation (0.235) was found between resilience capacity and the level of sustainability in the mixed farming system. The results of vulnerable sustainability and less resilience suggest the importance of increasing the adoption of sustainable agricultural practices in the mixed farming system, *Mahaweli* system H.

Keywords: Farmers' resilience capacity, Mixed farming system, Sustainable agricultural practices