

MULTIPLE CROPPING STRATEGIES TO MANAGE AGRICULTURAL RISKS: A CASE STUDY IN MAHAWELI SYSTEM H, SRI LANKA

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Farmers in *Mahaweli* system H are adopting multiple cropping strategies to reduce possible agricultural risks. This research tested the hypothesis that the adoption of multiple cropping could reduce the agricultural risk in *Mahaweli* system H. The study employed a questionnaire survey to gather primary data from randomly selected 100 farmers. The level of highest risk factor faced by the farmers was computed by a five-point Likert scale. A fuzzy matrix calculated the total risk and categorized farmers into high risk (50%), serious risk (32%), and moderate risk (18%) categories. Two highly ranked production risks were weed infestation (68%) and, pest and disease incidences (67%). The policies imposed by the government (56%) were the third, which was an institutional risk. Increased transportation costs (51%) and low market prices (46%) were the highest-ranked market risks. High cash demand for family needs (46%) was significant under financial risk. According to the Crop Diversity Index (CDI), 77% of respondents had diversified and 23% were specialized in their cropping strategy. Herfindal Index showed 59% were moderately diversified, 37% were highly diversified, and 4% were least diversified approaches. The multiple linear regression results revealed that CDI, land size, and presence of non-communicable diseases significantly ($p < 0.05$) contributed to the total risk, while the family size contributed at a 10% significance level. The study concluded that multiple cropping strategies can aid managing agricultural risks in *Mahaweli* system H. Short-term approaches (timely cultivation, crop selection, and multiple cropping with awareness creation) and long-term approaches (risk monitoring systems, crop insurance, integrated farming, and high-tech agriculture) are suggested to avert associated risks.

Keywords: Institutional risk, Market risk, Production risk