

Minea Mao 2009: Factors Affecting Farmers' Adoption of the System of Rice Intensification (SRI) in Tram Kak District, Takeo Province, Cambodia. Doctor of Philosophy (Tropical Agriculture), Major Field: Tropical Agriculture, Interdisciplinary Graduate Program. Thesis Advisor: Associate Professor Pichai Tongdeelert, Ph.D. 164 pages.

This research study were to; a) define socio-economic characteristics, b) specify the farmer adoption of SRI, c) identify the main factors affecting to leading farmer and general farmer's adoption, d) find out the farmers' major problems, suggestions, and e) propose the model of extension in SRI adoption under Cambodia conditions. Data were collected by using focus group (qualitative research) and interview schedule (quantitative research) from 372 samples which were analyzed and presented through frequency, percentage, and arithmetic mean. Chi-square test was employed to test hypotheses at the .05 level.

The research results revealed that leading farmers had followed the steps of SRI after attending the training course which it organized by local NGO, CEDAC. They utilized the trained knowledge especially in fertilizers usage, and the advantages and disadvantages of chemical and organic fertilizers. In addition, leading farmers' perception on the SRI principles and practices was at very high level, and they disseminated knowledge, practices, and experiences to family members and other farmers both in and outside district by face-to-face, informal meeting, and group discussion methods. The rice paddy yield increased from the former average 2 tons (t) per hectare (ha) to 2.8 t/ha when farmers changed to SRI implementation.

The research findings 71.8 percents of farmer households headed by male with the average age 45 years and 37.1 percents were able to read, and 28 percents obtained secondary school. 98.1 percents were farmers with the average experience in paddy cultivation were 28.16 years. The average of land holding size was 1.14 ha with the average of family member and farm labor was 5.58 persons and 3.63 persons, respectively. 78.5 percents of farmer hired labor less than 10 days. The average of family income (on and off-farm) was 3,598,210 riels with 60.2 percents were engaged in off farm employment, 93.3 percents participated in association.

Hypotheses testing revealed that education level, type of occupation, land holding size, family income, off-farm employment, association membership, rice production, and SRI yield were significantly related to the SRI adoption. Moreover, farmer community school, farmer group discussion, farmer regular meeting, farmer workshop and congress, extension agent visited farmer's field, farmer-to-farmer, exchange visit, television, radio, prints were significantly related to adoption of SRI. The problems found were irrigation and drainage problems, natural disasters, lack of technique in pests control, low soil fertility, labor shortage, rodents, insects and diseases problem. Farmers were looking forward for help to ease their problems from either government or NGOs.

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Thesis Advisor's signature