Boonyarat Kruawan 2012: Farmers' Participation in Irrigation Management, Yangmanee Operation and Maintenance Project. Master of Science (Agricultural Extension), Major Field: Agricultural Extension, Department of Agricultural Extension and Communication. Thesis Advisor: Associate Professor Pichai Tongdeelert, Ph.D. 145 pages.

The objectives of this research were 1) to study the fundamental factors, economic factors, social factors and irrigation factors 2) to study farmers' participation in irrigation management 3) to study the relations between the fundamental factors, economic factors, social factors the use of irrigation water and the farmers' participation in irrigation management 4) to study problems and suggest approaches for the development farmers' participation. The sample were 240 farmers. Data were collected by interviews schedule and focus group method. Data were analyzed included frequency, percentage, arithmetic mean, maximum, minimum and standard deviation. Chi-square test hypotheses.

Findings revealed that target farmers average age 54.64 years old, completed primary school, an average members of labor was 2. The average farm income was 232,258.3 baht per year, and non-farm average income was 23,225.0 baht per year, average their own agricultural land was 20.28 rai, average rental agricultural land was 19.07 rai. The average second crop rice yield 790.97 kilograms per rai, the average first crop rice yield 437.08 kilograms per rai. Farmers were the member of water user group and most of them had never contacted with the irrigated officials, perceived information about irrigation management from person media. Most of their land was located at the middle of the ditches. The benefit of irrigation management was at "high" level and environment conservation was at "high" level. Their overall participation in the irrigation management in every process was at "moderate" level.

According to the hypothesis test, non-farm average income and information of irrigation management, were related with farmers' participation in irrigation management, Yangmanee Operation and Maintenance Project role at the statistically significant level of .05 average first crop rice yield, being a member of group, communication with irrigation officer, benefit of irrigation management and environment conservation were related with farmers' participation in irrigation management, Yangmanee Operation and maintenance project role at the statistically significant level of .01

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