

Abstract

Participatory Action Research (PAR) on Agricultural Systems in the Upland Rice and Maize-based Cultivation Community. Study on Mae Song Highland Development Project Using Royal Project System that is rice cultivation community. There are cut and burned before planting. Altitude about 600 – 1,200 meter above median sea level, most population are Karen . There are 4,985 household, and 15,398 peoples and 8,107 women, 7292 men's Karen. Living by grows field rice and paddy rice. The main area of operations is Wadogro which has a 35.55 percent paddy rice and upland rice 64.45 percent of the total area planted to rice. Rice cultivation (5-6 years) and burn the forest to prepare the area for rice cultivation, and no systematic soil and water conservation. The main problem is low yields of rice, the average of upland rice were 244 kg/rai and paddy rice were 303 kg/rai. The study conducted at the farmers since fiscal year 2559-2561 conducted research in the area to support the goal the development of the Mae song focused on enhancing the food security of the community. By increasing the production of rice And enhance the ability of households to access food sources. Along with the strengthening of community in the budget. The operation 2561 participatory farmers 3 communities. , including that Wadogro Yapata and Shokhawakee were 27 cases by aims to support to solve problems and promote the development of agricultural systems that fit of Mae Song areas : 1) to increase paddy rice yield by producing pure rice seed with rice - Fish Culture 2). Upland rice planting with soil and water conservation to restore the fertility of the soil in the planting area Upland rices, and 3). The test of plant species selection for a source of food and income generated. Rice seed varieties Bue Yo. The local pure rice seed for 3 years and planting a single with fish farming in rice grain yield highest was 1,156 kg /rai by tilapia fish is appropriate fish farming in rice and yield rice grown in soil and water conservation (hillside ditch / planting legumes transverse slope / legumes planted ground cover) 3rd year increased 9 percent, also found that alternative plant that generates short term income. Peanut variety Kalasin 2 produced an average yield of 257.41 kg / rai. and the average net income was 1,835.5 baht / rai. Nave beans yield and average of 57.88 kg rai and average net income is 654.37 baht per rai. And plants make long-term income. Mango and avocado The average survival rate of 95 and 94 percent, respectively, was changed to commercial varieties in 2016.

Keywords: area-based approach, upland rice, fish culture in paddy field, soil and water conservation