

Wawta Chaithong 2013: The Study of Rice Plantation and Farmers' Self-reliance of Ban Thunglane, Tambon Pran, Amphoe Khun Han, Si Sa Ket Province. Master of Science (Sustainable Land Use and Natural Resource Management), Major Field: Sustainable Land Use and Natural Resource Management, Interdisciplinary Graduate Program. Thesis Advisor: Assistant Professor Thippawal Srijantr, Ph.D. 176 pages.

This research was aims to study for 1) the social-economic background, 2) the rice production background and 3) the framers' self-reliance of the rice farmers at Thunglane Village, Pran sub-district, Khun Han district, Si Sa Ket Province. The data were collected from field survey, household interview, in-depth interview and supported documents. Quantitative and qualitative were employed.

The results showed that there were 2 types of rainy season and off-season of the wet seeded rice production. The rice cultivars found were Khao Mali 105, Chai Nat, and Pathum Thani. Rice domestication and the Thunglane community livelihood could be categorized into 4 periods, *i.e.* the natural dependence during 1917-1957, the extremely factors dependence during 1958-1987, the occurrence of a debt during 1988-2002, and the liabilities rice farmer during 2003-2010. The farmer households were characterized into 2 groups of the fully chemicals using and mixed chemical-organic using. For the fully chemical using group, the average production cost of the rainy season rice was 2,037 bath/rai with the net return of 4,053 bath/rais. While, the average production cost of the off-season rice was 2,157 bath/rais with the net return of 4,155 bath/rais. In the case of the mixed chemical-organic using group, the average production cost of the rainy season rice was 1,935 bath/rai with the net return of 4,155 bath/rais. While, the average production cost of the off-season rice was 2,055 bath/rais with the net return of 3,300 bath/rais. The comparison of appropriate land size with the cost of living revealed that the 5-members household should earned about 32,726 bath/year for their survival. In the case of fully chemical use group, the appropriate paddy size should be 5 rai for farmers who had their own tractors, where as 4.6 rai for those farmers who did not have which were required for self-reliance to survive. For the chemical use reduction group, the average paddy size of 4.8 rai was for the own tractor farmer and 4.4 rai for that had no own tractor.

The self-reliance of rice farmer household was showed that reliable on agricultural income including production inputs of own rice filed and household labor, reduction of production cost, e.g. keep their own seed, as well as reduced the fertilizers and chemical use. In addition, adequate rice grain for household consumption throughout the year was necessary.

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Thesis Advisor's signature