

Tanaporn Hunkittikul 2007: Crop Production Planning in Pongyang Subdistrict, Mae Rim District, Chiang Mai Province. Master of Science (Agricultural Economics), Major Field: Agricultural Economics, Department of Agricultural and Resource Economics. Thesis Advisor: Mr.Aer Sirijinda, M.S. 147 pages.

The Thailand-China Free Trade Agreement has adversely affected the agricultural products prices received by Northern Thailand highland's farmers. Thus, the appropriate crop production planning was important to agriculture in highland northern Thailand. The main objectives of this study the socio-economic condition of the farmer; their to analyze cost return of crop production; and to find out the crop production plan for Pongyang subdistrict, Mae Rim district, Chiang Mai Province. The secondary data were from the Watershed Model for Development of Sustainable Highland Agricultural System in Thailand Project, surveyed from farmer's households in Pongyang subdistrict, Mae Rim district, Chiang Mai Province with 232 samples and analyzed by using Linear Programming Model and cultivated area distribution in Pongyang subdistrict 11 zone, separate zone with ethnicity, irrigation, and plant system.

The results of suitable crop production plan showed that Zone I should be cultivated peas, zone II - swanplant strawberry sayote and onion, zone III banana, zone IV sweet pepper, zone V chrysanthemum, zone VI potato and carrot, zone VII potato, zone VIII persimmon, zone IX roses lychee and banana, zone X sweet pepper, and zone XI should grow gerbera. The net present value obtained equals to 151,744.93 baht per household per year.

The results of testing scenario showed that case I import peas and grows sweet potato, case II import onion with growing sayote, case III import potato and grows carrot and chinese cabbage, case IV import sweet pepper and growing less area of sweet pepper, and case V should increase the lychee growing area.

The study recommended that with the Free Trade Agreement affecting a decline in prices of some crops. Even though growing of some crops such as sweet potato sayote and chinese cabbage to be an import substitution from China. Therefore, the government should employ some measures in order to reduce such consequences by an import limitation measures from China and should encourage the lychee as an export crop in the future.

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