ABSTRACT

Abstract of thesis submitted to the Graduate School of Maejo University in partial fulfillment of the requirements for the degree of Master of Science in Agricultural Extension

FACTORS AFFECTING ADOPTION OF TOBACCO-GROWING TECHNOLOGY BY GROWERS REGISTERED AT MAE LEN TOBACCO STATION, MAE-ON SUBDISTRICT, CHIANGMAI PROVINCE, THAILAND

By

KWUANMUANG JUYKLANG

DECEMBER 1999

Chairman : Associate Professor Dr. Thep Phongparnich

Department/Faculty : Department of Agricultural Extension, Faculty of Agricultural Business

The objectives of this research were to find out 1) personal and socio-economic characteristics of tobacco growers registered at Mae-Len Tobacco Station, Mae-on subdistrict, Chiangmai province ; 2) their attitudes towards extension agents; 3) tobacco-growing technology transfer by the extension agents and use of technology by the growers; and 4) the growers' problems, obstacles and recommendations to improve the use of technology. The data were collected by means of interview schedules from 182 tobacco growers , and analyzed by using the SPSS/PC^{+}.

The results revealed that the respondents had an average age of 45 years. Most of them had completed grade 4 of primary education. They had an average tobacco-growing experience of 21 years , an average land holding of 4 rai, average land for tobacco growing of 12 rai, rented land for tobacco growing of 11 rai and 6 rai of land for other people to grow tobacco. An average tobacco yield was 277 kg/rai and their income from selling tobacco was 180,001-210,000 baht. They attended a meeting only once in the previous year and contacted extension agents 3-4 times in the past three months.

Their attitudes towards extension agents were at a very high level in honesty (mean score 3.40) and human relationship (mean score 3.29); a low level in planning together with tobacco growers (mean score 2.24); and a moderate level in other aspects. Their overall attitudes towards extension agents were moderate (mean score 3.07).

Regarding tobacco-growing technology transfer by extension agents, 71.43 percent of the respondents indicated the transfer was conducted by explanation while 25.27 percent indicated the transfer by both explanation and demonstration. The study on technology transfer needed by the respondents revealed that 50.55 percent preferred explanation together with demonstration; 36.27 percent, explanation together with the use of media; 6.59 percent, explanation; and 6.59 percent explanation together with demonstration and the use of media.

Concerning the use of technology by tobacco growers , it was found that 49.45 percent of the respondents used the technology at a moderate level; 46.70 percent , a low level; 2.75 percent, a high level; and 1.10 percent did not use it at all.

The correlation analysis, which could not be conducted by using the Chi-square but by frequency, revealed that the variables likely to be correlated with technology adoption were yields per rai and contact with extension agents; other variables were found not to be correlated with technology adoption i.e. age, educational level, tobacco-growing experience, land holding, tobacco-growing areas, income, meeting attendance and attitudes towards extension agents.

The respondents were found to have problems in using the following technologies : digging planting holes in a zigzag line, planting spaces, rooting cuttings in plastic bags, placing Furadan at the bottom of planting holes, application of potassium nitrate and potassium sulphate, use of chemicals as shoot regulators and picking mature tobacco leaves for curing. Thus, they used these technologies at a low level. The extension agents recommended proper use of technologies at an appropriate level. Technologies of placing fertilizer under the ground and air layering on blooming were used at a moderate level. The extension agents recommended placing more fertilizer under the ground two times instead of once and conducting air layering during blooming, not before or after. The technology of stimulating plant growth by means

of fertilizer was used at a high level. The extension agents recommended the use of a smaller amount of stimulating fertilizer only once when tobacco plants are young.