

Thesis Title	Study on Appropriate Strategies for Insecticide Usage in Grape Orchard : Damnearnsaduak, Rajburi
Thesis Credits	12
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Abstract

The study on appropriate strategies in grape orchard was conducted at Damnearnsaduak District, Rajburi Province, to determine the usage and the behavior of the chemical insecticide usage by using the questionnaire and analyzing method for type and accumulative content of the chemical in soil, water, and fruit samples from 25 percent of all grape growing farmers in Damnearnsaduak, Rajburi. The purpose of this study was to know the appropriate strategies for insecticide usage in grape orchards. The results showed that most farmers had applied organophosphate insecticides. They had chosen the type of the insecticides by using their own experiences and without reading the direction of insecticide usage at 79.5 and 80.2 %, respectively. Most farmers applied the insecticides as usual according to their routine works without using the economic threshold. It was also found that they applied the insecticides within 2-3 day per time. During an application, they ignored the species of the insect and the period of the grape growth. In addition, the result showed that farmers at 22.5 % did not stop spraying the insecticides although it was the harvesting day. The farmer used to get harmed from insecticide usage at 61.5 % and the fish in the dish was dead at 75.3 %. For analyzing the species and accumulated contents of the insecticides, it was found that several organo-phosphate insecticides were accumulated the highest in the fruit parts and were lower at soil 0-6 inches depth, soil at 6-12 inched depth, and water, respectively. However, the monocrotophose was found at the highest level in the fruit at 1.79 milligrams per kilogram fresh weight. The second organo-phosphate was dimethoate and it was also found at the highest level in the fruit at 0.84 milligram per kilogram fresh weight. Moreover, using the SPSS program to analyze the

of the chemical usage and behavior and the interest of the decreasing of the insecticide usage of the farmers, it was found that male and female farmers have difference in decision making in buying and using the insecticide from chemical component of the insecticides. However, the farmers who got the education higher than grade 7 could have lower concentration insecticide usage than those who got lower education levels. In addition, the farmer who had a big land area could accept the advice from the government offices in a higher percentage than those who had small land areas. Finally, the farmers who used to get harmed from the insecticides were interested in decreasing the chemical usage in contrast to the farmers who never got harmed from the insecticide.

Keywords: Grape orchard / Insecticide residue / Organo-phosphate chemical / Damnearnsaduak