CHAPTER V

DISCUSSION

This study used a quasi-experimental research design to examine the effectiveness of the participatory learning program on knowledge, attitude, and practice (KAP) of pesticide utilization among the agriculturists in Srinakorn district, Sukhothai province. The specific objectives were to educate and train the agriculturists with a participatory learning program on the safe use of pesticide and to study the change in knowledge, attitude, and practice (KAP) in pesticide utilization after the program was implemented. The participatory approach was applied to develop the learning program between the researcher and stakeholders. After brainstorming with the stakeholders was conducted, the participatory learning program comprising of 4 modules for 2 days was designed. The activities of participatory learning consisted of 4 components: experience, reflection and discussion, understanding and conceptualization, and experiment (Kolb et al., 1991). Four components were adopted in the training program for agriculturists to develop correct knowledge attitude, which would lead to correct practices.

The samples were consisted of an experimental group (41 agriculturists living in Nongbua sub-district), who participated in the participatory process and attended the participatory learning program on the safe use of pesticide, and a control group (41 agriculturists living in Khlongmaplab sub-district), who did not attend the participatory learning program. The instrument used for this research was the

questionnaires modified and adjusted from Lojananont (2001). The data collection process involved collection of baseline data before the participatory learning program (pre-test) and collection of post-training data after completion of the participatory learning program (post-test). The two data were compared by using paired t-test to evaluate the changes in the participant's knowledge, attitude, and practices.

5.1 Summary and Discussion of Results

Personal characteristics of experimental and control groups were similar. For instance, most of the samples were between 40 – 49 years old, married, and had only grades 1-6 of education. On the other hand, the participant's gender in both groups was statistically significant difference. While a majority of experimental group (59%) was female, a majority of control group (66%) was male. The difference might be because women are usually more interested to participate in community activity than men.

The majority of the experimental and the control groups had been growing plants for more than 2 years and growing plants 2-3 types on their cultivated area. In terms of type of plant, most of the samples in experimental group grew rice, (73.2%) and chili (73.2%) but most of the samples in control group grew rice (90.2%) and watercress (53.7%). An average annual household income from cultivatable plants in both groups was more than 30,000 Baht. As for frequency of pesticide application, the majority of the samples in both groups sprayed pesticides four times per month. In

sum, agricultural characteristics of experimental and control groups were quite the same.

When the mean scores were compared between before and after intervention, the results were showed as follows:

In experimental group: after the intervention, the mean scores between pre- and post-tests of knowledge, right health attitude, and safe practice on pesticide utilization were statistically significant. The mean scores of knowledge, right health attitude, and safe practice on pesticide utilization were increased by 28%, 7.8%, and 8.1%, respectively. All KAP scores were all increased because they are correlated as other studies have shown that the promotion of one component would as well promote the other two components (Schwartz, 1975).

In control group: The mean scores between pre- and post-tests of knowledge, right health attitude, and safe practice on pesticide utilization were not statistically significant. The knowledge score was increased only by 0.67 percent and the safe practice score was increased by 8.09 percent. On the other hand, the right health attitude was decreased by 2.64 percent. The increase of practice scores might be from external influences such as a participant's alertness in learning safe practice from other media. As for attitude, the decrease might be from random fluctuation.

The participatory learning program on pesticide utilization was effective as shown in the results of significantly increased KAP scores after subjects receiving the participatory learning program. In contrast in the control group, which did not receive

the program, the KAP scores between pre- and post-tests were insignificant difference at .05 level. The result of effective participatory learning program was consistent with other studies of pesticide using participatory learning approach (Srikam, 2001; Pitasawad, 2003; Janhong et al., 2005)

5.2 Limitations

This study used a quasi-experimental research designed; in a two-group pretest-post-test format which most appropriate for this study. This research design was applied to distinguish the difference in changes of variable before and after the experiment. Although the study was carefully designed in the most appropriate way using a quasi-experimental with a control group and using pre- and post-tests, interpreting the results must be careful as they may be affected by external factors such as previous experience of subjects, a recalled bias from the first evaluation, and different level of information received from mass media. In addition, this study evaluated the effect of the program only one time in two-week period, the results may be different if the follow-up period were to be longer. Moreover, using the questionnaires to measure the safe practice of using pesticide may not portray actual behaviors of the subjects. Qualitative approaches such as in-depth interview, focus-group discussion, and observation may be used to provide additional aspects besides information from the questionnaire. Furthermore, the results may be applied to other communities with similar characteristics and stakeholders' profile because the participatory learning program was tailored by stakeholders in the community of Noug-bua sub-district.

5.3 Conclusion

The participatory learning program was organized only in the experimental group. After experiment, the experimental group had significant higher scores of knowledge, right health attitude, and pesticide practice on pesticide utilization than that before receiving the participatory learning program. On the contrary the mean scores of the control group between pre- and post-tests were not significantly different. Thus, the participatory learning program was effective in solving pesticide used problems of the community.

5.4 Recommendations

This study found that the joint effort of government officials in a community and local people is vitally important to the success of implementing participatory learning program. Government officials must have confidence in the local people in their ability to learn and develop their own problem solving skills. Moreover, government officials do need to support and invest on a community project in order to ensure the success of a project. In addition, building friendly atmosphere between the researcher and the community is also important. One of the approaches that we can build friendly relationships between the researcher and village health volunteers are to personally visit theirs house and have an informal discussion with them.

Since this study showed that the participatory learning program was effective, the program should be adopted to solve pesticide used problems in other communities. Furthermore, the program should be further reproduced by using the

participants as the trainers to provide correct pesticide knowledge, attitudes, and practice to other agriculturists in their own community. In order to provide the information for setting the policy and the budget to control and prevent using pesticide, additional research should be carried out in other areas.

For further study, the concept of participatory learning program should be used in solving other diseases that have different characteristics such as dengue hemorrhagic fever problems and non-communicable diseases (e.g., hypertension, diabetes mellitus).