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### **Abstract**

This study was a descriptive, cross-sectional study design. The objective aimed to study risk factors of water- chestnut farmers from using pesticide in Amphoe Sriprachan, Suphan Buri Province. The samples were 94 water - chestnut farmers by simple random sampling. The data was collected by structured questionnaires. The statistics used for data analysis were descriptive statistics: percentage, mean, standard deviation; and analytical statistic: correlation coefficients and chi-square test.

The result revealed that the majority of samples were male (53.2%), age range 36-45 years (47.9%), elementary education (87.2%). Both major and minor occupational were water-chestnut farmers (40.4% and 52.1%). The knowledge of pesticide using showed that 40.4 % of respondents were low knowledge level. The wrong knowledge were color label definition (84.0%), boots wearing (77.7%) and empty pesticide package selling (62.8%). Only 24.5% of them were high knowledge level. The most attitudes were moderate level (57.5%), but 20.2% of them was low attitude level. The wrong attitude were mixing more than 2 types of pesticides in spraying to increase the efficiency (68.1%), increasing the concentration of pesticides for solving insect's resistance (61.7%).

To practice in chemical using monocrotophos and endosulphan, most of the farmers was moderate practice level (70.2%). There was 12.8% of wrong practice about non-wearing fully protection equipment during pesticide mixing (53.2%), and spraying (81.9%), wind direction (53.2%), water-chestnut harvest after last spraying (72.4%), the disposal method of waste water from equipment cleaning (59.6%) and empty package disposal (91.5%).

The correlation coefficient among knowledge, attitude and practice in pesticide using of farmers at 95% confident interval showed that all of them were related. For cholinesterase enzyme testing result, there were 9.6% of harmful level and 43.6% of high-risk level. From chi-square test, only the wind direction was related. The farmers who stood under the wind direction were high risk than the farmers who stood above the wind (odd ratio = 2.3). Therefore, to solve this problem, the officers suggestion should be encourage the farmers by wearing the fully protection equipment and standing above the wind direction while pesticide spraying.