

Research Title	Monitoring of Insecticide Residues in Fresh Vegetables and Fruits in Muang, Surat Thani Province
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ABSTRACT

This research aims to study the qualitative and quantitative residues of insecticides and to disseminate knowledge about monitoring the situation of residual insecticides in fresh vegetables and fruits sold in 8 type 1 markets in Muang district, Surat Thani Province. The samples of fresh vegetables and fruits such as cabbage, cucumber, yard long bean, orange and watermelon were collected from each market (8 markets) in 2 periods which comprise of December 2012 to March 2013 and September 2013. The samples were analyzed for the presence of residual insecticides (organophosphate and carbamate group) in fresh vegetables and fruits by using a test kit of the Department of Medical Sciences, Ministry of Public Health. Thereafter, the positive samples which are unsafe were submitted for analysis to confirm the results by using Gas Chromatography in the Central Laboratory (Thailand) Co., Ltd. in Songkhla. After that, the results of residual insecticides in these samples were compared with the Maximum Residue Limits (MRLs) of Agricultural Commodity Standards, Ministry of Agriculture and Cooperatives and Codex standards. The results of first period (December 2012 to March 2013) showed that only one of the samples (n=158), the residual insecticides were found unsafe in a yard long bean for qualitative results but the quantitative results were found safe. In the second period (September 2013), all samples (n=39) were found safe. Moreover, the samples of each type were randomized for a quantitative analysis. The results showed that the residual insecticides were found in the organophosphate group from yard long bean and the carbamate group from oranges. However, the residual insecticides in these samples are lower than MRLs of Agricultural Commodity Standards, Ministry of Agriculture and Cooperatives and Codex standards. Knowledge dissemination in monitoring the situation of residual insecticides used networking and public relation activities. The results of satisfactions were found in high level.

The results from this research can be utilized to control of residual insecticides in food and it may be beneficial to formulate and plan the health policy.