

Project Title : Investigations on defining the processing factor of some pesticides used on tomato and pepper which are grown in Izmir

Start Date : 2012

Supporting Body : GDAR

Leader : Ahmet Uğur DURU

Co-researchers : Hakan ÖRNEK, Hüsnü ERDENK

Summary : In the process of development of agriculture, pesticides have become an important tool as a plant protection agent for boosting food production. But their indiscriminate use has been posing a serious threat to human health. In addition, due to adaptation and resistance developed by pests to chemicals, every year higher amounts and new chemical compounds are used to protect crops, causing undesired side effects and raising the costs of food production. These agro-chemicals leave residues in food and thereby produce ill effects. Such residues may be comprised of many substances, which include any specified derivatives such as degradation products, metabolites and impurities that are considered to be of toxicological significance. Also, there is increasing need to address the potential risks of combined exposures to multiple residues from pesticides in the diet.

Agricultural products are generally consumed as processed because of this residue of the processed products as well as residue of the unprocessed products (raw materials) is very important. According to processing, some pesticides or degradation products may accumulate and form more residues on the processed products. Therefore, residue studies should be conducted not only on plant or plant product but also processing factor on processed products to show residue behavior of plant protection products

Food processing studies are essential for the purpose of refining dietary intake estimates of pesticides. This information is necessary for reaching a conclusion on the acceptability of proposed MRLs and Good Agricultural Practices (GAPs) from a point of view of babies and children safety.

This study will carried out on tomatoes and pepper in Menderes-Izmir. National Instruction Manual was taken into account on pesticide treatments. For determining of the effects of processing procedures on the pesticides, samples were randomly will collect before and after one day after last application and the recommended preharvest days for each pesticide. The fate of pesticides on tomatoes and peppers during processing procedures such as washing, drying and

storage at 4°C in refrigerator. The processing factors and transfer factors will be found for each pesticide.

In this project, aimed to calculation of processing factors such as time in the harvest, washing, drying and storage in chosen pesticides and product which holds an important place in our diet.