

## PS-005. Pesticides and food safety

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Besides prevention of tropical diseases, pesticides are also used to make agricultural activities fertile. But pesticides are potentially harmful to our health and may be toxic to the immune, reproductive and nervous systems. After application; pesticide residues consist depending on factors such as plant species, time of administration, how it applied. While pesticides make food supply sustainable, there are concerns about residues in food that people consume. Therefore food safety concept introduced. Shortly, the purpose of food safety is to reach products to end consumers without losing its nutritional value and not posing a risk in any sense. In this context, good agricultural practices have been established and the maximum residue levels for pesticides is determined for each plant species and animal feed. This limit is called the pesticide tolerances. In fact, this limits are legal limits more than health. Health limit are the values, not effective in the long-term intake of certain pesticides in animal experiments. The legal limit is one percent of it. The goal is to make the amount of pesticide residue levels harmless for consumer health. Even though the residues are below legal limits, recent studies claim they may affect hormonal system of susceptible individuals. With debates of food security, to minimize potential damage to environment and human health, integrated pest control program has been created. American system consists of six main components; 1. Acceptable pest levels 2. Preventive cultural practices 3. Monitoring 4. Mechanical control 5. Biological control 6. Responsible use Conclusion: Pesticide use increase the availability of food through efficiency but may bring health risks of irresponsible use. Instead, combining mechanical, biological and other preventive practices, appropriate to the region it increases cost-effectiveness and with minimal ecological damage, we may provide sustainable agriculture by food security.

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