

Fate of Pesticides in the Agricultural Environment

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Editorial

Nowadays the word environment is often being used by almost all people around us, on television and in newspapers. Everyone is speaking about the protection of environment. Environment as a definition means our surrounding us including water, soil, plant, animal, air, the sum of external influence and conditions. Also, environment is a word being used to refer the totally of external factors that influence a population. From this point we can say that any problem happened to environment will reflect on humans and their lives.

The environmental pollution especially with pesticides is one of the important matters. During the last fifty years, the mutual relationship among environment, social organization and culture has been cleared. Silent spring a book that written by Rachel Carson and published at 1962, was the strongest global alarm that revealed the risks of irresponsible usages of pesticides. She showed the risks of pesticides on wild life, human health and resistance phenomena in certain organisms.

Environment as bio-system can deal with pesticides through certain processes which depending on two different types of factors. The first type is related to pesticides properties which including solubility, sorption, vapor pressure, persistence and chemical bonds of the compounds.

On the other hand, the second type of factors is related to environmental properties. The environmental properties are divided to three properties which were mobility, transport and degradation. The Mobility or movement of the pesticides is happened by leaching, surface drainage, subsurface flow, sorption by plants and / or microorganisms and adsorption on soil particles. While, transportation process carried out through air, water and soil. Moreover, degradation includes photo degradation, microbial degradation and chemical degradation.

Finally, fate of pesticides in agricultural environments is depending on one or more of these factors separately or in combinations.