**Pesticides**

Pesticides are used to kill pests. They include herbicides for destroying weeds and other unwanted vegetation, insecticides for controlling a wide variety of insects, fungicides used to prevent the growth of molds, rodenticides used to control mice and rats ...etc. Farmers need pesticides to increase yield and boost their profit.

Pesticides can travel great distances through within the ecosystem. When sprayed on crops or in gardens, they can be transported by the wind to other areas. They can also flow with rain water into nearby streams or can leak through the soil into ground water.

Pesticides may contaminate soil, water, grass, and other vegetations. In addition to killing insects or weeds, pesticides can be toxic to other consumers including birds, fish, beneficial insects, invertebrates and even humans.

Pesticides affect the food chain because they reduce the biomass of primary consumers. As results less food is available to secondary consumers causing loss of biodiversity, destroying beneficial insects that act as natural enemies of pests and  affect plant pollinisation.

Pesticides are used to kill target organisms, but unfortunately they can harm non-target ones. After many studies, pesticides have been linked to cancer, Alzheimer's disease, birth defects, and they can harm the nervous system, the reproductive system, and disrupt hormone level.

Soil can be degraded and the community of organisms living in the soil can be damaged by the over use of pesticides. Some pesticides are more toxic to soil organisms than others. Several pesticides may break down quickly when applied to soils, while others may persist for longer periods.

The goal of integrated pest management (**IPM**) is to eliminate pests and to strengthen the landscape (ecosystem) by applying many methods as agricultural rotation, the pest biological control (habits, life cycle, needs and dislikes) to break-down the life cycle of pests and to protect soil biodiversity.

