

Pesticides: Harm to Non-Target Species

We know that pesticides can be harmful to people. Some pesticides may harm beneficial insects, fish, birds, wildlife, domestic animals and plants.

Always follow the label directions and precautions to prevent harm to non-target species.

a. Bees

Bees are important beneficial insects because they produce honey and they pollinate tree fruits, small fruits, legumes, and other vegetables. Bees can be poisoned by pesticides in two ways:

- Through direct exposure during spray operations.
- Through indirect exposure, if the pollen they collect and store in the hive is contaminated with pesticide.

The extent of damage to bee populations will be influenced by the kind of exposure, the toxicity of the pesticide, and its persistence.

You will know that bees are being affected by a pesticide if you see:

- Large numbers of dead bees in front of hives.
- Aggressive bees.
- Slow moving bees (possible carbamate poisoning).
- Sudden decrease in the number of bees.

b. Other Beneficial Insects

Beneficial insects, such as the Praying Mantis and the Lady Bird Beetle (Ladybug), prey on pests. These insects help to control pest populations naturally. Widespread use of pesticides can kill beneficial insects as well as the target pests. If the number of beneficial insects is decreased, the natural balance is upset. There are fewer natural enemies to keep the pests under control. Those pests that survive the spraying may multiply quickly because of the lack of natural predators.

c. Fish and Other Aquatic Life

Some pesticides are highly toxic to fish and other aquatic life. A high concentration of a pesticide in water may kill fish, other aquatic life or the organisms they eat. Lower concentrations may affect the fish's ability to

reproduce or cause other long term damage. Pesticides can also accumulate in fish and make them unsuitable for human consumption.

Protect fish and other aquatic life, by preventing direct and indirect contamination of water sources.

d. Birds, Wildlife & Domestic Animals

Direct and indirect exposure to pesticides is dangerous for birds, wildlife, and domestic animals. Pesticide poisoning can cause death or harm an animal's health and ability to reproduce.

Direct exposure to pesticides usually occurs during pesticide applications. This can happen through drift, runoff, soil erosion, leaching or through the careless release of pesticides into the water. Wildlife, birds and other animals can be harmed if their nests, dens and burrows are contaminated.

Indirect exposure occurs most often because food or water supplies have been contaminated with pesticides. For example, pesticides may remove food organisms or aquatic vegetation and disrupting fish habitat. If stream-side vegetation is damaged, shade will be reduced and food sources may be destroyed. Birds may also be poisoned if they eat granular insecticides.

