

# Less Harmful Pesticides

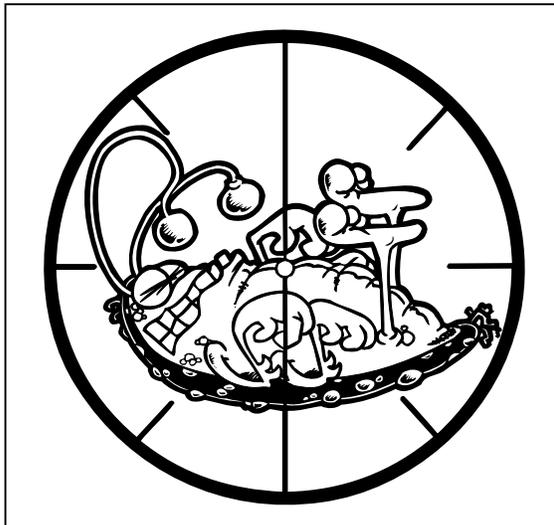
## Pesticides and Insecticides, what's the difference?

'Pesticide' is the general term for a chemical that kills pests. Pests can be weeds, insects, nuisance rodents, diseases, etc. An insecticide is a type of pesticide.

- Insecticides kill insects.
- Rodenticides kill rodents.
- Herbicides kill weeds.
- Fungicides kill fungi.

## What makes a pesticide less harmful?

**A pesticide is less harmful if it controls what we want to control and does not harm other creatures in the environment.** For example, we like to use pesticides that won't hurt people or pets. Less harmful insecticides control the "bad" bugs and leave the good bugs alive. A less harmful pesticide would control gypsy moths, aphids, or nuisance wasps, but wouldn't kill butterflies, honey bees, ladybugs, or praying mantises. **Pesticides that don't stay in the environment long are usually less harmful than those that stay in the soil, water, or air for a long time.**



## Why should I think about using less harmful pesticides?

**Because pesticides that kill insects might also hurt humans, birds, fish, dogs, cats, etc.** Even though we might not look much like insects, our bodies use some of the same things to make them work. If an insecticide kills an insect by destroying its nervous system and your nerves are basically the same as an insects' nerves, then the pesticide might harm you too. If you are spraying an insecticide in the house you should think about your children and your pets. If you're using a pesticide

outside please think about birds, fish, and other animals that might contact the pesticide. **You might be killing the 'good bugs' that are in the environment.** Insects like praying mantises, ladybugs, and honey bees are very helpful to humans and the environment, so we should try to protect them.

## What insects can I control if I use less toxic insecticides?

Sometimes it is hard to know which insecticides are supposed to control which bugs. It's even more difficult to know what your less toxic control options might be. In order to help you use less toxic pesticides, we are providing you with a list of some less harmful insecticides and the insects that will be affected by them.

**Bt** – *Bacillus thuringiensis* controls some caterpillars and beetle larvae.

**Boric Acid** – will control ants, cockroaches, silverfish, and termites.

**Diatomaceous Earth** – a natural pesticide dries pests out, which is why it's effective on pests that need a lot of water, such as slugs, millipedes, and sowbugs.

**Horticultural Oil (2 kinds)** – **Dormant Oil** is used during the winter season. It will control aphids, spider mites, and scales by suffocating them. **Summer Oils** are used while the plant is growing. Summer oils control aphids, mites, thrips, scales, and mealybugs. Oils are good controls for hemlock woolly adelgid.

**Insecticidal Soap** – will control soft-bodied insects such as aphids, leafhoppers, scales, and whiteflies. It may be sold as “Safer’s Soap.”

**Iron Phosphate** – will control slugs and snails. Very safe and very effective. May be sold as “Slug-go” or “Escar-go”.

**Neem (Azadirachtin)** – will control gypsy moths, leafminers, thrips, caterpillars, and mealybugs. Neem oil is also a fungicide. It may be sold as “Bio-neem” or “Azatin”.

**Pyrethrum** – a natural insecticide that will ‘knock down’ most insects, but unless something like piperonyl butoxide is added, the insects will not be killed.

**Pyrethroids** – are the synthetic versions of pyrethrum and they are effective against most insects. However, they do last longer in the environment than pyrethrum.

**Sabadilla** – will control caterpillars, leafhoppers, thrips, stink bugs, and squash bugs. Sabadilla may be sold as “Natural Guard” or “Red Devil”.

**Traps** – Not all traps are created equal! Japanese beetle traps, for example will catch a lot of beetles, but they also bring many more beetles to the area. Other traps, like pantry traps, are excellent for controlling insects.

Please keep in mind that **just because a pesticide is “organic” or derived from a natural product, does not mean that it is safer than a synthetic chemical.**

It is your responsibility to read the pesticide label and follow all directions on it.

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