

Managing Garden Pests

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Often “live and let live” is the best response to a garden problem. Some pests are eliminated by natural predators or the passage of time; some do only cosmetic damage that healthy plants easily survive [such as the cicadas that tip-prune our trees every 17 years].

Some apparent “pests” are actually beneficial, or at worst a mixed blessing. In my early gardening days, I diligently dispatched the fearsome-looking caterpillars that kept eating my parsley, only to find out later they were the larvae of swallowtail butterflies. Now I plant extra so there’s plenty of parsley for all of us.

Swallowtail butterfly larvae munch on our parsley – a small price to pay for the delight (and pollination services) the adults bring to our gardens.



Solving the Right Problem

When a serious problem persists, however, it's essential to identify the cause before taking any action. Some bacterial and fungal diseases, for example, have similar symptoms but require very different treatments. And mites, which are not insects but spider relatives, are not harmed by some insecticides, which may instead kill the mites' predators. So choosing the wrong solution can make matters worse.

The Master Gardeners who staff the weekly plant clinics at County farmers' markets over the summer can help you identify common pests and diseases and advise on treatment methods. They will send the less obvious cases to our lab for diagnosis; you will get a phone call with the results within a few weeks.

Using Chemicals Safely – and Rarely

As a general principle, the use of chemical pesticides in the garden – even organic ones – is to be avoided. Good gardening practices usually make them unnecessary. And non-chemical solutions such as hand-picking insects, hosing off plants, and setting out traps, netting, and other barriers can be quite effective. In the very few cases where pesticides can't be avoided, they should be used with the greatest caution and precision.

Pesticides kill, after all. The creature who is statistically at greatest risk from a pesticide is the human who applies it. Others are at risk as well. Because of that, every pesticide producer is required **by law** to provide on the product label detailed information about the product and detailed instructions for using, storing, and disposing of it and for treating accidental poisoning. Moreover, the law requires every pesticide **user** – you and me -- to read and follow the label instructions. All for very good reason.

To illustrate the danger, one of the first required items on a pesticide's label is a "signal word" indicating just how hazardous it is. Based on the approximate dose that would be fatal to a human (a rather large creature, when you think about it), here is what those "signal words" mean:

- "Caution": One ounce or more (the approximate fatal human dose).
- "Warning": One teaspoon to one tablespoon.
- "Danger": One taste to one teaspoon. Products at this toxicity level are not usually available to the home gardener.
- "Danger-Poison," with skull & crossbones symbol: Extremely toxic and available only to trained applicators; in some cases one drop on the skin is a fatal dose.

Many pesticides kill bees and other beneficial creatures. To minimize the danger to them – and yourself -- follow precisely the label instructions on how and when to apply them.



Other good general principles for safe and effective use of chemical pesticides:

- *Use the product most specific to the pest.* A broad-spectrum herbicide like glyphosate (RoundUp is one brand name), for example, will poison not only the weed you want to kill, but your grass and any other plant you accidentally spill it on. And if a pest is not listed as one that a pesticide controls (another label requirement), the product will be probably be ineffective.
- *Buy and apply no more of the product than necessary:* More is **not** better for the environment, and storing containers of leftover toxins (which may be flammable, explosive, or corrosive to boot) poses a continuing hazard.

If all else fails – as it sometimes does -- hang on to your patience and your sense of humor. This, too, shall pass.