

Organic Gardening by Vera Strader

Confused about organic gardening? If so, it's no wonder since organic gardening is often fuzzily defined as natural or nontoxic. Hopefully the following ideas will add some clarification.

PESTICIDES: Many organic gardening products are made from plant or animal formulations. Much has been made of such "natural" pesticides, but their safety is especially variable. Nicotine, from tobacco leaves, is highly toxic to animals and simply too dangerous to use. Rotenone, also plant based, is deadly to fish and beneficial insects. Caterpillar treatment with organic Bt (*Bacillus thuringiensis*) can wipe out a treasured butterfly colony.

Always identify your pest before heading for the pesticide arsenal. Plants tolerate a few nibbled leaves and the crisis may simply disappear as beneficial creatures come to dine on the pests.

In other cases, **a carefully targeted pesticide may be called for.** For the pros and cons of selected pesticides, including natural and synthetic herbicides, fungicides, and insecticides, go to <http://www.ipm.ucdavis.edu/PMG/menu.pesticides.html>. For help identifying pests and choosing integrated pest management (less toxic) techniques, visit <http://www.ipm.ucdavis.edu/PMG/menu.homegarden.html>.

SOIL ENRICHMENT: Many gardeners make their own organic amendments from fallen leaves, pine needles, aged barnyard manures, composted kitchen and garden waste, and worm castings. Garden centers sell organic mulches and fertilizers including wood chips, fish emulsion, and blood and bone meal.

These products are sold side-by-side with powerful, often less expensive chemical or synthetic fertilizers. Synthetic fertilizers usually have higher concentrations of the basic soil nutrients—nitrogen, phosphorus, and potassium.

Why bother with organic amendments? Macro and micro nutrients in organic fertilizers and mulches are released slowly, require less frequent application, and decrease the likelihood of over fertilization with destruction of beneficial soil organisms. Organic fertilizers and mulches help improve soil by enhancing its ability to hold water and decrease weeds, erosion, and soil crusting. And, if made from fallen leaves, homemade compost or wood chips, they're moneysaving as well. Cover cropping and green manure (a cover crop tilled into the soil) can also boost soil quality.

On the other hand, compost and manures act slowly and may contain weed seeds or other contaminants such as pesticides. Animal manures must be well composted to eliminate the risk of pathogens like *E. coli*.

When applied judiciously, **synthetic fertilizers do provide a quick and convenient way** to get nutrients to plants. However, synthetic fertilizers contain a limited number of nutrients, are often made from petrochemicals or environmentally destructive mined minerals, and require energy-gulping processing and shipment. Over fertilization can burn plant roots and nitrogen rapidly leaches away, often into ground water.

FOOD: Rare is the grocery store that does not feature some organic foods. The USDA National Organic Program certifies food as organic when grown by certain standards. These standards do not address nutritional benefits and food safety.

Are organic foods worth the extra expense? Whether they are more nutritious is the subject of sometimes heated debate since studies produce conflicting results. However, when grown and marketed locally, produce is usually fresher, tastier, and likely to retain more nutrients. Wash all produce thoroughly before eating, regardless of production techniques.

Organically grown food has several other benefits including healthier farm workers due to reduced exposure to agricultural pesticides and less pesticide residue on foods. Organic food may be especially important for pregnant and nursing women, young children, and those with weakened immune systems. Organic food growing leads to less air, soil, and water pollution and improved soil quality and reduced erosion.

We have much yet to learn about how to garden safely and efficiently. Organic gardening is a process toward making a healthier future concludes **Jeff Gillman** in his very readable book, **“The Truth about Organic Gardening: Benefits, Drawbacks, and the Bottom Line.”**

Vera Strader is presently experimenting with no-till and cover cropping to enrich the soil in her Sonora vegetable garden.