

Organic Gardening Fundamentals

Growing in popularity

A 2004 survey by the National Gardening Association found that 5% of America's 90 million households garden only with organic management techniques and an additional 31% use both synthetic and all-natural fertilizers and pest controls. This baseline data is complemented by forward-looking questions, which predict that the number of strictly organic gardeners will nearly double in coming years (National Gardening Association, 2005). This trend is particularly evident in urban areas.

What does "organic" mean?

As defined by US Department of Agriculture (USDA) National Organic Program (NOP):

- Mostly do not use synthesized chemical fertilizer or pesticides
 - Derived from plant, animal, mineral sources
- Prohibit the use of
 - Genetically modified organisms
 - Ionizing radiation, and
 - Sewage sludge-based fertilizers
- Labeling standards for foods
 - "100 percent organic" contain only organic ingredients (and usually a single ingredient such as a fruit, vegetable, eggs, etc.)
 - "Organic" must contain at least 95% organically produced ingredients.
 - Only products meeting the above standards may display the official "USDA Organic" seal
 - Processed products that contain at least 70% organic ingredients can use the phrase "made with organic ingredients"
 - Animals raised in an organic operation must be fed organic feed and be given access to the outdoors. Antibiotics and growth hormones are prohibited.



Specifics for organic gardeners

- Build healthy soil by adding composted organic matter
 - Helps create favorable soil structure by feeding soil organisms, which create a glue that holds soil together. Soil life helps to make nutrients from mineral soil and organic matter available to plants, particularly when soil temperatures are warm.
 - Creates pore space for air and water.
 - Increases drainage in clay and water holding capacity in sandy soils.
 - Provides some nutrients, depending on source of compost, but unpredictable.
- It's hard to make good compost at home from garden wastes; it's easier to make good compost from food scraps through worm composting.
- Create a balanced ecosystem by providing habitats for birds, snakes, frogs, and beneficial insects
 - Provide diversity of plants (flower type, color, architecture, annuals, and perennials) to attract insects.
 - Provide insectary plants with small flowers.
 - Provide adequate water.

- Plant alyssum, marigold, sunflower, phacalia, buckwheat, etc. to attract bees.
- Let crops such as cilantro and lettuce flower.
- Use of organic fertilizers
 - Get a soil test with interpreted results
 - Many different materials to choose from; do your homework!
 - Organic fertilizers – Nitrogen: fish emulsion (3-5%), composted chicken manure (3%), blood meal (12-15%); Phosphorus: bone meal (12-24%); Potassium: kelp meal (2-5%)
 - Granular organic fertilizers are slow-release and the nutrients are generally not immediately available to plants and most will not burn
 - Incorporate organic fertilizers several months in advance
 - Use a water soluble organic fertilizer to get plants off to a good start
 - Steve Solomon's recipe:
 - 4 parts fish meal: 1 part dolomite lime: 1 part soft rock phosphate (or 1.2 part bone meal) : 1 part kelp meal
 - Apply 4 # / 100 square ft / crop
- Organic products to control insects and diseases
 - Derived from plants: Neem, pyrethrins, capsaicin, rotenone
 - Derived from microbes: *Beauvaria*, beneficial nematodes, spinosad, Bt
 - Derived from mineral sources: oils, soaps, kaolin clay, iron phosphate, sulfur, lime-sulfur, copper-based sprays.
 - Just because a product is labeled as *organic* does not mean that it is completely safe
 - **Read and follow direction on label! The label is the law.**
- Weed control in organic gardens
 - Diligence!- Don't let weeds go to seed
 - Hand pulling and a sharp hoe
 - Sheet mulching (wet soil, layer of overlapping cardboard, mulch on top) can smother annual weeds but does not work for perennial weeds like quack grass and field bindweed
 - Organic herbicides made from vinegar (acetic acid), clove oil, citrus oil, soaps, etc. will burn foliage and can work on annual weeds, especially when young
- With all products, consult with Organic Materials Review Institute (OMRI) and National Organic Program guidelines to determine if it is officially considered organic.

Further Study

- [Maritime Northwest Garden Guide](#)- Seattle Tilth
- [Growing Vegetables West of the Cascades](#)- Steve Solomon
- [How to Grow More Vegetables](#)- John Jeavons
- [Designing and Maintaining Your Edible Landscape Naturally](#)- Robert Kourik
- [The New Organic Grower](#)- Eliot Coleman

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- Call Home Horticulture Helpline: 503-655-8631 (Clackamas Co), 503-725-2300 (Washington Co), 503-445-4608 (Multnomah County)
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