



Basic Organic Gardening

There are many simple and effective ways home gardeners can have a beautiful, healthy lawn and garden without resorting to the traditional chemical fertilizers and pesticides that can pose a threat to our waters, our wildlife, our families, our pets, and ourselves. By combining common sense, good garden practices, natural fertilizers, and alternative pesticides, you already have the fundamentals of organic gardening.

- **STEP 1:** Stop using all synthetic fertilizers and pesticides.
- **STEP 2:** Start recycling organic matter, building soil health with organic products, composting, and mulching.
- **STEP 3:** Use native plants and well-adapted introductions.

It's a basic truth of gardening that weak or sickly plants are more inviting to insect pests than healthy plants. The best prevention against insects and disease is to follow sound gardening practices to ensure the health of your plants.

BUILDING A SOLID FOUNDATION

Combine native soil with a soil amendment, such as steer manure, sheep manure, pine bark, peat moss, or gypsum. Our General Bed Preparation Information sheet has more information on building a well draining garden bed.

Keep your garden mulched, pruned, weeded, and properly watered, and use plants that are less prone to insect problems. Check with Heirloom Gardens to learn which plants perform best in the Brazos Valley.

Planting

Prepare beds by scraping away existing grass and weeds, adding a 4 to 6 inch layer of compost, lava sand at 40-80 lbs, organic fertilizer at 20 lbs, and wheat/corn/molasses amendment at 30 lbs/1,000 sq. ft. Till native soil to a depth of 3 inches. Excavation and additional ingredients, such as concrete sand, peat moss, foreign soil, and pine bark, should not be used. You will need more compost for shrubs and flowers than for groundcover. Add Texas greensand to black and white soils, and

high-calcium lime to acid soils. Decomposed granite is an effective amendment for all soils.

FERTILIZING

Apply an organic fertilizer two or three times per year. Use foliar feeding during the growing season, and spray turf, tree, and shrub foliage, trunks, limbs, and soil at least once a month with Garrett Juice. Add volcanic sand, such as lava sand at 40-80 lbs/1,000 sq ft. Add dry molasses and humate for the first few years of growth.

MULCHING

Mulch all shrubs, trees, and ground cover, and food crops with 2 to 5 inches of shredded native tree trimmings to protect soil from sunlight, wind, and rain, and to inhibit weed germination, decrease watering requirements, and to stabilize soil temperature. Other natural mulches can be used, but avoid Bermuda grass hay because of herbicide residue.

Watering

An organic gardening program will reduce the need for water. Water only as necessary. Add a tablespoon of apple cider vinegar per gallon of water when watering pots. Use 1 oz of liquid humate in acid soils.

MOWING

Mulch clippings into the lawn to return nutrients and organic matter to the soil. Add occasional excess clippings to your compost pile. Do not allow clippings to leave the site. Do not use line trimmers around shrubs and trees. Mowing requirements vary with growing conditions and the type of grass you plant; Buffalo grass needs less mowing than any other variety.

WEEDING

Pull large weeds by hand and work on soil health for overall control. Mulch all bare soil.

Avoid synthetic herbicides, such as pre-emergents, broad-leaf treatments, soil sterilants, and especially the SU (sulfonyleurea) herbicides, such as Manage and Oust. As a last resort, spray broadleaf weeds with full strength vinegar combined with 2 ounces of orange oil and 1 teaspoon of liquid soap. Commercial products are now available.

PRUNING

Remove dead, diseased, and conflicting limbs. Do not over prune. Do not make flush cuts — leave the branch collars intact. Do not paint cuts except on red oaks and live oaks in oak-wilt areas when spring pruning can't be avoided. Remember that pruning cuts hurt trees. Pruning is done for your benefit, not for the benefit of your trees.

COMPOSTING

Compost, nature's own living fertilizer, can be made at home or purchased. Compost can be started any time of the year in sun or shade. Anything organic can go into compost — grass clippings, tree trimmings, food scraps, bark, sawdust, rice hulls, weeds, nut hulls, and animal manure. Mix the ingredients together and simply pile the material on the ground. The best mixture is 80% vegetative matter and 20% animal waste, although any organic mix will compost.

Oxygen is a critical component in compost. Use coarse and fine-textured ingredients to promote air circulation throughout the pile. Turn the pile as time allows to speed up the composting process.

Another critical component is water. A compost pile should contain the approximate moisture of a squeezed-out sponge to help the living organisms in it work their magic. Compost is ready to use when the ingredients are no longer identifiable. The color will be dark brown, the texture soft and crumbly, and it will smell like the forest floor. Rough, unfinished compost can be used as topdressing mulch around all plantings.

COMPOST TEA

Manure compost tea is an effective foliar spray because of its many mineral nutrients and naturally occurring microorganisms. Fill any container half full of compost and finish filling with water. Let the mix sit for a few days, then dilute and spray on the foliage of plants. A rule of thumb is to dilute the leachate down to one part compost liquid to 4 to 10 parts water. When ready, the spray should look like iced tea. Be sure to strain the solids out with old pantyhose, cheesecloth, or floating row cover material. Full strength tea makes an excellent fire ant mound drench when mixed with 2 oz molasses and 2 oz orange oil per gallon. Add vinegar, molasses, and seaweed to make Garrett Juice.

DEALING WITH PESTS

Here are some things you can do to naturally control insects in your garden:

1. Interplant repellent crops and flowers. Certain plants produce strong odors or cause abnormal insect development. Planting repellent vegetation close to vulnerable plants is believed to offer protection. Examples of repellent plants include marigolds, onions, garlic, and hot peppers.
2. Provide food, water, and shelter for birds. Birds can help keep your insect population in check.
3. Use beneficial insects to counterbalance insect pests. Lady bugs, lacewings, trichogramma wasps, and praying mantis can all be effective.
4. Try using some of the organic sprays now available.

CONTROLLING DISEASES

For black spot, brown patch, powdery mildew, and other fungal problems, spray Garrett Juice plus garlic and/or neem. Baking soda or potassium bicarbonate can also be added for more serious problems. Treat soil with horticultural cornmeal at 20 or so lbs/ 1,000 sq ft.

Typically, organic gardens have few disease problems. The best method of control is prevention through soil improvement, avoidance of high-nitrogen fertilizers, and proper watering.

GARLIC-PEPPER TEA INSECT REPELLENT

Fill a blender with water and liquefy 2 bulbs of garlic and 2 cayenne or habanero peppers. Strain off the solids. Pour the garlic-pepper juice into a 1 gallon container. Fill the remaining volume with water to make one gallon of concentrate. Shake well before using; add 1/4 cup of the concentrate to each gallon of water in a sprayer.

To make garlic tea, simply omit the pepper and add another bulb of garlic. For extra potency, add 1 tablespoon of seaweed and molasses to each gallon. Always use plastic containers with loose fitting lids for storage.

GARRETT JUICE (foliar spray and soil drench)

Mix the following per gallon of water: 1 cup of compost tea or liquid humate, 1 oz liquid seaweed, 1 oz blackstrap molasses, and 1 oz apple cider vinegar. To make a mild insect control product, add 1 oz of citrus oil per gallon of spray. To make the fire ant killer, add 2 oz of citrus oil per gallon. When spraying the foliage of plants, don't use over 2 oz of citrus oil per gallon of spray. This mixture also works as a soil detox product.

DIRT DOCTOR'S POTTING SOIL

Mix 8 parts compost, 4 parts peat moss or cow peat, 4 parts lava sand, 2 parts decomposed granite sand, 2 parts cedar flakes, 1 part zeolite, 1 part horticultural cornmeal, 1 part dry molasses, and 1 part Texas Greensand.