



Vegetable, Flower, and Herb Gardening

We actively grow a vegetable garden here at the Natural Gardener 365 days a year. What started as a heavy clay soil in 1993 has been turned into a deep, rich “chocolate cake” texture that supports an abundance of produce year-round. Many visitors ask us how we sustain such a beautiful garden. The key to successful gardening starts with the health of the soil.

Following are the methods and materials that we use in our vegetable garden, along with alternatives. There are many different ways to be successful at organic gardening. Try various routes and find the ones that work for you. These recommendations can also be applied to growing annual and perennial flower gardens, as well as herb gardens. However, herbs and native perennials prefer less fertilizer. Experiment and enjoy!

I. Initial Soil Preparation

Ideally, a vegetable, flower, or herb bed should consist of amended soil *at least* 8 inches deep – the deeper the better. Only dig in the soil when it is slightly moist. Working the soil when it is too wet or dry can ruin the soil texture for years. The guideline is to only work the soil when it has a moisture level like that of a wrung-out sponge. How you prepare your area depends on what kind of soil you have.

A. *Deep, Blackland Prairie soil, “Builder’s Clay”, or any soil deeper than 5-6”* – If you have soil, add compost to amend it. If you live toward the east side of Austin, your native soil is likely a rich, deep, black clay. A hefty amount of good quality compost should be worked into this soil prior to planting vegetables, annual flowers, or herbs. Up to 60% compost may be needed to begin. For example, add six inches of compost and mix into the top six inches of soil to get 50% compost. For *native* perennial flower beds, less compost is needed – 25 – 40% is preferred, depending on the plant.

B. *Thin, Edwards Plateau Soil* – If you live toward the west side of Austin, you probably have a very thin layer of native soil on top of solid limestone or caliche. A raised bed is needed for vegetable, flower, and herb gardens. Make the sides out of cedar or other untreated lumber, cinder blocks, rock, or other non-toxic materials. You can add compost to whatever amount of native soil you have, as described above. Then, add a quality prepared soil to create a bed with a total depth of *at least* 8 inches. Slightly mix in the new garden soil to the native soil below to make the bed more homogenous.

II. Secondary Soil Preparation

Now that the soil has the right proportion of organic matter and the proper depth, it is time to add more nutrients. Even if you use our high quality compost and/or soil, *vegetables and annual bedding flowers need additional organic fertilizer*. There are many good options in organic fertilizer; a soil test will provide the most accurate guideline for choosing. Mix a dry organic fertilizer into the top 4” of the soil before planting veggies and annuals. Look for the proper ratio of nitrogen, phosphorus, and potassium to get plants off to a good start. Cottonseed Meal and coffee grounds *slightly* acidifies our alkaline soil. (*Changing* the pH of our alkaline soil is futile, says Texas A&M). If you’re planting fruit-bearing vegetables such as tomatoes, and your soil test does not indicate an excess of phosphorus, and an organic source of phosphorous.

At the same time, mix in a quality mineral supplement. This adds much-needed trace minerals. Another great step in improving the soil before or after planting is to drench the soil with a soil activator. To maintain soil health, apply once each season. As an added insurance against common soil diseases, especially tomatoes, and for improved root development in any plant, work in some of the *streptomyces* amendments.

III. Planting Time!

Now for the fun part – it’s planting time! Plant the tallest vegetables on the north side of the bed and the shortest on the south side. Also, consult our information sheet on companion planting to find out which plant friends prefer to be planted together.

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III. Planting Time! (continued)

Try planting by the moon, too! Plant vegetables that produce aboveground (e.g. tomatoes, broccoli) when the moon is waxing, and vegetables that produce belowground (carrots, potatoes) when the moon is waning. In addition, plan ahead for crop rotation. Crop rotation means that, for example, members of the tomato family should not be planted in the same area for two years. This helps to prevent the buildup of diseases and pests that are common to a particular vegetable family. Therefore, it is best to plant all members of the same family in a block together, and plant them in a different location for the next two years. Here is a list of common vegetable plant families:

Beet Family	Crucifer Family		Cucurbit Family	Tomato Family
Beet	Broccoli	Collards	Cucumber	Eggplant
Lamb's Quarters	Brussels Sprouts	Kale	Melons	Pepper
Spinach	Cabbage	Kohlrabi	Pumpkin	Potato
Swiss Chard	Cauliflower	Radish	Squash	Tomato
		Turnip		

When planting seed, it's a good idea to spread a thin layer of worm castings on top of the soil before planting. Seeds must be kept moist until they sprout. If the newly emerged seed dries out for one minute, it could die. Water lightly but frequently – multiple times each day in warm weather.

All vegetable, flower, and herb transplants, except for tomatoes, should be planted with their rootball level with the garden soil. Tomato transplants can be planted deeply – the stem may be buried in the soil and will produce more roots. Firm the soil gently around each planting, and water in immediately. The finishing touch: add two or three inches of mulch. Mulch holds in moisture, keeps out weeds, moderates soil temperature, keeps soil softer, keeps plants clean, and can help prevent some diseases. We use **Pine Straw Mulch**. It is easy to move around when changing the vegetable garden with each season; it decomposes into a rich, slightly acidic soil amendment; and it looks nice. Always remember to rake back the mulch before planting anything or amending the soil; *do not mix mulch into the soil*.

Finally, after the initial watering, you can follow up with a solution of fish emulsion. Fish emulsion is a mild fertilizer and a wonderful starter tonic for seeds and transplants, as well as a regular boost to the growing garden.

Voila! Now you have a wonderful new veggie, flower, or herb garden!

IV. Maintenance

Every four to six weeks during the growing season, fertilize vegetables again using an organic dry fertilizer. If a soil test indicates a need for phosphorus, or if you're growing summer veggies such as tomatoes, add an organic fertilizer higher in phosphorus. In addition, it is a good practice to foliar feed veggies and flowers with seaweed or fish emulsion, early morning or late evening. Regular foliar feeding can help prevent diseases and pests, and stimulate flowering and fruit set. Spray two to four times a month for best results. It is also helpful to drench the soil with these products while you're at it. Ellen Zimmerman, of EZ Herbs, recommends foliar feeding herbs once a month with seaweed, and simply applying compost twice a year as their only maintenance. The same holds true for native perennials. For additional nutrition, apply organic dry fertilizer in spring and fall.

When a garden bed is not in use, mulch or plant a cover crop. In the cool season, plant Hairy Vetch, Clovers, Austrian Winter Peas, or Rye grass. In the warm season, plant Buckwheat or Southern Peas. At least two weeks before you're ready to plant a garden, or before the cover crop flowers, dig it into the soil and allow it to decompose. Do not let Rye grass grow taller than 1 foot before digging in, or it will be too tough to till.

When it is time to begin a new season of veggie gardening or annual flowers in your prepared beds, mix in more compost and fertilizer again. Please ask us if you have any questions. **Enjoy your garden!**