



Raised Bed and Square-Foot Gardening For the Whole Family

By Nancy Furth, February 2008

For those of you who have had thoughts about starting a vegetable garden, and/or wish you could share this activity with your young children, ***this is not the time to be idle!*** I always feel sorry when customers come in and want to start vegetable gardens in May and I have to tell them they've pretty much missed the boat. Take the first steps ***now*** and plan your spring garden.

Successful gardeners in these parts know the advantages of Raised Bed Gardening. They are:

1. Vegetable yields are increased because the depth of the topsoil is increased.
2. Raised gardens filled with a good soil or soil mix drain faster and warm up earlier in the spring.
3. Water usually soaks in rather than running off.
4. Soil compaction is eliminated or reduced.
5. Weeds, soil insects and soil-borne diseases are more easily controlled since recommended treatments are more effective in raised gardens.

Your first step should be to have your soil tested. The only way to know what your soil is or isn't lacking is to have it tested. Texas AgriLife Extension Service (the new name for Texas Cooperative Extension) offers soil testing. Contact the Collin County Extension Office at: (972) 548-4232 for information, or get it on-line at: <http://soiltesting.tamu.edu/>

Step 2: Way before you do any manual labor or tilling, make an *educated site selection*. Locate the garden near a good and accessible water supply, and one that you can conveniently get to on a daily basis. Choose the sunniest spot you can find. Most vegetables like 6-8 hours of full sun every day. Plan to build the beds away from the canopies of trees and neighboring structures on well-drained land. If you have less than perfect light conditions, research what vegetables do well with less light.

Step 3. Review all those wonderful seed catalogs and the Texas Gardening Guide listed under resources at the end of this article, and jot down what vegetables you would like to grow, being realistic as to what your family will eat.

Remember these tips when selecting crops:

- More compact varieties increase harvest;
- Sprawling plants need lots of space and should be trained to grow up;
- Very tall plants such a corn should be grown on North side;
- Pole beans can be intercropped with faster, shorter growing plants such as lettuce and radishes

Step 4: Next, decide on the size of your garden. Be realistic and base the size on the time you have and the actual amount of produce you need for your family. Four-foot wide beds are ideal because the contents of the beds will be within reach and you won't be stepping into them causing soil compaction. The length of the bed is up to you, but one or two 8-ft. beds will get you off to a good start. Remember, because of easy access, plants do not have to be in rows. This is called the intensive method of gardening.

Step 5: Make rough drawings (always suggested), placing the length of the beds in a north-south position which will allow the sun to travel across the beds east to west. Plan to grow vertical crops on the northern end of these beds so they do not overshadow shorter plants. Remember to make aisles or space between beds big enough for tilling and maintenance equipment.

Step 6: Choose an edging material. All raised vegetable gardens need to be edged in some fashion. The edging keeps the soil from eroding and permits the addition of soil amendments. While holding in the additional soil and soil amendments, the edging also keeps grasses and weeds from encroaching. You have several choices, such as wood, concrete pavers, cement blocks, etc.

Want to take less time, less work, and still make vegetable gardening a positive, rewarding activity for both you and your children? Try Square-Foot Gardening! This concept, originated by Mel Bartholomew who has written several books on the subject, is a wonderful method of gardening for beginning vegetable gardeners, adults and children alike. Beds are made 4-ft. x 4-ft. (16 sq. ft.), but for children, many families and schools use 3x3 beds—an easier reach for little arms. One bed per person easily supplies vegetables and salads for all. The must to having success with Square Foot Gardening is the permanent use of grids. (See illustration.) The grid lies on top of the bed and divides the garden into equal one-foot squares where individual crops can be planted. Because these squares are easily accessible and never walked on, there is no wasted space. For instance, one square-foot section (nine sections per one 3-ft.x3-ft. bed) can hold sixteen radish plants or four lettuce plants, or one tomato or pepper plant. The website for Square Foot Gardening and information about the book is at: <http://www.squarefootgardening.com/>

Another easy way to edge raised beds and make them somewhat portable is to use cinder blocks. They make excellent gardens for children and are used for many school as well as home gardens. The holes in the cinder blocks can become extra little containers that the children can plant with small vegetables such as radishes, carrots and lettuce. The book entitled **Cinder Block Gardens (Paperback)**, by **Lynn A. Gillespie** has all the information you need to grow vegetables in this type of garden.

General Construction Tips:

- Use stakes with string lines and string levels to mark off the sides of the straight beds. Remove any woody plants with loppers, hand saws or chainsaws, then dig out the roots.
- Apply a systemic, post-emergent herbicide to kill turf when the turf is actively growing. Give the herbicide adequate time to do its job. Always read label directions. During the dormant season (October to April most years), sod must be removed by digging or by the use of a sod cutter.
- Or, kill vegetation without herbicide by covering the bed area with clear plastic (anchor edges with rocks or soil) for 1 to 2 months.

Step 7: Till, cultivate or double dig the soil. Once your plans are made and you are ready to dig, wait until your soil is ready. Till only when the soil is slightly dry and friable. Mud clumps clinging to tiller blades upset its balance, causing undue wear on you and the tiller. The soil should crumble readily after being compressed together in your hand.

Step 8: The ideal soil for plant growth consists of 50 percent solid material and 50 percent open space (25% air, 25% water). One third of the final soil mix should be some type of organic material. Always apply enough to physically change the soil structure.

Recipe for A RAISED BED:

Work three inches of expanded shale into the top six-eight inches of soil.

Add six inches of finished plant-based compost. Cultivate again.

Crown the bed (make flat-topped mounds) for optimum drainage.

Vegetable beds should be 12 to 15 inches deep.

The key to any healthy, productive garden is well-prepared soil. Not only will the planting beds be more attractive, the plants will be more disease and insect resistant. Whether purchased materials such as compost, peat, shredded pine bark, or your own finished compost, the expended effort and expense will reap big dividends throughout the growing season.

Remember that compost and other organic materials break down fairly quickly and must be replenished regularly.

Irrigation Tips:

- Drip irrigation places the water at the root system, which allows for less evaporation and prevents water from moving to non-target areas such as the paths.
- Soaker Hose Hookup: Maximum effective length is 100 ft.; Use a Garden hose to connect; Make sure the ground is level; Lay lines 12-18" apart in well-drained soil.
- Overhead or Sprinkler Irrigation: May be the most convenient for the gardener but not necessarily best for the plants; Decide on number of pop-up or riser heads needed; Consider spray overlap, angle and height of sprinkler heads; Beds should be divided into watering zones.

That covers the basics of building raised beds. Next month my 'Not for Kids Only' article will include more about plant selection and gardening activities that can be twice as much fun if shared by both children and adults. Learning to garden through the eyes of a child can be a wonderful experience!

I hope this will be the year you break ground and experience the benefits of growing your own vegetables in Texas! Please feel free to stop by the nursery any time if you have gardening questions or need help with plant, seed or amendment selections and purchases. The resources below, especially the Texas Home Gardening Guide, might also be helpful:

Texas Home Gardening Guide: <http://aggie-horticulture.tamu.edu/greenhouse/hortgardens/conservation/homegardeningguide.pdf>

Constructing a Raised Bed Garden: <http://aggie-horticulture.tamu.edu/extension/raisedbed/constructing.html>

Kids Gardening Resources: <http://aggie-horticulture.tamu.edu/county/smith/kids.html>

Children in the Garden: <http://www.coopext.colostate.edu/4DMG/Children/ingarden.htm>