Vegetable Garden Series, Part 2: Building Your Vegetable Garden

Welcome to the second installment of our four-part vegetable gardening series. If you're just now joining us, the first article can be found here on the Tulsa Master Gardeners website.

Last month we covered the planning phase of a new vegetable garden, including site selection, garden sizing, sketching a garden plan, and learning about plant dates based on maturity and frost classification.

To recap, the following homework tasks were assigned (did you do them all?):

- ✓ Acquire a journal - a quad (grid) ruled spiral notebook, and make some preliminary sketches of your garden
- ✓ Select your site - do you have what plants need (light, water, nutrition)?
- ✓ Get a soil test
- ✓ Right-size your garden (be honest with yourself)
- ✓ Select the best value...grow what you enjoy eating!

We'll assume decisions have been made about where and what size your garden will be, whether your soil will sustain growth (or if it will require amendment), and what you may enjoy growing (and eating!). Often the challenges for basic needs - light, water and nutrition (soil) - will dictate what garden ***format*** to employ.

Garden Formats

Not every garden is a picture-perfect traditional tilled quarter acre of parallel rows. To the contrary, the best yielding gardens are often raised bed gardens. Container gardens offer the greatest flexibility. They can range in size, can be moved almost anywhere to sun and water.

Whatever your preference, the most popular formats are described below. Click the links in the descriptions, or consult the Resources section at the end of this article for further techniques on designing and building your favorite.

Popular Garden Formats

- **Containers:** Pots are not just for flowers! Scaled to size and/or specific plantings, container gardens may be placed or moved to optimize sun exposure. Determinate or dwarf fruit bearing vegetables, leafy greens and herbs can all do well in containers. Just about any vessel can serve as a container, even straw bales!

- **In-Ground:** Soil and bed preparation is key for in-ground gardens. Structure raised rows 36" apart to accommodate tilling equipment, and furrows between to allow for drainage. This article from Texas A&M Agrilife Extension provides more information.
- **Raised Bed:** The benefits of raised beds are many. Accessibility, water and soil retention, greater yields due to more planted area, better soil (no walkway compaction, more efficient use of amendments and fertilization). Variable in height and length to the needs of the gardener, raised beds often are a maximum of four feet wide (two-foot adult reach from either side). Raised bed soil is prepared just as an in-ground bed, with additional compost or amendments to fill. It may or may not have a frame. A Keyhole Garden is an example of a framed, self-composting raised bed. Read more about keyhole gardening here.
- **Other Types:** Hydroponic and aquaponic systems are two commercialized systems using liquid solutions/soilless media (hydroponic) and aquaculture (fish raising) plus hydroponics (aquaponic). Both require higher setup costs and skill to maintain.

One factor is common, regardless of your choice: the growing media must fit the nutritional needs of whatever you decide to plant.

Soil - The "Happy Medium"

Nurturing healthy soil is the most fundamental step to vegetable gardening success. Soil should provide everything (but the sun!) your vegetables require - water, air, nutrients - and a place to form stable roots. Vegetables grow best in deep, well-drained soil mixed with plenty of organic matter, like compost, composted manure, and green plant material (grass clippings, cover crops). Soil pH (the measurement of soil acidity/alkalinity), will generally determine the availability of nutrients to be taken up by the plants. Most vegetables will thrive in a pH level of 6.0 to 7.0 (slightly acidic to neutral). Consult this OSU fact sheet for required pH levels of popular vegetables.

Take a handful of your soil and squeeze it in your hand. Sandy soils will not hold together and will not hold water, clay will form a hard ball, holding too much water and not enough air. A happy medium will be a loamy, crumbly mix that is well drained, yet holds some moisture and allows air to circulate down to the roots.

For in-ground and raised beds, your soil test will advise if amendments are necessary, and how to fertilize. Do not work soil when wet, as that compromises the soil structure. Work in organic matter when tilling or turning soil over at least 8-12 inches in depth. Remove all weeds, rocks and sticks. For more information about tilling rows and preparing your in-ground bed, click here.

Container gardens do best with a light, well-drained, artificial “soilless” media designed to resist compaction and retain moisture. To optimize nutritional value and curb disease, media should be changed every year and the containers sanitized with a 10% bleach solution. For more ideas on vegetable gardening in containers, view this video from Oklahoma Gardening.

Until Next Time...

Until next month’s installment, there is much to do, so start with these:

- ✓ Read about and decide on your garden format
- ✓ Sketch the final draft of your garden plan
- ✓ List and obtain your materials (media, building materials, etc.)

And for whichever garden format you choose:

- ✓ Break ground and prepare the soil for your in-ground garden
- ✓ Build the raised bed(s) and fill with soil
- ✓ Assemble containers and fill with media

Do your homework...and come back for **Part 3: Planting Your Vegetable Garden**!

Resources

Fact Sheets and Resources for Part 2: Building Your Vegetable Garden

Tulsa Master Gardeners: Types of Gardens
HLA-6033: Raised Bed Gardening
HLA-6458: Container Gardening
PSS-2264: Straw Bale Bed: A Way to Garden While Building Soil
HLA-6436: Healthy Garden Soils
Texas A&M: Soil Preparation
Oklahoma Gardening: Container Gardening With Vegetables
University of Illinois Extension: Successful Container Gardens
HLA-6036: Soil Test Interpretations for Vegetable Crops

Fact Sheets and Resources for Part 1: Planning Your Vegetable Garden

HLA-6440:Homeowner Garden Design Series - Planning the Landscape
HLA-6004: Oklahoma Garden Planning Guide
Texas A&M: Planning a Garden
Vegetable Varieties for the Home Garden in Oklahoma