

Starting Your Vegetable Garden

What to Grow

Begin with what you like to eat, high-cost crops (herbs, for example) and short-season crops. If you eat salads, try sowing some lettuce that matures in 40-50 days for early success. Expand your palette over time.

Space & Location

Start small. A 2-foot diameter by 18-inch deep container can work for leafy greens. Beginners may try a 10-foot by 10-foot plot. A well-tended garden produces many times more than a neglected one. A 30-foot by 30-foot garden will yield enough fresh produce for a family of 4.

Find a sunny location. 8 hours of sun is crucial to plants that bear fruit (tomato, cucumber, squash, eggplant, peppers, and melon); leafy vegetables (lettuce and spinach) tolerate partial shade.

Choose or make a high spot. Low areas tend to have drainage problems. Cold air settles in low spots and shortens the growing season. To remedy, consider making raised beds; it improves drainage and warms the soil.

Time Requirement

Start small so that you can devote enough time to care for your crops. For a 10-foot by 10-foot garden, OSU researchers estimate that planting and cultivation takes 40 minutes per week. Allow 30 minutes for each watering session. Most vegetables are annual crops and demand on-going attention throughout the growing season.

When Do I Begin?

Ideally, you begin in the fall with a soil test to determine nutrient level and pH. If needed, add amendments to adjust pH. Over winter, plan your garden on paper. Decide what you want to grow, allocate space to each crop, and determine whether you will sow seeds directly in the ground or buy transplants. Many seed catalogs offer a planting calendar.

A soil thermometer is a valuable tool in determining when to sow. Remember that seeds germinate after soil temperature reaches the minimum required. If you plant early crops such as peas, you may begin as early as February. Peas germinate in 35 degree soil, while basil seeds do so at 60 degrees or higher.

If you want to keep your garden growing during the fall and winter, try some cold-season crops such as broccoli, cauliflower, and beets. They are planted in mid- to late-summer for harvest the next spring.

Soil Preparation

A soil test gives nutrient levels in your soil and what kinds of amendments are needed. Professional labs conduct full soil tests, and Clackamas County Master Gardeners do free pH tests. For the pH test schedule, check www.cmastergardeners.org. Add lime to balance acidic soil, if needed. Do so in the fall to give it time to work. Before digging, check if soil is workable. If you can squeeze water out of a handful of soil, wait. To improve soil structure, mix in 2-4 inches of compost. You may do this in the fall up to just before planting. If you are gardening in soil not previously cultivated, break up the clods with a broad fork, spading fork, cultivator, or rototiller. This is crucial to establish the delicate roots of seedlings. If you use a rototiller, stop when soil still has particles of different sizes; take care not to pulverize the soil. If you grow vegetables in a container, use potting mix, not garden soil.

Planting

Soil and air temperatures determine when we plant. Soil temperature is crucial to seed germination. The minimum soil temperature (°F) required for some favorite crops are: peas (35); onions(35); carrots (40); beans (50); eggplant/peppers/tomatoes (55); and basil (60). Air temperature is crucial to good plant growth; optimum air temperature (°F) for some favorites are: peas (50-60); tomatoes (60-80 during the day, 59-68 at night); peppers (70-80); and cucumbers (75-80). If you sow peas in late winter, they may germinate, but they won't grow well until the air temperature warms up.

Short-season crops mature in 50 days or less. You can sow seeds directly and still ensure a good harvest. Long-season crops such as tomatoes mature in 75-90 days. The gardener is usually in a race against time to harvest long-season crops before fall rains and cold nights arrive. Transplants, purchased from garden centers or started in your own greenhouse, give the gardener a head start. Select healthy plants firmly established but not yet showing encircling roots. Soak the root ball in water to rid air bubbles just before transplanting. Take care not to damage roots. Water thoroughly after planting.

Fertilizing

Nearly all vegetables are annual crops and need sufficient nutrients to produce well. In general, leafy greens need more nitrogen (N), fruits and flowers need more phosphorus (P), and roots need more potassium (K). Fertilize according to the needs of the plant and fertility of your soil. Heavy feeders such as beet, collard, kale, lettuce, parsley, spinach, and tomato may need more fertilizer. Light feeders such as carrot, garlic, onion, chard, mustard, and pepper may need a moderate amount. Bean, pea, soybean, and clover fix nitrogen from the air and often do well with no fertilizer.

Plants use only the nutrients that are dissolved in soil water, but most nutrients in soil are not in a soluble form. Water-soluble forms of fertilizer are immediately available for plant use. There are many organic and synthetic fertilizers. In general, synthetic fertilizers become usable to plants faster than organic forms. If you use organic fertilizers that are not in liquid form, then apply a couple of months before planting. Examples of organic fertilizers are fish emulsion (3-5% N); composted chicken manure (3% N); blood meal (12-15% N); bone meal (12-24% P); and kelp meal (2-5% K).

Watering

Water so that the root zone is evenly moist. Dig down 6 to 8 inches after watering to check soil moisture. A drip system delivers water to the roots and is preferable to watering overhead which dampens leaves and can foster disease. If you water overhead, minimize splash and refrain from watering late in the day. Watering early in the day minimizes evaporation.

Be vigilant to water during the most critical stage of your crop. Here are some examples: beans/peas—during flowering and pod development; broccoli/cabbage—during head formation and enlargement; onion—during bulb formation; eggplant/peppers/tomatoes—from blossom set to fruit enlargement; lettuce and other leafy vegetables—from germination to harvest.

OSU Extension Service Resources

Visit your OSU Extension Service office at 200 Warner-Milne Road, Oregon City, for these publications, or get them online at <http://extension.oregonstate.edu/catalog>

Sustainable Gardening Handbook EM 8742

Master Gardener™ Advice

- Call the Home Horticulture Helpline: 503-655-8631 (Clackamas County); 503-821-1150 (Washington County); or 503-445-4608 (Multnomah County).
- For more 10-Minute University™ handouts and class schedule, visit www.cmastergardeners.org or www.metromastergardeners.org.
- Look for Master Gardeners at area Farmers' Markets.