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People+Plants is a multimedia series on how to build, maintain, and make the most of community gardens. For more titles and topics in the series, visit learningstore.uwex.edu.



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Common Crops for Community Gardens

Community gardens offer a great opportunity to grow plants in the company of others. In addition to making friends and building relationships, most gardeners grow produce. To help you maximize your garden's productivity and minimize potential crop problems, this guide will walk you through the basics of the most common crops grown in community gardens.

Choosing types and cultivars

Type, sometimes called "kind," refers to broad groups of plants—for example carrots, beans, or tomatoes. Cultivars simply refer to the cultivated variety of a type of plant. The cultivar name helps you to know if you have a 'Big Boy' or a 'Yellow Pear' tomato. Cultivars help you know how big the plant will grow, its expected yield, and how the crop will look and taste. Community gardeners

should look for cultivars that will fit in their limited area and have good disease resistance. Also look for types and cultivars that can grow to maturity and be harvested within your local growing season.

Intensive gardening

Don't let the name scare you. Intensive gardening is simply squeezing more delicious produce into your limited garden space by planting crops in the space between rows, using raised beds with compost-enriched soil, reducing the spacing between plants, and trellising vining crops.

It can also mean succession planting, a descriptive term for a variety of planting techniques that maximize your space and increase your harvest. One method is to plant again as soon as you harvest your first vegetable crop to lengthen the growing season, which allows the same area to do double duty.

A second method is to sequentially plant a crop so you can harvest for a longer time. For example, plant bush beans at two-week intervals throughout the season so you can harvest beans all the way to the first frost.

The spacing information in this guide is the traditional recommended spacing for the crops listed. You can experiment with plant spacing that works for you, but be careful not to overdo it. Tight plant spacing can lead to disease, insect, and other problems.



The growing season

Choose plants wisely to suit your climate, especially if a late winter means you lose a few weeks of the spring growing season. Choosing types and cultivars with fewer days to harvest and using transplants are good ways to grow in a short growing season. The “days to harvest” are the number of days it takes for the first harvestable produce to be ready; if you want a long-yielding plant, choose crops that mature in 90 days or less. For example, a given tomato cultivar may say 75 days to harvest, meaning 75 days from the time of planting the transplant to the first ripe tomato. It would be good to have ripe tomatoes for many weeks following! Be sure to harden off your transplants by cutting back on watering and fertilization and acclimating them to outdoor conditions before planting. Summer temperatures will also affect how quickly your crops mature.



Plant health

We all have visions of lush healthy plants as we’re sowing seed, but a little effort is needed to make that dream a reality. Consider the quality and fertility of your soil and look for disease-resistant cultivars to minimize potential plant problems. Always water at the base of the plants to avoid getting the leaves wet and potentially causing plant diseases. Fertilize according to the plant’s needs. Check your plants for

anything out of the ordinary each time you visit the garden. Catching problems early—and correctly identifying the insect, disease, or other growing challenge—is important to successfully managing them. Take photos and consult with your local Extension office (see Resources) if you have questions about plant health.

Cool-season crops

Cool-season vegetables are those that grow best in cool temperatures. The plants are usually grown for their roots or leaves. Because these crops thrive between 60 and 70° F, it is best to plant them in the spring or late summer. Cool-season vegetables, depending upon the crop, can tolerate light to heavy frost. These crops tend to be shallow-rooted, which makes them more susceptible to drought stress.

Beets

Beets are grown both for the greens—or top growth—and the beet, or root, of the plant. Beets come in several shapes and colors, including dark red, purple, orange, white, and striped. Beets are fairly frost-hardy and can be planted from late April through mid-July. For sequential plantings, sow seeds every three weeks.

Planting: Sow seeds ½ inch deep and, once seeds germinate, thin to 2–3 inches apart within the row. Space rows 12–18 inches apart. If you are only growing beets for their greens, sow seeds closer together.

Harvesting: Harvest greens once the tops are 3 inches high if you are only growing beets for the greens. Otherwise, harvest the beets and greens together 45–60 days after planting, when beets are between 1½ and 3 inches in diameter. Avoid allowing beets to grow larger than 3 inches in diameter since they tend to become tough and fibrous. Cut the greens off 1 inch above the beet.

Common problems: Aphids, cutworms, leaf miners, rodents, and cercospora blight.

Tips: Shallow cultivation around beet plants will manage weeds and prevent damage to the roots. Keep beets uniformly moist and avoid soil crusting for good seedling emergence. Beets sown too close together will not yield harvestable roots, only greens.



Broccoli

There are two main types of broccoli: heading and sprouting. Heading broccoli produces one or two large heads and sprouting broccoli produces many small sprouts or florets that can be harvested continuously.

Planting: Directly sow seeds three weeks before the last frost or 10–12 weeks before the first killing frost at ¼ inch deep and 3–4 inches apart. Prevent crusting of the soil to promote seedling emergence. Space plants 18–24 inches apart within the row and space rows 24–30 inches apart.

Harvesting: Harvest sprouts or heads when flowers are still tight and before the flowers turn yellow or open. Cut heading broccoli within 5–6 inches of the main stem. Cut sprouting broccoli just below the floret to stimulate new growth.

Common problems: Loopers, cabbage maggot, and bacterial soft rot.

Tips: Transplants should be used for spring plantings. Harden plants off before planting. Supply even moisture for good transplant establishment. Temperatures below 40° F will cause chilling injury.



Carrots

Carrots can be grown for fresh eating or for storage. Well-tilled, loose soil is the key to a nicely shaped carrot. Tilling the soil and removing soil clods, rocks, and sticks 6–8 inches deep will allow carrots to grow unobstructed. Carrots will grow in a variety of soils but well-drained areas reduce the risk of disease.

Planting: Directly sow carrot seeds 4–6 weeks before the last frost in your area ¼ inch deep. Sow about four seeds per inch. Mix the seeds with sand to help with spacing. Thin the plants to 1–3 inches apart when they are 1–2 inches tall. Space rows 12–15 inches apart. Avoid soil crusting to allow seedlings to emerge. Sow seeds every three weeks from April to mid-July to extend your harvest.

Harvesting: Fresh eating carrots are ready to harvest 60–70 days after planting. Harvest by undercutting the roots and pulling the carrots from the ground. Harvesting carrots late can cause them to become woody. Storage carrots should be harvested at around 100 days and their tops removed to prolong storage quality.

Common problems: Aster leafhopper, aster yellows, alternaria leaf blight, cercospora leaf blight, and black rot.

Tips: If carrot seedlings are not thinned to the correct spacing, the roots will not develop properly. Hoe or cultivate soil up over the tops of carrots where they emerge from the soil to prevent them from turning green. Avoid planting too early because carrots are affected by frost. Fall-harvested carrots will be sweeter than those harvested in the heat of summer.



Greens

(mustard, collard, turnip)

Many plant leaves can be cooked or eaten fresh from the garden. Among these are the leaves—or greens—from mustard, collard, and turnip plants. All of these members of the cabbage family can withstand frost and grow best under cool spring and fall weather conditions. Greens require full sun and prefer well-drained soils.

Planting: Sow seeds in the spring as soon as the soil can be worked. Form a furrow ½ inch deep in the soil and space seeds 3 inches apart within the row. Cover seeds with loose soil. Thin plants 12–18 inches apart. Smaller varieties of mustard greens should be thinned to 6 inches apart. Plant transplants 12–18 inches apart in the row. Refer to the seed packet for between-row spacing.

Harvesting: Leaves can be harvested once collards are 10–12 inches tall and mustard and turnip greens are 4–6 inches tall. Harvest the larger outer leaves regularly before they become tough and woody. Harvest all greens immediately if the plant initiates a flower stalk or if hot weather is expected, because heat makes the greens bitter.

Common problems: Aphids, cabbage loopers, cabbage worms, cutworm, and flea beetles.

Tips: Greens can be spaced more closely together to increase yield in small spaces. More intensive spacing will require more attention to soil fertility and more frequent harvesting.



Lettuce

Lettuce is one of the easiest, fastest, and earliest crops to grow. Leaf lettuce and butterhead (bibb or Boston) type lettuce are most commonly grown in northern gardens. Lettuce doesn't require a lot of space and does well in both spring and fall.

Planting: Plant seeds in the garden as early as 4–6 weeks before the average last frost in well-worked soil with good drainage and moisture retention. For a fall crop, plant seeds in late August and September. Sow seeds ¼ inch deep. Space head lettuce seeds 8 inches apart in the row and 12 inches between rows. Plant leaf lettuce seeds close together in 2- to 4-inch wide rows and thin plants to 1–2 inches apart. Plant butterhead seeds every 2 weeks for a continuous harvest. Prevent crusting of the soil to promote seedling emergence.

Harvesting: As leaf lettuce grows, selectively harvest outer leaves, leaving the inner leaves to develop. Harvest head lettuce at maturity by cutting the entire plant off at ground level.

Common problems: Aphids

Tips: Lettuce requires frequent watering for good yields. Lettuce can be planted between other crops, such as tomatoes or beans, which will provide shade and extend the lettuce season.



Warm-season crops

Warm-season vegetables have a long growing season and include plants that require warm soil and air temperatures for normal growth. These plants are very frost-sensitive and should be planted after the last frost date for your area. Warm-season crops have deep roots and good drought tolerance.

Cucumbers

Cucumbers are a sprawling plant that can be grown either on the ground or on a strong trellis to save space. This crop likes loose organic soil and grows best between 65 and 70°F. Cucumbers are shallow-rooted plants and require frequent watering.

Planting: Direct seed or plant transplants after the last frost when soil temperatures have reached at least 60°F. Sow seeds 1 inch deep and 8–12 inches apart within the row. Space rows 36 inches apart. Transplants should be hardened off before planting.

Harvesting: Pick cucumbers by hand when they are firm, green, and crisp. For slicing varieties, this is at about 6–8 inches long. Harvest three times a week to maintain plant productivity. Plants not picked regularly will stop producing cucumbers.

Common problems: Angular leaf spot, bacterial wilt, cucumber beetle, damping off, powdery mildew, and viruses.

Tips: Cucumbers naturally produce a chemical called cucurbitacin, which some people have difficulty digesting. “Burpless” varieties have less cucurbitacin and may be easier to digest.

Green beans (snap beans)

Green beans can either be bush type or pole beans. Bush beans grow upright without support and do better in cooler weather. Pole beans are better suited to hot summer temperatures and do best when trellised.

Planting: Plant beans after the last expected frost and when the soil temperature at 3 inches deep is at least 50°F. Directly sow seeds 1 inch deep. Space bush beans 2–3 inches apart in the row and space rows 18–24 inches apart. Pole beans are planted 4–6 inches apart in the row and rows should be 30–36 inches apart.

Harvesting: Pick beans when the pods are firm and crisp but before the beans have matured. Once the beans mature, the pod will become tough. Pick beans regularly to get the best quality, increase the yield, and extend the harvest.

Common problems: Corn earworm, bacterial brown spot, and sclerotinia white mold.

Tips: Control weeds with shallow cultivation during the first six weeks after planting. Plant bush bean seeds every 2–4 weeks through the summer for continuous harvest. Pole beans produce throughout the summer from the original planting.




Melons (watermelons & muskmelons)

Melons require a long growing season, warm soil, and plenty of space to grow. Although many melons can be grown in community gardens, seedless watermelons are not recommended. They require a seedless watermelon plant and a seeded watermelon pollinator to produce seedless fruit. These plants take up a large part of your garden and yield few watermelons.

Planting: Direct seed or plant transplants in early to mid-June when the chance of frost has past and the soil temperature 3 inches below the surface is 60°F. Sow seeds ½–1 inch deep with 12 inches between plants for muskmelon (sometimes called cantaloupe) and at least 36 inches for watermelons. Both muskmelon and watermelon rows should be at least 60 inches apart.

Harvesting: Muskmelons and watermelons can be harvested when the vine leading to the fruit starts to wither and the fruit separates easily from the vine. Do not allow the vines to dry out completely, or the fruit will be overripe when harvested. Chill melons after harvesting to maintain quality.

Common problems: Anthracnose, bacterial wilt, cucumber beetle, and powdery mildew.

Tips: Transplants work best to maximize yields. Check seeds for disease resistance. Smaller icebox-type seeded watermelons work well in community gardens and yield 7- to 10-pound fruit. 




Peppers

Peppers fall into two groups: bell or sweet peppers and hot peppers or chiles. Bell peppers tend to be blocky in shape and become sweet if allowed to ripen. Hot peppers are usually grown for their heat and become hotter as they ripen. All peppers require a warm, sunny location with fertile, well-drained soil.

Planting: Transplants are recommended for northern climates. Plant when the chance of frost has passed and the soil temperature is above 50°F at a 3-inch depth. Space pepper plants 18–24 inches apart in the row and space rows 30–36 inches apart.

Harvesting: Bell peppers can be picked unripe, as green peppers, or allowed to ripen for sweet peppers. Hot peppers will have the most heat if they are left on the plant to fully ripen. Harvest peppers regularly to maximize yields.

Common problems: Bacterial speck and spot, anthracnose, and viruses.

Tips: Grow peppers suited for the length of your growing season. Cool, wet summers may not have enough hot days for hot pepper plants to produce. 

Tomatoes


Tomatoes prefer a warm, sunny location with fertile, well-drained soil. Tomatoes are determinate (bush-type) tomatoes or indeterminate (vining-type). Both should be staked or supported to keep the leaves and fruit off the ground. Indeterminate tomatoes have greater yields and a longer harvest season, but require more space and care than determinate tomatoes.

Planting: Transplants are recommended for northern climates, because tomatoes require a long growing season, and transplants will lengthen the harvest period. Harden off plants before planting in the garden. Plant after the last frost and when the soil temperature at 3 inches deep is at least 50°F. Space transplants 18–36 inches apart in

the row, depending on the eventual size of the plant, and space rows 36 inches apart.

Harvesting: Pick tomatoes green or allow them to vine-ripen for the best flavor.

Common problems: Bacterial speck and spot, blossom end rot, caterpillars, early blight, late blight, septoria leaf spot, and viruses.

Tips: Hybrid tomato varieties have higher yields and are more disease-resistant. Expect lower yields from heirloom tomatoes, but their seeds can be saved and replanted. Never refrigerate tomatoes; they should always be stored above 55°F to maintain flavor. 

Challenges of community gardening

Growing food in a community setting can be a lot of fun, but everyone will face a challenge or two along the way—whether with a finicky crop or a finicky garden neighbor. Both crops and neighbors respond well to early intervention with an appropriate remedy. Seek out another gardener or community garden organizer for help with your neighbors. If it's a disease or insect pest that's bothering you, your local UW-Extension office can help (see Resources).



Crops for food pantries

If you are planning to grow produce and donate it to your local food pantry, start by asking them what fruits and vegetables their patrons prefer. Every community—and thus every pantry—is different. Here are some factors to consider:

- **How desirable is it?** Is it a popular crop, or is it so unfamiliar that food pantry visitors will pass it up?
- **How easy is it to grow?** Excessive tending, such as watering and pruning, may not be practical for a community garden. Varieties prone to insects and disease may require chemical management, which some community gardens may avoid or even not permit.
- **How easy is it to store and transport?** The distance from the garden to the food pantry may be long enough to bruise and damage delicate skins on some vegetables. Some food pantries are only open once or twice a week, so the produce will need to be stored until it can be distributed.

Crops you may want to think twice about

We aren't saying don't grow these, but you may find the following crops more trouble than they're worth in a community garden:

- Most cauliflower requires blanching, which adds a time-consuming step.
- Sweet corn needs to be grown in a big stand to ensure adequate pollination.
- Potatoes demand lots of labor for a relatively small amount of food.
- Asparagus and rhubarb are perennial crops, which stay in the ground year-round. Many community gardens discourage perennial crops for maintenance reasons.
- Pumpkins and Brussels sprouts are frequently pilfered from community gardens.
- Okra must be picked every day.

Resources

Your local Extension office
 To find your local Cooperative Extension office, visit www.csrees.usda.gov/Extension/.

UW-Extension publications
 The following publications are available on the Learning Store at learningstore.uwex.edu.

- The Growing Vegetables series:
- *Spring Vegetables* (A3900-01)
 - *Summer Vegetables (Part 1)* (A3900-02)
 - *Summer Vegetables (Part 2)* (A3900-03)
 - *Fall Vegetables* (A3900-04)

The People+Plants Community Garden series:

- *Community Gardens—Where people and plants come together* (A3905-01)
- *Starting a Community Garden—How to put your plot on the path to success* (A3905-02)
- *Soil Contaminants in Community Gardens* (A3905-03)
- *Raised Beds and Containers for Community Gardens* (A3905-04)
- *Youth Gardening* (A3905-06)

Trellising, Staking, and Caging (A3933-01)

Online resources
Organic Vegetable Gardening Techniques
 University of Missouri Extension
extension.missouri.edu/p/G6220



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