

Container Vegetable Gardening

If you have poor garden soil, limited space, not enough sun in the garden area, or impaired mobility, you may want to grow vegetables in containers. Containers allow you to have a movable garden with the opportunity for a limited vegetable supply, or a supplemental source of vegetables that are difficult to locate for purchase. Container gardening affords better pest management and a chance to have color in areas where you want it. Container vegetable gardening is also a great way to introduce children to gardening.

The downside of container gardening is that containers need frequent watering. Since the root system is restricted by the size of the container, some plants may produce smaller fruit, and some vegetables don't grow well in containers. Vegetables that grow well in containers are those with a confined habit of growth, such as salad greens, spinach, eggplant, Swiss chard, beets, radish, carrots, peppers, bush beans, determinate tomatoes, bush varieties of summer squash and cucumbers, green onions, and many herbs.

Types of Containers

Nonporous: Glazed pots, plastic, metal, and glass

Porous: Clay

Semi-porous: Wood (half barrels, whiskey barrels), and pressed fiber

Make sure the container has good drainage in the bottom, at least four holes are recommended. Tomatoes produce best in containers of at least 20" or 22" diameter, peppers grow best in 16" diameter pots, and vining crops require a 20" or larger container. Greens, such as lettuce and spinach, have shallow roots and thus do well in broader, flatter containers.

Potting Mixes

Use either a soilless mix or soil mix for your container.

- **Soilless mixes** are readily available and these mixes are made up of peat moss, vermiculite, and either coarse sand or wood products.
 - Vermiculite holds several times its weight in water and nutrients, and keeps container mixes moist.
 - The soilless mixes are lightweight and may be the best choice if the container is to be moved frequently.
- A **soil mix** is often made up of one-part sphagnum peat moss or compost, one-part pasteurized soil, one-part vermiculite or perlite, and some composted cow manure.
 - Soil mixes tend to hold water better than soilless mixes.

Vegetable	Pot Size
Peppers, chard, and dwarf tomatoes	Soil volume of 1-2 gallons per plant
Full-sized tomato plants and cucumbers	Soil volume of 4-5 gallons per plant
Lettuce, radish, onions, and beets	6"-10" diameter pots
Most herbs	4"-6" diameter pots

Estimating Soil Mix to Use

Pot Size	Soil Mix
4" pot	1 pint soil
6" pot	3 pints soil
8" pot	1 ½ gallons soil
10" pot	2 ½ gallons soil
12" pot	3 ½ gallons soil
14" pot	4 ½ gallons soil
16" pot	5 ½ gallons soil
20" pot	6 ½ gallons soil

Planting

Plant vegetable transplants or seeds as you would plant normally in a ground bed. Tomato plants can be placed deeper in the pot (⅓ to ½ deeper) and the stem covered with soil to stimulate root development along the stem.

Your container vegetables will likely need support. Tomato cages can be used for smaller tomato plants, peppers, and cucumbers. Cone or pyramid-shaped trellises usually work better than flat types. After planting, no more than 1" of mulch can be added to the soil surface to retain moisture and moderate high summer temperatures. If you plan to move large, heavy containers around, rolling platforms can be placed under them to aid in moving them.

Fertilizer

There are two types of fertilizers: timed-release and water soluble. Both are needed for container vegetable growing success. Slow or timed-release is added at planting time, and should be thoroughly incorporated into the soil mix. Look for a complete, balanced type such as a 10-10-10 formulation.

Water soluble fertilizers are added about mid-season when the plants begin to produce. This additional fertilizer is needed because most potting mixes don't retain nutrients very well. The plant's roots are restricted and thus somewhat stressed, and watering leaches nitrogen out of

the soil. These water soluble fertilizers should be mixed at a slightly weaker rate than the label recommends and added once every week or two.

Watering

Container plants are exposed to the extremes of weather more so than plants in ground beds. Wind and scorching sun will increase the need for watering. Water-holding gels (starch-based gels that retain water, called "hydrogels") can be incorporated but even with hydrogels or other organic amendments designed to hold water, containers may need daily watering on a very hot day, and some may need water twice a day.

Additional Maintenance

Check daily for insects, mites, and signs of disease, and implement integrated pest management practices if needed.

End of the Season Clean Up

At the end of the season, discard the entire contents of each pot; don't even add debris and potting mix to the compost pile. Do not reuse the mix the following season; you do not want to run the risk of spreading diseases that may be present in the mix or on the plant debris. Also, the potting mix has been depleted of nutrients. Scrub each container and disinfect it with a 10 percent chlorine bleach solution.

Suggested Vegetable Varieties for Container Growing

The following is a list of suggested varieties for vegetable container growing in the Midwest. This is not an exhaustive compilation. You may find other varieties that will do just as well. The important thing to remember when seeking suitable varieties is to look for those described as "bush" or "compact" in growth habit, and any varieties that have been especially bred or hybridized for container growing.

Vegetables	Varieties / Cultivars	Container Size
Beans, Lima	Bush Baby, Fordhook Bush Lima, Fordhook 242	12" wide, 8-10" deep
Beans, Snap	Bush Romano, Contender, Provider, Tendercrop Stringless, Bush Blue Lake	8" wide, 8-10" deep
Beets	Baby Canning, Spinel Little Ball, Red Ace Hybrid, Burpee Golden	6"-12" deep
Broccoli	Any variety but Crusader	20" deep
Brussels Sprouts	All varieties	12" wide, 12" deep
Cabbage	Baby Head, Dwarf Morden, Minicole, Fast Ball, Flash	8"-10" wide, 12" deep

Vegetables	Varieties / Cultivars	Container Size
Carrots	Short root or round, Nantes, Gold Nugget, Best of the Bunch, Little Finger, Baby Spike, Short & Sweet, Thumbelina	10" wide, 10" deep
Chard	Any variety	8-12" deep
Chinese Cabbage	Bok Choy, Michihli, Wong Bok	20" deep
Collards	Any variety	12" deep
Corn	Space saving varieties, F-M Cross, Golden Bantam, Kandy Korn, Precocious	21" wide, 8" deep. Need 3 plants per container to assure pollination.
Cucumber	Salad Bush, Burpee Hybrid II, Bush Crop, Spacemaster, Burpee Pickler, Bush Champion, Fanfare, Pickalot, Picklebush, Pot Luck	20" wide, 16" deep
Eggplant	Dusky, Morden Midget, Bambino, Millionaire	16" deep
Horseradish	Maliner Kren	5 gallon or larger
Kale	Any variety	8" wide, 8" deep
Kohlrabi	Grand Duke	12" deep
Lettuce	Black-seeded Simpson, Red Sails, Salad Bowl, Tom Thumb, Green Ice, Little Gem	8" wide, 6-8" deep
Onion	Bunching types work best: White Pear, Japanese Bunching, Beltsville Bunching, Crystal Wax Pickling PBR	10-12" deep
Peas	Little Marvel, Sugar Bon, Sugar Mel, Laxton's Progress, Sugar Rae, Melting Sugar, Burpee's Blue Bantam, Early Patio, Snowbird	12" deep
Peppers	Any variety	16" deep
Potatoes	Charlotte, Kennebec, Red Pontiac, Irish Cobbler, Epicure	1-20 gallon containers
Pumpkins	Autumn Gold Hybrid, Bushkin, Jack Be Little, Small Sugar, Baby Boo	5 gallon tub
Radish	Cherry Belle, Early Scarlet, French Breakfast, Sparkler, Burpee White, Comet. Avoid winter radishes.	4-6" deep
Spinach	Any variety	4-6" deep
Squash, Summer	Early Yellow Summer, Crookneck, Goldbar, Park's Creamy Hybrid, Straightneck, Scallopine, Peter Pan, Gold Rush, Pic-N-Pic Hybrid, Richgreen Hybrid, Sunburst	24" deep
Squash, Winter	Butterbush, Bush Acorn, Table King, Cream of the Crop	24" deep

Vegetables	Varieties / Cultivars	Container Size
Tomatoes	Patio VF, Pixie, Small Fry VFN, Yellow Pear, Sweet 100, Tumbling Tom, Container Choice, Rutgers, Tiny Tim, Husky Red, Husky Gold, Yellow Canary, Whippersnapper, Basket Pak, Red Cherry, Gardener's Delight, Sundrop	Dwarf--12" deep Standard--24" deep
Turnips	Any variety	10-12" deep

Source: OSU Ext., Karen Demboski, Annette Swanberg, Jane C. Martin