

# How to plant vegetables

## When to plant

Most vegetables are either cool season or warm season crops. **Cool season vegetables** grow best during the cooler temperatures of spring or fall and can withstand some frost or freezing temperatures, particularly when plants are young. Some cool season vegetables such as onions, peas and spinach, are very hardy and can be planted as soon as the ground can be worked in the spring. This is usually late March or early April in southern Michigan and one to three weeks later further north. Fall garden planning should be made in July through maybe September.

**Warm season vegetables**, such as cucumbers, melons, squash, peppers and tomatoes are sensitive to cool temperatures and will be killed by frost. They cannot be safely planted outdoors until the **danger of frost** is past unless they are placed under hot caps, tents or covers. Seeds of warm season crops germinate poorly in cool soil and may rot in wet soil if planted too early. Early varieties of sweet corn can usually be planted a couple of weeks ahead of other warm season vegetables since they aren't quite as tender, and seedlings are protected by the surrounding soil until they emerge from the ground.

## Planting from seed

Starting plants from seeds is economical and fun for gardeners of all ages. With seeds, there is an incredible variety of choices not found in transplants. Whether purchased online from specialty nurseries, catalogs, or at local garden centers, seed packets offer heirloom plants, rare and unusual cultivars, and tempting varieties of veggies even the diehard non-vegetarian will enjoy. Some examples of vegetables easy-to-grow from seed include radish, lettuce, peas, and carrots.

## Keys for success

- ✓ Prepare only the soil you intend to plant within a few days so weeds don't get a head start.
- ✓ Check the soil temperature. Some seeds, like certain extra-sweet corn cultivars, will not germinate well unless the soil temperature at planting depth exceeds 60°F. Beets, carrots, radishes and turnips, on the other hand, will germinate at a minimum of 40°F.
- ✓ For a neat, easy-to-care-for garden, plant straight rows. Rows help you to tell the vegetables from the weeds. Rows of onions, parsnips and beets may be marked by planting a few radishes in the row; radishes grow faster. Place a stake at each end of a row, and tie a taut string from one to another. Create straight furrows by pulling a hoe along the string from one stake to the other.
- ✓ Planting depth depends on seed size. As a general rule, plant seeds no deeper than twice their diameter. For more specific information, read the back of the seed packet.

### Importance of good varieties

Using superior varieties is a first step toward successful gardening. Varieties vary in such characteristics as adaptability, earliness, color, shape and size. They also vary in disease, insect or nematode resistance or tolerance. Good seeds of superior, adapted varieties will be inexpensive in the long run. Poor seeds of inferior or poorly adapted varieties will be expensive at any price.

- ✓ Cover the seed and tamp gently with the flatside of a hoe blade.
- ✓ Water lightly to insure that seeds get a good start.
- ✓ Remember to read the back of the seed packet. It has a wealth of information to help you be successful: planting, thinning, and growing instructions specific to each type of plant.
- ✓ When directions recommend planting the seeds in "hills," this means groups of seeds, not actual hills of soil. Squash, melon, and cucumbers are frequently planted in hills. (When the seedlings are up and growing, thin out the weakest seedlings in the hill.)
- ✓ To produce good, sturdy plants, you need 12 to 14 hours of daylight. Unless you have a greenhouse, you'll need to put your plant under a grow light or fluorescent lighting along with sunlight.
- ✓ Start your seeds in any container that has proper drainage about six to eight weeks before you want to move plants to the garden.
- ✓ Select a potting mixture rich with nutrients. It should contain approximately equal amounts of sphagnum peat, potting soil and vermiculite.
- ✓ Fertilize lightly, but often with liquid fertilizer to keep young seedlings growing vigorously.
- ✓ Place young seedlings outdoors in the shade for a few days to a week, to harden them off before planting them in direct sunlight.

## Planting from transplants

### Growing your own

Many vegetables do best when started indoors rather than being planted directly into garden soil. Seedlings started in containers indoors can be transplanted to the garden as soon as danger of frost is past. If you chose to grow your own transplants, follow these tips:

- ✓ Buy disease-resistant seed varieties recommended for growing in Michigan's climate.

### Buying transplants

Some gardeners have neither the time nor the space to raise their own transplants.

Select young, stocky plants with lots of leaves, but without flowers or fruit.

Plants should have good green color and no pests on them.

Vegetable suggestions for beginner to avid gardeners					
	Beginner/patio gardener	Beginner/small garden	Any gardener/general garden	Experienced gardener	Avid gardener
<b>Cool season crops</b>	Lettuce (leaf and bibb) Onions	Carrots Peas Radishes	Beets Broccoli Brussels sprouts Cabbage Cauliflower Parsnip Spinach Swiss chard Turnip	Celeriac Chinese Cabbage Chives Collards Dill Kale Kohlrabi Lettuce (head) Parsley Potatoes Rutabaga	Asparagus (perennial) Celery Garlic Horseradish Mustard Rhubarb (perennial) Salsify
<b>Warm season crops</b>	Cucumbers (bush) Summer squash Tomato	Cucumbers (vine) Snap beans Tomatoes: cherry, grape slicer or paste	Eggplant Lima beans Muskmelon Okra Pumpkins (bush) Squash (winter) Sweet corn	Pumpkins Tomatoes (yellow) Watermelons	Jerusalem artichokes Popcorn Sweet potatoes Soybeans

Check the roots. This is especially important with cole crops such as broccoli, brussels sprouts, cabbage, kohlrabi, cauliflower and the new broccoli-cauliflower cross called “broccoflower.” Diseases such as clubroot are almost impossible to get rid of once they are introduced into the garden soil. Healthy roots are white, sometimes with visible white root hairs.

Choose recommended or familiar varieties. Whenever possible, select those that are also resistant or tolerant to insects, diseases and nematodes.

### Hardening off the plants

Whether you have purchased transplants or raised them yourself, they should be transplanted out into the garden as soon as the danger of frost is passed. Allow a short transition period (also known as hardening off) outdoors for seven to 10 days before planting.

Set the transplants in a shady location protected from sun and wind to help them adjust to their new outdoor environment. Gradually expose transplants to longer periods of sun and wind.

Keep the transplants’ soil moist during this transition period.

### Planting transplants

- ✓ Water plants well before transplanting.
- ✓ Transplant seedlings in the evening or on a cloudy day so they are not dried out by the sun’s heat.
- ✓ Dig a hole slightly larger than the transplant container.

- ✓ Move each seedling from its pot as you get ready to plant it.
- ✓ Keep as much of the plant’s growing medium (soil) around the roots as possible.
- ✓ Gently loosen the roots to encourage proper root growth.
- ✓ Set plants at the same depth that they were in the containers.
- ✓ Gently firm soil around the plant gently with your hand. Create a circle mound around the plant to hold water near the roots.
- ✓ Water new transplants gently, but thoroughly.
- ✓ Get the plants off to a good start by keeping the soil moist, but not wet for the first week after planting. **Do not** overwater.
- ✓ Apply two to three inches of organic mulch to prevent weeds, conserve water and moderate soil temperatures. Do not allow mulch to touch plant stems.

### Spread out the harvest

Vegetables can be harvested over a longer period of time if you do several plantings throughout the season. For example, three or four small plantings of corn, beans and lettuce two weeks apart will be better than a single large planting. It is also important to use early, mid-season and late-maturing varieties in conjunction with successive plantings to insure a continual harvest.

## Notes:

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