



**The Fall Vegetable Garden**  
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Experienced gardeners know that the gardening season does not close at the end of summer. Instead, this is the time to plant fall vegetables and prepare for next season's vegetable gardening activities. Autumn is the season to clean up the summer vegetable garden area, enjoy the benefits of fall crops, prepare the ground for next year's planting, and clean up your garden tools.

**PLANTING A FALL GARDEN**

At the peak of the season, when fresh produce is abundant, it is difficult to think about planting more crops. Late July through September is the time to extend the vegetable growing season by planting a fall garden. This planting will add more vegetables to your supply and make use of the full growing season. The fall garden requires less time and labor

because the soil was already worked up in the spring. Many vegetables, such as broccoli and cauliflower, are of higher quality when grown in the fall rather than during midsummer. Some vegetables, such as kale and Swiss chard, develop a better flavor after frost.

To prepare for a fall garden, remove all previous crop residues before seeding fall vegetables. As in spring planting, prepare the ground by spading the soil to a depth of 6 to 8 inches and incorporating 1 to 1 1/2 pounds of an all-purpose garden fertilizer (13-13-13 for example) per 100 square feet or a comparable organic fertilizer. Plant the seed according to directions on the seed packets. A good rule to follow is to plant seed two to four times its largest diameter. Keep the soil evenly moist until the seedlings are up and growing; the upper 1/4 to 1/2 inch of soil must be moist at all times to ensure germination. This is particularly important because you will be seeding in midsummer, when the soil dries quickly.

If you set out plants you have grown yourself or purchased from a garden center, plant them at the same depth that they were growing in the container. Firm the soil around each plant and water thoroughly. A starter fertilizer solution can be used in place of water; prepare by mixing 2 tablespoons of a soluble, high-phosphorus fertilizer in 1 gallon of water and apply 1 cup around each transplant.

The suggested planting dates for a number of fall vegetable crops are as follows:

Beets, broccoli, cabbage, carrots, cauliflower, Chinese cabbage, endive, snap beans, summer squash:

Southern Illinois – July 24 to August 3

Central Illinois – July 10 to 20

Northern Illinois – June 25 to July 5

Kohlrabi, leaf lettuce, mustard, turnip, winter radish:

Southern Illinois – August 15 to 24

Central Illinois – July 10 to 20

Northern Illinois – July 17 to 26

Leaf lettuce, mustard, spinach, spring radish:

Southern Illinois – September 8 to 17

Central Illinois – August 25 to September 5

Northern Illinois – August 11 to 20

## FROST PROTECTION

As fall approaches, frost presents a threat to tender vegetables in the garden. Although many cool-season vegetables such as root crops will survive a frost, other crops will not. It is usually best to harvest sweet potatoes, pumpkins, and winter squash before a frost. If harvested after a frost or freeze, they will not store well. One way to protect plants from frost is to cover them with plastic sheeting, tarps, old blankets, boxes, or any other kind of close-fitting cover. A cover is effective because it traps the radiated heat from the soil at night and raises the temperature enough around the plants to ward off a light frost. Cucumbers, beans, tomatoes, and squash are usually still productive in autumn and are worth trying to save for a few extra harvests.

If a hard freeze is predicted, pick any green but mature tomatoes remaining on the vines or pull the entire plant. Store the tomatoes in a cool, dry place at about 65° F. They will continue to ripen for about two weeks. Squash, peppers, and eggplant should be picked and stored under recommended conditions.

Some crops are not affected by frost or moderate freezes and can be left in the garden until the weather becomes quite cold. This group includes cabbage, broccoli, cauliflower, kohlrabi, Swiss chard, Chinese cabbage, and kale. Root crops, including beets, carrots, parsnips, and turnips, can be mulched with straw or leaves, left in the garden, and dug up as needed until midwinter.

## PREPARING THE GARDEN FOR NEXT YEAR

Fall is the best time to prepare the garden for the next season. While the weather is still good, a number of chores can be done to help get the garden ready for early spring planting. The main preparations are cleaning up garden refuse, sowing cover crops, if needed, and plowing the soil.

Many organisms overwinter in garden debris. Collecting the leaves, stems, and old fruit reduces the potential for disease and insect problems in the following year. The cleanup should be done following the first killing frost. It is safe to put the debris in a compost pile as long as the material does not include diseased plants. If you are uncertain that all diseased plants have been eliminated, it is best to consider an alternative such as having it hauled away.

Some disease-causing organisms that survive composting include: corn smut; clubroot of cabbage, broccoli, cauliflower, and other cole crops; *Verticillium* wilt of tomato, pepper, eggplant, and potato; and root-knot nematodes that infest quite a number of crops. Some of these organisms can overwinter in the soil indefinitely, even up to 15 years or more. Since rotation and sanitation have little effect on these diseases, the best control is to maintain adequate fertility levels in the soil and to grow disease-resistant varieties.

As many as 85 percent of disease-causing organisms are soil invaders. Plowing or tilling the crop residues into the soil in the fall helps prevent the overwintering of many of these organisms. In addition to destroying their winter homes, this practice also helps control the insects that transmit certain diseases. Crop residues that are turned under improve soil tilth and structure and help make spring garden work easier.

While the past season's garden is still fresh in your mind, make a map or garden plan. This will be helpful in planning next year's garden and deciding upon a crop rotation program. Crop rotation is an important measure that is used to control certain diseases. Since many disease organisms only attack related plants in the same family, you can sometimes avoid disease problems by not planting the same kind of vegetable in the same location in the following year. Wherever possible, avoid planting any vegetables within each of the following groups in the same location more than once every three years:

CABBAGE FAMILY – broccoli, Brussels sprouts, cabbage, cauliflower, Chinese cabbage, kohlrabi, mustard, radish, rutabaga, and turnip.

CUCUMBER FAMILY – cucumber, gourd, muskmelon, pumpkin, squash, and watermelon.

TOMATO FAMILY – eggplant, pepper, potato, and tomato.

ONION FAMILY – chive, garlic, leek, onion, and shallot.

Fall is also a good time to add organic matter to the soil to improve its tilth and fertility. The most common sources of organic matter for garden soils are compost, manure, peat moss, rotted hay, straw, or a green manure crop. A green manure crop is planted in the fall and then turned under in late October or left until spring. Rye, ryegrass, or oats are often used, usually sown at the following rates per thousand square feet: rye, 3 pounds; ryegrass, 1/2 pound; and oats 1 1/2 pounds. Broadcast the seed and work it into the well-prepared soil with a rake or cultivator.

## CLEANING GARDEN TOOLS

The final gardening chore before winter's arrival is the cleaning and winterizing of all garden equipment. Proper care will extend the life of your equipment, and gardening will be easier next spring with clean, sharp tools and easy-to-start engines. Clean your hand tools so that they are free of dirt and rust. A putty knife and wire brush are good tools for this operation. After the dirt and rust are removed, sharpen the tools and, if necessary, coat all exposed metal surfaces with oil for protection against moisture. Store your tools in a dry, sheltered place. Wash and dry sprayers thoroughly. Be sure to drain all pipes, hoses, and valves. When these chores are finished, it is time to sit back, relax, browse through garden catalogs, and be ready to plant your vegetable garden when spring arrives next year.