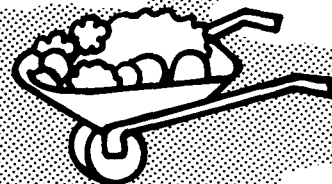


AGRICULTURAL EXTENSION SERVICE—UNIVERSITY OF MINNESOTA

# YARD'N'GARDEN



## Summer Care of the Vegetable Garden

FACT SHEET 102  
C. GUSTAV HARD

After the garden is planted, there is a pause in the work until plants emerge. Then the work continues throughout the growing season. Success in the garden depends on proper individual care for the many kinds of vegetables and the proper succession of crops to make the most of space and effort. Weed and pest control is essential. Proper thinning of seedlings for spacing is important as well. Water must be applied when there is a lack of rainfall.

### Succession Plantings

You can plant many vegetables at weekly intervals to increase the harvest period. For example, you can make 3 or 4 or more plantings of sweet corn and snap beans until July 1. Carrots, beets, and cabbage can be planted in mid-June for winter storage. These will be of better quality for winter use than those planted earlier.

Cool season crops like lettuce, spinach, radishes, turnips, and kohlrabi can be sown around August 1 so that they will mature during cool weather. Sometimes fall peas will do well, and they should be planted about the first of August. Chinese cabbage planted around July 20 usually results in fine heads for fall use.

Cabbage, broccoli, and cauliflower seeds can be planted in the garden around June 1. These plants will mature in the fall after the weather gets cool.

Nutrients removed by earlier crops should be replenished before you plant a succession crop in the same area. A complete fertilizer mixed thoroughly into the soil at the rate of  $\frac{1}{2}$  pound to 25 feet of row may be used. If a larger area is to be replanted, apply 3 to 4 bushels of well-rotted manure or compost or 3 pounds of a complete fertilizer (5-20-20) to 100 feet of row.

Special attention to watering must be given when the crop is planted late. The first crop may have removed much of the water. Also, July and August may be dry and hot.

### Thinning

Plants should be spaced so that they mature properly in terms of shape and form and to reduce competition in the row.

Thinning is hard work and is best done soon after plants germinate. When the soil is moist, the surplus plants can be removed easily without injuring the remaining plants. Early thinning is especially important in root crops like carrots, parsnips, beets, rutabagas, onions, and turnips. The tops of surplus beets and turnips make very fine greens for the table. Thinnings of lettuce and chard also can be used as food. Radishes and onions can be left in the ground until the ones to be thinned are large enough to eat.

Where several seeds are planted in hills, the plants must be thinned after germination. Thin corn, cucumbers, melons, and squash to three plants per hill. Further recommendation for spacing is usually given on the seed packet.

### Some suggested spacing distances

Plant	Distance between plants (inches)	Plant	Distance between plants (inches)
Beans, bush lima	3-4	Parsnips	3-4
Beans, bush snap	3-4	Peas	1-2
Beans, pole snap	6-8	Pumpkins	15-18
Beets	2-3	Radishes	1-1½
Carrots	1-2	Rutabagas	6-8
Chard	6-8	Spinach	2-3
Cucumbers	8-10	Squash	15-18
Kohlrabi	3-4	Sweet corn	10-12
Lettuce, leaf	3-4	Turnips	3-4
Muskmelons	10-12	Watermelons	15-18
Onions	2-4		

### Cultivation and Weed Control

Cultivation is done mainly to control weeds that compete with vegetable plants for moisture, nutrients, light, and air. Cultivation also aerates the soil, promoting the growth of roots and helpful soil bacteria. Cultivation helps provide a dry surface mulch to conserve moisture.

You can control weeds easily by stirring the soil with a garden rake early in the season as the weed seeds germinate. Since weeds are easily killed when they are small, start cultivating as soon as the vegetable seedlings emerge and mark the rows. Cultivating at weekly intervals, or as soon as the soil is dry enough after a rain, keeps weeds under control.

Don't cultivate or hoe too deeply around the plants. If vegetable plant roots are injured, they cannot absorb the water and nutrients made available to them by weed removal. Various types of wheel hoes or garden cultivators are effective in eliminating weeds between the rows during the growing season. Small hand weeders can be used to remove weeds within the row. Some weeds like purslane are difficult to control. Rake these weeds out of the garden after cultivation to keep them from re-establishing.

Although there are several chemicals on the market for controlling weeds in vegetable crops, their use by the home gardener is not usually practical. A material called dacthal is now available as a granule for weed control in several vegetable garden crops. Follow directions carefully for information on its use. Where quackgrass is a problem, a fall application of dalapon will be helpful. Follow directions on the package.

### Watering

Water carries essential minerals from the soil to the leaves of plants. It helps manufacture plant food in the leaves. Rains do not always come at the proper time to assure a constant supply of moisture, so supplementary watering will be needed at some time in almost every growing season. Thoroughly soak

the soil to a depth of at least 6 to 8 inches. This should be enough for a week or 10 days on heavy soil, but for sandy soil more frequent watering will be required (every 4 to 5 days).

Use a sprinkler or a "soaker" hose. For watering with an open hose, allow the water to run from the garden hose on to a stone or small board. This keeps the soil from washing away and soaks it thoroughly. The water temperature doesn't matter. Light sprinkling is of little value. Cleaning the foliage may have some cosmetic value; however, avoid leaving the foliage wet over an extended period of time such as overnight. Watering during the day is preferable.

### Mulches

Mulching the soil helps control weeds, conserve moisture, cool the ground, and keep the edible parts of vegetables clean. Mulches are especially beneficial around tomato plants. They prevent blossom end rot by maintaining a uniform supply of soil moisture. You can use grass clippings, finely chopped straw, ground corncobs, buckwheat hulls, peat moss, sawdust, vermiculite, and other materials that do not spread disease. Spread 2 or 3 inches of this mulch around plants and between rows, preferably before weather becomes very hot and very soon after plants are established.

Black plastic also can be used for mulching purposes. It is effective in controlling weeds, warming the soil, and conserving moisture for earlier production of some warm-season vegetables. It is especially well-suited for melons, tomatoes, and other warm-season crops whose fruit come in contact with the soil. Clear plastic does not control weeds, but it is more effective than black plastic in warming the soil.

Place the plastic on the prepared soil before planting. Anchor the edges in 2-inch furrows, and cover the edges with soil. You may insert seeds of large-seeded vegetables or transplants through holes cut in the plastic at desired spacings. Slits cut in the plastic allow water to go through the plastic and to the soil under the mulch during rain or irrigation.

### Staking and Pruning

Some tall-growing vegetables require supports for growing. Pole beans can be supported on poles arranged in a tepee manner or on trellises. To make a trellis, drive stakes every 10 to 12 feet in the row. Stretch wire between the stakes at the top and bottom. Weave string between the top and bottom wires to support the plants. Most plants require that the stems and branches that are allowed to grow be "trained" onto the trellis early in plant growth.

Tomatoes are staked to conserve space. Where space is limited, close spacing (18 to 24 inches), along with staking and pruning, considerably increases total yields from the plot. Drive 5-foot stakes into the ground beside the plant. Tie a strong cord or strip of cloth firmly around the stake and loosely around the stem just below each flower or fruit cluster.

Since it is difficult to support an entire tomato plant on a stake, pruning is necessary. As the plants begin to branch, remove the small side branches that develop in the axils of the leaves just above where the leaf joins the main stem. Permit only one or two main stems to elongate and produce flower clusters. If you have plenty of room, you can space the plants as much as 4 feet apart and allow them to sprawl without staking and pruning.

### Blanching

Blanching is necessary to produce good-quality white heads of cauliflower. The heads turn a shade of brown, yellow, or green when exposed to sunlight. Until the heads are about 2 or 3 inches in diameter, the leaves cup over the heads and shut out

sunlight. But as the head grows, the leaves are pushed apart. Light then gets in, coloring the head. To prevent this, you can pull the outer leaves together and tie them together over the head. The cauliflower continues to grow and develops a nice white head.

The golden or yellow celery varieties also require blanching or removal of light from the stalks. Bank them with soil or boards along the row. The green or Pascal varieties are not blanched. They are easier for the home gardener to grow.

### Growth-Regulating Substances

Often night temperatures in spring and early summer are cool (below 60° F) and tomato plants may drop their first blossoms. You may apply commercially prepared growth-regulating substances to secure fruit on these first blossom clusters and increase early yield. Often these fruits are seedless.

Apply a fine spray of the chemical with an atomizer or small sprayer to the first two or three blossom clusters that appear. Don't spray young leaves or growing tips, or they may be dwarfed.

Growth-regulating substances are available under several trade names. They are available at most garden centers. Follow directions on the container for dilution and application.

### Insect Control

You should begin insect control in your home garden at planting and continue throughout the season. It is better to prevent damage than to try to repair it afterward.

New insecticides make prevention and control easier. However, many of these materials control only certain pests. Many have a long residual effect and should not be used on edible plant parts. Other insecticides are too poisonous to be recommended generally. For detailed information on insect control, ask your county agent or write to the Bulletin Room, 3 Coffey Hall, University of Minnesota, 1420 Eckles Ave., St. Paul, MN 55108, and ask for *Controlling Insects in the Home Vegetable Garden*, Entomology Fact Sheet 11.

### Disease Control

The best disease control is prevention. Sanitation and early detection are essential. The gardener is cautioned to be knowledgeable as to what "normal" plants look like. Any change from the "normal" condition may be interpreted as having a causal problem. Leaf spot, discoloration of foliage, exuded substances, crinkling of leaves, and pustules all may be symptoms of a disease problem. So be alert and apply controls.

Sanitation begins in the fall. Get rid of diseased plant material. Make note of the plantings so that you are not planting the same vegetables several years in the same location.

For further information on disease control, see *Controlling Diseases in the Home Vegetable Garden*, Plant Pathology Fact Sheet 9.

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12/80/15M

Some of the material for this publication was taken from former Extension Folder 167 by Orrin C. Turnquist, retired University of Minnesota extension horticulture specialist.

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