The Home Vegetable Garden

By

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This bulletin presents information on planning and planting the home vegetable garden. It does not deal with commercial vegetable production but is designed to encourage more and better home gardens in the state.

Importance of vegetable crops. Census records indicate that 70 per cent of all farms in Oregon, or about 45,000, reported vegetable crops grown for home use, having a total value of $2,000,000, in addition to which many thousands of dollars worth of vegetables are grown in city and suburban areas.

At least 30 to 36 different kinds of vegetables can be successfully grown in various parts of the state, thus affording a wide range of healthful, nutritious food. In addition to fresh vegetables obtainable from the garden, many crops can be canned, frozen, pickled or stored, thereby providing an ample supply the year round. A well-planted garden, properly cared for, invariably results in reduced purchases of other foods not produced at home.

The financial value of the vegetable garden is apt to be underestimated, because the bulk of the produce goes to the family table instead of being converted into actual dollars and cents.

Systematic work is as essential to success in the vegetable garden as is the regular care of poultry, the dairy, or the stable. No garden will thrive and be satisfactory under irregular, inconsistent attention, any more than would a cow milked whenever the farmer took a notion.

Lay-out of the garden. Inasmuch as the area of the home garden may vary in length and width according to the land available, no definite size is here mentioned. In general the garden should be about two to four times as long as it is wide, with the rows running lengthwise of the plot. An area close to one quarter of an acre for a farm garden would be furnished by a plot 50 by 200 feet. In a city or suburban garden the operations usually have to be on a smaller scale and more intensive.

While a certain number of linear feet of each vegetable is suggested in the plan, this is a variable factor according to the size of the garden and the preferences of crops of each family. The figures, however, can be followed in most instances as suggestive.

Vegetable Production in the Home Garden

Asparagus is especially useful because it is a perennial crop. Once planted it is productive for many years. Plants begin to bear well three or four years after being set out, but light cuttings may be made before that time. When the garden is practically barren of crops in the early spring,
# HOME GARDEN PLANTING TABLE

Showing Detailed Recommendations Arranged in Order of Planting. Beginning in the Spring.

<table>
<thead>
<tr>
<th>Vegetable</th>
<th>Variety</th>
<th>Ft. of row or No. of plants</th>
<th>Date of seeding</th>
<th>Hills, drills, or plants</th>
<th>Date of planting</th>
<th>Distances of planting</th>
<th>Amt. of seed per 100 ft.</th>
<th>Depth of planting inches</th>
<th>When maturing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radish</td>
<td>Scarlet turnip—white tipped</td>
<td>25-50</td>
<td>Mar. 10</td>
<td>D</td>
<td>Successive seedings</td>
<td>12-18</td>
<td>1 oz.</td>
<td>1</td>
<td>May and in succession</td>
</tr>
<tr>
<td></td>
<td>White Icicle</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spinach</td>
<td>Thick turnip—white tipped</td>
<td>100</td>
<td>Mar. 10</td>
<td>D</td>
<td>18-24</td>
<td>1-2</td>
<td>1 oz.</td>
<td>1</td>
<td>May 15</td>
</tr>
<tr>
<td></td>
<td>Giant Leaf</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lettuce</td>
<td>New York 515</td>
<td>3 doz.</td>
<td>Feb. 1-15</td>
<td>Hotbed</td>
<td>Apr. 10</td>
<td>12</td>
<td></td>
<td>June 1</td>
<td></td>
</tr>
<tr>
<td>Onion (sets)</td>
<td>Danvers</td>
<td>50-75</td>
<td>May 10-15</td>
<td>Hotbed plants</td>
<td>Apr. 10</td>
<td>24</td>
<td>2</td>
<td>1 lb. sets</td>
<td>June 1</td>
</tr>
<tr>
<td>Turnip</td>
<td>Purple top</td>
<td>100</td>
<td>Apr. 10</td>
<td>D</td>
<td>24</td>
<td>1/2 oz.</td>
<td></td>
<td>June 1</td>
<td></td>
</tr>
<tr>
<td>Beet</td>
<td>Early Model</td>
<td>50</td>
<td>Apr. 10</td>
<td>D</td>
<td>30</td>
<td>2-3</td>
<td>1 oz.</td>
<td>July 1</td>
<td></td>
</tr>
<tr>
<td>Carrot</td>
<td>Chantenay, Nantes</td>
<td>50</td>
<td>Apr. 10</td>
<td>D</td>
<td>30</td>
<td>2-3</td>
<td>1 oz.</td>
<td>July 10</td>
<td></td>
</tr>
<tr>
<td>Lettuce</td>
<td>New York 152</td>
<td>50-100</td>
<td>Apr. 10</td>
<td>D</td>
<td>Successive seedings</td>
<td>30</td>
<td>12-18</td>
<td>June 10</td>
<td></td>
</tr>
<tr>
<td>Swiss Chard</td>
<td>Fordhook Giant</td>
<td>20</td>
<td>Apr. 10</td>
<td>D</td>
<td>30</td>
<td>6</td>
<td>1 oz.</td>
<td>July 1</td>
<td></td>
</tr>
<tr>
<td>Onion (seed)</td>
<td>Yellow Danvers</td>
<td>100</td>
<td>Apr. 10-25</td>
<td>D</td>
<td>40</td>
<td>3</td>
<td>1 oz.</td>
<td>Sept. 20</td>
<td></td>
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<tr>
<td>Salsify</td>
<td>Sandwich Island</td>
<td>50</td>
<td>Apr. 20</td>
<td>D</td>
<td>30</td>
<td>3-4</td>
<td>1/2 oz.</td>
<td>Sept. 20</td>
<td></td>
</tr>
<tr>
<td>Corn</td>
<td>Golden Early Market Rectangular block of each variety</td>
<td>May 1-15</td>
<td>D</td>
<td>Successive seedings</td>
<td>36</td>
<td>12-16</td>
<td>2 oz.</td>
<td>July 25-frost</td>
<td></td>
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<tr>
<td>Bean—bush</td>
<td>Stringless</td>
<td>200</td>
<td>May 1-15</td>
<td>D</td>
<td>Successive seedings</td>
<td>36</td>
<td>3</td>
<td>1 lb.</td>
<td>July 20-frost</td>
</tr>
<tr>
<td></td>
<td>Green pod</td>
<td></td>
<td>July 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bean—pole</td>
<td>Kentucky Wonder</td>
<td>100</td>
<td>May 15</td>
<td>H</td>
<td>36</td>
<td>24</td>
<td>1 lb.</td>
<td>Aug. 1-frost</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oregon Giant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Blue Lake</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bean—lima</td>
<td>Oregon Pole Lima</td>
<td>100</td>
<td>May 15</td>
<td>H</td>
<td>36</td>
<td>30-35</td>
<td>1 lb.</td>
<td>Sept. 10</td>
<td></td>
</tr>
<tr>
<td>Squash—summer</td>
<td>Yellow Straightneck</td>
<td>6 hills</td>
<td>May 10-15</td>
<td>P</td>
<td>48</td>
<td>36</td>
<td>1/2 oz.</td>
<td>Aug. 10</td>
<td></td>
</tr>
</tbody>
</table>
NOTES ON PLANTING TABLE

Dates are approximately correct but naturally vary according to season and locality in the state.

Dates of maturity show whether a crop takes half or all of the growing season to produce a crop.

The following successions of crops are suggested:

(a) Early radish and lettuce followed by late carrots and beets.
(b) Early spinach followed by celery.
(c) Early peas followed by broccoli and fall cauliflower.
(d) Early cabbage followed by fall lettuce and spinach.
(e) Early beets and carrots followed by Brussels sprouts and curly kale.
(f) Early onion sets or peas followed by late cabbage.

Two sowings of beets and carrots are recommended, the first for early summer roots, the second for fall and winter supply.

Turnips are usually broadcast for fall production. Ample supplies of "greens" can be grown with spinach, chard, kale, and broccoli.

Contrary to general opinion, winter squash will not cross with pumpkin, cucumber, melon, or summer squash. The only two of these mentioned which will cross are pumpkin and summer squash.

When only a single row of vegetable is to be planted the main consideration of the gardener is to observe the distance between plants in the row, allowing the given space, as noted, before proceeding to plant the next vegetable.

Where more than one variety of a vegetable is suggested, it is not unwise to plant several kinds as in the case of Glory and Ball Head cabbage for fall and winter, dwarf as well as tall beas, varieties of sweet corn differing in season of harvest.

### Table

<table>
<thead>
<tr>
<th>Crop</th>
<th>Variety</th>
<th>Number of Plants</th>
<th>Sowing Date</th>
<th>Harv. Date</th>
<th>Distance (inches)</th>
<th>Season of Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cucumber</td>
<td>Davis Perfect, Vaughn</td>
<td>18 hills</td>
<td>May 10-15</td>
<td>Aug. 1</td>
<td>54-60 H</td>
<td>48-54 oz.</td>
</tr>
<tr>
<td>Squash-winter</td>
<td>Delicious</td>
<td>12-20 hills</td>
<td>May 10-15</td>
<td>Aug. 1</td>
<td>96 H</td>
<td>1</td>
</tr>
<tr>
<td>Pumpkin</td>
<td>Winter Luxury</td>
<td>10-12 hills</td>
<td>May 10-20</td>
<td>Sept. 15</td>
<td>84 H</td>
<td>1</td>
</tr>
<tr>
<td>Pepper</td>
<td>California Wonder</td>
<td>12-18 plants</td>
<td>Feb. 25</td>
<td>Aug. 1</td>
<td>36 H</td>
<td>1</td>
</tr>
<tr>
<td>Eggplant</td>
<td>Black Beauty</td>
<td>6-12 plants</td>
<td>Feb. 25</td>
<td>Aug. 1</td>
<td>36 H</td>
<td>1</td>
</tr>
<tr>
<td>Carrot-late</td>
<td>Chantenay, Nantes</td>
<td>50-100</td>
<td>June 15</td>
<td>Sept. 15</td>
<td>24 H</td>
<td>1</td>
</tr>
<tr>
<td>Beet-late</td>
<td>Detroit Dark Red</td>
<td>50-100</td>
<td>June 15</td>
<td>Sept. 15</td>
<td>24 H</td>
<td>1</td>
</tr>
<tr>
<td>Cauliflower</td>
<td>St. Valentine</td>
<td>3-4 doz.</td>
<td>May 1-15</td>
<td>Sept. 15</td>
<td>36 H</td>
<td>1</td>
</tr>
<tr>
<td>Broccoli-green</td>
<td>Calabrese</td>
<td>50 ft.</td>
<td>May 1-15</td>
<td>Sept. 15</td>
<td>36 H</td>
<td>1</td>
</tr>
<tr>
<td>Celery</td>
<td>Golden Self Blanching</td>
<td>3-4 doz.</td>
<td>May 1-20</td>
<td>Oct. 1</td>
<td>36 H</td>
<td>1</td>
</tr>
<tr>
<td>Cauliflower</td>
<td>Snowball</td>
<td>5-6 doz.</td>
<td>May 1</td>
<td>Oct. 1</td>
<td>36 H</td>
<td>1</td>
</tr>
<tr>
<td>Cabbage-late</td>
<td>Glory, Ball Head,</td>
<td>2-3 doz.</td>
<td>May 1</td>
<td>Oct. 20</td>
<td>36 H</td>
<td>1</td>
</tr>
<tr>
<td>Sprouts</td>
<td>Ulrich's American</td>
<td>50</td>
<td>May 1</td>
<td>Sept. 25</td>
<td>36 H</td>
<td>1</td>
</tr>
<tr>
<td>Kale</td>
<td>Scotch curled</td>
<td>10</td>
<td>May 1</td>
<td>Oct. 10</td>
<td>36 H</td>
<td>1</td>
</tr>
<tr>
<td>Turnip-late</td>
<td>Purple Top W. Globe</td>
<td>10</td>
<td>Aug. 10</td>
<td>Oct. 25</td>
<td>36 H</td>
<td>1</td>
</tr>
<tr>
<td>Cabbage</td>
<td>Chinese...Wong Bok, Chihli</td>
<td>25 Aug. 1-15</td>
<td>24 10</td>
<td>Oct. 10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Also the following perennials

<table>
<thead>
<tr>
<th>Crop</th>
<th>Variety</th>
<th>Number of Plants</th>
<th>Sowing Date</th>
<th>Harvest Date</th>
<th>Distance (inches)</th>
<th>Season</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asparagus</td>
<td>Washington</td>
<td>100-200</td>
<td>Apr. 15</td>
<td>24</td>
<td>8-10</td>
<td>Apr. to July</td>
</tr>
<tr>
<td>Rhubarb</td>
<td>Victoria</td>
<td>12-24 plants</td>
<td>Apr. 1-15</td>
<td>48</td>
<td>3-4</td>
<td>Apr. to July</td>
</tr>
</tbody>
</table>

Notes on Planting Table

1. Dates are approximately correct but naturally vary according to season and locality in the state.
2. Dates of maturity show whether a crop takes half or all of the growing season to produce a crop.
3. The following successions of crops are suggested: (a) Early radish and lettuce followed by late carrots and beets. (b) Early spinach followed by celery. (c) Early peas followed by broccoli and fall cauliflower. (d) Early cabbage followed by fall lettuce and spinach. (e) Early beets and carrots followed by Brussels sprouts and curly kale. (f) Early onion sets or peas followed by late cabbage.
4. Two sowings of beets and carrots are recommended, the first for early summer roots, the second for fall and winter supply.
5. Turnips are usually broadcast for fall production. Ample supplies of "greens" can be grown with spinach, chard, kale, and broccoli.
6. Contrary to general opinion, winter squash will not cross with pumpkin, cucumber, melon, or summer squash. The only two of these mentioned which will cross are pumpkin and summer squash.
7. When only a single row of vegetable is to be planted the main consideration of the gardener is to observe the distance between plants in the row, allowing the given space, as noted, before proceeding to plant the next vegetable.
8. Where more than one variety of a vegetable is suggested, it is not unwise to plant several kinds as in the case of Glory and Ball Head cabbage for fall and winter, dwarf as well as tall beas, varieties of sweet corn differing in season of harvest.
this valuable perennial will begin its season of harvest. Cutting may con-
tinue for two or three months.

While asparagus prefers a well-drained soil that warms up early in the
spring, the plant grows well in any soil of reasonably good type and fer-
tility. In a dormant condition it will withstand the average winter in any
part of the state.

Fifty to one hundred one-year-old plants, costing but 1¢ to 1½¢ apiece,
will supply the average family with an ample number of stalks during the
cutting season of April to July. Asparagus of the finest quality can be ob-
tained by using it shortly after it is harvested. Beetles are often injurious
but can be controlled in the home garden. (See Extension Bulletin 551,
Vegetable-Garden Insect-Pest Control.)

Rhubarb. Every home garden should have a few plants of rhubarb, a
perennial vegetable, which, like asparagus, is one of the earliest producing
crops in the spring. Rhubarb plantings are made from divisions of strong
plants that bear stalks of a good red color. Unlike asparagus, however,
plantings should be renewed every five to eight years in order to keep up
good production of stalks. A few new plants should be set out each spring
to take the place of those that may be dug in the late fall or early winter for
forcing. Rhubarb of the finest quality can be obtained by winter forcing.
(See Extension Bulletin 487 and Special Circular on Forcing Rhubarb.)

Garden rhubarb prefers a well-drained soil to which rotted manure is
applied. Early rhubarb may be encouraged by covering the hills with warm
manure and placing a half barrel over them. Both rhubarb and asparagus
will produce more heavily in succeeding years if irrigated during the sum-
mer months. Few if any insects bother this crop. The harvest season is the
same as for asparagus.

Beans are grown in considerable quantity for use directly from the
garden, and for canning and freezing. For a continuous supply of green or
wax snap beans, successive plantings should be made, beginning after
danger of frost is over, and continuing to within eight weeks or so of the
normal killing frost of the fall. Dwarf varieties will produce more quickly
than the pole types, but the latter are more productive over a longer season.
Early dustings for beetle control are often essential, otherwise the leaves
and pods may be badly chewed. (See methods of controlling the 12-spotted
beetle in Extension Bulletin 551.)

Long production of beans depends upon successive seedings, generous
soil fertilization, and applications of water during the summer. Clean pick-
ing of all pods large enough to be harvested will also insure longer produc-
tion. Weevils must be controlled by treating seed soon after it is threshed
in the fall. The most widely grown varieties of beans are listed in the plant-
ing table on page 2.

Beets and carrots. For early use, planting of beets and carrots should
be made as soon as spring weather and soil conditions permit. Root crops
have the finest quality when grown quickly and harvested before they are
too large. A few successive seedings, therefore, will insure roots of good
quality and medium size.

Young beet plants are susceptible to injury by flea beetles and damp-
ing-off. Dusting will control the former, and to avoid damping-off the seed
may be treated with either mercury or copper compounds. Careful seeding
will eliminate much work in thinning plants in the row. Spring seedings
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should not be depended upon to produce crops of late beets and carrots. (See Extension Bulletin 487, Growing Fall and Early Winter Vegetables.) Irrigation is desirable for both of these crops during dry weather. The tops from young beet roots make excellent greens. For storage of roots, see Extension Circular 339.

Cabbage. An early cabbage crop must be started in the greenhouse or hotbed so that the plants will be ready for transplanting to the garden as soon as early spring conditions will permit. Plants should be somewhat hardened before being set out but not severely so. After transplanting to the garden, control measures for maggots should be carried out, using either the tar pads or the corrosive sublimate method (see Extension Bulletin 551, Vegetable-Garden Insect-Pest Control). Otherwise, quite a percentage of plants may die from the injury by maggots. Cabbage plants must also be treated for lice and green worms. Golden Acre is a useful variety of early cabbage. Row or side dressing with a complete fertilizer during spring rains will stimulate the plants to larger and earlier heading. For summer and early fall cabbage Copenhagen Market and Glory of Enkhuizen are good varieties. Late cabbage culture is discussed in Extension Bulletin 487, and in a special mimeographed circular on cabbage.

Cantaloupes. Early melons are grown by starting plants in individual containers and transplanting them to the garden. This is valuable where the season is short. Plants take about 3½ to 4 weeks to reach a proper size for transplanting. Spear is one of the earliest of the varieties for home use. Well-rotted manure applied in the hill or a few ounces of complete fertilizer mixed with the soil will provide a good stimulant for young plants. Some growers sow the seed in rows and thin to 18 inches between plants. If the seed is planted before danger of frost is over, it should be protected with some form of covers, such as hotcaps. In the home garden a small box sloping to one side with a pane of glass as a cover will be a means of protecting early plantings. As both striped and spotted beetles attack early melon plants, dusting for these is essential.

Cauliflower. Early cauliflower is likely to head prematurely if the plants are set out as early as the first cabbage. It is inadvisable to have plants ready for transplanting to the garden before the weather has become moderately warm and settled in the late spring. If the plants are set out at that time they must be treated for maggots, lice, and green worms as in the case of early cabbage. Well-fertilized soil is essential for good cauliflower plants and heads. The fall season is the best time for a crop of good size and quality. Culture of this crop is discussed in Extension Bulletin 487.

Sweet corn. The finest-quality corn can be grown in the home garden where it can be watched carefully for development to a point at which it can be harvested in the milk stage and consumed shortly thereafter. Continuous production of ears can be obtained by planting different varieties varying in seasons or by making several plantings of one variety. The newer types of hybrid corn are highly productive in yield and grade of ear. In the home as well as the commercial garden planting shorter rows to form a rectangle rather than a few long rows is best. In experiments at Corvallis, suckering has slightly increased the early but not the total yield. Injury by the corn ear worm can be reduced to quite a small percentage of loss by making several dustings at 3- to 5-day intervals (see Extension Bul-
Cucumbers. Soil and fertilizer treatments similar to those for cantaloupes will produce a good crop of cucumbers. There should be a liberal seeding to provide a good stand. Growing plants in rows and thinning to 12-18 inches apart will provide for a better growth and larger yields, especially if no irrigation is possible. Beetles are injurious early in the season and the young plants must be protected by dust. Clean picking is essential for continued production of fruits. Applications of water and some side dressings of nitrogen fertilizer in the summer stimulate heavier yields.

Lettuce. The earliest head lettuce is grown from transplanted plants started with heat at the same time as early cabbage (see Extension Circulars 275, 342, and 343 on Plant Growing in Hotbeds). At the time these plants are set out in the garden the first seeding should be made and repeated at intervals. Spring, early summer, and fall are best times of the year to mature head lettuce. In coastal counties, summer and early fall lettuce is excellent. Avoid growing too heavy foliage of plants that makes them more susceptible to tip burn and slime. Keep the soil stirred lightly about the stems to prevent lettuce drop.

Onions. There are three possible methods of growing crops of onions in the farm garden. Early green onions are produced from small, mature sets, and if these are no larger than three-quarters of an inch in diameter, they will often make good dry onions instead of running to seed after having made a green bulb. The fall and winter storage crop is grown by making seedings directly in the garden, as for Danvers or Sweet Spanish, but the early maturing varieties, such as Bermudas, are usually grown by starting young plants in a heated bed or greenhouse and transplanting them to the garden, in which case the crop will mature during the latter part of the summer. (See circular on Growing Bermuda Onions.)

Peas. The best yields of peas are obtained if the plants are developing and forming pods during moderately cool weather, and seedings should be made accordingly. For the first plantings in the spring when the soil has excessive moisture, seed treatments with mercury or copper compounds greatly improve the stand, preventing seed rot. Successive seedings in the spring or use of varieties differing in season will help to provide a continuous supply of pods. Side dressings of nitrogen fertilizer such as nitrate of soda, calcium nitrate, or sulphate of ammonia during spring rains stimulate vine and pod growth. Early dustings for aphis will prevent serious infestations and reduce danger of mosaic. When plants first bloom they should be dusted for control of weevils. For a fall crop of peas, seed two to two and a half months before desired time of harvest.

Spinach. This is a hardy and quick-growing crop for greens and under spring temperatures will be ready for harvesting in about 45 to 50 days. The young plants are subject to damping-off soon after coming through the
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Ground. Seed treatment, as for peas, is a distinct advantage in improving the stand of plants. A few successive seedings will produce continuous harvestings, but no seeding should be made later than about May 1 as the plants will make seed stalks in hot weather. Side dressings with nitrogen fertilizers hasten growth during the spring. No plant thinning is necessary. The growth of fall and early winter spinach is discussed in Extension Bulletin 487.

Sweet potatoes. In warm, sandy, or silt loam soils, good sweet potatoes can be grown and matured if the frost-free season is long and warm enough, usually about 120 to 130 days being necessary. Plants can be grown from tubers planted in a hotbed or can be bought. Nancy Hall and Triumph are the most widely grown varieties. The former has given good yields on the sandy loam soil on the station grounds at Corvallis. The plants are tender when set out and should be transplanted in cloudy weather. Harvesting is done promptly after the first fall frosts. Tubers should be dried well at a temperature of 80° to 85° F. before being put away at a storage temperature of 55° F. or so. (See Publications, page 8.)

Tomatoes. Probably most important of all home garden crops on the farm is the tomato. Early fruiting is obtained by choice of early varieties, setting out well-grown plants, slightly but not severely hardened, and using a well balanced fertilizer high in phosphoric acid. In areas of a short frost-free season, covering the plants for a week or so after setting them out will induce earlier ripening. Hotcaps or home-made protectors of a box with a pane of glass as a covering are useful. Plants should be dusted for flea beetles soon after being set out.

Unless limited space in the garden is concerned, no particular objectives are gained by pruning and staking the plants. Better protection of fruits from sun scald and discoloration and an increase in total yield are obtained by allowing the plants to grow naturally on the ground. Fruits may sometimes be induced to rot by lying on the soil; but the main rot of tomatoes is at the blossom end, which rot is induced by an insufficient amount of soil moisture for the plant and fruit during periods of warm weather. Irrigation is useful, therefore, in tomato growing to assist in maintaining uniform soil moisture.

As mature green tomatoes or “green-ripes” will develop a normal red color under moderate room temperatures, the harvesting season for home-grown fruit may be considerably lengthened by gathering the mature green tomatoes before frost. Immature green fruit will not color. Tomatoes will keep well in a storage temperature of 45° to 50° F. without ripening, but at 50° F. upward will slowly assume a red color. (See Extension Circular 339 Vegetable Storage.)

Additional Suggestions

1. Unprofitable home gardens are usually due to any or all of the following factors: lack of planning the garden; too few plantings, thus causing gaps in production; using inferior seed; insufficient soil fertilization; lack of humus (See Extension Bulletin 524); little if any insect control work (see Extension Bulletin 551); inconsistent care in looking after plantings; need of irrigation.

2. Well-grown plants of certain vegetables for transplanting, such as cabbage, lettuce, onions, cauliflower, tomatoes, celery, and pepper aid ma-
in giving the crop a good start. These should either be grown in hotbeds or small greenhouses or purchased from some reliable plant grower.

3. Commercial fertilizers are often a valuable stimulant to vegetable growth. Of particular value are side dressings to rows of vegetables as indicated in the discussion regarding certain crops in the preceding paragraphs. A special circular is available concerning fertilizer materials to use and how to apply them (Extension Bulletin 524).

4. Many home gardens will repay, in increased yields and value of crops, money and time spent in irrigation. The water can be readily applied by gravity or sprinkling from the water storage tank on the farm or pumped from some nearby river, creek, or well.

5. There is little excuse for an insect-eaten garden. Most of the common vegetable insects can be readily controlled with standard poison dusts or sprays. A complete dust containing calcium arsenate, nicotine sulphate, and a filler of lime or sulphur is useful for the control of many leaf-eating or leaf-sucking insects. Keep handy a copy of Bulletin 551, Vegetable-Garden Insect-Pest Control.

6. Fall and early winter vegetables must usually be started a number of weeks before the expected maturity of the crop. Extension Bulletin 487, dealing with this important phase of gardening, should be used by all who desire a complete garden.

7. Crops that are not discussed in this bulletin but the culture of which is to be found in Extension Bulletin 427, Growing Fall and Early Winter Vegetables, are as follows: cabbage, cauliflower, Brussels sprouts, curly kale, sprouting broccoli, fall head lettuce, spinach, celery, celeriac, Chinese cabbage, mustard, late carrots and beets, radish, turnip, pumpkin and squash, kohlrabi, Swiss chard, salsify.

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PUBLICATIONS USEFUL IN HOME AND COMMERCIAL VEGETABLE GROWING

**Bulletins**
- Extension Bulletin 457. Planting the subsistence vegetable garden.

**Mimeographed Circulars**
- Greenhouses, Hotbeds, Cold Frames, Plants
  - A monthly schedule of operations in growing vegetables for home use on the general farm.
  - Small greenhouses for growing vegetable plants and crops.
  - Growing early vegetable plants under glass.
  - Treating soil for control of the damping-off disease.
  - Construction and operation of the cold-frame in vegetable growing.
  - Growing vegetable plants in the manure-heated hotbed.
  - The flue-heated hotbed in growing early vegetable plants.
  - Greenhouse vegetables—tomatoes—cucumbers.
  - Applying formaldehyde to greenhouse soils.
  - Suggestions for the control of tomato mosaic and streak.
  - Growing and forcing Witloof chicory or French endive.
  - Forcing rhubarb.

**Crops**
- Artichoke
- Asparagus
- Snap beans
- Beets
- Broccoli
- Brussels sprouts
- Cabbage
- Cauliflower
- Carrots
- Cantaloupe
- Celery
- Cucumber
- Garlic
- Horseradish
- Lettuce
- Onion
- Green peas
- Pumpkin
- Tomato
- Rhubarb
- Sweet corn
- Sweet potatoes
- Squash

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