Spinach

Spinach (*Spinacia oleracea*) is a hardy, cool-season crop that can be planted in early spring or fall throughout South Carolina. It can survive temperatures of 20 °F without injury, making it an excellent vegetable to harvest through the winter and into the spring, when given proper maintenance.

### Planting Dates

<table>
<thead>
<tr>
<th>Area</th>
<th>Spring</th>
<th>Fall</th>
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<tbody>
<tr>
<td>Piedmont</td>
<td>Feb. 15-Mar. 15</td>
<td>Sept. 15-30</td>
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<tr>
<td>Central</td>
<td>Feb. 1-25</td>
<td>Sept. 15-Oct. 20</td>
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<tr>
<td>Coastal</td>
<td>Jan. 1-Feb. 25</td>
<td>Sept. 15-Nov. 10</td>
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Spinach grows well on a variety of soils, but it prefers a fertile sandy loam high in organic matter. Plant spinach in early spring to avoid high temperatures and long days, which cause the plants to bolt or form flower stalks. Soil temperature above 85 °F will inhibit seed germination.

Plant spinach seed in rows 1 to 3 feet apart, spacing seed 2 inches apart in the row. Plant seed ½ inch deep and firm the soil over the seed to help ensure germination. Seed can also be broadcast on 12 inch-wide beds. It is important to use new, fresh seed each year. Spinach seed that is more than a year old does not germinate well.

Raised beds that are approximately 3 inches high are good in the Coastal area because the improved drainage may reduce the incidence of damping-off of young seedlings. Do not use raised beds in the sandy Central area because heavy rains will erode the bed.

### Cultivar Types

Most spinach that is grown in South Carolina is of the semi-savoy type. The savoy characteristic refers to the amount of leaf crinkle. Slow-bolting is an important varietal characteristic for overwintered and spring plantings. Bolting is the formation of the flower stalk. Resistance to downy mildew is an important characteristic in a spinach variety.

### Recommended Cultivars

- Melody
- Space

### Fertilizing

A soil test is always the best method of determining the fertilization needs of the crop. Information on soil testing is available in HGIC 1652, Soil Testing.
Follow the results of a soil test to maintain a soil pH between 5.8 and 6.5 and optimal fertility levels. If a soil test has not been taken, apply 5-10-10 at 3 pounds per 100 square feet before planting. Sidedress once during the growing season with 33-0-0 at 1 pound per 100 feet of row or calcium nitrate (15-0-0) at 2 pounds per 100 feet of row. More frequent sidedressing may be required if the garden is sandy or if leaching rains occur.

Soil pH is important in growing spinach. If limestone is recommended as a result of a soil test, incorporate the lime into the planting area at least three months prior to planting.

Proper watering and the use of calcium nitrate as a sidedressing discourages blackheart and tipburn, which are calcium deficiency disorders.

**Watering**

Water the garden to provide a uniform moisture supply to the crop. The garden should be watered in the morning so that the foliage is dry before dark. Water the garden sufficiently to moisten the soil to a depth of 6 inches. Light sprinklings will encourage shallow rooting of the plants. Spinach requires a uniform supply of moisture to produce a high-quality crop.

**Cultural Practices**

Control weeds in the planting with shallow cultivation. Do not cultivate deeply because this will damage roots. Do not move soil toward the plants because spinach leaves that are covered by soil will rot rapidly.

**Harvest & Storage**

Spinach should be ready to harvest in about 37 to 45 days after planting. Harvest dark green, tender leaves that are 3 to 6 inches long by picking individual leaves or cutting leaves. Start by picking the outer leaves and harvest the newer leaves as they reach the desired size. Remove the petioles (leaf stems) if they are too large and fibrous. Rinse the spinach by using paper towels or a salad spinner. Store spinach in plastic bags in the refrigerator.

**Problems**

Insects that may be a problem in growing spinach are aphids, cutworms, cabbage loopers, corn earworms and diamondback moth caterpillars. Aphids are a major problem because they transmit viruses to the plants.

The primary disease problems with this crop are downy mildew, white rust and seedling damping-off.

Excerpted from *Home Vegetable Gardening*, EC 570, 2002.

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