

Home Gardening Series

Spinach

Craig R. Andersen
Associate Professor and
Extension Specialist -
Vegetables

Environment

Light – sunny
Soil – well-drained
Fertility – medium
pH – 6.0 to 7.2
Temperature – cool
Moisture – average

Culture

Planting – direct seed, late winter
or fall
Spacing – 2-4 inches x 24 inches, thin
Hardiness – cool-season, hardy
Fertilizer – heavy feeder, requires high
calcium and sulfur

Spinach – *Spinacia oleracea*

Spinach is a member of the beet family and is closely related to Swiss chard. It is a cool-season vegetable grown in early spring or late fall, because long, hot summer days cause it to “bolt” (form a seedstalk) making it unusable. One of the more important vegetable greens grown in the United States for both salad and cooking, spinach is rich in vitamins and can be grown in all parts of Arkansas.

Cultural Practices

Planting Time

The first planting can be made as soon as the soil can be prepared in late winter. If the soil was prepared in the fall, seeds can be broadcast over frozen ground or snow cover in late

winter. Seed spinach again in late summer for fall and early winter harvest. Spinach will survive over the winter (when plants are one-fourth to one-third grown) on well-drained soil and resume growth in spring for an early harvest. Spinach can be grown in hotbeds or protected cold frames for winter salads.



Spacing and Depth of Planting

Sow 6 to 12 seeds per foot of row. Cover 1/2 inch deep. When the plants are 1 inch high, thin to 2 to 4 inches apart. Closer spacing (no thinning) is satisfactory when the entire plants are to be harvested. The rows may be as close as 12 inches, depending upon the method used for controlling weeds. Little cultivation is necessary.

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Cultivars

Variety	Days to Maturity	Seed/ 100 Ft of Row	Disease Resistance or Tolerance	Remarks
Bloomsdale Long Standing	42	1 oz		Resistant to blue mold. Long standing savoy type.
Tyee Hybrid	45	1 oz	DM 1,3	Semi-savoyed dark green leaf. Slow to bolt in the spring. Good disease resistance.
Avon	44	1 oz		Can be sown twice for extra yield. Quick-growing, large, tender, dark green, slightly crinkled leaves.
Melody Hybrid	43	1 oz	DM 1,2 and CMV	Thick, dark green, semi-savoyed leaves. Great yields.

Abbreviations: **DM**: Downy Mildew; **CMV**: Cucumber Mosaic Virus

Care

Spinach grows best with ample moisture and a fertile, well-drained soil. Usually, no supplemental fertilizer is needed. If growth is slow or the plants are light green, side-dress with a nitrogen fertilizer containing sulfur. You could supplement your nitrogen fertilizer with Epsom salts (2:1 ratio) to supply sulfur.

Harvesting

The plants may be harvested whenever the leaves are large enough to use (a rosette of at least five to six leaves). Cut the plant at, or just below, the soil surface. Spinach is of best quality if cut while young. Two or three separate seedings of short rows will provide harvest over an extended period. Some gardeners prefer to pick the outer leaves when they are 3 inches long and retain the younger leaves for later harvest. Harvest the entire crop when seedstalk formation begins in the spring.

Frequently Asked Questions

Q. I've heard that spinach is extremely high in minerals and vitamins but also contains high levels of something which can cause problems. Is there any truth to this?

A. Spinach contains high concentrations of oxalic acid which can interfere with the use of calcium or magnesium in the diet. The same is true for rhubarb and Swiss chard.

Q. What causes spinach to develop flower stalks (seedstalks) before a crop can be harvested?

A. Spinach bolts quickly to seed during the long days of late spring or summer. Warm temperature accelerates this development. Varieties that are long standing or slow to bolt are best adapted for spring planting.

Q. What causes yellowing, stunting and early death of plants?

A. These conditions are caused by fusarium or damping-off fungi. Grow resistant varieties and use soil solarization on garden sites.

Q. How do I keep my spinach growing vigorously instead of slowing down?

A. Spinach responds to liberal application of a nitrogen fertilizer which stimulates growth and production of leaves. Application of ammonium sulfate applied as a side-dress at the rate of 2 to 3 tablespoons per 10 feet of spinach row will hasten growth and improve spinach yields. Apply when the plants are about 2 inches tall and again after the first harvest.

Q. Should spinach be harvested by removing the outer, older leaves or by pulling the entire plant?

A. This depends on whether it is a spring- or fall-planted crop. Spinach will go to seed quickly in the spring, so the best harvesting method is to pull the entire plant. When planting in early fall for winter harvesting, harvest the outer leaves and allow the plant to continue to grow and produce additional foliage.

Q. What is Malabar spinach?

A. Malabar spinach, not a true spinach and sometimes called summer spinach, is an attractive, glossy-leaved vine that grows rapidly during warm weather and produces edible leaves and shoots in 70 to 80 days. Since it grows a vigorous vine, train Malabar spinach against a fence or wall. Harvest young leaves and growing tips throughout the summer. Seed may be saved from the plant in the fall for replanting in the next garden.

Q. Can New Zealand spinach be grown successfully in Arkansas?

- A. Yes. New Zealand spinach, not a true spinach plant, is a low-growing, warm-season plant which spreads 3 to 5 feet. New Zealand spinach should be started indoors in peat pots and transplanted in the spring after the danger of frost. Young, tender stems and leaves can be harvested through the summer in most areas.

Q. The foliage on my spinach plants developed white, ruptured areas underneath the leaf and a faint yellow color on the upper side of the leaf.

- A. This is white rust, a fungus that causes severe loss of foliage. It is favored by cool, moist weather and can be controlled with foliar sprays of maneb-type fungicide or resistant varieties, such as Fall Green.

Q. The foliage on my spinach plants has developed a bluish-gray material underneath the leaf. The leaves dried quickly.

- A. This is blue mold of spinach caused by a fungus and is controlled with foliar sprays.

Q. White spots develop quickly on the upper sides of my spinach leaves, then form holes. The leaves look ragged.

- A. This is either Cercospora leaf spot or Anthracnose. These fungal diseases attack spinach causing the described symptoms.

Q. The young leaves of my spinach plant are chlorotic and appear nitrogen deficient, but applications of nitrogen have no effect.

- A. Your spinach has a sulfur deficiency. Add 1/2 cup of Epsom salt to a gallon of water, and apply to 10 feet of row.

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DR. CRAIG R. ANDERSEN is associate professor and Extension specialist - vegetables, University of Arkansas Division of Agriculture, Cooperative Extension Service, Fayetteville.

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