

Home Gardening Series

Lettuce

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Vegetables

Environment

Light – sunny
Soil – well-drained loam
Fertility – rich
pH – 6.0 to 7.0
Temperature – cool
Moisture – moist

Culture

Planting – according to type
Spacing – according to type
Hardiness – hardy annual
Fertilizer – medium feeder

Lettuce – *Lactuca sativa*

Lettuce is native to southern Europe and Western Asia. It descended from wild lettuce *lactuca scariola*, a common weed of roadsides and wastelands in both the Old and New Worlds. It is a leafy green vegetable of great antiquity. The Greeks cultivated three varieties of it; the Persian kings used it as early as 300 B.C.; and the Moors developed many types of lettuce, among them the present-day Romaine. All the varieties that are grown now were known in Europe before the Middle Ages. Less than a hundred years ago, it was cultivated only in home gardens, now lettuce is an important commercial crop, with several hundred different varieties of it grown.

Lettuce is a fairly hardy, cool-weather vegetable that thrives when the mean daily temperature is between 60 and 70 degrees F. It

should be planted in early spring or late summer. At high temperatures, growth is stunted, the leaves may be bitter and the seedstalk too elongated. Some types and varieties of lettuce withstand heat better than others.

There are five distinct types of lettuce – leaf (also known as loose-leaf), Cos or Romaine, crisphead, butterhead and stem (also called asparagus lettuce).



Leaf lettuce is best adapted to Arkansas conditions and produces crisp leaves loosely arranged on the stalk. Nearly every gardener has at least a short row of lettuce, making it the most widely planted salad vegetable. Cos or Romaine forms an upright, elongated head and is an excellent addition to salads and sandwiches. The butterhead varieties are generally small, semiheading types that have tender, soft leaves and a delicate flavor. Stem lettuce forms an elongated seedstalk that is used mainly in stewed, creamed and Chinese dishes. Crisphead varieties are the least adapted to Arkansas

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Cultivars

Crop	Cultivar	Days to Maturity	Seed/ 100 Ft of Row	Sources	Remarks
Lettuce	Grand Rapids (leaf)	45	1/16 oz	2, 8, 9	Broad, finely waved leaves with curled margin; pale green, rosette growth.
	Ruby (leaf)	45	1/16 oz	4, 5	Waved bronze red leaves, rosette growth, slow bolting.
	Bibb (butterhead)	60	1/16 oz	2, 3, 10	Small rosette, thick, dark-green leaves, forms a loose head.
	Buttercrunch (butterhead)	65	1/16 oz	1, 2, 3, 4, 5, 6, 7, 8, 10	Attractive Bibb type that is more tolerant and bolts less than Bibb All-America winner.
	Freckles (romaine)	55	1/16 oz	3, 5	Red spotted Romaine, holds well in the heat.

conditions and require the most care. They are extremely sensitive to heat and rain and must be grown from transplants that are started early.

Sources

There are many different sources for these cultivars. Some sources include the following:

1vh W. Atlee Burpee Company
300 Park Avenue
Warminster, PA 18974-001
Tel: 1-800-888-1447

2v Chesmore Seed Company
5030 Highway 36 E.
St. Joseph, MO 64507
Tel: 1-800-383-0865

3vh The Cook's Garden
P. O. Box 5010
Hodges, SC 29653-5010
Tel: (800) 457-9703

4vh Gurney's Seed and Nursery Company
110 Capital Street
Yankton, SD 57079
Tel: (605) 665-1930

5v Johnny's Selected Seeds
Rural Route 1, Box 2580
Albion, ME 04910-9731
Tel: (207) 437-4301

6vh Park Seed Company
1 Parkton Avenue
Greenwood, SC 29647-0001
Tel: (800) 845-3369

7v Southern Exposure Seed Exchange
P. O. Box 170
Earlyville, VA 22936
Tel: (804) 973-4703

8vh Stokes Seeds, Inc.
P. O. Box 548
Buffalo, NY 14240-0548
Tel: (716) 695-6980

9v Twilley Seed Company, Inc.
121 Gary Road
Hodges, SC 29653
Tel: 1-800-622-7333

10v Willhite Seed Company
P. O. Box 23
Poolville, TX 76487
Tel: 1-800-828-1840

v – vegetables
h – primarily herbs

Cultural Practices

Planting Time

Leaf, Cos and butterhead lettuce can be planted in the spring when the soil is dry enough to rake the surface. Two or more successive plantings at 10- to 14-day intervals will provide a continuous supply of lettuce. Lettuce does not withstand hot summer days, so complete spring planting during May. Late planting started in mid-August will mature during cool fall weather. Water is essential for seed germination and establishment of seedlings.

Start transplants indoors or in a cold frame and set them in the garden in mid-March. Harden transplants outdoors so they become acclimatized to

the conditions under which they will be grown. Cos and leaf lettuce can also be transplanted for earlier harvest. We do not recommend planting head lettuce in Arkansas. Head lettuce must be transplanted and is susceptible to bacterial soft rots when exposed to frequent rains.

With the use of cold frames and row covers, lettuce can be produced 10 months of the year. Many gardeners use plastic-covered tunnels to protect their lettuce during the winter months.

Spacing and Depth of Planting

Plant seed 1/4 to 1/2 inch deep (10 seeds per foot) in single, double or triple rows 12 to 18 inches apart. Do not plant too deep because lettuce seed has a light requirement for germination. Thin seedlings to 4 inches apart for leaf lettuce and 6 to 8 inches apart for Cos or butterhead. Removed seedlings may be transplanted or eaten.

Care

Lettuce is shallow-rooted, so it should be hoed or cultivated carefully. Lettuce adapts to many types of soil as long as there is good drainage. Soil test your garden and lime the soil to raise the pH above 6.0. Apply phosphorus and potassium fertilizers prior to planting. Nitrogen fertilization should be kept to a minimum prior to planting. Apply nitrogen as a side-dress application once the crop is established. Frequent, light watering will cause the leaves to develop rapidly, resulting in high-quality lettuce. Watering lettuce early in the morning will reduce the number of hours of leaf wetness and limit foliar diseases. Overwatering, especially in heavy, tight soils, can lead to diseases, soft growth and scalding or burning of the leaf margins.

Harvesting

Leaf lettuce may be cut whenever it is large enough to use. Cutting every other plant at ground level will give the remaining plants more space for growth. Leaf lettuce reaches maximum size (6 to 12 ounces) in 50 to 60 days. Butterhead varieties form small, loose heads that weigh from 4 to 8 ounces at harvest (60 to 70 days). The innermost leaves, which tend to blanch themselves, are a delicacy. Cos varieties have an upright growth habit and form a large head.

To store lettuce, wash, drip dry and place it in a plastic bag in the refrigerator. Lettuce keeps best at 32 degrees F and at high (95 percent) humidity.

Common Problems

Tipburn is a physiological condition that causes lettuce to “die back” at the edge of the leaves. It results from a calcium deficiency in the young,

rapidly growing tissue at the edge of the leaves. Clip off any brown leaf tissue and use the remainder of the leaf. Frequent, light watering and liming the soil to help raise the pH will help prevent tipburn. Some varieties are resistant to this condition.

diseases – stem, leaf and root rots.

insects – aphids, root aphids.

cultural – tipburn (irregular moisture, or lack of calcium; bolting, bitterness due to high temperature or lack of moisture; leaf rots due to soil and/or moisture on leaves.

Harvesting and Storage

days to maturity – 40 to 80 days, depending on type

harvest – Leaf lettuce can be used when plants are 5 to 6 inches tall. Use the older, outer leaves that contain high levels of calcium first. Harvest every other one of the largest plants to accomplish thinning.

Bibb lettuce is mature when the leaves begin to cup inward to form a loose head. The heads will never become compact. Cos or Romaine is ready for use when the leaves have elongated and overlapped to form a fairly tight head about 4 inches wide at the base and 6 to 8 inches tall. Leaf and Bibb will store as long as four weeks if the leaves are dry when bagged. If lettuce is to be stored, harvest when it is dry. Remove the outer leaves of lettuce but do not wash, and place it in a plastic bag and store in the crisper drawer.

approximate yields (per 10 feet row) – 5 to 10 pounds

amount to raise per person – 5 to 10 pounds

storage – cool (32 degrees F), moist (95 percent relative humidity) conditions; 2 to 3 weeks

preservation – cool, moist refrigeration; canning and freezing are not recommended

Frequently Asked Questions

Q. Why did my lettuce seed not germinate?

A. Failure of seed to germinate is caused by insufficient moisture, planting too deep or old seed. Lettuce seed does not keep well. It is advisable to obtain new seed each spring. Store seed for fall planting in a sealed container in the refrigerator or freezer.

Q. Seedstalks have appeared in the center of my lettuce plants. What should I do?

A. The formation of seedstalks, bolting, is caused by a combination of long days, warm temperatures and age. When seedstalks begin to form, harvest lettuce immediately and store in the refrigerator.

Q. Is leaf-type lettuce easier to grow than the head-type lettuce?

A. Yes. Leaf lettuce matures faster, and most varieties of leaf-type lettuce will mature in six to seven weeks from seeding. Head lettuce varieties often require 10 to 11 weeks and have many more disease problems.

Q. Does lettuce seed have to be refrigerated before planting in the garden?

A. No. Refrigeration is not necessary for germination. Light is required for germination. Lettuce should be planted in early spring as soon as the ground can be worked. For fall planting, temperatures should average below 80 degrees F to assure maximum germination and growth of young seedlings.

Q. Why did my lettuce taste so bitter and start to grow tall so quickly?

A. Most home garden lettuce, especially the Bibb variety, goes to seed or bolts quickly in high temperature, long-day conditions and develops bitter flavor in hot weather. Buttercrunch, Saladbowl, Ruby and Romaine are more tolerant of these conditions and remain sweet and tender for a longer period.