Leafy Salad Vegetables: Lettuce, Celery, Cress, Endive, Escarole, Chicory

by Bruce Johnstone

The principal leafy salad vegetables covered in this chapter, especially lettuce, are among the most widely grown vegetables by home gardeners throughout the United States. Most of them—but not celery and chicory—are easy and fast to grow, and with the exception of celery are among the relatively few vegetables that tolerate moderate shade.

They also are adapted to small home gardens because each of them requires but little space for an average size crop. Salad crops in general also conform to the currently popular American taste for low calorie and high vitamin content foods.

Besides the leafy salad crops covered in this chapter—lettuce, celery, cress, endive, escarole and chicory—a few other leafy vegetables covered under different categories and in separate chapters also can be used advantageously as green leafy ingredients in salad making. Among these are spinach, New Zealand spinach, chard and mustard, each adding a slightly different flavor, color and texture to various salads.

Other common salad vegetables such as tomatoes, cucumbers, onions and radishes are covered in different chapters of this book and can be located through the table of contents or the index.

Lettuce

Known botanically as Lactuca sativa of the Composite family, lettuce probably originated somewhere in Asia Minor and the eastern Mediterranean region. Used as a food plant for some 2,500 years, it was a favorite of Persian kings in the sixth century B.C. and later as a food plant by the Romans. In the late 15th century, it first was brought to the New World by Columbus.

Lettuce seed is rather small (25,000 seeds per ounce), germinates quickly (7 days) in cool (65°-70° F) temperature, and produces a crop comparatively fast. Loose leaf lettuce types normally produce a crop in 40 to 50 days while most heading varieties require 60 to 80 days to mature.

The loose leaf varieties are more widely grown than heading types in home gardens because they are faster to mature, easier to grow, and somewhat more shade tolerant. They also have about three times as much vitamin A and roughly six times as much ascorbic acid or vitamin C as the equivalent amount of the heading varieties. Loose leaf varieties of lettuce require less thinning and thrive under somewhat warmer and more adverse conditions than the heading types.

Because lettuce basically is a cool weather crop, seed should be sown direct in the garden in early spring in order to mature before the summer heat arrives to cause bolting and deterioration of the foliage. (Bolting is premature flowering). Five feet of row per adult in family is usually enough for each planting.

Successive plantings can be made in midsummer for autumn crops. The seed should be scattered thinly, covered a quarter inch deep in rows as close as 8 and up to 24 inches apart, depending on space available.

Thinning is not absolutely necessary for loose leaf kinds but spacing the plants 4 to 6 inches apart is com-
monly recommended and results in larger, more easily harvested leaves. Typical loose leaf varieties available are: Black Seeded Simpson, Grand Rapids and Salad Bowl.

Heading varieties are of two main types, crisphead and butterhead. Crisphead varieties are of thinner texture, are crisp, frequently have curled and serrated edges, are harder and more durable in handling and storage. Most of the so called Iceberg types available in stores are of this class. Other typical crisphead varieties: Ithaca, Great Lakes 118 and 659.

In contrast, butterhead types are softer and more fragile in texture, have thicker leaves and a smooth, buttery substance. Butterhead types—Bibb, Buttercrunch, White Boston—have a distinct delicate flavor and usually are more perishable than the crisphead varieties.

Heading varieties have cultural requirements similar to the loosehead types of lettuce except they require a longer, cooler growing season, more careful thinning, and need full sun for best development. All lettuce types are heavy feeders and because of their limited root structure require ample and constant soil moisture. They need high nitrogen fertility in a moist soil and give best results if growth continues unchecked.

Cos lettuce (Romaine) or celery lettuce has an elongated framework, smooth outer leaves, and a blanched inner head. The leaves are more brittle than the other heading types, the midrib is heavier, and the flavor uniquely sweet and mild. Cos types usually take 65 to 70 days to mature and have the same basic planting and cultural requirements as the other heading types. Most popular varieties are Paris White Cos and Paris Island Cos.

Where there are short, hot growing seasons as in much of our Northern, Central and Midwest states, the heading varieties are most successfully grown by starting seed indoors in very early spring, then getting the transplants into the garden as soon as frost danger is past. In this way the plants can mature and form heads

Left, young gardener checks lettuce in her garden in Hawaii. Right, Bibb lettuce being harvested.
before summer heat curtails growth and development.

Harvest with a sharp knife as soon as looseleaf types are the size of your hand. Heading varieties should be full and firm. If allowed to go to seed in warm weather, leaves lose quality and become bitter.

When cultivating or hoeing lettuce, take care to keep the blade shallow and not too close to the plants to avoid injuring the root system which is sparse and close to the surface.

Homegrown lettuce is relatively free of disease although leafhoppers can be a problem, mostly in spreading virus disease. Effective chemical controls are available.

**Celery**

Celery (Apium graveolens—family Umbelliferae) is native to marshy areas from Scandinavia to Algeria and Egypt and eastward to the Caucasus and into Baluchistan and parts of India.

The two main classes of celery are the green and the golden, or self-blanching. The green type with unblanched stalks adds considerably to the appearance and flavor of both salads and casseroles and is currently more popular on American tables. This type includes Giant Pascal, Forkhook and Utah strains. For use as a canape of raw vegetables, some cooks still prefer the golden or self-blanching type with yellowish white stalks and usually a milder, blander flavor. Popular golden varieties grown are Golden Plume, Cornell 19 and Michigan Golden.

Celery seed is very small (60,000 per ounce) compared with other common vegetables, very slow to germinate (15 to 21 days) and requires a long, cool growing season of 120 to 140 days to produce a crop.

Celery needs a rich, moist soil and mild, equable growing conditions without sudden cold spells or dry periods to check its growth. Muck or sandy loam soils with good fertility are ideal. These exacting conditions make celery growing by home gardeners rather difficult, especially in much of the Midwest and inland Northern areas. In coastal regions or areas near large bodies of water, the usually longer and more temperate growing conditions are more suitable for celery culture.

Because celery is such a slow growing, rather difficult crop to raise, it should not ordinarily be chosen by a beginning gardener in most areas. It is successfully produced, however, by many experienced gardeners in favorable areas who take the time and care necessary. Because of its many culinary uses from salads to casseroles to attractive canapes, it probably is well worth the effort.

Celery seed must be started very early (usually indoors) 8 to 10 weeks before spring planting time unless commercially grown transplants are available. Germination is very slow, usually 2 to 3 weeks, and can be hastened slightly by presoaking the seed.

*Celery display in a garden.*
overnight before sowing in flats 1/16 inch deep. Seed flats must be kept moist and covered at 60° to 70° F temperature until the sprouts appear.

At this stage, they should be uncovered immediately and moved to direct sunlight and a slightly cooler situation. Seedlings must be transplanted or thinned so that developing plants are 1 1/2 to 2 inches apart and kept in full sunlight until frost-free planting time. The young plants then can be hardened off outdoors, and set in the garden, spacing them 6 to 10 inches apart in rows 2 feet apart.

For ordinary usage, figure on a half-dozen plants per adult in family. Harvest by cutting at base of stalk with a sharp knife. The usual harvest span is from the stage when the stalk is two-thirds of full size until fully would be about a 5-10-10 ratio.

Celery requires ample and continuous soil moisture and a high fertility. If soil is not rich, fertilizer should be used. The formula depends on the individual soil type, but in most cases would be about a 5-10-10 ratio.

Celery may be attacked by leaf-eating worms and aphids (plant lice). You can control these insects with approved insecticides. Blight and mildew also may be problems; control them with an appropriate fungicide.

Endive—Escarole

Endive (Cichorium endivia—family Compositae) is native to regions of the eastern Mediterranean and was grown and used by Greeks and Egyptians before the Christian era. Closely related to chicory, endive has small seeds (27,000 per ounce) which germinate quickly (5 to 14 days) under moist conditions and in varying temperatures from 60° to 70° F.

There are two principal types of endive: Curled or Curly—with loose, narrow, medium green fringed and curly leaves; and Batavian or escarole with broader, thicker, smooth leaves that have a white midrib forming a loose head with partly blanched inner foliage.

Endive is more tolerant of summer heat and low soil moisture than most lettuce varieties, and is also slower to grow and mature (usually 85 to 95 days). The curled varieties can be cut and cropped, yet continue to produce new secondary edible leaves. These curled varieties such as Green Curled, Ruffec, and Deep Heart have a slightly bitter flavor but are very decorative and desirable in salads and for garnish. The broad-leaved Batavian or escarole varieties are somewhat milder and add a different flavor and texture to salads.

Seed is usually sown direct in the garden in the early spring 1/4 inch deep in rows 2 to 3 feet apart, later thinned to 6 or 8 inches between plants. Four to five feet of row per adult in family will suffice for average table use.

For earlier harvest, seed may be started in flats indoors 6 to 8 weeks before planting time, then transplanted to the garden. Summer sowing of seed will produce autumn crops which, maturing in cooler weather, are apt to be somewhat milder in flavor and with less of the slight bitterness characteristic of summer harvested crops. Loosely tying the outer leaves upright to exclude sunlight tends to blanch the inner leaves, making them milder and reducing the bitter taste.

Harvest by cutting at base or carefully pulling entire plant when inner leaves are partly or wholly blanched. Outer leaves are apt to be bitter and usually are discarded.

Endive seldom is bothered by insects or disease problems. Sometimes, in mild damp areas, slugs or snails may appear and eat the foliage. Control them with special snail bait or slug protectant. Dry ashes around plants usually repel both slugs and snails.
Cress

Garden Cress or pepper grass (*Lepidium sativum*) belongs to the Cruciferae family and although similar in flavor to water cress and upland cress, it is far more popular and much easier to grow under ordinary gardening conditions. Water Cress (*Nasturtium officinale*) is a semi-aquatic plant requiring very cold spring water conditions to grow well. Upland Cress (*Barbarea verna*) tolerates a normal soil but is slower to grow, somewhat bitter in taste, and not commonly produced in U. S. gardens.

Garden Cress is both easy to grow and extremely fast to form edible leaves. The seeds are moderate in size (12,000 per ounce) and under moderate temperature of 65° to 70° germinate in 4 to 7 days.

Garden cress is probably the fastest seed to sprout of all garden vegetables. The young seedlings also grow rapidly and the very young immature leaves are tender, mildly pungent like water cress, and they can be cropped for table use when only a few inches high—10 days to 2 weeks old.

Garden cress is used commonly as a quick growing indoor crop, often available in preseeded kits with a medium of vermiculite, peat moss, etc., and is intended to be grown in a sunny kitchen window to produce edible leaves in 10 to 15 days. Grown this way indoors, cress can be available and used all winter long by successive plantings.

Outdoor spring and summer garden culture is also easy enough but for continued harvest one must make successive plantings every few weeks. Hot summer weather causes garden cress plants to bolt quickly and lose quality, so early cropping is necessary.

Sow the seed ¼ inch deep in rows a foot apart and harvest as soon as seedlings are 3 to 4 inches high for the best quality.

A 10- to 15-foot row usually suffices for the average family. Cut with a sharp knife as soon as leaves are formed.

Chicory

Chicory (*Cichorium intybus—family Compositae*), also known as French Endive or Witloof Chicory, is thought to be native to Europe and Asia. Although some chicory is grown for the roots which are dried, ground and used as a coffee adulterant, we will cover here the salad type and culture in which the blanched leaves are the garden crop wanted.

Chicory is related closely to endive but usually produced in a far different manner.

The seeds are small (27,000 per ounce) and they germinate in 7 to 14 days at temperatures between 68° to 85° R.

Seed ordinarily is spring sown a quarter inch deep in 15- to 18-inch rows and the seedlings thinned to eventually stand 4 to 5 inches apart. It must not be planted too early or premature flowering (bolting) will occur.

The parsnip-like roots are harvested in the fall before freezing weather, washed, and trimmed of all leaves except the single central crown bud on top. The roots are then stored under cover in a cool frost-free room.

These roots are stored and later planted for winter production of the edible shoots by setting them slant-wise at a depth of 4 to 6 inches with crowns about even with the surface in a medium of sand, sawdust or a similar porous medium at temperatures of 50° to 60° F in a dark place. In 3 to 4 weeks the blanched heads or shoots appear and are ready to cut and harvest. Successive winter plantings of the stored dormant roots every 2 to 3 weeks can be made to produce edible shoots throughout the winter.