NebGuide

University of Nebraska–Lincoln Extension, Institute of Agriculture and Natural Resources

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Eggplant

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The tender and often purple eggplant is closely related to sweet pepper, tomato, and potato, but not grown as frequently as these garden favorites. This NebGuide examines the best cultivars and techniques to successfully grow eggplant in the home garden.

The eggplant *(Figure 1)* belongs to the *Solanaceae* or nightshade family, which includes the sweet pepper, tomato, and potato. Other members of this family include petunia, Jerusalem cherry, tobacco, and horse nettle.

Eggplant was so named because the first cultivars introduced to English-speaking people had egg-shaped fruits. Its scientific name is *Solanum melongena* var. *esculentum*.

Figure 1. Eggplant.

Figure 2. Eggplant flowers are violet-colored and star-shaped.

Description and Use

Eggplant leaves are large, alternate and lobed, with the underside of most cultivars (varieties) covered with dense wool-like hairs. The flowers are violet-colored and star-shaped, and bloom either solitary or in clusters of two or more *(Figure 2)*. These characteristics give the plant an ornamental look.

The fruit can vary in shape from oval to round and long to oblong. The color of the mature fruit is typically purple to purple-black, but can also be red, yellowish-white, white, or green, some with streaks or speckles on the skin.

Eggplant fruit is usually baked, sautéed, cut into strips or cubes and fried, or stuffed. According to the USDA, a cooked, boiled, and drained 100-gram, edible portion of eggplant consists of 94.3 percent water. This portion provides 19 calories, 1 gram of protein, 0.2 gram of fat, and 4.1 grams of carbohydrate, including 0.9 gram of fiber.

The average yield of eggplant varies with the cultivar planted and the growing conditions. Two or three plants per family member are usually sufficient — depending, of course, on the acceptability of eggplant into the diet. Eggplant is usually not suitable for canning but can be frozen.

Cultivars

Eggplant cultivars recommended for Nebraska include, but are not limited to:

- 'Black Beauty' — Large, smooth, purplish fruit
- 'Black Bell' — Medium-large, round, smooth, glossy black/purple fruits; extremely disease-resistant
- 'Burpee Hybrid' — Oval, medium-sized, dark, glossy purple fruit
- 'Dusky' — Medium-sized; adapted to container growing

Specialty and unusual cultivars include:

- 'Ichabod' or 'Ichiban' — Long, slender, oriental-type fruit; adapted to container growing
- 'Hansel' — Clusters of miniature, finger-sized, elongated purple fruits; early maturing; adapted to container growing
- 'Fairy Tale' — Small, elongated, white fruits with violet/purple streaks, can be harvested small, but remain tender and non-bitter at larger sizes; adapted to container growing
- 'White Italian' — Medium-sized white fruit, slightly milder flavor than purple types
- 'Applegreen' — Apple-green colored fruit
- 'Casper' — Cylindrical, white-skinned fruit 6 inches long
- 'Easter Egg' — Fruit is white; resembles hen's egg in size and shape

Purchasing Transplants vs. Growing Your Own

Most home gardeners find it more convenient to buy their eggplants as transplants rather than to grow their own from seed due to insufficient space, inadequate growing conditions, lack of time, or because they only need a few plants. On the other hand, some cultivars are not locally available as transplants so you have no choice but to grow your own from seed.

When purchasing transplants, select those that are sturdy, dark green in color, and not yet in bloom. Leaves should be fully expanded and free of diseases and insects. Plants grown in individual containers may cost more, but are usually worth it because their roots are disturbed less when they are set out in the garden.

Eggplants grown from seed in the home should be seeded four to six weeks before the plants are to be set out in the garden. Commercial growing mixtures for starting seeds are available. Plant the seeds 1/2 inch deep and keep the medium moist and at a temperature of 75° to 85°F. Be sure the soil doesn't dry out during the germination period.

When the germinating seeds break through the soil surface, water the soil only as necessary to keep it moist to the touch. Damping-off disease can be a problem. Supplemental artificial light may be necessary if adequate natural light is not available.

Transplant young seedlings into growing containers when the stems have straightened and the first true leaves have opened. This is usually 15 to 20 days after the seed was sown, but may be longer at lower temperatures. The young plants should be exposed to full sunlight if possible. The best temperatures for growing transplants are from 65° to 75°F during the day and 60° to 70°F at night. Growing the plants in a hotbed or cold frame works well.

Transplanting to the Garden

Eggplants require more care than many other types of plants when transplanting to the garden. Hardening off the plants enables them to withstand the planting shock. Start the hardening off process 10 days to 2 weeks before planting them in the garden. Begin by moving the plants in their containers outdoors to a shady spot (a cold frame works well for this purpose). Move the plants into sunlight for short periods each day, gradually increasing the length of exposure. Reduce the watering frequency to slow growth, but don't allow the plants to wilt.

Don't put tender seedlings outdoors on windy days. Once the plants are hardened off and the danger of a frost is passed, they can be planted in the garden.

Planting

The eggplant is a warm-season crop and is very sensitive to frost. It can even be injured by periods of cold temperatures above freezing, and is more sensitive to low temperatures than either tomatoes or peppers. The average earliest planting date in southeast Nebraska is May 5, in central Nebraska May 10, and in western Nebraska May 20. Of course, in some years you can get by with an earlier planting date, while in other years it may be later. The plants are usually set 2 to 3 feet apart in rows 3 to 4 feet apart. Row covers can help protect plants from spring cold periods.

Plant eggplants in full sun. Those growing in partial shade will produce less than optimum yields and take longer to ripen fruit. Plants will also perform better with protection from the wind. The site should have fertile, well-drained soil. If possible, avoid planting where eggplants, tomatoes, potatoes, or peppers were planted the previous year. All of these can be susceptible to and harbor similar disease problems.

Garden soils can be tilled or spaded in the fall after the harvest season or in the spring before planting. Soil should not be worked while it is wet.

Eggplant is a heavy feeder and therefore may need extra fertilizer for a good crop. A soil test may be necessary to determine the fertility of your soil.

If soil nutrition is low, apply 2 to 3 lb of a complete fertilizer (i.e., 5-10-10, 6-12-12, or 9-16-16) per 100 square feet of garden area when preparing the soil. A cup of starter fertilizer (high in phosphorus) solution can also be poured around each newly transplanted seedling to help stimulate growth.

A side dressing of 1/4 cup of fertilizer in a 2-foot circle around the base of the plant immediately after flowering will be beneficial on soils low in nitrogen. Do not over-fertilize.

Individual plants can also be grown in large containers, but these plants need more attention as the soil tends to dry out quickly.

Watering

Eggplants need generous moisture at all times. One inch of water each week is a minimum. This may vary, however, due to air temperature, wind, soil type, rainfall, and whether or not a mulch is used.

Sandy soils require more frequent watering. Heavy soakings at weekly intervals are better than many light soakings. Light, frequent waterings promote shallow root systems. Mulching will reduce water loss from the soil.

Weed Control

Weeds compete with eggplants for sunlight, nutrients, and water. In the average home garden, weeds are best controlled with cultivation or mulches. In large plantings, herbicides can be used.

Mulches help keep weeds down, reduce water loss, and stabilize soil temperatures. Inorganic mulches are available in many garden stores. The use of plastic can also help warm the soil in the spring.

Organic mulches, such as straw, leaves or grass clippings, can also be used. Organic mulches should be at least 2 inches — and preferably 3 to 4 inches — deep. Mulching too early in the season with organic mulches will keep the soil cool, resulting in slow growth, poor fruit set, and shallow rooting. Organic mulches are best applied after soil temperatures have reached 75°F.

Harvesting

Eggplant fruits are harvested from the time they are one-third grown to full size. Remove the fruit before the flesh becomes soft and the seeds begin to harden.

Overmature fruits that have passed the prime stage for eating become spongy, seeds harden and darken, and the fruit surface becomes dull. Fruits can be snapped from the plant, but less damage usually occurs if they are clipped with a sharp knife or pruning shears. The short stem that attaches the fruit to the stalk is often covered with sharp spines so gloves may be necessary when harvesting.

The harvested fruits are delicate; be careful when handling them. Removing fruit when it reaches a mature size encourages continued production of new fruit. In general, eggplant fruit will only keep well for a few days.

Staking may be necessary later in the season as the number and size of the fruit increase. Rain, wind and irrigation can cause the branches to break or droop. Fruit touching the ground may spoil.

Problems

Eggplants are subject to a number of problems, including diseases, insects, and those brought on by weather and other environmental factors.

Eggplant diseases include seed rot, damping-off, anthracnose, late blight, alternaria leaf spot, and verticillium wilt. Seed treatment and proper growing conditions can reduce seed rot and damping-off. Verticillium wilt is best controlled by long-term rotations with non-related crops that are not susceptible to wilt, and by planting in well-drained soil.

Insects can also cause damage to eggplants grown in Nebraska. Cutworms may feed on new leaves or cut the stems on small plants. Spider mites can be a problem during hot weather. Flea beetles, which chew small holes in the leaves of eggplants, can be severe in some years. The Colorado potato beetle can also cause severe damage if left uncontrolled. Control insects and similar pests with appropriate insecticides, but only if needed.

Poor performance of eggplants can also be caused by unsatisfactory growing conditions, including improper soil fertility, low temperatures, lack of moisture, lack of light, wind damage, and sunscald, which is caused by allowing the fruits to be exposed to direct sunlight. Encourage plants to produce good leaf cover and provide uniform moisture during hot/dry growing conditions.

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