



Vegetables: Growing Eggplant in Home Gardens

WASHINGTON STATE UNIVERSITY EXTENSION FACT SHEET • FS149E

Crop at a Glance

Growing season: Summer.

Time to transplant: Spring, after date of last killing frost.

Spacing: Plant transplants in rows 24 inches apart with rows 36 inches apart.

Days to harvest: 100 to 150 days from seed; 55 to 85 days from transplants.

Yield: 4 to 6 large fruit or 20 pounds per 10-foot row.

Common starting method: Transplant.

Introduction

Eggplants are a warm-season vegetable native to Asia. They grow best in the regions of the state that are warmer and have a longer growing season. In the cooler areas of the state, gardeners should consider growing short-season eggplant cultivars to be successful. In addition to the large, purple, oval eggplant familiar to gardeners, there are many other eggplant cultivars to grow; in many different sizes, shapes, and fruit colors.

Selecting Types to Plant

There are three general types of eggplant. These include the large oval-fruited eggplant with purple skin; the oriental or Asian elongated type with purple skin; and the novelty types with fruit of various sizes, shapes, and colors, including white, lavender, green, yellow, orange, and red. Some gardeners incorporate eggplant into their edible landscapes for their ornamental, brightly colored fruit and large leaves.

Choosing a Planting Site

Eggplant grows best in a planting site that provides full sun and fertile, well-drained, slightly acid soil with a high

level of organic matter. However, eggplant will tolerate less favorable soil conditions.

Planting Guidelines

Because eggplant is a warm-season vegetable with a long growing season, it is typically started from transplants, and not directly seeded in the garden. Larger transplants, about six to eight inches tall and grown in individual pots, will give you a head-start on eggplant's long growing season.

Cool weather is not favorable for eggplant growth. Wait at least two to three weeks after the last average date of frost before planting to allow the soil to warm up to 60°F. Growing eggplant, a tropical vegetable, is a challenge in the cooler regions of the state, especially where nighttime temperatures frequently drop below 50°F in late spring and summer. Consider planting eggplant in raised beds or covering the soil with black plastic mulch several weeks before planting. Remove the plastic at planting time and reuse it next season. After planting, provide the plants with more heat by using hot caps, cloches, spun fiber row covers, plastic covered cages, "Walls of Water" (double-walled clear plastic cylinders that hold water), or other garden devices that retain heat.

When planting in rows, place transplants 24 inches apart with rows 36 inches apart. If planting in raised beds instead of rows, space plants 24 inches apart. If planting in containers, eggplant require at least a two-gallon pot per plant. Cultivars with compact plants are a good choice for container growing.

Plant Maintenance

Before planting, have your garden soil tested and follow the recommendations for proper fertilization before planting. After planting, eggplants need to be fertilized with a nitrogen fertilizer once during the growing season. Apply a 21-0-0 fertilizer to the plants when the fruit first start to form; the recommended rate of 1½ teaspoons per plant should be applied to the soil, near the base of the plant. Under heavy irrigation or during a very wet growing season, an additional application of fertilizer may be needed.

This fact sheet is part of the WSU Extension Home Garden Series.

Water

Eggplants require about one to two inches of water per week during the growing season. Maintain an evenly moist soil; watering deeply only as needed. Uneven soil moisture will lead to poor production. An application of organic mulch after the soil warms up can help conserve soil moisture and reduce weeds.

Eggplants have perfect flowers (containing both male and female parts) and were thought to be self-pollinating like their relatives the tomato and the pepper. However, research indicates that eggplant pollination and fruit-set is enhanced by bee activity. Encourage wild bees and other pollinating insects in your garden by planting pollinator-attracting flowers nearby. Minimize the use of pesticides in your garden and follow label precautions when they are used. With or without insect pollination, blossom drop will occur without flowers setting fruit when temperatures are above 95°F or below 60°F.

When grown under favorable conditions, some eggplant cultivars develop large, heavy fruit that require support to prevent branches from breaking or to keep the plants from blowing over in windy conditions. Consider staking eggplants or providing support with a wire tomato cage.

Pest Management

Eggplant is not affected by many serious insect or disease problems, but gardeners should periodically inspect their plants for signs of insects or diseases. The most common



Eggplants have perfect flowers (containing both male and female parts), however, eggplant pollination and fruit-set is enhanced by bee activity. Photo by Marianne Ophardt, WSU Extension, Benton County.

insect pests are flea beetles, whiteflies, and aphids (see Common Problems chart).

The most common disease problems are verticillium wilt and curly top virus. Because verticillium wilt is a soil-fungus disease, it is important to rotate your garden crops. Do not plant eggplant in soil that has been planted with crops that are also susceptible to verticillium wilt (within the previous three to four years). This includes tomatoes, peppers, potatoes, strawberries, cucumbers, squash, pumpkins, and melons. These crops can be rotated with non-susceptible crops, which include lettuce, spinach, root crops, beans, peas, onion, garlic, cabbage, broccoli, cauliflower, and other crops in the mustard (Brassicaceae) family.

Common Problems

Curly Top, Curly Top Virus

A virus found mostly in eastern Washington; spread to plants by leafhoppers carrying the disease.

Photo: Eric J. Sorensen, WSU Extension, retired

Symptoms: Puckering and downward curling of leaves. The plants then turn yellow and die. Older plants may only show yellowing and stunted growth. Leaves are thick and brittle.

Corrective Action: Remove and destroy infected plants. Discourage leafhoppers by shading plants. There are no pesticides that will effectively control the spread of the disease by the leafhopper.



Verticillium Wilt (Verticillium spp.)

A soil-borne fungus disease found in Washington soils.

Photo: Lindsey duToit, WSU Extension, Mount Vernon

Symptoms: The fungus enters through roots and plugs the plant's vascular system, which conducts water and nutrients throughout the plant. The first symptoms are the yellowing of the lower leaves and stunted plant growth, followed by wilting from the base of the plant upward. Lengthwise cuts into the stem of an infected plant will show discolored vascular tissue.

Corrective Action: Nothing can be done to save an infected plant. Diseased plants should be removed and discarded without composting. To avoid problems with verticillium wilt, rotate garden crops and do not plant verticillium-susceptible crops in the same area for several years. Verticillium-susceptible crops include tomatoes, potatoes, peppers, squash, cucumbers, pumpkins, melons, and strawberries.



*For a list of products available for home garden pests, consult WSU Hortsense at <http://pep.wsu.edu/hortsense>.

Flea Beetle
(*Epitrix subcrinita*)

Actual adult size is 1/15 to 1/6 inch.

Photo: Mike Bush, WSU Extension Yakima County

Symptoms: Small metallic-black beetles feed on eggplant leaves causing small, round holes early in the season when plants are small. Flea beetle larvae also feed on the underground parts of the plant.

Corrective Action: To discourage the beetles remove weeds in and around the garden. There may be insecticides registered for use on eggplant to control adult flea beetles.*



Whitefly
(*Trialeurodes vaporariorum*)

Actual adult size is 1/10" or less.

Photo: Mike Bush, WSU Extension Yakima County

Symptoms: Whiteflies feed on the undersides of leaves, sucking sap from plant tissues. As a result, leaves wilt, turn yellow and then brown, and may drop from the plant. A sign of their presence is a cloud of very small moth-like flies disbursing when the plant is disturbed.

Corrective Action: Whiteflies primarily infest greenhouse-grown transplants, so carefully check transplants to avoid introducing them into your garden. Protect beneficial insects that feed on the whitefly by not using broad-spectrum insecticides. There may be insecticides registered for use on eggplant to control whitefly.*



Aphid
(*Myzus persicae*, pictured, *Aphis gossypii*, and others)

Actual adult size is 1/8 inch.

Photo: Mike Bush, WSU Extension Yakima County

Symptoms: Aphids suck sap from the leaves and secrete sticky honeydew (excess sugary plant sap) on the leaves. Heavy feeding may stunt plants.

Corrective Action: A non-chemical option for aphid control is to knock the aphids off the plant with a strong stream of water. Protect beneficial insects that feed on aphids by not using broad-spectrum insecticides. There may be insecticides registered for use on eggplant to control aphids.*



*For a list of products available for home garden pests, consult WSU Hortsense at <http://pep.wsu.edu/hortsense>.

Harvest and Storage

Harvest large oval-fruited cultivars when the skin is still glossy and the fruit is six to eight inches long or about 10 to 20 days after flowering. A ripe eggplant will be soft enough to allow you to make a thumbprint in the skin when you apply some pressure, but the thumbprint will disappear when the pressure is relieved. Eggplant is over-mature when the skin turns dull and brown or when pressure from your thumb leaves a permanent mark. The flesh of over-mature fruit is spongy and seedy with an undesirable, bitter flavor. It should be removed from the plant and discarded.

Asian elongated types should be harvested when the skin is still glossy and the fruit is 1/2- to 1-inch in diameter. Novelty cultivars should also be harvested when the skin is glossy and the fruit reach the size and color specific to that cultivar.

The stem of eggplant is very tough and woody, so fruit should be cut from the plant using garden shears or a sharp knife, instead of twisting the fruit off the plant. The stem and calyx (the outside portion of the flower that protected the petals before it opened) at the top of the fruit can be very spiny, so wear gloves when harvesting. The calyx remains attached to the top of the fruit as the flower fades and develops into a fruit—leave the calyx on the fruit when harvesting.

Eggplant does not store well and its quality deteriorates quickly (within a week or less). After harvesting, the fruit should be prepared for eating as soon as possible. Eggplant store best in a cool (55°F) spot in a perforated plastic bag. If stored below 50°F in the refrigerator, they will sustain chilling injury, causing the fruit to develop water soaked spots and the flesh to turn brown and spongy. When storing,



Asian eggplant types should be harvested when the skin is still glossy and the fruit is 1/2- to 1-inch in diameter. Photo by Marianne Ophardt, WSU Extension, Benton County.

don't store eggplant with apples, bananas, or tomatoes. These, and certain other fruit, produce ethylene gas which will speed deterioration.

End Uses

For fresh eating, eggplant is typically cooked before eating. There are many recipes available for baked, broiled, sautéed, roasted, grilled, or fried eggplant. In some cuisines, they are also pickled before eating. If preserved, eggplant is best frozen.

The University of Georgia hosts the National Center for Home Food Preservation website (<http://www.uga.edu>), which offers research-based recommendations for most methods of home food preservation.

Further Reading

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Photo in header by Marianne Ophardt.

Use pesticides with care. Apply them only to plants, animals, or sites as listed on the label. When mixing and applying pesticides, follow all label precautions to protect yourself and others around you. It is a violation of the law to disregard label directions. If pesticides are spilled on skin or clothing, remove clothing and wash skin thoroughly. Store pesticides in their original containers and keep them out of the reach of children, pets, and livestock.

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