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How to Grow Eggplant in Connecticut

Eggplant is a semitropical/tropical plant originating in Asia and India where it is a short-lived perennial. Eggplant is thought to have originally been introduced into North America by Thomas Jefferson for his Monticello garden. By the 1860's, seed catalogs in the United States listed several varieties of eggplant. Eggplant is widely popular in Asian, African, and Mediterranean countries. Eggplant, a warm-season plant, is cultivated primarily as annuals from transplants in the United States to reduce the field growing period by several weeks. It is a member of the Solanaceae (tomato) family related to tomato, pepper, and potato.

Eggplant is rich in vitamins, minerals, and dietary fiber. In addition, eggplant is also high in chlorogenic acid, a plant compound known for its strong antioxidant properties. Chlorogenic acid has been found to lower LDL ("bad" cholesterol) and to fight the free radicals that cause cancer. The skin of eggplant contains nusunin, an antioxidant anthocyanin, which protects brain fats by scavenging free radicals that target brain lipids.

Cultivars. Eggplants are a botanically diverse group that can be divided into two groups based on fruit shape and color. The first group are the traditional

teardrop-shaped, large-fruited eggplant. Fruit of these eggplants are typically oval or long and tapered in shape with a black, purplish-black, or purple skin color, often with a green calyx (scalloped cap that sits atop of each eggplant). Popular cultivars in this group include Black Beauty, Black Magic, Classic, and Black Bell.

The second group is collectively referred to as the "specialty" eggplants, some of which are referred to as "oriental" or "Asian". Asian eggplants generally have a purple calyx. Fruit shapes of specialty varieties vary from long and smooth to ball or bell-shaped with colors ranging from white, to green, to purplish black, to purple. Japanese and Chinese eggplants (Orient Express, Orient Charm, Hansel) tend to be long and thin, looking like purple fingers. White (Gretel), green, and striated (Fairy Tale) versions of these cultivars are also available. Thai eggplants (Calliope and Kermit), on the other hand, are more spherical, and also display a range of colors. Thai eggplant can also be very small with one version looking remarkably like a chicken egg.

Asian eggplants are used extensively in Oriental cuisine, but can also be used in Western dishes. Asian eggplant is sweet and tender, in contrast to traditional eggplant which has a slightly bitter flavor. These

traits of Asian eggplant can be compromised if the fruit remains on the plant too long. As a result, Asian eggplant is usually harvested young and used promptly, since it can acquire bitterness in storage.

Growing transplants. Containers for growing transplants can be purchased or you can use plastic egg cartons, milk cartons, aluminum foil loaf pans, or pie tins. Provide drainage holes at the bottom of the container before filling the container nearly to the top with a soilless mix. Several commercial sterile soilless mixes are available. It is better not use garden soils as they may be contaminated with weed seeds and disease and drainage is often poor.

Sow seeds approximately 8 weeks before planting in the field. When using trays or pans, plant the seeds in rows and cover with one quarter of an inch of mix. Do not plant seeds too thickly. When planting in individual containers, plant two or three seeds per container. After thorough watering, cover the containers with a piece of plastic or slip them into a clear plastic bag to maintain high humidity until germination, usually in 7-14 days. Optimum germination temperature is 80°F. If the temperature drops below 80°F, germination slows.

As soon as the seeds germinate, remove the plastic to increase the light intensity to prevent spindly growth. Maintain in at least 6 hours of direct sunlight each day. Cool, white, 40-watt fluorescent tubes placed 6 to 8 inches above the seedlings can be used as a supplemental light source. Optimum results are obtained if the fluorescent fixture is next to a window to increase the amount of natural light reaching the young seedlings. The planting medium should be kept moist, but avoid overwatering that can cause disease. Individual containers with more than one seedling should be thinned to one plant. Seedlings germinated in trays should be

transplanted to individual containers while still small.

Fertilization. Soluble 20-20-20 fertilizer (1 tbsp/gal) should be added to the potted seedlings about ten days before transplanting. Fertilize the field soil with 10-10-10 at a rate of 1300 lb./A before transplanting. The pH of the field soil should be about 6.5. If the pH is too low, lime can be added at a rate determined by a soil test.

Field transplanting. At least one week before transplanting in the field, transfer seedlings to an outdoor cold frame for hardening. Wait 2 or 3 weeks after the last frost date to allow the soil to warm and then transplant seedlings two to three feet apart in rows three feet apart. At closer row spacing, branches of plants in adjacent rows become intermixed - making harvests more difficult.

Mulches. Eggplant prefers warm soil temperatures. Plastic mulches raise the soil temperature an average of 6-12°F, whereas organic mulches such as compost, leaves, hay, or grass clippings lower the soil temperature 10-18°F. Thus, plastic mulches are preferable to organic mulches for crops that prefer warm soil temperatures. Clear plastic creates a mini greenhouse which favors the growth of weeds that compete with the eggplant plants for water and nutrients. Black plastic prevents weeds from growing. The warming effect of black plastic mulch compared to unamended soil is more evident early in the season. Our studies with jilo (African eggplant) showed that plants mulched with black plastic had greater and earlier yields compared to plants without mulch. Although harvest of fruit from mulched and unmulched rows began on the same date, yield from the mulched rows were more than twice the yield from the unmulched plots in the early harvests.

The only detriment to black plastic mulch is water stress that may develop if the plastic is laid in dry soil. Ideally, plastic should be laid after a rain or irrigation. Holes should be punched in the plastic after a rain to drain puddles on the plastic and to allow water to penetrate the soil beneath the plastic.

Irrigation. Eggplant should never be allowed to develop water stress because of their high-water requirement. Yields will be greatly reduced, and the eggplant fruits will become tough if they develop water stress during fruit formation. In our studies with jilo, moisture stress caused flowers to abort with little or no fruit set. During the growing season, at least 1 inch of water each week from rainfall or irrigation is needed to promote fruit set.

Insects and diseases. As a member of the Solanaceous family, eggplant can attract Colorado potato beetles that can be controlled by hand if caught early and the plants are checked regularly. Otherwise, insecticides registered for beetle control may be required. Flea beetle infestations can be prevented with the use of row covers which protect the young transplants. Once plants have been in the field for about a month, the plants are large enough that they can withstand any foliar damage and yields will not be affected. Verticillium wilt, a common soil borne disease, causes stunting in plants and yellowing, wilting, and dying of leaves. If possible, plant eggplant or other tomato family crops in the same location only once every three or four years to reduce Verticillium and other soil borne diseases.

Harvest. Eggplant will not set fruit if nighttime temperatures fall below 65°F. Pinch off blossoms 2 to 4 weeks before expected frost so that plants channel energy into ripening existing fruit, not producing new ones. Harvest eggplant any time after

the fruit reaches a third of their mature size. They are ready when the skin turns glossy. Once the skin turns dull, they are past their prime and will contain lots of seeds. The long oriental varieties mature faster than the larger oblong types. Harvesting eggplant early prevents the fruit from becoming too seedy and will encourage increased production. Cut the stem with scissors or a knife to avoid damaging the plant. Light frosts injure the uppermost leaves of most plants, but do not injure the fruits.

Eggplant is one of the lesser grown vegetables in the home garden, but it is easy and rewarding to grow. They add color to your vegetable garden and a delicious item on the dinner table.