



HOW TO GROW PUMPKINS IN CONNECTICUT

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Pumpkins originated in the Americas and were cultivated by the ancient civilizations of Central and South America over 7000 years ago. The name pumpkin originated from “pepon”, the Greek word for “large melon”. Pumpkins belong to the Cucurbits family of vegetables that also includes melons, cucumbers, gourds, and summer/winter squashes. All are vines, although bush forms have recently been developed. Some confusion exists about the difference between pumpkins and squash. The definition of pumpkin and winter squash best centers around their use. Pumpkins can be used in pies and other baked goods, or as painted or carved ornamental jack-o’-lanterns. The mature fruit of winter squash are grown from several different *Cucurbita* species and are used primarily for baking and eating. Most ornamental pumpkin varieties are *C. pepo*, while most used in pies and baking are *C. maxima*.

Cultivars. Many pumpkin cultivars have been developed differing in size from the smallest (miniatures < 1 lb) to the largest (giant > 50 lb), color, shape, stem size, and seed characteristics (naked or edible seeds). The predominant market for pumpkins in southern New England is for jack-o’-lantern types (12 lbs to 20 lbs). Specialty pumpkins come in a wide range of colors and color combinations including white, pale green, tan, burnt orange, and yellow. Shape also

varies from the ideal round, to squatty with a flattened or concave top, to oval, to tall and elongated. Smooth pumpkins are preferred for painting or coloring.

Here are the characteristics of some of the cultivars which we have tested:

Howden – developed by John Howden of Massachusetts. Defines “the look” of a standard jack-o’-lantern type pumpkin. It has a deep orange color, deep ribs, and good handles. Typically averages 25 lbs or greater with one or two pumpkins per vine. Susceptible to downy mildew.

Tom Fox – developed by a New Hampshire farmer. Smaller jack-o’-lantern type known for its long thick strong handles and its durability. Averages about 15 lbs with two or three pumpkins per vine.

Moonshine – small to medium, white pumpkin averaging 8-12 lbs with three to four pumpkins per vine. Long dark green handles. Good for decorating or carving.

Autumn Gold – great for carving and decorating. Unique in that immature fruit is yellow which allows for an early harvest and a more flexible harvest time. Averages 7-10 lbs with 3 to 5 pumpkins per vine.

New England Pie – classic traditional heirloom pie pumpkin on the east coast. Deep orange fruit with deep ribs and moderately thick stems. Averages 4-5 lbs. Flesh is stringless and highly prized for use in pie filling and breads.

Jack-Be-Little – very small (averages less than 0.5 lbs/fruit), fits in the palm of your hand. Orange, ribbed, and flattened. When kept out of the sun, will last for months. They are perfect displayed on a desk or a shaded window sill. They are edible and have a nice flavor.

Oz – precocious yellow fruit that will turn to a deep orange early. Small, averages 3 lbs with smooth skin. Sturdy dark green handles.

Dill's Atlantic Giant – huge, pinkish or orange fruits with weights commonly 50-100 lbs. Fertile soil, wide-spacing (at least 70 sq ft/per plant), and limiting each long-vined plant to one fruit commonly result in 200-300 pounders. Developed by Howard Dill in Nova Scotia.

Rocket – medium-sized, averaging 12 to 20 lbs. Upright shaped with distinctive ribbing and long slender handles. Ripens early to a brilliant, deep orange color.

Hooligan – early, mini (3/4 lb) pumpkins with white, green, and orange mottled color. Fruits are deeply ribbed, with long dark green handles. Flesh is orange and smooth with an excellent sweet pumpkin flavor.

Lil Pump-Ke-Mon – small ornamental creamy colored pumpkins with ribs emphasized by bright orange stripes. The color of the stripes intensifies with maturity. It is also edible.

Transplants or direct-seeded?

Pumpkins can either be grown from transplants or direct-seeded in the field. Advantages of growing pumpkins from transplants include having no gaps in the row from uneven germination and getting a head start on the growing season (especially important when growing large pumpkins). The advantages of direct-seeding are that there is no transplant shock (no interruption of growth) and there is less labor and supplies than is involved when the transplants are indoors.

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. Garden soils may be contaminated with disease and weed seeds, 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 a thorough watering, cover the containers with a piece of plastic or slip them into a clear plastic bag to maintain high humidity until germination. The optimum germination temperature is 80°F. Germination time is usually 7-14 days. If the temperature drops below 80°F, germination slows.

As soon as the seeds germinate, remove the plastic to increase the light intensity which prevents spindly growth. Maintain 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 light reaching the young plants. The planting medium should be kept moist, but avoid overwatering. 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. Add soluble 20-20-20 fertilizer (1 tbsp/gal) 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. In late-May to early June, transplant seedlings three to four feet apart in rows six feet apart being careful not to disturb the roots. Bush and small-fruited varieties can be planted as close as 18 inches apart. Set plants out during the late afternoon or early evening, when the wind has died down, to avoid stress from the hot sun.

Direct-seeding. Seed in early June when the soil has warmed to at least 60°F. Plant three seeds in planting hills three to four feet apart in rows six feet apart. With hills, the soil will warm quickly and the seeds will germinate faster. Plant seeds 1 inch deep into the hills. After germination, thin crop to one plant/planting site without disturbing the roots of the remaining plant.

Black Plastic. Black plastic mulch is very effective because it absorbs heat, warms the soil, and maintains good moisture levels. This can speed the harvest since the soil will be warm when the seeds and transplants are planted. The plastic can be installed when the soil is in good planting condition, anytime from a few days to 2 weeks before planting. Soil should be moist when plastic is laid.

Organic mulches. In the summer, after the soil has warmed, organic mulches (peat moss, compost, untreated lawn clippings, or weathered straw) can be applied to a depth of three inches. Applying organic mulch before the soil has warmed will slow growth.

Weed control. After an early cultivation about 2 weeks after planting or about June 15, pumpkins need minimal care to discourage weeds. The vines quickly

spread to cover the ground and shade out most weeds.

Irrigation. Pumpkins should receive 1 inch of water per week. When watering, try to keep foliage and fruit dry unless it is a sunny day. Dampness will make disease and rot more likely. Water in the morning or early afternoon so the foliage dries by evening. Decrease watering later in the season to encourage fruit to mature. At this time, the root systems will be more extensive and able to withstand drier conditions.

Pollination. The first flowers that appear on pumpkins are usually male. Male blossoms do not bear an immature fruit directly behind the petals as do female flowers. They furnish pollen for bees to pollinate the female flowers, and then drop off the plant naturally without fruit production. The female flowers have an ovary directly behind the flower, which looks like a tiny fruit. When pollinated, it swells to form a fruit. If the female flowers bloom before there are male flowers to supply pollen, they will dry up or produce small fruits that drop off and die.

Insects and Diseases. Pumpkins are susceptible to a number of insects and diseases that can reduce yields or kill the plants. Contact the Experiment Station for insect and disease control recommendations.

Harvest and Storage. Pumpkins will keep best if they are harvested when mature. The vines will usually be dying back at this time. Cover during a light frost and avoid leaving pumpkins out during a hard frost to prevent softening. Do not pick pumpkins because they have reached your desired size; if you want small pumpkins, plant a small variety. A pumpkin is ripe when its skin turns a deep, solid color (orange for most varieties). When you thumb the pumpkin, the rind will feel hard and it will sound hollow. Press your nail into the pumpkin's skin; if it resists puncture, it

is ripe. To harvest the pumpkin, cut the fruit off the vine carefully with a sharp knife or pruners; do not tear. Be sure not to cut too close to the pumpkin; a liberal amount of stem (3 to 4 inches) will increase the pumpkin's keeping time. Handle pumpkins very gently or they may bruise. Pumpkins should be cured in the sun for about a week to toughen the skin and then stored in a cool, dry place – anywhere around 55°F.

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