

How To Grow A Giant Pumpkin

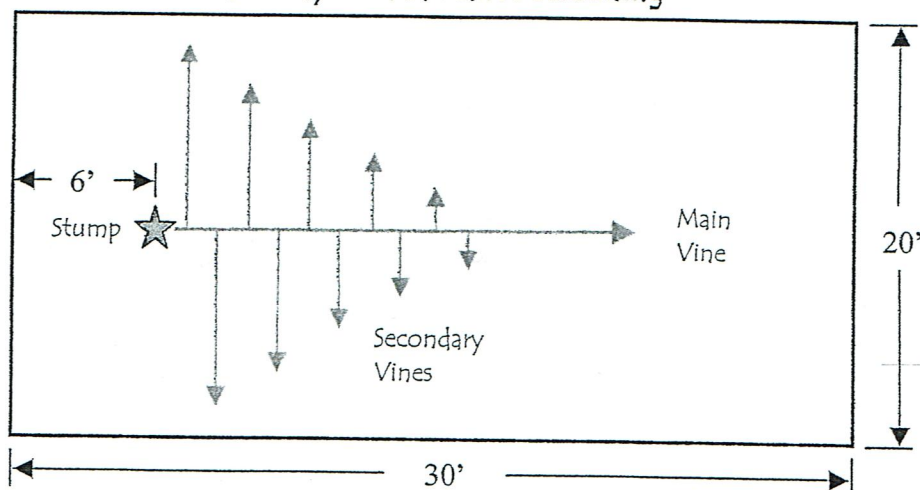
If you want to grow a world-record pumpkin, you can forget about every variety of pumpkin out there except Howard Dill's patented Atlantic Giant. Since 1979, no other pumpkin variety has been a world champion. The best Atlantic Giant pumpkin seeds can be obtained from competitive pumpkin growers or Howard Dill Enterprises (www.howarddill.com)

The primary thing you need to grow a big pumpkin is good soil. Pumpkins are large consumers of all the major plant nutrients (nitrogen, phosphorus and potassium), as well as other nutrients like calcium, magnesium and other trace elements. The key for big growth is a balanced soil, well amended with organic matter, deeply tilled and consistent generous watering. Growing a huge pumpkin is a lot of work but you can obtain amazing results if you follow the 12 basic steps listed below.

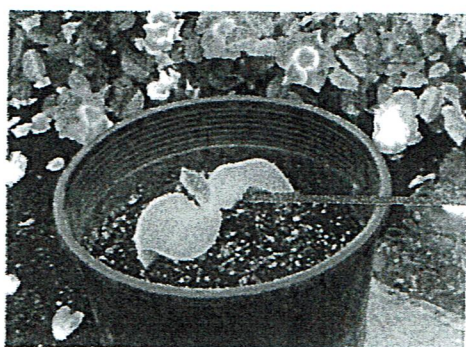


1. **PATCH PREPARATION:** Pumpkin plants thrive in rich balanced soils high in organic matter. If you can, allow a 20' by 30' foot area for each planting site. (Smaller gardens use 16' x 25' min.) In the fall or early spring, apply three to five yards of compost or well-aged manure per planting site. A cover crop planted in the fall and plowed under in the early spring will help protect and condition the soil. Prior to planting, add fertilizers and other amendments as required and till the patch as deep as possible. After final tilling, keep the patch weed free by shallow hoeing and avoid compaction of the soil at all times.

Patch Layout and Plant Positioning



2. **GERMINATE SEEDS:** Start seeds indoors in six-inch peat pots or one gallon containers about the first week of May. Many growers file the edges of the seeds except the tip to promote germination. Keep the soil temperature in the pots at 85 to 90 degrees F. Most seeds will emerge within five days. Do not try to plant the seeds directly outdoors as they will not germinate if the soil is not warm enough.
3. **TRANSPLANT SEEDLINGS:** Transplant seedlings into the garden as soon as possible after germination. Three to four days after germination is ideal. Roots grow quickly and the plant will become root bound in less than a week. The main vine normally grows in the opposite direction of the first true leaf. Plant the seedling so that the main vine will grow down the center of the length of your patch. Transplant with care as pumpkin seedlings are easily set back during transplanting.



direction of main vine growth
is opposite first true leaf.

4. **EARLY PLANT PROTECTION:** Place a small greenhouse over the young plants to protect them from frost, wind and pests. Use a 4 foot by 4 foot structure or larger. Once the plants outgrow the greenhouse, they will need to be protected from the wind until the main vine is on the ground and well rooted. Insert bamboo stakes on both sides of vine near the vine tips to keep the wind from rolling the vines over. The vine tips can become sun sensitive and burn easily. You may have to shade the vine tips with shade cloth to prevent sunburn on new growth.



Polycarbonate wind protection - Bamboo stakes are used to stabilize the plant

5. **TRAIN AND PRUNE VINES:** Pumpkin plants start a new vine at each leaf junction and must be pruned heavily and trained to grow in an orderly fashion. The main vine will start to run about one month after germination. Train the main vine to run down the center of your patch by gently coaching the vine tip and anchoring it in position with bamboo stakes. Allow secondary vines to grow perpendicular to the main vine as shown in the diagram on the first page.
- Pinch off all the tertiary vines from the secondaries as soon as they begin to form. The vines should be buried as they grow to encourage anchor root growth at the leaf junctions. Burying the vines also helps protect the plant from wind damage. When the main vine and the secondaries reach the edge of the patch they should be terminated by pinching off the vine tips.
6. **WATER AND FERTILIZE:** Pumpkin plants like lots of water. The plants should get a good watering two or three times a week. Pumpkin plants are heavy feeders so weekly application of soluble fertilizers is recommended. Young plants need high phosphorus mixes such as 15-30-15. They also respond well to foliar sprays of kelp and fish emulsions. Shift to a more balanced formula, such as 20-20-20, once fruits are set. Apply water-soluble fertilizer at the rate of one pound per week per plant from the fruit set until the end of the growing season. Late in the season also consider the use of foliar calcium to supplement calcium uptake and help prevent fruit splitting. Avoid heavy watering and over fertilizing especially after fruit set as a growth spurt can result in the fruit splitting. Slow and easy wins the race. Remember this when you feel the urge to over-fertilize.
7. **POLLINATE FLOWERS:** Eight to ten weeks after seed starting, the first flowers will start appearing on the plant. Pumpkin plants have both male and female flowers. The females are easy to distinguish from the male flowers because they have a small pumpkin at their base and a multi-lobed stigma. Hand pollination of the female flowers is recommended to insure the flower is fully pollinated. Female flowers only last for several hours after they open and must be pollinated early in the morning before it becomes too hot. Use at least three male flowers per female. Pick the males early before the bees get to them and remove the outer flower petals, exposing the pollen-laden stamen. Gently swab the stigma (internal parts) of the female flower with the stamen or use a small artist's brush to transfer the pollen to the female stigma.



Pollinate at least the first three females that open on the plant. It is important to get a pumpkin set early, preferably before the middle of July. The earlier a pumpkin is set, the longer it has to grow until harvest. Atlantic Giants can continue to grow for up to 90 days.

8. **SELECT THE MOST PROMISING PUMPKIN:** For the best chance of growing the largest pumpkin, all but one should be removed from the plant. The biggest pumpkins will normally grow on the main vine. Set at least two pumpkins on the secondary vines and use these as backups in case there are problems setting a good pumpkin on the main vine. If the main vine pumpkin is growing significantly slower than the backups, consider trying to set the next female on the main vine or going with a backup on a secondary. You can leave one or two backups on the plant until they get to 10 to 15 days old before culling them. Once you've selected your best prospect, remove all other pumpkins and female flowers from the plant.
9. **POSITION PUMPKIN AND RELIEVE STEM STRESS:** Once a pumpkin has set, its position on the vine becomes extremely important. Most often the stem grows at an acute angle to the vine. However, for optimal long-term growth, the best position is to have the stem perpendicular to the vine. If the stem is not at right angles to the vine naturally, coax it gradually, over about a week's time. Be very careful, because at this early stage the pumpkin may abort or the fragile stem can be injured.



Position the pumpkin's stem perpendicular to the vine. Here a bed of sand is used to help keep the bottom of the pumpkin dry

Place sand, fabric or styrofoam under the pumpkin to protect the bottom surface from the ground. As the pumpkin grows larger, the stem will be torn from the pumpkin if steps are not taken to reduce stem stress. Cut the anchor roots from underside the vine for several feet on either side of the fruit to allow the vine to rise as the pumpkin grows.

When the pumpkin is growing rapidly monitor stem stress often. You may have to remove some secondary vines and reposition the pumpkin repeatedly to keep the stem stress down.

10. **KEEP TRACK OF GROWTH:** Measure your pumpkins at least weekly to track its growth. A competitive pumpkin will have a circumference of about 20" at day 10, 60" at day 20 and 100" at day 30. To estimate weight, measure the circumference of your pumpkins first parallel to the ground around the entire pumpkin, from blossom end to stem. Next, measure over the top in both directions: from ground to ground along the axis from stem to blossom end, then perpendicular to the stem-blossom-end axis. Add these three measurements together, and then look up the estimated weight in the attached table one. A less precise but easier estimate is obtained by simply measuring the circumference from stem to blossom end and obtaining an estimated weight from the attached table two.
11. **SHADE THE PUMPKIN:** As the pumpkin gets larger, it must be shaded from the sun to prevent sunburn and to reduce the chance of splitting. Build a structure around the pumpkin and drape with a plastic tarp or otherwise shade the pumpkin. Some growers cover the pumpkin with a blanket to shield it from the sun during the day and reduce heat loss at night.
12. **MOVING THE PUMPKIN:** Giant pumpkins will usually stop growing at 70-80 days from pollination. If a pumpkin is headed to a weigh off, it should be left on the vine as long as possible. It can lose over a pound a day to evaporation once it is cut from the vine.



A large pumpkin can be moved with the help of some strong friends and a tarp. For larger pumpkins (greater than 500 pounds) consider buying a special moving tarp designed with hand holes. (www.howarddill.com) Gently roll the pumpkin up on one side and position the tarp underneath. Roll it back onto the tarp, gather your friends around and heave-ho! If you have real trouble lifting the pumpkin – it may be a winner!!

Copyright © 2013 Team-Pumpkin. All rights reserved

9