

Tips for Growing your Giant Pumpkin

Notes taken from Dr. Jerry Erschabek's Presentation at the
2016 Goshen County Master Gardener Giant Pumpkin Contest Kickoff
Compiled by Libbey Lundgren, Goshen County Master Gardener

Seed Choice: Dill's Atlantic Pumpkin Seeds

Site Choice: - The site you choose must receive maximum sun exposure. 4 hours a day is minimum

Space Requirements: normally recommend 1000 square feet per plant. If you don't have that 10'x10' - 100 square feet will do.

Formula: 200 sq. feet = 150# pumpkin

400 sq. feet = 350-# pumpkin

600 sq. feet = 400-600 # pumpkin

Over 600 sq. feet = 400-800 or more pumpkin

Soil Preparation: Prepare for competition.

1st purchase a pH kit – figure out the pH level. The ideal pH for a pumpkin is a range between 6.5 and 7.0. Adjust your soil's pH upwards with dolomite lime (acidic limestone) or downward with sulfur. Most of the soils around us are pH 7.5 – 8.0. Reduce by using peat moss and Sulfur 10#/100 sq. feet. Jerry used 3#/100 square feet in his garden (put in 4-6 months to 1 year before)

To amend soils – add 1 "compost/ year – at least 2 weeks before you plant or in the fall. For more information on composting manure: <https://bit.ly/compostmanure>

Two weeks before planting your pumpkin seeds outdoors – apply your manure, compost and/or chemical fertilizer evenly to your soil and rototill or work it in with hand tools as deeply as possible.- some even hand sift the rocks and debris out.

TAKE A SOIL TEST – Ward Labs: <https://www.wardlab.com/services/soil-analysis/>

Starting your Pumpkin Seedling:

Our Target date for this year is October 3, 2020 – so figure back from that date

The seed will germinate in 3-7 days

The soil needs to be between 65 and 70 degrees

Since May 13th is the average frost date (some say the 15th) figure from there. (If planted directly in the ground May 20th is a good date – you don't want it to freeze or

frost once that plant has germinated) If you put them in a 4" peat pot – put a lot of holes in the sides and the bottom to allow the root to get air and to prevent root rot– if you use a gallon pot put at least 30 holes in it. Use sterilized soil in the pot. Be sure to plant extra plants in case some do not survive. Plant with the pointy end down and the rounded end about ½ inch before soil surface. Before planting soak your seed for at least one hour. Some recommend lightly sanding the edges – NOT the rounded top or pointy bottom – to help germination.

Your pumpkin seedling is ready to be planted outside when it develops its first 2 true leaves. You need to get it in its permanent spot as fast as possible because the roots will grow out of the pots.

Prepare your transplant hole the size of your pot (gallon pot) and have it ready. Carefully transfer your pumpkin plant into the soil in about the center of the area you have prepared for each plant. Pumpkin plants planted in the Northern Hemisphere will vine South; plants planted in the Southern Hemisphere will vine North.

As a note: many champion specimens are produced by growers who don't even open their seed packets until well after the last frost date when weather patterns have stabilized.

Protection: Protect your pumpkin plant with a 'wall of water' for 10-15 days. If it gets too hot – take the wall off. The goal is to make the heat units about 10 degrees hotter and to protect it at night.

To protect it from the wind – use shingles or some sort of wind protection. The wind can rip your plant out of the ground. One idea: Using 1"x2"'s covered with plastic sheeting about 4' long, 4' wide, and 2.5' high for a miniature greenhouse - it may have to be removed if it gets too hot, – It also needs some sort of ventilation holes.

Additional fertilizer:

You can side-dress with compost or manure tea. You can also use compost tea to foliar feed.

At about 4 weeks old – you can foliar spray for extra feeding. Which means to spray the plant with additional fertilizer. If you add too much the plant will grow so fast that it will cause the pumpkin to crack – so this is a boom or bust situation. If it does crack you can use mud or caulk to fill in the crack and it might heal itself. Foliar feed your plant beginning with the manufacturer's recommended dosage on a biweekly schedule. Week by week you can increase until you are spraying at a concentration of 2 – 3 times greater than the manufacturer's dosage. Some champion growers have applied soluble fertilizer to their competitive plants on a 3 day per week schedule up to 5 times the manufacturer's recommended dosages. YOU need to decide how much and how often and if it is too much and too often! It is better to apply less than more! Your foliar feeding regimen should continue all season.

The recommended water is 1" per week – do not let the bottom of the pumpkin get wet – to avoid fungus or mildew. Remember to water deeply. Water in the morning to avoid the development of mildew and to conserve heat. Maintaining a consistent watering schedule helps avoid splits.

The pumpkin's main vine and side runners send down taproots at each vine and leaf juncture. These taproots provide two functions: to anchor the vines and to acquire nutrients for the plant. A trick that many use is covering these vine junctures with a shovelful of soil to promote additional root growth.

Pollinating your pumpkin:

Mid-July is the usual target date for pollinating your pumpkin. You must pollinate whether or not your plant is of competitive size. The male flowers are on tall stems and the female flowers remain low and have a bulbous stem. You can leave pollination to the bees or you may hand-pollinate. (Plant cosmos or bee loving flowers in the pumpkin patch to attract pollinators if you are leaving it to nature).

To hand pollinate, 10 am seems to be the perfect time. The pumpkin you pick needs to be 10 feet or further from the mother root. Pick the flower that is perpendicular to the main root. Do not pick one that is at a sharp angle. Pollinate at least 2 – 3 pumpkins to make sure that one will be viable. Within approximately 15 days your pumpkin should be the size of a soccer ball. At this stage, if the pumpkin has been pollinated the growth rate will continue.

Female flowers are receptive between 6 – 10 am on the morning open. Male pollen is viable only the day the flower opens. The evening before opening, M/F flowers will transition from green to orange tips. Take 2-3 male 'paintbrushes' (or use a Q-tip to transfer pollen) and lightly brush on female lobes to transfer pollen. Watch this video to learn more about hand pollinating your giant pumpkin: <https://bit.ly/GPpollination>

Pumpkin Leaves and vines:

If your pumpkin has 800 leaves it can support 1 pumpkin

800-1200 leaves – 2 pumpkins

More than 1200 leaves – 3 pumpkins

Remove all female flowers (the shorter ones) and all other pumpkins when you have picked the pumpkin you want. (In Jerry's words – take the rest of the girls off).

How long do you want the vine to be? Vines can be 40 – 70 feet long. Cut them when they grow where you don't want them. The roots will mimic the vines.

Cut vines off when they outgrow the spot. Put a shovel of dirt at the end so roots will form. There are no rules about where to cut it off.

Protecting your pumpkin and plant:

Do not let anyone smoke in your patch – no spitting – and no touching! Put Clorox in a spray bottle - 1tbsp Clorox/1 quart of water- spray pumpkin down.

To prevent mold or fungus on the bottom – shield pumpkin from water – water the plant not the pumpkin. You can put vermiculite, sand, maybe a fungicide, or a platform such as a wood pallet under the pumpkin to prevent fungus.

Protect the pumpkin from direct sunlight – because, like people, direct sunlight makes the skin of the pumpkin leathery and tight. You can make a shade cage – 2'x2' or bigger over the pumpkin – use plywood with a plastic tarp – to shield from the sun and water.

Stem Stress:

Stem stress will take the handle right off. Cut taproots on either side of the pumpkin to release the vine for upward movement. If stem stress is not addressed, the vine will win out over the upward force of the pumpkin and the stem will separate. Very gently, VERY GENTLY, roll the pumpkin to the side so the stem is not in a position that may cause stress to it. Be very careful NOT to cause the stem holding the pumpkin to break or be crushed. You want to get the vines away from the pumpkin so they do not mar the sides by touching it. Do this in the heat of the day when the vine is most pliable. You want the stem holding the pumpkin close to the ground. Do not step on the stems of the vines – they are hollow and will crush! And that vine will die.

DO NOT TURN THE PUMPKIN once it is in position – **IT WILL CAUSE THE STEM TO BREAK**

Heat Stress:

Heat stress can be caused by not enough Phosphorous. You can use granular vermiculite and add more phosphorous. Refer back to your soil tests to see what you need to add to prevent this.

If you have your pumpkin covered it will help with heat stress on the pumpkin. It also helps to protect it from hail and heat.

Some use a water spray to cool their pumpkin plants so the leaves do not get scorched.

Giant pumpkins respire a tremendous quantity of water which results in heat stress and weight loss. To control heat – you can cool your plant off midday with an electronically controlled, automatic, overhead sprinkler system. Remember to protect the hose from direct sunlight as the water in a garden hose can become boiling hot when exposed to direct sunlight. Do not use that water as it is too hot. Heat stress will make the leaf wilt and it will scorch the leaf. When you employ overhead watering – you will have to occasionally reapply insecticide in the evening hours.

Critters and all control:

Mice, insects, mold, fungus, deer, and dogs. Control of harmful insects and disease is imperative. Use fungicides or pesticides – but be careful and read label directions. Remember the safety precautions and follow them! Don't get bugs. Watch for squash beetles and other pests.

NO WEEDS – weeds harbor insects and take nutrients from your pumpkin. You can rotor-till when the plant (PLANT not pumpkin) is basketball size. Stay away from the plant itself - remember roots mimic the vine growth! After that, you have to hand weed. Jerry used chopped straw as a mulch. The best protection from wandering dogs and deer is a tall fence.

Transporting Giant Pumpkins:

Some people tape a bottle to the stem after it is cut so that the pumpkin will not lose moisture. It does have to be removed before weighing. Adding Vaseline to the cut stem might help some loss of moisture.

DOS AND DON'TS

1. Use quality seeds
2. Do not leave seedlings indoors so long the plant becomes root bound
3. Always use sterilized soil for germinating your seeds.
4. Don't plant too early or too late
5. Don't under or over water
6. Do protect your plant from insect, animal, and weather damage
7. Step on your soil only when absolutely necessary. When you do step on your soil – use walk boards or planks to avoid soil compaction. Please remember that pumpkin plant roots extend the same as the vines!
8. If you touch or anyone touches your pumpkin, remember to spray your pumpkin with a very mild bleach solution or fungicide
9. When you irrigate, don't wet your pumpkin or your soil beneath it

We are very excited that you are planning to grow a giant pumpkin this year! If you have any questions, comments, helpful hints, or need more information; please don't hesitate to ask us. We may not know all the answers – but your questions will make us learn more and we will try to find the answers!

You can reach the Goshen County Master Gardeners at (307) 532-2436 or goshencountypdc@gmail.com.

Send us pictures throughout the year so we can see the progress. We hope this is a ton of fun for you and we can't wait to see your pumpkin! Even if it is the size of a quarter – huge like the back of a pickup truck – or even if it has a blemish- we'd like to see the results of the first GIANT PUMPKIN CONTEST!

The 2020 Giant Pumpkin Contest will be held in the Frontier Shelter at the Goshen County Fairgrounds during Yee Haw Daze on Saturday, October 3rd. Check-in begins at 1 pm with the weigh-in to follow. There is a \$5 entry fee for growers 12 and up. Spectators are welcome too!

More Information

University of Wyoming Extension YouTube playlist: <https://bit.ly/growwyogiants>

St. Croix Grower's Association: <https://www.stcroixgrowers.org/>

Interactive website including message boards, chat rooms, and other resources:
<http://www.bigpumpkins.com/>

Cheers!

The Goshen County Master Gardeners