

# How to grow Giant Pumpkins!

## Patch Preparation

**Preparing the Soil** is the key for any type of plant growth. These pumpkins require the correct soil medium to grow to a healthy prize winning pumpkin. Try to find out what your soil conditions are currently, and consult your local County agencies for soil testing. The soil test will provide the amount of soil nutrients your garden contains and provide corrective action to balance your soil for planting. *I did not test my soil, but I have had good luck with growing in the past. I wanted to make sure I was real serious about it before I got that technical! I will test it this year. It is not all that necessary, if you have good soil you should be able to grow a large pumpkin. But if you want to grow one that is 1,000 pounds or so you will need to take every measure possible to get it there. Believe me there are a lot of things a grower will need to do to get the prize winner!*

The State will provide the test result which is defined as the percentage of nitrogen, phosphorus and potassium fertilizer (I will give valuable hints about these further in the instructions.) needed to correct deficiencies; these percentages are the three numbers found on most fertilizers bags. Follow what they say and amend your soil with the compost or fertilizer of your choice. Of course there are many types of products to amend your soil, *I just added cow & horse manure*. Some people plant a cover crop in the winter and amend the soil with an additional manure to give that extra punch. Now be sure to till your compost in well to provide a good planting medium. *Tilling it in is very important, this way you will not have valuable nutrients washed away from the top of the soil. Some growers will dig a pit where they are going to plant, and fill it full of a mixture of good soil & manure. I would recommend this if you have bad soil.*

## Planting seedlings

Average frost free growing season: May 25 to September 15<sup>th</sup>, just use your best judgment, Vermont has tricky weather!!!

**Seed Prep:** Using a nail file, file down the edges of the seed. Not all the way in but just enough so you see a dark line start to emerge. Do not file the pointed edge of the seed at all! The giant pumpkin seeds are so hard that the leaves of the seedling may never open or become very damaged trying to emerge through the seeds shell. *I also soak my seeds in warm water until a small sprout shows at the pointed tip. I use a Tupperware dish and put a wet paper towel in the bottom, place the seeds on it and put another towel over the top and close the container. I put it on top of the seedling heat mat. If you do not have a heat mat, the top of the fridge sometimes works well because it is usually warm.*

*Before*



*After*



**A pot and potting soil** are required if you plan on starting your seeds indoors. You will need to put the plant outside 2 weeks after being planted in the pot, otherwise it will become root bound. *I used a heat mat in a small indoor greenhouse to start my plants.* I recommend buying a high quality potting medium that can be purchased at your local nursery store. Don't waste your time on buying the cheap stuff. *I use a Miracle-Gro seed starter soil.* Do it correctly and "buy a quality product". Seed germination takes about seven days if the soil surface stays warm, *my heat mat keeps a temp between 74-80.* Plant the seed in a large Jiffy pot with a hole on the bottom or plant it in a gallon pot to be transplanted in the near future. *I use milk jugs, this way I can easily cut them down each side, and slide the plant out without disturbing the roots. This is very important, and root damage may stunt the growth of the plant!*

**If you plan on planting your seed directly outside:** *I would recommend starting the plant inside, but if you do plant outside:* Prepare your soil as you would for any other method of giant pumpkin growing, but do it as soon as the soil can be worked in the spring. Well-drained deep loam is the best. After you have prepared the soil make a large mound approximately 2 to 3 foot around and 1 foot high. *I use a soil heating cable because I plant early, mid May.* The outside walls of the mound should be covered with black plastic to increase the heating by the sun. Just cut away plastic when plant is about 2 ft long so you may start burying parts of the vine. *Do the same as you would for planting inside, file the seed first, make a small pocket in the ground and fill it full of the Miracle-Gro seed starter soil, plant seed 1 inch deep POINT DOWN, and cut the bottom off of a plastic milk jug to make a mini greenhouse over the seed.*

Keep the soil damp and it is best to place a small flat rock on the mound to pour the water on, this will prevent erosion of the soil around the seed. *I use "watering cones" you screw them onto a 2 liter soda bottle with the bottom cut off so they work like a funnel, then you pierce them into the soil. They slowly water the plant so all the water is absorbed into the soil.*



### **Fertilizers: nitrogen, phosphorus and potassium**

IMPORTANT!!! These are labeled on the fertilizer bag like so **12-12-12** = (Nitrogen) 12-(Phosphorus) 12-(potassium) 12. There are many different amounts of each fertilizer you can get in one mix. **These will vary for each growth stage.**

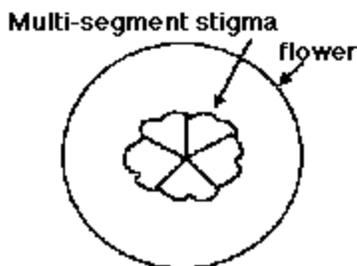
**Early season fertilizing and watering** is recommended to provide superior plant growth prior to pollination. The recommended liquid solid ratio is **9-35-15**. The first stage of fertilizing should be based on providing **phosphorous** for root growth, gradually shifting to more balanced formulation with more *nitrogen*. As time progresses, prior to setting the fruit switch to higher potassium formulation for development of the set fruit. Most Big Hitters prefer to use [Neptune's Harvest](#) as a **foliar** application to fertilizing. Please read their website for ideas.

**Mounding** soil over the vine to create a double root system is something you must do! This is a must to get that huge fruit. It also helps with wind, wind will break vines. Take your shovel and place the dirt over the vine, *I stacked rocks over it to prevent the dirt from eroding away with rain.* It is recommended to use the surrounding soil versus different types of medium, but be careful about digging close to the plant you may find you are digging up small white roots, those are pumpkin plant roots! Most of the prized pumpkins are at least 10 feet from the main root tap. So pile it on. *I also cut the main at about 25 feet out and bury it.*

**Nitrogen & Water** -After your plant is about 2ft long start using more nitrogen to boost plant growth. *I used regular Miracle-gro.* A lot of water will be needed from now on. Water every day or to keep soil moist, a drip line or weeping hose would be the best. *I have a 425 gallon tank at the top of the hill that gravity feeds my patch all 425 gallons in a day. I fill it every night and turn it on every morning, this way the water has warmed up to the outdoor temp. Don't let your patch dry out, try to keep an even amount of moisture at all times*

**Select the female flower** at least 10 feet from the main root tap. Some growers do not even pollinate until there is at least 800 leaves on the plant. *I just pollinate everything after 7 feet out and see what one does the best and pick off the slower ones! **Keep only one or two pumpkins per plant!***

I assume you know the difference between a male and female pumpkin flower? If not, the female has the fruit under the flower and the male is long slender stem with a flower on top.



Male flower



Female flower

Has baby pumpkin on it.

Now we have discussed the difference, find a female plant with the correct angle on the vine and with *five plus segments*. A good female candidate should have a stem angle which is almost 90degrees (perpendicular) to the vine. If the vine versus the female plant is acute, the stem will be more likely to be damage as the pumpkin grows. If you want, you could modify the angle with a little TLC. *I will mention more about positioning pumpkins later.*

Segments are the cavities which contain the seeds. When you look inside the flower, you will see the segments. The female flower is characterized by the multi-segment stigma located in the interior of the flower. *The flowers that grow the biggest pumpkins have more than 5 of these.*

**Pollinating the blossoms** can be done two ways. The primary method is Hand-Pollinating Pumpkin Plants. This is when you pick the male flower and use it to pollinate the female flower. The male flower must have a “dusty” look to the pollen inside to work. Then use a clothes pin to close the flower back up. This way you know what it is crossed with, and you may keep track of the genetics of the pumpkin. The second way would be to let the bees do the work, and not know the genetics.

**Post fertilization program** is required during this transition from vine growth to fruit. During the fruit growth stage switches from the balanced fertilizer to formulations which contain a high percentage of **potassium**. If you use a water soluble fertilizer, use a ratio of 1-1-2 or 1-1-3 for optimal growth. *Too much Nitrogen and all the energy will be sucked into growing more plant! Think Potassium at this stage, potash can be used, just go light, some pumpkins have grown so fast they actually blew up! I also used a fertilizer that was slow release sprinkled on the ground next to the plant, replenishing about every two weeks.*

### **Foliar feeding works well!**

*I foliar feed my pumpkin plants by using a sprayer and a watering can. I put ½ of the regular fertilizer mix or something called seaweed & fish emulsion in my watering can or sprayer and watered the leaves in the morning or evening 2x a week.*

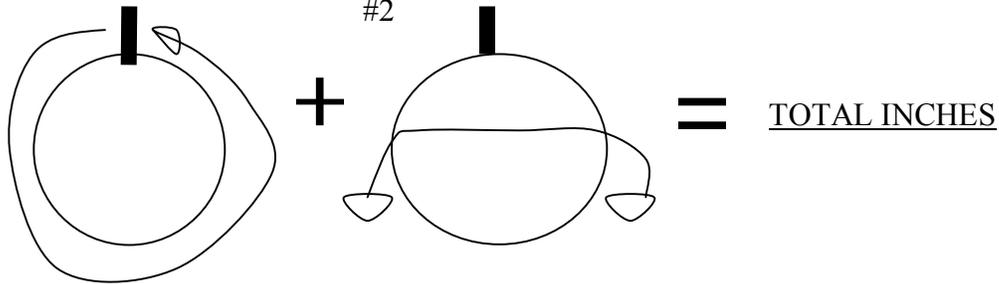
**Vine positioning & pruning** is required for your main and secondary vines. Positioning the vines will provide a proper use of your growing area and reduce vine stress. Pruning the tributary small vines and burring them will help more energy go into your pumpkin.

Make sure the vine is perpendicular to the fruit. As the pumpkin grows, the shoulders will extend forward, touching the vine. . So if the pumpkin grows, the vine will go upward and undue stress will be provided to the vine. This can be eliminated by positioning the vines early so they go away from the pumpkin. Make a "U" shape or give it some slack. **Think Ahead!** *I always make sure that the vine is not connected to the ground by a tap root 3 feet on each side of the pumpkin. As the pumpkin grows you may have to reposition it so it won't snap off. Do this only during late afternoon hours and SOWLY!!! If you do it to early AM the plants are very crisp and break easy, it may take more than one day to move it where it needs to be.* This allows the vine to rise off the ground as the pumpkin grows tall. You can also have trouble with the shoulders of the pumpkin growing so large that they push against the vine and split it off that way too. When the pumpkin is about the size of a basketball you can slowly move the pumpkin perpendicular to the vine. This should be done in small steps over a period of a week or you will snap it off. There is no warning when the pumpkin is about to crack off so go slow and don't move it much each day. Also if the fruit sets on the left side of the vine, you can train the vine to the right which gives the shoulders more room. Side vines can also wrap around the large pumpkin and cause splits. Train the side vines away from the area where the pumpkin will eventually be so there is room. *Be Careful the slightest scrape stays on a baby pumpkin and becomes a huge scar as it gets big. Make sure all leaves and vines are clear of the pumpkin to keep a nice shinny skin.*

**Daily measurements** and selection is required to assist you in your final choice (if luck is on your side). So what is this all about? You now have several fruits on your vines and you need to make a decision on which fruit to select for the final pumpkin. So, go out there and measure the circumference of each pumpkin daily and keep records. From your data, you are able to make that final decision for your prize winning pumpkin.

I have attached a chart. Measurements are (OTT) *Over The Top*, #1 circumference stem to blossom end plus #2 ground to ground over the top of the pumpkin.

#1



**Then you look up the inches on the chart under the inches column and to the right of that will be the estimated weight of your pumpkin.**

**Shade protection** should be provided to prevent cracks Build a frame around your pumpkin without stepping on any vines. Some growers use a product called ReMay. You should be able to find this at your local Nursery. *I use 4 stakes in the ground around the pumpkin to staple a sheet or tarp on to. I leave plenty of growing room too!*



#### **Under the pumpkin**

You will need to put something under the pumpkin to help protect it from bugs and rot. It also needs to push out as it grows and the soil can hold it so it can't grow outward. Sand is the best to use. I used the weed block material people put in flower beds under mulch.

- Early season fertilizer Phosphorus-Water
- Mid before pollination Nitrogen- plus foliar feed mix 2x weekly + slow release fertilizers every 2 weeks- lots of water every day
- Fruit stage Potassium- **Be Careful, don't over-do Potassium!** Plus foliar feed mix 2x weekly + slow release fertilizers every 2 weeks- lots of water every day.

*\*Most of this info came from, <http://www.backyardgardener.com/secert.html>*