

STEVE GEDDES The 2528 interview

This is an amazing interview with Steve Geddes. A grower from New Hampshire, and member of the NHGPGA who is well known and respected in the GPC and New England area. He already broke through the 2K barrier back in 2016 with his 2066 AG. As this interview progresses you will note some revolutionary ideas and some interesting simplification of tactics many growers are now using. He has combined the newest genetics and fertilizing/fungicide techniques with some decades old growing methods. Keep in mind that Steve had 3 plants. Two other pumpkins were lost at around 1880 and 2100 pounds this year...Everything he did will be shared below....

Well Steve lets start. I'll run down a bunch of questions from growers. Lets discuss how the 2528 happened, and your seed selection methods. Regarding how I got to 2528...that would to a great extent be the access to science based info through our NH Ext. Service (George Hamilton). Always nice to have a resource like George that will get you up to date info on plant science, disease issues, pest issues etc. My selections are not based on how the pumpkins looked, but how it performed to chart, and other expectations and its genetic ancestry. And with that said I firmly believe the vast majority of seeds out there have the potential to produce 2000 pounders. No need to get too selective any more. I liked Leonardo's 1911, which came from my 2066 and that came from the 2145. 1803 Gadbury, was a 2145 offspring with some 1965 Brandt and 2230 Wallace genetics in it. I loved the 867 Davis last year. It was a remake of the 2145. And when I contact each of the seed owners in the off season, I really need to know if the seed I want was from a disease free plant. That's a big deal to me, to minimize the potential of disease coming into my patch.

What Patch prep did you do the previous year. I have several compost piles going year round. I will haul in Horse Manure and trailer loads of Maple Leaves to add biomass to my compost. The aged (1 year or older pile) is amended into my patch in the Fall. For cover crops...If the pumpkin and plant make it to the end of the season (mid to late Sept.) the only cover crop that will germinate here is winter rye so that is my usual go to Fall cover crop. If I lose a plant(s) earlier like I did this year in August I will usually try to get in a cover crop of mustard (Pacific Gold or Kodiak) and still have time to till it in, let it break down for 2 weeks and then get in an end of the season cover crop of winter rye.

What planting methods do you use when you start the seedlings in Mid April to get an early start outside up in NH. I almost always turn over the first section of the patches by hand in the spring to get those areas ready for hoop houses and heat cables. Then, depending on how my back is feeling I will often turn another section (100 sq. ft. or so) by hand a few weeks before the plants will be in that space. I plant my seedlings at a 30°-45° angle, to help assist the direction of the Main, and to prevent a kink in the vine since it doesn't have to make a 90° bend to hit the ground. These kinks in the vine can constrict the nutrient flow, and even contribute to a leaky Foamer later on in the season. I heard you lost 2 others. What caused them to go down. Kind of an unknown, It had myself and George Hamilton kind of scratching our heads. But anyway they rotted out. Other Growers too, like Matt DeBacco said they'd never seen anything like it. Perfectly healthy plants, but at around 1800 pounds in the 2nd week of August (a June 4th pollination) the fruit on the 1803 Gadberry plant appeared to have some sort of pumpkin edema. Large blisters, from high pressure. I lanced a few and water shot out 3 ft. The Rind was very thick on this pumpkin too. We think some sort of pathogen entered the fruit. When I cut the vine the next day it looked clean and healthy. Very strange demise on that one. Then my 867 Davis which was pollinated June 20th, with the 1911, went down on the last week of August at well over 2150 pounds. Knowing it was from the 2145, I knew it would be a tough plant to

grow. With potentially some less than desirable growth habits I found that on any cold night below 60F, I could almost guarantee I'd have a side on the 867 vine double up on me.. It's a bit of work because I had to trim the double side-vine to one several times. But the potential rewards and Giant Fruits from these 2145 or crosses of this seed are extremely high, because the plants are very likely to produce a fast growing large pumpkin if fed properly, and if the environmental conditions are right (with nice warm evenings for example). Note that the 867 was on a 48-49 pound/day rate for about 24 days. In general could we get some plant geometry for the 2528 from you. And how many side vines on the 2528 before each set fruit. Its pretty consistent for me depending on how leggy the plant was. I averaged about 11-12 per side with about 18" spacing. I used the Xmas Tree pattern, and the sides were allowed to run out about 13-15 ft. This fruit grew in 1300 sq ft. Also I don't alternate removal of the side vines after the pumpkin. But vine growth, after the pumpkin, really slowed down on their own. The Main Vine continued to grow very slowly. My guess is that the fruit sink was taking all energy. I've

Pollinated June 20th

Date	OTT	Est. wt	#/day
July 5	106	33.2	33.2
July 12	190	155.2	17.4
July 19	265	398.4	34.7
July 26	323	709.9	44.5
Aug 2	368	1043.5	47.7
Aug 9	406	1397.6	50.5
Aug 16	429	1647.3	35.67
Aug 23	446	1850.2	28.9
Aug 30	463	2069.3	31.3
Sep 6	475	2234.1	23.54
Sep 13	486	2392.8	22.67
Sep 18	491	2467.4	10.7
Sep 25	490	2452.4	0

never had a plant like this 1911. The fruit never stopped growing when the fruit sink first reached a max daily growth rate of 52#/day. It just kept growing at the same 45-50 lb/day rate for almost a month. and my patch filled up too fast. I even had to terminate the main vine in the allotted space, which I never do. When I pollinated the 2528 on June 20th I had already terminated 3-4 secondary vines on each side of the main. Which is risky since it shifts a lot of hydraulic **turgor pressure** and nutrients up to the fruit that you just pollinated, and the greater the pressure the greater the number of cells that are splitting every hour. So to me, its very beneficial to have these 6 terminated vines, to start cell division sooner.

At the same time you want to stop growing the big salad of leaves. When was this time for you. I terminated all growth on the plant going into the 3rd week of August at 1300 sq ft.. I certainly had plenty of plant to support pumpkin growth right up to weigh-off day.

What do you add to your soil during vine burying time. Believe it or not I add nothing. Zero amendments. So when I'm pruning and looking to cull flowers, female pumpkins or tertiary/secondary vines, I carefully cut them with small sharp scissors for a clean cut. I never pinch them off with my fingers. That's too traumatic and damaging to the vine. Then I just bury the vines with fresh loam and loosen the soil. I focus on the little things. I do this to promote good tap root growth above and below the vine. I tamp the soil gently No air voids, in the soil. I also never let my vine tips shoot up overnight because they easily can break if I push them down to bury them. So I gently proactively weigh them down the night before if needed, with bungee's or something like that, on those hot days, to keep them on the ground. And I never blow the Main Vines clean of dirt either. Rain will clean mounded dirt off my main vines.

Are you rotating to other gardens or patches? No, I've been growing Giant Pumpkins in the same spot for 10 years and prior to that I grew here with regular vegetables for another 15 years.

Do you use Anthesis. I do apply an ethylene called Florel to the young pumpkins surface at 100 ppm 48 hours after I pollinate. It cost \$25/pint. I think they call it Ethrel up in Canada. Its good for extending cell division in the Pumpkin (which should help increase the Pumpkins size/weight by hopefully 10-15%). Matt DeBacco is a good SME subject mater Endoreduplication expert on this subject. Do you bring in any loam. No I never have brought in any loam. I definitely have very sandy soil though. Drainage is great. I do have

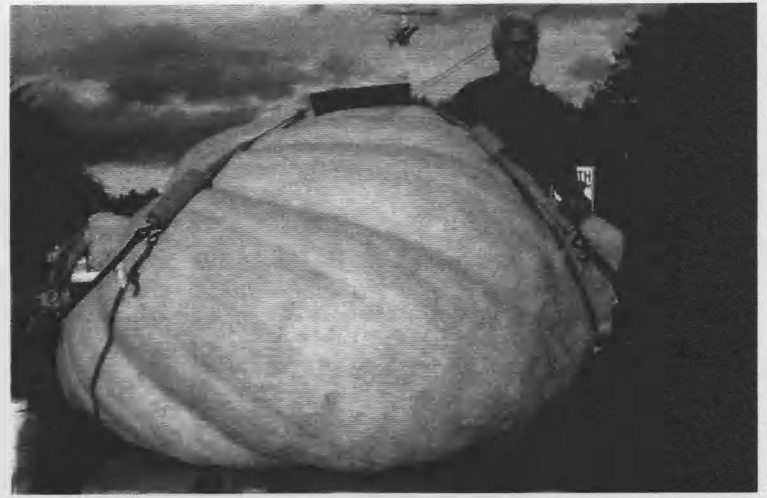
some Compost piles out back and I fill them with horse manure weekly and maple leaf compost at this time of the year. I have 2-3 ages of compost going and being turned at the same time.

Do you water over head. Mostly my watering is by hand with a hose and nozzle, early to mid morning. I fill a 10 gallon tank with regular tap water, and mix with regular standard agricultural 15-5-15 water soluble ferts, which has a good mix of the micronutrients, and Kelp Mag. I do not foliar feed my plant. I haul my cart around and spray under the canopy. Then with a hose and nozzle I saturate with 100 gal of water, per day, per plant, at peak growth periods. (Less H₂O in the beginning and end of the growing season). Then if its too hot in the afternoon, like in the 90's I will mist the leaves daily with a hose and nozzle, again by hand. I look at the young foliage especially, and keep that misted. Being retired I have time for a lot of manual labor. I never let surface roots dry out either; don't want them to get cooked by the sun/heat etc. Do you warm the water before using it. No I use it right out of the hose. I do believe there are benefits to using warm water though. But I just use it right out of the tap. No chlorine filters or anything like that..

Steve you are decomplicating a process that has become overly complicated over the years. Do use max out the boron use during the season. Well for my daily amendments: At the start of the season I use Marvel 15-5-15 Fertilizer, (a custom blend of water soluble fertilizer). Its very similar to the Peters Blend plus it includes micronutrients like boron and molybdenum etc. But, a lot leaches through my sandy soil so sometimes I can bring my boron levels up with daily doses of 1/8 tea-spoon of soluble boron otherwise I would be deficient by the end of the summer. I test in the Spring and I'm usually at 1.1-1.3ppm of boron, but with these daily boron doses I am usually at 1ppm per my end of the summer soil test. In June I switch to a 15-5-30 Kal Mg for the rest of the season. I did supplement that with Hollands Nutri Aid 0-52-34 from about 2 weeks before pollination through the remainder of the growing season, to help with Nutrient uptake. Because my Mg levels are starting to climb I will likely use a slightly different fertilizer next year with lower levels of Mg and will need to supplement some additional Potassium by using some 0-0-50 (SOP) through the season.

Do you tissue test or just soil test. No I do not tissue test. But I will not say a negative thing about them. I like science and I believe these tests give an accurate read on the plants deficiencies so they are a great aid to the grower. But I can read my plants daily. Its not scientific but I go by what my plants vibrancy looks like. I can see nitrogen deficiencies, or excesses, and react to them. Maybe 3/8 of a cup of Calcium Nitrate will get mixed into 10 gallons of water to green up the plants. There are many guides out there for reading plants deficiencies and leaves, if you are not quite sure what to add. Generally some of these fertilizers that carry a good spread of nutrients will keep your plant healthy. But remember the ability to get a tissue test is always there if needed. I do get a Spring and Fall Soil test though. My test results usually indicate my macronutrient levels are fairly consistent. Last few years for example my tests were telling me that my potassium levels were lower than the recommended level meaning I wasn't adding enough So I increased my potassium amendments.

Do you use **Origin 360**, as a protein and amino acid soil enhancer. Yes I use it daily and volunteered to do a trial run of it last year. There are two big protein based fertilizers out there Origin's and the Fish fertilizers out there, like the hydrolyzed **Neptune's Fish fertilizer**, with its growth hormones which means the elements within that fertilizer stay the same. Neptune's has a very stable product. Note that in and of themselves these products have relatively low NPK levels and won't by themselves support 50 pounds per day of Fruit growth. But they do contain amino acids which some of the nitrogen fixing bacteria's like Azos and Spirillum thrive on. **So if you are into understanding microbiology, and bacterium in soils**, that have a synergistic relationship with plants, from the byproduct of the digested interaction of this underground biological battle going on in the soil, you will win. This all results in healthy soil and enhanced plant growth. I used these two protein fertilizers heavily and daily this year. I think more testing is needed before making an all-out scientific claim of the benefits.



And just like my water soluble ferts, I started with very small amount and added more as the plant grew. By peak season I was probably using 3/8 of a cup per day of the Origin 360. plus all my other ferts at the recommended levels too.

Would you say worm casting fit into this equation. Well worm castings are just a another means of taking organic matter and turning it into soluble forms of Nitrogen and phosphorus, but it contains no growth hormones. I didn't use worm casting but I will say I think I had a greater amount of worms by using the Origins 360. I noticed a large increase in the worm casting piles every morning, in my patch this year. Do you use any fungicide soil drench. The only two I use are Alliete for foliar or spray. Alliete is not a cure all for anything. And I use Ranman for Downy Mildew and phythothropa etc. when mixed in with a soil drench 2-3 times per year with my liquid soil drench. FYI since we are talking about drenches.I never ever totally let my soil dry out. All those root hairs and filaments will start dying off within a few hours if they get dry. Ranman seems very effective in my patch against the downy mildew. Been using it for 3 years.

You said the weather helped you this year. Certainly one of the larger factors was the weather. But we had the 3rd worst heat wave on record in New Hampshire which hurt a lot of growers. So during those spells of 90-100F heat I was out in the patch every day misting the leaves to prevent them from flagging due to heat stress. If your plant gets on the bad side of that weather you will not have time to recoup. But the nights were perfect. During these stretches. Evening Temps in the 70's made for great weather to keep my plants vibrant, and pumpkin weight gains up. That is, until 2 weeks before the weigh-off, when we got nights in the 30-40s, and the plant shut down, and the weight gains tanked.

What was the odd growth on the massive stem. To be honest I thought the stem was proportionate to he pumpkin size. It was definitely the largest stem I ever had, but it was also my largest pumpkin. There was no overdose of Nitrogen or anything like that. Maybe a little high, but no locked up nutrients. And it was not detrimental to the fruit growth. Do you cover with towels, sheets or tents. I know some people build the tents or canopy's over their pumpkins. But the tents can contribute to shade problems, causing powdery or downy mildew, on the leaves. I actually use a flannel sheet covered with a fitted queen and later King sized fitted sheet 24/7. The fitted sheets hold on nice, usually. I dry them out when needed.

What would you change for 2019. I think, other than a minor potassium increase I will stay status quo with my methods next year. One thing worth noting is that since 2012 the vast majority of top growers are hovering at around 2200 pounds without a major bump up. We now also have a few 2400 pounders though, so the bar is ever so slowly raising. We need to figure out how to get out of this level situation. Maybe the indoor growers with CO₂, for example, could make a difference. Maybe global warming or better genetics will help nudge the weights up. I'm still not a pessimist about a 3000 pound pumpkin. We shall see. *I want to wish everyone the best next year. Outdoor and indoor growers can both make it happen. —Steve Geddes*