The Atlantic Giant 2016 Elite Gene Pool

This year there were 48 official GPC AGs over 1750 pounds and I have chosen these 48 specimens to identify the surviving genes of the many great past AGs. I think many growers must lose track of what happened to their AG from past years and wonder if any of the genes they produced are still in play.

I have made pedigrees for these 48 AGs, going back 4 generations. The list starts with the mothers' "parents", so the youngest are from 2014. Decimal pounds have been dropped as well as any "uol" or "dmg" tags. After the growers name, the number of occurrences is shown. The AG could be in generation 2,3 or 4 behind the 2016 mother. The occurrence number shows the relative importance of each AG in that year in the modern gene pool. Also in each year I have shown the number of repeats and unidentified singles.

2014
1756 Howell-Jolivette - 9 - WI
1916 Barron - 6 - MI
2323 Meier - 5 - Switzerland
2036 Glasier - 2 - CA
1651 Breznick - 2 - VT
repeats - 5, singles - 11

2011
1494 Bordsen - 11 - CA
1554 Mathison - 5 - CA
1789 Wallace - 4 - RI
1807 Stelts - 3 - PA
1582 Werner - 2 - PA
1647 Wallace - 2 - RI
1704 Urena - 2 - CA
1140 Finders - 2 - SC
1278 Goetze - 2 - MA
repeats - 9, singles - 1

2008
1288 Wallace - 9 - RI

2007
1385 Jutras - 43 - RI
1161 Rodonis - 32 - NH

2003
1068 Wallace - 10 - RI
1370 Rose - 2 - OH

2013
1057 Howell - 21 - WI
1625 Gantner - 11 - WI
220 DeBacco - 9 - CT
2328 Meier - 9 - Switz.
1985 Miller - 5 - CA
2032 Mathison - 4 - CA
1734 Steil - 4 - MN
1530 Breznick - 2 - VT
1338 Martin - 2 - WI
repeats - 9, singles - 5

2010
1409 Miller - 54 - CA
1495 Stelts - 33 - PA
1381 Checkon - 23 - PA
1596 Werner - 14 - PA
1674 Marsh - 8 - SD
1622 Liggett - 4 - OH
1274 Stelts - 2 - PA
1810 Stevens - 2 - WI
repeats - 8, singles - 2

2006
904 Stelts - 25 - PA
1450 Wallace - 2 - RI

2012
2009 Wallace - 83 - RI
1730 Werner - 11 - PA
1676 Daletas - 3 - OR
1843 Geddes - 2 - NH
1391 Wuersching - 2 - Ger.
1872 Wallace - 2 - RI
1623 Wallace - 2 - RI
repeats - 7, singles - 3

2009
1725 Harp - 62 - OH
1622 Young - 17 - IA
1658 Young - 16 - IA
1421 Stelts - 7 - PA
1462 Starr - 6 - OR
1303 Sweet - 4 - MI
1488 Marsh - 3 - SD
1544 Revier - 2 - MN
repeats - 8, no singles

2005
998 Pukos - 6 - NY
1231 Pukos - 2 - NY

2004
1446 Eaton - 2 - ON
1420 LaRue - 2 - WA

In summary this list of 57 repeat AGs represents the modern AG gene pool. In 2010,for example, there were **1850 AGs** on the GPC list, but genes of **only 10** have survived to 2016,on this elite list. I find this evolution fascinating and I hope others do too. Even Charles Darwin would be amazed.

Where grown? USA -- 53 Switzerland -- 2 Germany -- 1 Canada -- 1

I would appreciate any comments on the above list. eaton1446@rogers.com Al Eaton,Ontario,Jan/16

Growing the 1921

Cecil Weston

Langley Soil Estimator → Team-pumpkin.org

In 2014 we made several changes that in conjunction with better weather we believed contributed to our success.

In 2015 we were able to repeat them for another successful year.

Key points that got us here

- Use Bryan Langley's Soil Estimator
- Grow cover crop
- Add amendments just ahead of plant growth
- Increase drainage
- Reduce plant stress
- Grow bigger plant prior to pollination
- Select keeper based on lobe shape and symmetry
- Feed small amount continuously
- Keep plant healthy

- I started using Bryan Langley's Soil Estimator to balance our soil in 2013
- Soil tests taken 2-4 months after applications closely reflected what the estimator predicted.
- Increased our weights by 63% (from 1180 to 1921)
- Dr. Liggett increased weights by 20% (1636 to 1964) when I helped him with the estimator

- **CAUTION:** You can't get EVERYTHING to match the ideal ratios. Be aware of toxic levels!

Fall 2014 Soil Test (UMASS)

Results

Analysis	*Value Found*	*Optimum Range*
Soil pH (1:1, H2O)	6.2	
Modified Morgan extractable, ppm		
Macronutrients		
Phosphorus (P)	1.9	4-14
Potassium (K)	95	100-160
Calcium (Ca)	1781	1000-1500
Magnesium (Mg)	389	50-120
Sulfur (S)	21.1	>10
Micronutrients *		
Boron (B)	0.2	0.1-0.5
Manganese (Mn)	3.7	1.1-6.3
Zinc (Zn)	1.2	1.0-7.6
Copper (Cu)	0.3	0.3-0.6
Iron (Fe)	6.9	2.7-9.4
Aluminum (Al)	26	<75
Lead (Pb)	1.2	<22

Analysis	*Value Found*	*Optimum Range*
Cation Exch. Capacity, meq/100g	15.9	
Exch. Acidity, meq/100g	3.5	
Base Saturation, %		
Calcium Base Saturation	56	50-80
Magnesium Base Saturation	20	10-30
Potassium Base Saturation	2	2.0-7.0
Scoop Density, g/cc	1.06	

* *Micronutrient deficiencies rarely occur in New England soils; therefore, an Optimum Range has never been defined. Values provided represent the normal range found in soils and are for reference only.*

Soil Test Interpretation

Nutrient	Very Low	Low	Optimum	Above Optimum
Phosphorus (P):				
Potassium (K):				
Calcium (Ca):				
Magnesium (Mg):				

Bryan Langley's Soil Estimator for 1921 Weston 2015

300 lbs Low MG Lime
50 lbs Bone Meal
75 lbs 6-24-24
4.75 lbs Borax
200 lbs SOP (0-0-50)
475 lbs Pelletized Gypsum
7 lbs Manganese Sulfate (32%)
1.5 lbs Copper Sulfate (25%)
2.5 lbs Zinc Sulfate (35.5%)
25 lbs Ironite
25 lbs Azomite

150 lbs Alfalfa Meal
150 lbs Kelp Meal
50 lbs Blood Meal
50 lbs Fish Meal
50 lbs Pelletized Chicken Manure
18.75lbs Feather Meal
10 lbs CA Nitrate

Patch Size in Square feet		Green squares contain drop down lists with data fr						
4000		Blue squares are for data inpu						
		Orange squares are results do not type any						
Soil test Information		**Year**		2014	**Season**		fall	
Nutrient	Current PPM	PPM gained	End PPM	eCEC MEQ/100g	OM %	Nutrient Relationship	Ratio	Ideal Ratio
Nitrogen		65.1	65.1	20.4		ca:mg	5:1	6-20:1
Phosphorus	1.9	83.3	85.2	Base Sat %	Desired range	ca:k	10:1	10-15:1
Potassium	95.0	512.4	607.4	7.6%	5-9	Ca:P	36:1	40-100:1
Calcium	1781.0	1302.8	3083.8	75.5%	65-80	p:zn	14:1	15:1
Magnesium	389.0	18.0	407.0	16.5%	10-20	p:mn	5:1	4:1
Sodium		0.0	0.0	0.0%	<5	p:cu	36:1	25:1
Hydrogen		0.0	0.0	8.0%	<15	zn:cu	3:1	3:1
Boron	0.2	2.9	3.1	Sulfur Added to Patch	Loamy Soil End PH	mn:zn	3:1	3:1
Copper	0.3	2.0	2.3			mn:cu	7:1	7:1
manganese	3.7	12.3	16.0		6.2	k:b	198:1	200:1
Iron(fe)	6.9	6.1	13.0		Sandy Soil End PH	mg:k	2:1	2:1
Sulfur	21.1	686.4	707.5	PPM S04-S from OM		Ca:B	1005:1	80-1000:1
zinc	1.2	5.0	6.2		6.2	mn:fe	1.2:1	1:1.5-2.5
Buffer PH	7	PH	6.2	0.0	Clay Soil End PH			
					6.2			
	Lbs Of Lime	Type of Lime		Lime Ca%	Lime Mg%	Lime CCE		
Lime 1	300	HighAg		36	1	96		
Lime 2				0	0	0		
Actual Lime (CaCO3)	Loamy soil End PH	Sandy soil End PH	clay soil End PH	Add Lime Material to list		Clear Amendments	Add Fertilizer to List	
288.0	7.1	8.6	6.8					

- **Grow spring cover crop** inoculated with mycorrhizae so it can get a head start
- **Add amendments 2-3 weeks ahead of plant growth** while tilling in cover crop, instead of all at once in beginning of year.
- To do this, we divided the patch into 100 squares and then the total nutrients needed by 100, so we know how much to add to each small square.
- By adding the amendments as the plant grows, the same level of nutrients exist when the plant gets there, through the life of the plant instead of having been there for 2 months and being depleted by micro-biological activity and leaching.
- Mid and late season tissue tests prior to this method of amending always showed low MN, CU, ZN, CA, B, and K. After we started this method, our tissue tests show all nutrients are in the desired ranges.

- **Increase drainage**
  - Drainage is one of the most limiting factors we have due to our silty clay soil.
  - Add organic matter
  - Raise soil above grade
  - Dug ditch around patch to drain away runoff
- **Reduce plant stress**
  - Added shade in 2013
    - Our retractable shade cloth can be deployed like a curtain by one person in about 10 minutes. Use high tension 12 gauge electric fencing wire and 4x4s with guy wires.
  - Added misting system in 2014 – it created too wet of an environment increasing disease pressure which ended growth early, wasn't used in 2015

- **Grow bigger plant prior to pollination**
  - In our patch, prior to 2014 once the pumpkin was set, the plant growth almost completely stopped.
  - By waiting until the plant was bigger (17 ft) the plant can keep growing AND feed the fruit.
- **Select based off of lobe shape and symmetry**
  - Through observation over the years we believe that you can tell the shape of the pumpkin by looking at the symmetry and shape of the lobes.
    - A small lobe or non symmetrical lobes have created odd shaped pumpkins that doesn't usually end well.
    - This (in addition to keeping it level) is how we ended up with the most perfectly (in my opinion) shaped pumpkin over 1900 lbs.

- **Feed small amount continuously**
  - We use Harvest More Urea Mate 5-10-27 by Stoller in our irrigation at every watering. It is a water soluble fertilizer with the perfect balance of: N, P, K, CA, MG, B, Co, Cu, Mn, Mo and Zn
  - The rate we use is ½ tsp per plant per day, continuously from the time the vine lays down and starts growing side vines. This is the rate recommended to us by Dr. Liggett, who has been using this product with great success for many years.
  - The label recommends 4 times this amount (12.5 lbs per acre, which equates to about ½ cup or 8 TBLS per 1000 sq ft every 2 weeks). However, many good growers in our area have busted otherwise great pumpkins by feeding them twice the rate we are using. I believe by having the soil ramped as high as we do following the recommended rate is too much and might even cause boron toxicity.
  - Following Matt Debacco's theory that cell division stops around day 15-20 and something I was told when I first started by several heavy hitters (you have to get everything the pumpkin needs in the plant before its the size of your fist), my thought is we are making a perfect balance of all the needed nutrients available to the plant prior to fruit set and creating the best opportunity to maximize potential while keeping the plant healthy.

Keep plant healthy!

It may be the single most important thing to getting a big one to the scale.

- Start insect and fungus control early
- Look at mode of action for Fungicides, using different names with same mode of action is not a good rotation. You must use different modes of action.
- Mix a contact with every systemic.
- Contacts used are Manzate, and Docket. Docket is a generic daconil/bravo
- Systemics: TKO, Actinovate, Serenade Maxx, Neem, Subdue Maxx, Quintech, Eagle 20, Quadris Top, Alliete, Quilt, Immunox, Inspire, Terrazole, Headline

- Many people ask about the bury mix we use.
- During good growth the following is mixed daily and used liberally (half a handful at each node), mix less if you don't use it the same day.

  2 cups worm casting

  2 cups mycorrhizae

  1 cup Epsoma Starter Plus (organic starter fert with Myco and bacillus)

  1 cup kelp meal

  1 cup alfalfa meal

  ½ cup humic acid (Greensmiths granular) – I've been told other will burn

  ½ cup root shield plus

  2 TBLS Serenade Max

  2 TBLS Azos

  2 TBLS Actinovate

Before

Nutrient	Current PPM	PPM gained	End PPM	eCEC MEQ/100g	OM %	Nutrient Relationship	Ratio	Ideal Ratio
Nitrogen		0.0	0.0	12.4		ca:mg	3:1	6-20:1
Phosphorus	1.9	0.0	1.9	Base Sat %	Desired	ca:k	37:1	10-15:1
Potassium	95.0	0.0	95.0	2.0%	5-9	Ca:P	937:1	40-100:1
Calcium	1781.0	0.0	1781.0	71.6%	65-80	p:zn	2:1	15:1
Magnesium	389.0	0.0	389.0	25.8%	10-20	p:mn	1:2	4:1
Sodium		0.0	0.0	0.0%	<5	p:cu	6:1	25:1
Hydrogen		0.0	0.0	8.0%	<15	zn:cu	4:1	3:1
Boron	0.2	0.0	0.2	Sulfur Added to Patch	Loamy Soil End PH	mn:zn	3:1	3:1
Copper	0.3	0.0	0.3			mn:cu	12:1	7:1
manganese	3.7	0.0	3.7		6.2	k:b	475:1	200:1
Iron(fe)	6.9	0.0	6.9		Sandy Soil End PH	mg:k	13:1	2:1
Sulfur	21.1	0.0	21.1	PPM S04-S from OM		Ca:B	8905:1	80-1000:1
zinc	1.2	0.0	1.2		6.2	mn:fe	1:1.9	1:1.5-2.5
Buffer PH	7	PH	6.2	0.0	Clay Soil End PH			
					6.2			

After

Nutrient	Current PPM	PPM gained	End PPM	eCEC MEQ/100g	OM %	Nutrient Relationship	Ratio	Ideal Ratio
Nitrogen		65.1	65.1	20.4		ca:mg	5:1	6-20:1
Phosphorus	1.9	83.3	85.2	Base Sat %	Desired	ca:k	10:1	10-15:1
Potassium	95.0	512.4	607.4	7.6%	5-9	Ca:P	36:1	40-100:1
Calcium	1781.0	1302.8	3083.8	75.5%	65-80	p:zn	14:1	15:1
Magnesium	389.0	18.0	407.0	16.5%	10-20	p:mn	5:1	4:1
Sodium		0.0	0.0	0.0%	<5	p:cu	36:1	25:1
Hydrogen		0.0	0.0	8.0%	<15	zn:cu	3:1	3:1
Boron	0.2	2.9	3.1	Sulfur Added to Patch	Loamy Soil End PH	mn:zn	3:1	3:1
Copper	0.3	2.0	2.3			mn:cu	7:1	7:1
manganese	3.7	12.3	16.0		6.2	k:b	198:1	200:1
Iron(fe)	6.9	6.1	13.0		Sandy Soil End PH	mg:k	2:1	2:1
Sulfur	21.1	686.4	707.5	PPM S04-S from OM		Ca:B	1005:1	80-1000:1
zinc	1.2	5.0	6.2		6.2	mn:fe	1.2:1	1:1.5-2.5
Buffer PH	7	PH	6.2	0.0	Clay Soil End PH			
					6.2			

	Lbs Of Lime	Type of Lime	Lime Ca%	Lime Mg%	Lime CCE
Lime 1	300	HighAg	36	1	96
Lime 2			0	0	0

Actual Lime (CaCO3)	Loamy soil End PH	Sandy soil End PH	clay soil End PH	Add Lime Material to list	Clear Amendments	Add Fertilizer to List
288.0	7.1	8.6	6.8			

2015 OVGPG Spring Advanced Seminar Recap

Matt Brungard recapped his year growing the 1951.

- He sub soiled last fall
- Tilled ahead of the plant
- Watered seedlings with companion
- Used 4 oz of each of the following every week foliarly with a gas backpack sprayer
  - 5-15-0
  - Photomag
  - Seashield 2-1-1
  - Seaweed
  - Calcium Acetate
- He sprayed less often this year and had less spray damage
- Let main vine grow till end
- Really poured the water to it the last 2 weeks – he thinks that helped make it heavy

He also gave a presentation on Sap testing that he and Jerry Snyder performed last year in place of tissue testing.

- It shows the nutrients that are actually moving through the plant
- Compared it to grinding up your arm versus doing blood test to determine your health
- Lab is in Norway
- Cost of test includes shipping and decreases with number of tests purchased
- Each test consists of sending in an old leaf and 2 new leaves to get enough to sample.
- Samples sent on Monday, results by Friday
- It's supposed to be more accurate than tissue testing
- Said to be able to predict deficiency about 3 weeks faster than tissue testing

The process compares sap in old leaves to new leaves. If the nutrient level in the old leaf is higher than the new leaf then there is no deficiency, but if the nutrients are higher in the new leaf than the old, it is taking the nutrients form the old leaf instead of the soil (deficiency exists).

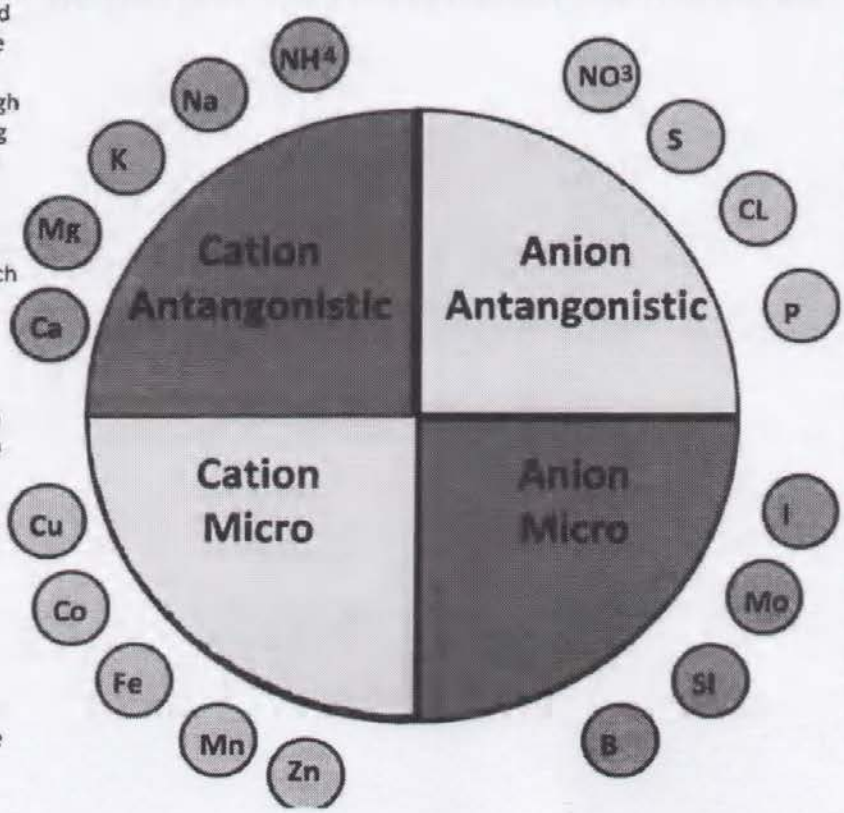
Antagonistic versus symbiotic relationships between nutrients

In this chart the sections to the left and right of each other are antagonistic to each other. If one is too high on one side something on the other is locked up.

The diagonal sections are symbiotic with each other and work together.

However there is a finite amount of room in each section, so too much of one thing in one section creates a deficiency of its partners.

The only way to get them all working together is to have balance and not have too much of any single nutrient.



To give a couple of examples that we are all familiar with.

Too much CA, K or Mg keeps the other ones in this section from being available (ties them up)

Boron helps with Ca uptake. Mo is essential in N, K, and Mg uptake.

Phosphorus will tie up Calcium, Magnesium, & Potassium but is essential in the uptake of the micronutrients (Copper, Iron, Manganese, Zinc, & Cobalt)

Name: Date:

2017 Giant Pumpkin Grower Supply Early Order Form

Parks Garden Center - 9010 Youngstown-Salem Rd. - Canfield, OH 44406

Phone: 330-533-7278 Fax: 330-533-8987 E-Mail: parksgardencenter@aol.com

Biostimulant Products	Pkg.	Description	Price	Qty	Total
Actinovate	18 oz	4 oz per 100 gal drench	$105.00		
Calcarb	6 oz		$28.00		
Humic Acid (granular)	50 lb	Greensmiths	$28.00		
Humic Acid (granular)	50 lb	40+ bags	$23.00		
Rootshield Plus (granulated)	5 lb	"Shield" your roots from damaging fungi	$63.95		
Rootshield WP	3 lb		$230.00		
RTI Azos (Nitrogen Fixing Bacteria)	12 oz	Covers 2,000 sq. ft.	$40.00		
Liquid Azos	16 oz	Nitrogen Fixing Bacteria 12 oz per acre	$72.00		
RTI Mycos WP	2.2 lb	Water Soluble Mycorrhizhae	$70.00		
Symbois (formerly Pumpkin Pro)	5 lb	Mycorrhizhae 2-4 lb per plant	$58.00		
RTI granular	10 lb		$90.00		
Liquid Mycorrhizhae	8 oz	1 oz per 1,000 sq. ft.	$72.00		
Liquid Mycorrhizhae	16 oz		$104.00		
Liquid Mycorrhizhae	1 gal		$410.00		
WOW Wonder Brew Compost Tea	80 gram	Makes Liquid Fertilizer and Soil Accelerator	$24.00		
WOW Wonder Brew Compost Tea	500 gram	Makes 25 gal of Brew	$68.00		

Fertilizers	Pkg.	Description	Price	Qty	Total
Brexil Calcium	5 lb	0.5 oz per 1,000 sq. ft. sprayable	$28.00		
Calcium Nitrate	50 lb	dry or sprayable	$28.00		
K-Mag	50 lb	0-0-22	$44.00		
Kelp	50 lb	Granular - North Atlantic	$43.50		
Sulphate of Potash	50 lb	0-0-50	$41.00		
Liquid Calcium	2.5 gal	10%	$40.00		
Neptune's Fish Emulsion	1 gal		$31.00		
Neptune's Fish Emulsion	5 gal		$140.00		
Neptune's Seaweed	1 gal	Liquid Kelp	$32.00		
Neptune's Seaweed	5 gal		$145.00		
Neptune's Crabshell	50 lb		$63.50		

Insecticides	Pkg.	Description	Price	Qty	Total
Slug & Snail	2 lb	Slug Bait Pellets	$9.95		
Generic Merit 75 WSP	6.4 oz		$30.00		
Generic Merit	1 gal		$79.00		
Generic Merit .5 Granular	30 lb	20,000 sq. ft. coverage	$28.00		
Generic Talstar	1 gal	Basic Insecticide	$48.00		
Safari Systemic Insecticide	64 oz		Not Available		
Venom Systemic Insecticide	1 lb	3x same active as Safari	$146.00		
Xxpire	1 lb	New Chemistry 2.75 oz per 100 gal	$300.00		

Fungicides	Pkg.	Description	Price	Qty	Total
Abound (sub for Quadris)	1 gal	Spray or Drench	$345.00		
Adorn	1 quart	Pythium/Phytophthora & Rotate for Downy	$395.00		
Captan	5 lb	Fungicide Paste Wounds	$34.00		
Cease	1 gal	Bacteria Spray	$68.00		
Cleary 3336 Granular	30 lb	Fusarium Control - 2,000 sq. ft.	$54.00		
Companion	1 quart	Spray or Drench	$33.00		
Companion	1 gal		$122.00		
Companion	2.5 gal		$270.00		
Eagle	1 pint	1/10 oz for 1,000 sq. ft.	$39.00		
Generic Daconil	5 lb	Weekly Fungicide	$52.00		
Heritage	4 oz	0.5 oz per 100 gal	$124.00		
K-Leaf (super low salt agri-fos)	2.5 gal	For Pythium/Phytophthora	$90.00		
Manzate 75 DF	6 lb	Sprayable Fungicide	$39.00		
Pageant	1 lb	Pythium Rhizoctonia Fusariums 14 oz/100 gal	$129.00		

Fungicides continued...	Pkg.	Description	Price	Qty	Total
Medallion (Fusarium Drench) 50%	8 oz	1.5 oz per 100 gal	$180.00		
Emblem 40.5% (Liquid Medallion)	1 pint	1-2 oz per 100 gal	$250.00		
Phyton 35 (New Dimension)	1 gal	Better Copper Spray	$285.00		
Quintec (Powdery Mildew)	30 oz	0.5 oz per 5 gal	$132.00		
Ranman	1 quart	Pythium Drench/Down Mildew 3 oz/100 gal	$313.00		
Subdue Maxx	1 quart	Pythium Drench	$170.00		
Subdue Granular	25 lb	8,000 sq. ft. coverage	$140.00		
T-Methyl F	2.5 gal	Liquid Clearies	$185.00		
T-Methyl + Chipco 26019	1 gal	Combo for Drip Systems	$175.00		
Topsin 70 WP	5 lb	AG for Clearies	$56.00		
Truban 30 (Pythium Drench)	2 lb	6 oz/1,000 sq. ft. replaces Terrazole	$85.00		

Items from Growth Products	Pkg.	Description	Price	Qty	Total
Essential Bio Stimulant	1 gal	"Feed your Microbes"	$75.00		
Essential Bio Stimulant	2.5 gal		$167.00		
Fungicide TKO Phosphite 0-29-26	2.5 gal	Stimulates disease resistance	$105.00		
Fertilizer Recover RX 3-18-18	2.5 gal	like above but adds phosphate	$58.00		
Liquid Potassium 0-0-25	2.5 gal		$50.00		
MicroTech CT (don't mix with others)	2.5 gal	Manganses Zinc Boron package	$44.00		
Micrel Total	2.5 gal	8 Micronutrient package	$95.00		
Nitro 22	2.5 gal	40% Smart Nitrogen	$29.00		
Cal Mag Max	2.5 gal	4% chelated Calcium 2% Magnesium	$85.00		

Misc. Products	Pkg.	Description	Price	Qty	Total
Fafard 3B Prof. Growing Media	2.8 cu.ft.		$15.95		
Fafard 3B Prof. Growing Media	2.8 cu.ft.	5+ bags	$15.45		
Fafard Superfine Germinating Mix	2.8 cu.ft.		$19.95		
Peatmoss	3.8 cu.ft.		$10.25		
Perlite - Course	4 cu.ft.		$16.95		
Vermiculite - Medium	4 cu.ft.		$18.95		
Hi-Yield Spreader Sticker	16 oz		$7.95		
Complex Spreader Sticker	1 gal	Excellent Sticker	$73.00		
Mighty Mustard 'Pacific Gold'	4 lb	Biofumigant for soil borne disease	$26.00		
Mighty Mustard 'Ida Gold'	4 lb	Biofumigant for weed seed control	$26.00		
Mustard Seeding Rate: 1/2 lb per 1,000 sq. ft.					
Hairy Vetch (weed prevention)	1 lb	Covers 3,500 sq. ft. per pound	$11.65		
Pen-A-Trater Tillage Radish	1 lb	Covers 4,000 sq. ft. per pound	$13.50		
Round Up Custom	2.5 gal	Low Drift Formula	$75.00		
Ranger Pro	2.5 gal	Generic Round up 41% Glyphosate + Sticker	$47.00		

Subtotal: _____

7.25% Sales Tax: _____

Order Total: _____

Payment Method: _____

For our out of town growers, early orders placed by February 17th can be picked up at Parks Garden Center on Saturday, March 11th, 2017; the same day as the advanced seminar also in Canfield, Oh. **All orders places after February 17th for pick-up March 11th will be subject to a 10% late handling fee.** A second order period from March 1st to March 22nd can be placed at the early order pricing for pick up on April 11th. This second order is contingent upon availability. Some products, humic acid and kelp in particular, sell out quickly.

The following products are also available at Parks Garden Center: pelletized dolomitic lime, fertilizer, pre and post emergence herbicide (to keep your patch clean), gypsum, remay, bulk and bagged mushroom compost, mulch, and pots.

Please add 7.25% sales tax to all orders. Thank you!

Shipping is now available from our warehouse. Rates available on request.

AS ALWAYS, FOLLOW LABEL INSTRUCTIONS AND USE ALL PRODUCTS AS DIRECTED

DISCLAIMER: Tim Parks and the Ohio Valley Giant Pumpkin Growers are not liable for any personal injuries or crop loss due to the use and/or handling of these products.

Grower Name: Phone:

Address Email:

Received by: Date:

ENJOY THE JOURNEY

(Opening Remarks Before the 2015 Weigh-off)

Tim Parks, president/ site coordinator

Ohio Valley Giant Pumpkin Growers

Good morning. Welcome to the 21st annual weigh-off.

For the past twenty years, we have gotten together in early October to weigh our year's efforts and determine who our champion will be.

It occurred to me that some folks take annual trips (ie. golfing, shopping, Las Vegas, duck hunting or fishing in Canada). I think it is nice people take the time to do that.

Looking back over these twenty years of weigh-offs, to me this is our annual trip with friends. The great part is we have three trips per year (weigh-off, seminar and summer tour/ picnic).

When our trip began twenty years ago, it was a small affair with a few friends. All that was needed was: forklift, pallet jacks, borrowed lifting tarps and eight strong backs. As with any really good trip, you need to plan.

Our trip now involves: three forklifts, custom made lifting rings, overhead crane systems, night watchman, leader's chair, sound systems, curtains and tunnels, rental chairs, decorations, internet broadcast, and real time computer results. This requires LOTS OF PLANNING.

So I'd like to take a moment to thank our "annual trip planners". The directors of the Ohio Valley Giant Pumpkin Growers: Glenn Orr, Dave Rumancik, Nick Harp, Quinn Werner, Frank Lanterman, Alan Gibson, Dale Lanterman, Jerry Rose and Tim Parks. I would also like to recognize some folks who worked especially hard putting this together: Glenn Orr, Alan Gibson, Frank Lanterman and Dale Lanterman.

Some of the volunteers: Jeff Ziegler, Drew McCoy, Steve Razo, Jack Lanterman, Dempsey Lanterman, Sheila Parks, Ron Moffett and Billy Lanterman. There are many others so let's give them a hand.

Our trip would not be possible without our sponsors. I would like to take a moment to thank them for their support. (Sponsor signs on the wall.)

Last but not least, the most important people on our trip are you the members. Without the unbelievable support of our membership, none of this would be possible. Thank you. Enjoy your journey today and make a memory.

OHIO VALLEY GIANT PUMPKIN GROWERS
"HOW LONG DID IT TAKE TO GROW THE 2058.5# PUMPKIN?"
Alan Gibson

Congratulations to Jerry Rose Jr. and his son, Jerry Rose III on their Ohio record pumpkin (2058.5#).

Let's start with opening remarks by Tim Parks at our 2016 weigh-off:

" Welcome to the Ohio Valley Giant Pumpkin Growers 22nd annual weigh-off. This is the day we the OVGPG growers get together to determine who our champion will be.

A common question we are asked is- "How long does it take to grow one of those?" The answer- we start seeds in April, transplant in May, pollinate in June and pick in October. It occurred to me that that is not accurate. Not even close to accurate. It takes 22 years to grow a pumpkin that big. You see, that's how long the club has been hosting educational events and weigh-offs.

Without organizations like the Ohio Valley Giant Pumpkin Growers, we as growers would not have achieved the astronomical percentages of weight gains that we have in the past 22 years."

The OVGPG and Jerry Rose have come full circle. In 1995, Jerry had the Ohio record pumpkin at 816#. Today, he and his son are again Ohio record holders at 2058.5#. This is an increase of 252%.

Jerry, his wife Kitty and two sons reside in Huntsburg, Ohio. He has served as a director of the OVGPG the past thirteen years. This is the fifth time he has held the Ohio record.

For a complete analysis of Jerry's patch and growing practices, please go to our website (www.ovgpg.com). Look under "Articles- February, 2006 Jerry Rose- World Class Giant Pumpkin Grower".

OVGPG HISTORY

1995 Jerry Rose (816#)- Ohio record
1996 1000# barrier broken by Bill Greer (1006#) and Paula Zehr (1061#)
1997 801.5# Stelts- a genetic backbone of our hobby
1998 Len Stellpflug (1056.5#)- Weeks Seed Co.
1999 846# Calai- another genetic giant
2000 1140# World record- Dave Stelts 1st use of a lifting ring
2001 Top 10 Avg.- 907#
2002 Fred Calai (1074#- 1056.5#- 1049.5#)
1st win for Quinn Werner (1076.5#)
2003 Jerry Rose (1370#- 1367#)
2004 Quinn Werner (1187.5#)
2005 Jerry Rose (1344#)
2006 Quinn Werner (1446.5#)
Top 10 Avg.- 1208.7# Pumpkin Cruise I
Tim Parks- GPC "Hall of Fame"
2007 Quinn Werner (1556.5#)
2008 Quinn Werner (1521.5#)- GPC "Grower of the Year"
2009 Christy Harp (1725# World Record)
Glenn Orr (154.5# World Record Connecticut Field pumpkin)
Alan Gibson- GPC "Hall of Fame"
2010 Jeff Zoellner (1663#)
Bill Neptune- 252# watermelon
Top 10 avg.- 1490.2#
2011 Dave- Carol Stelts (1807.5#) Top 10 avg.- 1471.95#

Dave Stelts
1140# World Record
(2000)

$50.00 per seed
2058.5 Rose +5% Heavy
F - 1585.5 Werner
M - 2008 Neptune

OVGPG HISTORY (continued)

2012 Quinn Werner (1730.5#)- 209# World Record Connecticut Field pumpkin
Top 10 avg.- 1553.25#
Ron Wallace- 1st 2000#er (2009#)

2013 Paul- Cheryl Fulk (1744.5#)

2014 Matt Brungard (1951#)
Top 10 avg.- 1730.8#
Beni Meier (Switzerland)- 2323.7# World Record

2015 Quinn Werner (2020.5#)
Quinn Werner- GPC "Hall of Fame"

2016 Jerry- Jerry III Rose (2058.5#)
Top 10 Avg.- 1786.4#
Matthias Willemijns (Belgium)- 2624.6# World Record

Thank you for 22 years of fun, friendships and accomplishments. The Ohio Valley Giant Pumpkin Growers is truly "One of the World's Premier Giant Pumpkin Clubs".

Jerry Rose and lifting crew (1995)

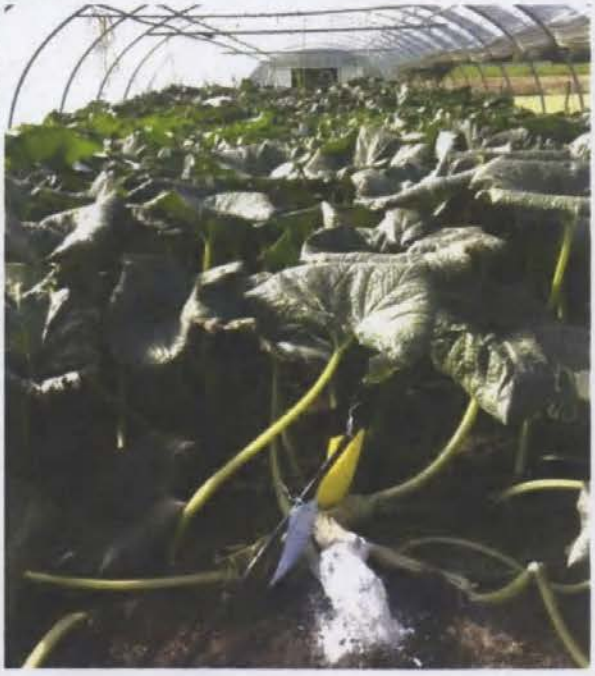
Fred Calai (2002)

My name is **Mathias Willemijns** and I am 24 years old. I started to grow giant pumpkins at an age of 17 and I was able to beat my personal best every year again. I am employed as **lead technician for growing vegetables in greenhouses at a research centre**. I'm responsible for our watering unit, climate control, plant protection, judging tests the plants undergo, … So my job feels like a hobby for me. Next to my main job, I also work at the agricultural farm of my parents. My 5 years younger brother, Bruno, started to help maintaining the plants since 2015. He is still studying agro-and biotechnology at school.

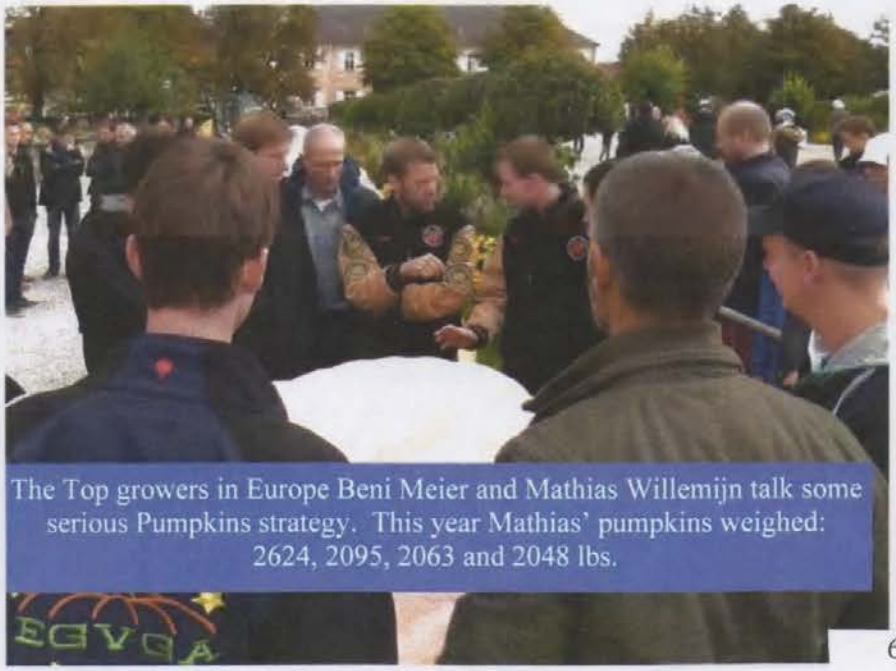
We grow giant pumpkins in a **polytunnel** which is 26 feet wide, 130 feet long and 10 feet high at highest. So our polytunnel is big enough to grow 4 plants at an optimum space. Every plant grows in a Xmas pattern and we try to get a fruit set between 13 and 17 feet on the main vine. In 2016 every fruit was set on 13 – 14 feet from the main vine. We cover every vine, also the main vine, with some compost. Don't add too much compost on the vines… just make sure that the (starting) side roots are in the dark (beneath the compost). The vines will grow out of the compost when they start getting thicker. This way you will have less risk of rotting vines. We sow approximately 32 seeds on my birthday, April 2nd. About 10 days later we will transplant the 4 strongest plants / patch. We prefer to transplant them as soon as possible so roots can go the way they want.

The first month after transplanting we give hardly any water. The plants should undergo water stress so they are forced to make more roots looking for water and nutrients. We don't mind if the first leaves are wilting a little bit during the first few weeks.

We don't have any automatic system for **climate** control. Every day we look at the weather forecast for next day and at our temperature and humidity meters. In the morning we make the decision how much we will roll up the sides of our greenhouse, if we should open the large doors or windows at both ends. We also have a big fan positioned at height of our door window that blows new fresh and cool air in the greenhouse for the entire 130 feet length. In early growth phase we never open our polytunnel fully because we prefer more similar day and night temperatures to stimulate plant growth. We start making more difference between day and night when the first females start to appear.



Make sure when you pollinate females in the morning that your average daily temperature (24h avg.) won't be above 23°C (73.4°F). We prefer to pollinate our females in the 2nd or 3rd week of June. We cover males the evening before, just like we do with our females. The next morning we pollinate between 7:30 and 8:00 and afterwards we cover the females again for the next 2 days. This way we are 100% sure no other pollen has made its way in. Once we have a fruit set, we try to open our polytunnel at maximum, even at night, to make a big difference between day and night temperature which stimulates fruit growth. We also have a misting system we sometimes use during plant growth to cool down the air temperature on hot days. In this way we also try to raise our relative humidity so we get less burned leaves because of the sun.

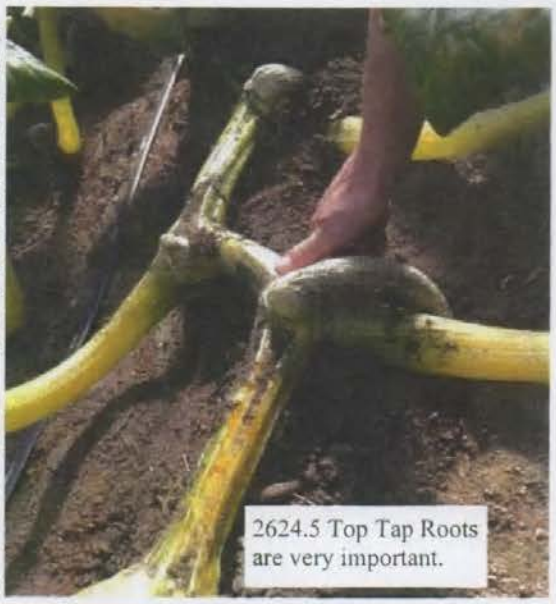


The Top growers in Europe Beni Meier and Mathias Willemijn talk some serious Pumpkins strategy. This year Mathias' pumpkins weighed: 2624, 2095, 2063 and 2048 lbs.

Roots under the stump of the 2624.6 were incredible.

We installed an IBC container of 1000l connected directly to our pressure compensating drip tapes. So we have an equal **watering** release on every drip tape without any pump. In total we have 79 tapes with each a manual tap. This gives us the opportunity to water and fertilize only the tapes we want. We add soluble **fertilizers** of different compositions (from Everris, ICL) directly in our IBC container. How frequent, how much and which compositions all depends on how the plant is doing and on how the weather forecast is. Sometimes we also get the question how much people should water their giant pumpkin plants... but this all depends on your soil (we grow on a sandy loam soil), plant & fruit growth, weather forecast, ... Sometimes we give 500l water / plant and sometimes we don't give any water for some days. Most people prefer sensors to see when they should water their plants. I don't prefer any sensor because they only show you a soil humidity value at one specific spot and at one specific depth. I still prefer an auger to drill some holes in the soil so I can check the humidity with my own eyes.

Untill now I didn't use anthesis or BigStem (maybe next season?). I do add a lot of good fungi and bacteria to the soil of a local brand from who I can be sure the organisms aren't death yet. In 2015 I did a complete soil test (in autumn) for every patch in our greenhouse. I tried to optimize every patch which seems to be successful. At the end of this season I only took a mixed soil sample of all patches in our greenhouse. I don't do any new soil test in spring but I try to read the needs of my plants. Last season I spent a lot of time by **monitoring** my **plants** for pests, diseases or nutrient deficits. I tried to counteract as soon as possible with the best spraying products that didn't harm my natural predators. Price didn't matter for me.



2624.5 Top Tap Roots are very important.

Some basic **advice** when **spraying** against pests and diseases... don't use spraying products against aphids with an active ingredient called pyrethrum. Aphids get really fast resistant against pyrethrum. You will kill more good natural predators (larvae of green lacewings, larvae of ladybugs, ...) in stead of killing the aphids. When spraying against mildew... start with products that have a strobilurin (ex. pyraclostrobin) in it. Strobilurins have an extra greening effect on your leaves. Now... the difficult part... Try to spray less as possible because your leaves get quicker old, but... try to spray preventive against the pests and diseases. We only spray preventive products when the disease or pest pressure is high (due to weather conditions).

In **2017** we are growing more or less in the same way. The only big change will be a new plastic on the polytunnel. The current one is 3 years old and is losing it's quality. It's also getting more difficult to clean off all the green residues. Every horticulturist here in Belgium knows that 1% less light transmission results in 1% less production.

I hope you all enjoyed reading the way how I grew these beasts this season. Last but not least... I want to encourage you all for next season! It is possible to grow very big giants without a lot of automation. Spend enough time to read your plants and counteract as soon as possible. Good luck and grow them big!

---- Mathias Willemijns

Seed: 2145 Mcmullen
Cross: 1756 Howell/Joliviette x 1625 Gantner
Sown: 2/apr
Planted: 12/apr
Pollinated: 11/jun
Pollinater: 1872 Willemijns

2624.6 GROWTH CHART

21% Over Chart Esti-

Date	DAP	C	BS	SS	OTT		EW GPC		DG GPC	
		cm	cm	cm	cm	in	kg	lb	kg	lb
01 jul 16	20	169	119	117	405	159,4				
06 jul 16	25	232	148	149	529	208,3	94,0	207,2	3,8	8,3
11 jul 16	30	301	186	184	671	264,2	188,0	414,5	18,8	41,4
16 jul 16	35	354	212	207	773	304,3	286,0	630,5	19,6	43,2
21 jul 16	40	399	230	234	863	339,8	393,0	866,4	21,4	47,2
26 jul 16	45	442	252	249	943	371,3	505,0	1113,3	22,4	49,4
31 jul 16	50	471	268	274	1013	398,8	611,0	1347,0	21,2	46,7
05 aug 16	55	498	278	283	1059	416,9	681,0	1501,3	14,0	30,9
10 aug 16	60	522	287	295	1104	434,6	748,0	1649,1	13,4	29,5
15 aug 16	65	541	293	301	1135	446,9	799,0	1761,5	10,2	22,5
20 aug 16	70	556	293	306	1155	454,7	826,0	1821,0	5,4	11,9
01 sep 16	82	578	304	312	1194	470,1	888,0	1957,7	5,2	11,4
07 sep 16	88	586	307	317	1210	476,4	911,0	2008,4	3,8	8,5
16 sep 16	97	589	317	321	1227	483,1	937,0	2065,7	2,9	6,4
26 sep 16	107	597	315	323	1235	486,2	948,0	2090,0	1,1	2,4
07 okt 16	118	601	325	334	1260	496,1	986,6	2175,0	3,5	7,7

2016 Growing Season Review

By: Ron and Pap Wallace

The 2016 season started to take shape for us in fall of 2014. We amended this 5,500 sq ft pumpkin patch with 15 yards of aged chicken compost along with 10 yards of leaf compost. A cover crop of winter rye was inoculated with WOW Pumpkin Pro mycorrhizal inoculants and planted. The winter rye was tilled under in the spring of 2015 and a cover crop of giant zinnias was planted. Many growers who visited us on the summer 2015 patch tour got to see the zinnias in full bloom. They are a fast growing, long lasting, spectacular color cover crop, but the biggest benefit is that they are a tremendous colonizer of mycorrhizal fungi; in fact, zinnias are used to help grow the inoculants. In August the zinnias were tilled under and after a few weeks we again planted a cover crop of winter rye mixed with Pumpkin Pro. The patch was now ready for the 2016 season.

This past season our plants were in an area that had only been rested for 1 season. Because of our disease issues, we usually try for a 3-year rest / cover crop rotation. This was not possible in 2016 as we were going to fumigate and solarize our 2017 pumpkin patch (more on that in our April newsletter), and the previous season we planted in our other patch so we had no choice but to plant in this area.

The winter, or lack there-of, in 2016 was extremely mild, and we were able to take a soil sample on March 1st. Heating cables and green houses were in place for April 10th giving the soil 3 weeks to warm up. We started our seeds on April 12th this year, and they were placed in the garden on May 1st. Based on our plants in 2015 we once again transplanted from 4 inch peat pots to 1 gallon size pots so we could grow a bigger plant before transplanting into the patch. The T 5 Bad Boy lights used for 14 hours a day certainly got the plants off to a great start. We highly recommend them. Inside our 5x7 green houses, as in previous seasons, we installed a "mini" Quonset hut made from cattle fence. . On cold nights under the hut we would have a spotlight pointed to the ground so no light would be shown. The heat from the metal lamp and the blanket that covered the cattle fence helped keep the plant at 55-60 F degrees. This year the spring started out warm so we only had to cover the huts and turn the lights on a few times. In 2015 we had to do this almost every night. All seedlings were inoculated with WOW Pumpkin Pro and Liquid Mykos. Seedlings were fed with Root (The active ingredient in Root is Formononetin, a naturally occurring compound found in Red Clover roots, which stimulates the natural growth of vesicular-arbuscular mycorrhizae.) Seaweed, Essential and Harpin Proteins. Our plants are fertilized with small doses of fertilizer as soon as the first true leaf is shown. During the growing season fertilizer amounts increase based on tissue test results.

When plants went in the ground, the only area tilled up was for our 5x7 greenhouses. The remaining garden was still covered in our inoculated cover crop of winter rye. The subsequent cover crop was mowed several times and amendments were added to 5,500 sq ft on May 26th. The month of May and the first few weeks of June were just about "average" for us. From the third week of June till the end of September we recorded 25 days over 90 degrees (a Rhode Island Record). Humidity was also very high as most days the heating index was over 100. We were concerned with the high heat slowing down the pumpkins, but once we started measuring it seemed like they really enjoyed the warmer than average days, especially the nights. The pumpkins may have enjoyed the high heat and humidity but it was also a perfect recipe for the root rot known as "Pythium." We have dealt with Pythium before but not as bad as this past season. We lost several vines on each plant and about 25% of the leaves because of it. The problems started in early July, and we were able to keep the plants in one piece till the end of the season. One thing we will do differently in the future is increase air flow around the blossom. The 2307 that we weighed in early September was lost from the blossom "nub" rotting behind it. The white sheets that we keep over the pumpkin during the season probably trapped too much heat and humidity and we lost it. In the future we will have small fans blowing on this area during times of high heat and humidity

Soil test results from 3/11/16

Soil pH 7.1	
Organic Matter	9.9
Cation Exch Cap	31.0
Nutrient Levels: PPM	
Phosphorus	357
Potassium	803
Calcium	4996
Magnesium	501
Sulfur	56.1
Micronutrients	
Boron	2.2
Manganese	22.9
Zinc	12.8
Copper	3.1
Iron	7.1
Percent Base Saturation	
Calcium=80 Magnesium=13	

Amendments added to 5500 sq ft patch May 26th

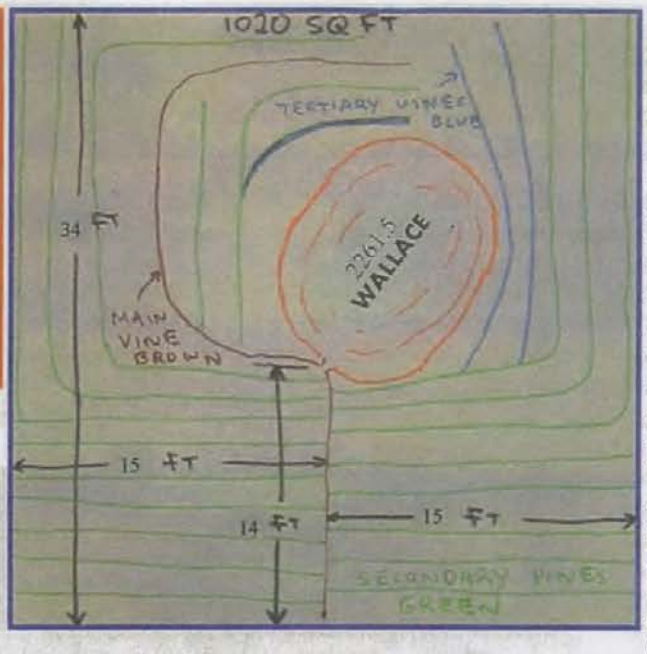
25 lbs WOW Humic /Fulvic Acid
100 Pounds WOW Kelp Meal
24 ounces Boron (Borax 20 Mule Team)
25 pounds K - Mag (Potassium, Magnesium Sulfur)
24 ounces Copper Sulfate
5 pounds Manganese Sulfate
60 pounds Pro Mag (Magnesium Oxide)
20 pounds 0-0-50 (Potassium Sulfate)

Fertilizers used

WOW Wonder Brew:	Every 2-weeks June to September
Mykos Liquid:	Every 2 weeks June 1st-September 1st
WOW Seaweed powder	Three times per week (foliar and drench)
WOW Humic Acid:	Three times per week (foliar and drench)
ROOT:	Every 2 wks (from seedling—August 1st)
Liquid Azos:	Every 2 wks..added to Wonder brew drench
Harpin Proteins:	Every 14 days seedling - August 7th
Essential:	Every 10 - 14 days
Calcarb:	Every 10 days
Seacom:	Every 7-10 days
TKO Phosphite:	Every 7 days foliar (June 1st– Sept 30th)
0-0-25: Growth Prod	Every 10 days (August 1st till end of season, mixed with TKO)

The 2307.5/2261.5 Tissue Test Results
WESTERN LABS (7/12/16)

Plant Nutrients	Sufficiency Range	Your Test Results
Nitrate	5895	6482
Phosphorus	.81 - 1.2	0.85
Potassium	7.5 - 12.0	11.31
Sulfur	.23 - .5	0.20 deficient
Calcium	.5 - 2.25	0.60
Magnesium	.25 - .48	0.30
Copper	13 - 45	11 deficient
Iron	75 - 500	127



Plant Size: Total size for each plant was 1,020 sq ft. (30 x 34). Vines were buried with a mixture of WOW Pumpkin Pro and Azos powder. Azos has been a very important ingredient in our growing program. Azos a nitrogen fixing bacteria, combined with mycorrhizal fungi help to create IAA (Indole-3-acetic acid). IAA is the most common, naturally-occurring, plant hormone of the auxin class. It is the best known of the auxins. A few of the main benefits of IAA: Plant cell division and elongation, root development, and plant gene regulation.

Watering: Watering was done in the beginning of the season by hand with the water warmed in poly tanks. As the season progressed we once again entered a severe drought and watering was done twice a day by overhead-automated sprinklers. To maintain the proper level of moisture during a drought in the heat of the summer each plant was receiving water twice a day for a total of about 150 gallons of water per plant per day. This was about 25 gallons less than in 2015. The patch we grew in this year has a heavier, higher organic matter soil that holds more moisture. For the second year in a row we went quite heavy on most of our pumpkins. Genetics, water and our fertilizer program we feel play a big role in that. Plants were spoon-fed fertilizers daily depending on test results. Epson Salts for Magnesium and Sulfur along with Borax for Boron are 2 products that are spoon-fed daily.

Weed Control: Weeding was done by hand in the beginning and then 2 applications of weed killer sprayed "carefully" under the plant did the trick.

Tissue Testing: Best advice during the season before pollination and then 3 weeks after pollination would be to do a tissue test. Tissue testing will allow you to come up with a program designed for your patch. What works for us may be lethal in another grower's patch. Our results from this past season were, for the second year in a row, very good because of acting proactively with specific nutrients instead of reactively.

The 2261.5 was pollinated on June 21 and was set 14 ft from the base of the plant, the 2307 on June 22nd at 15 ft out. The 2307 hit the ground running and was our fastest grower ever at day 30 (649 pounds). It averaged an incredible 53.5 pounds per day for 14 days. Paps North American Record 2261.5 was also "smoking hot" averaging 45 pounds per day over the same 2 weeks. We were a bit disappointed when we lost the 2307 with a month left in the season. It would have made a close run at 2,500 pounds. In disappointment, however, it gave us confidence that we were on the right track for where we want to be.

2261.5 Growth Chart
Pollinated 6/21/15

Date	Pounds	Avg/day
7/16	249	
7/23	541	41
7/30	873	47
8/6	1129	36
8/13	1407	39
8/20	1597	27
9/3	1779	13
9/17	1882	7

2307 Growth Chart
Pollinated 6/22/15

Date	Pounds	Avg/day
7/16	285	
7/23	649	52
7/30	1033	55
8/6	1313	40
8/13	1614	43
8/20	1813	28
9/3	2033	16

List of products used for:

Insect Control:	Warrior T and Merit
Biological Controls:	Companion
Disease control:	Manzate, Eagle, Clearys, TKO Phosphite, Previcur Flex, Terrazole, Chipco 26 GT and Banol

2016 was a year we will never forget, from record heat and incredible growth rates to Pap capturing the North American Record in his final year of growing. It was something special for all who witnessed the weigh-off. We would like to congratulate Matthias Wilemijns for his amazing 2,624 lb WORLD RECORD and say "THANK YOU" to all who have sent us so many touching emails of support and congratulations. We wish everyone a safe and happy holiday season and best of luck in 2017.