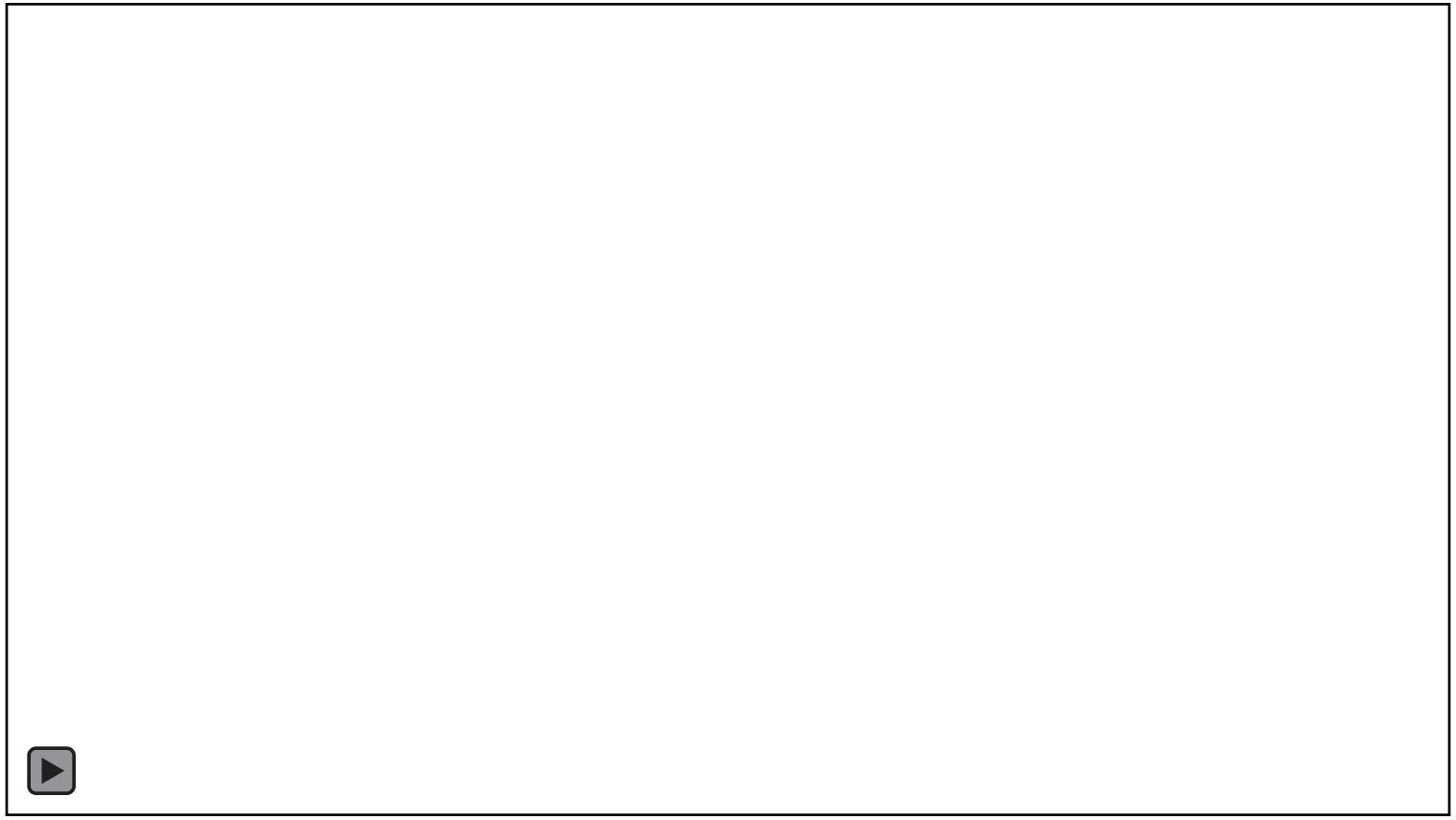
GIANT PUMPKIN GROWING 101 +

Plus Advanced Growing Tips for Experienced Growers

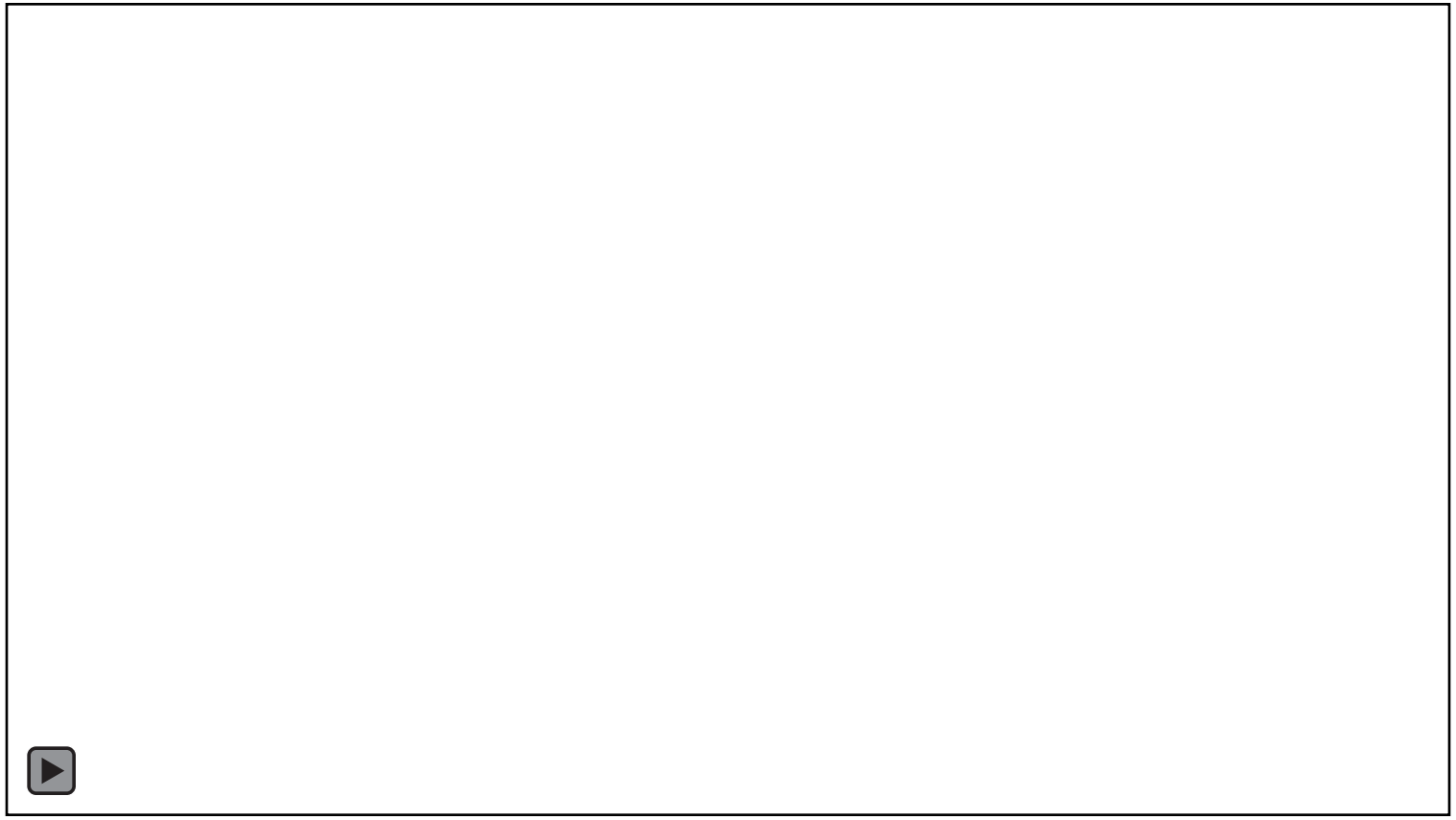
ABOUT ME

- 10 years of growing giant pumpkins
- Personal best pumpkin of 1,220 pounds
- Moved to Midway, Utah in fall of 2016, previously from Denver
- Founder of website design business (pixoinc.com)
- Father of two pumpkin growers
- www.giantpumpkinman.com

ONLY APPROVED & SERENADED GROWER BY JERRY SEINFELD



ONLY DISAPPROVED GROWER BY JULIANNE MOORE



BASICS OF GIANT PUMPKIN GROWING

- Good Seed
- Good Soil
- Good Luck?

(or make your own luck!)

GIANT PUMPKIN GROWING IS ABOUT MITIGATING RISK

- The seed has the genetic potential in it. The grower needs to get out of the way of that potential. Former World-Record holder Beni Meier proved that in 2014 with 3 world-record sized pumpkins.
- Grower needs to create an environment that takes out as many risk factors as possible
- There are "magic seeds," but there isn't much luck, mostly hard work. (Ask Mr. McConkie)
- If you think top growers are using "secret fertilizers" to get world and state record sized pumpkins, think again.

GOOD SEED

- Not all Atlantic Giant seeds are created equal
- Ask club members for seeds. Send a self-addressed, stamped bubble envelope.
- Research seeds. Ask growers. (tools.pumpkinfanatic.com)
- Seed Name:
  2145 McMullen (1756 Howell x 1625 Gantner)

  Pumpkin Weight + Grower Name
  (Mama Seed x Papa Seed)

GOOD SOIL

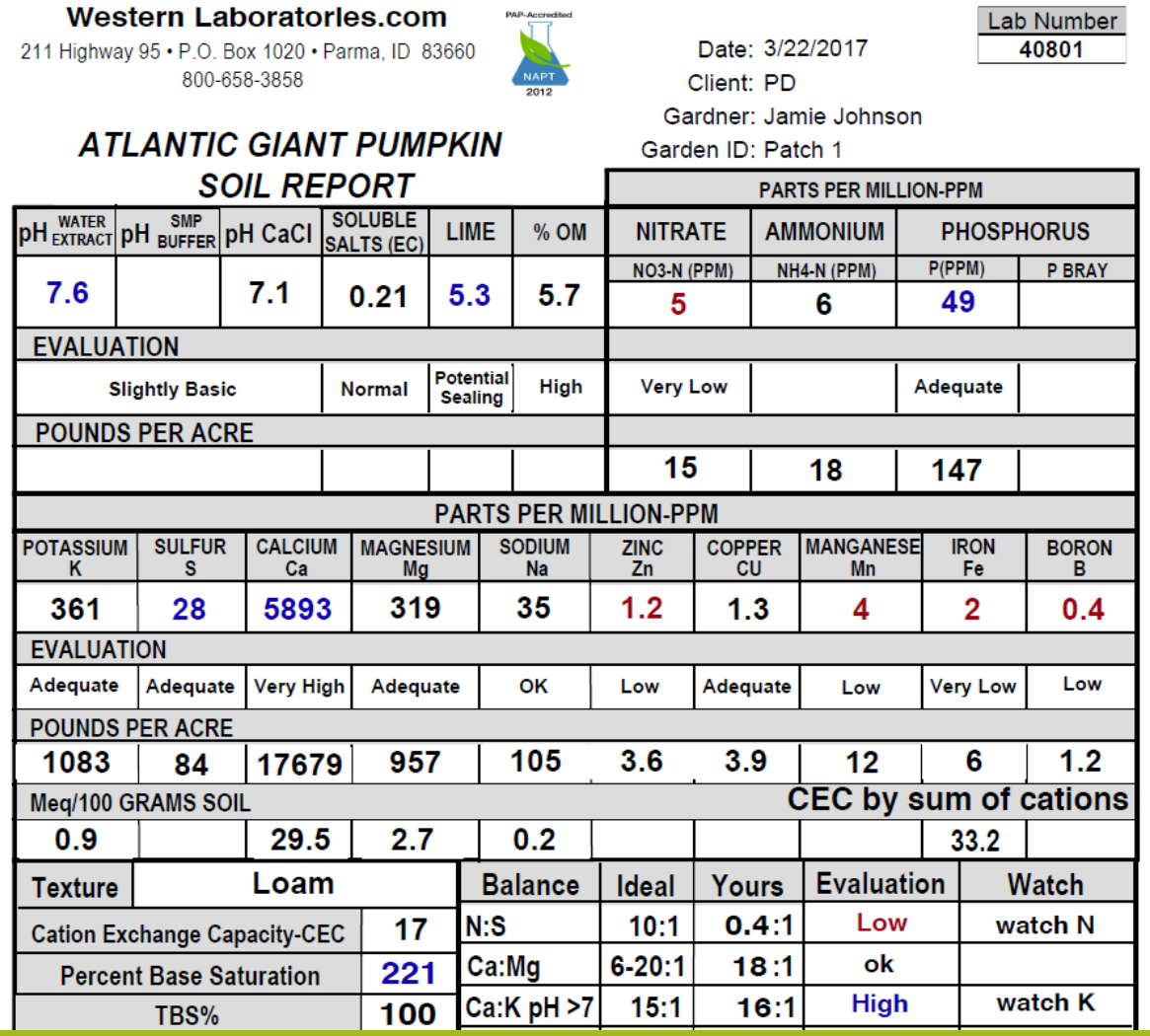
- Good soil preparation starts with a soil test
- Soil preparation starts in the fall with adjustments in the spring
- Good soil is balanced. Parts per million(PPM) numbers are just guidelines. Soil needs the right ratios of calcium/magnesium/potassium to be optimal. Balance is key!

GOOD SOIL

- How to do a soil test and why
- 1 cup of soil per planting area and sample from multiple locations 8-10 inches down
- Pay for recommendations
- www.westernlaboratories.com (talk with John Taberna after test for recommendations)
- www.al-labs-west.com

GOOD SOIL

- Soil test results are a guide. Atlantic Giants seems to allow for a range.
- Best to use the same lab for each test for consistent results
- Use recommendations to plan your amendments



Western Laboratories.com
211 Highway 95 • P.O. Box 1020 • Parma, ID 83660
800-658-3858

PAP-Accredited NAPT 2012

Lab Number 40801

Date: 3/22/2017
Client: PD
Gardner: Jamie Johnson
Garden ID: Patch 1

ATLANTIC GIANT PUMPKIN SOIL REPORT

pH WATER EXTRACT	pH SMP BUFFER	pH CaCl	SOLUBLE SALTS (EC)	LIME	% OM	PARTS PER MILLION-PPM NITRATE	AMMONIUM	PHOSPHORUS	
						NO3-N (PPM)	NH4-N (PPM)	P(PPM)	P BRAY
7.6		7.1	0.21	5.3	5.7	5	6	49	
EVALUATION									
Slightly Basic			Normal	Potential Sealing	High	Very Low		Adequate	
POUNDS PER ACRE									
						15	18	147	

PARTS PER MILLION-PPM									
POTASSIUM K	SULFUR S	CALCIUM Ca	MAGNESIUM Mg	SODIUM Na	ZINC Zn	COPPER CU	MANGANESE Mn	IRON Fe	BORON B
361	28	5893	319	35	1.2	1.3	4	2	0.4
EVALUATION									
Adequate	Adequate	Very High	Adequate	OK	Low	Adequate	Low	Very Low	Low
POUNDS PER ACRE									
1083	84	17679	957	105	3.6	3.9	12	6	1.2
Meq/100 GRAMS SOIL								CEC by sum of cations	
0.9		29.5	2.7	0.2				33.2	

Texture	Loam
Cation Exchange Capacity-CEC	17
Percent Base Saturation	221
TBS%	100

Balance	Ideal	Yours	Evaluation	Watch
N:S	10:1	0.4:1	Low	watch N
Ca:Mg	6-20:1	18:1	ok	
Ca:K pH >7	15:1	16:1	High	watch K

GOOD SOIL: Organic Matter

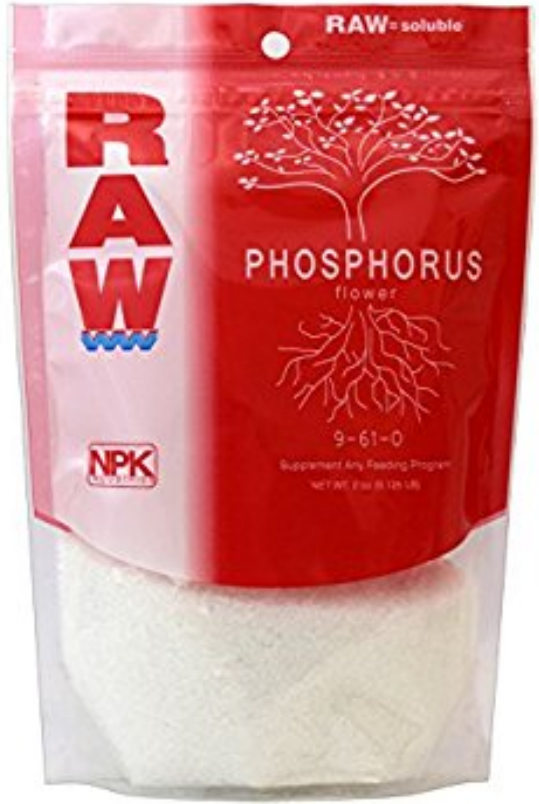
- **Organic Matter 4-9%:**
  You do not want to have this number much higher because disease pressure. If you are going to add anything in the spring make sure it is well composted.
- Sources: compost, grass clippings, sphagnum peat moss, leaves, alfalfa pellets, kelp meal
- Retains water, adds nutrients, improves soil texture, adds nutrients, adds microbes, buffers pH swings

GOOD SOIL: Nitrogen

- **Nitrogen (N): around 30ppm (parts per million)**
  This nutrient can be difficult to get a consistent test on, so as long as you are close to the 20-40ppm range you should be fine.
- Sources: ammonium sulfate, urea, blood meal, liquid fish fertilizer, compost, alfalfa meal, urea, calcium nitrate, cotton seed meal
- Nitrate nitrogen can take 20-30% of plant energy to assimilate nitrates. Adds to top growth and can restrict root growth. Can delay flowering if overdone. Plant can have higher nitrate demands during vining. Leaches easily from the soil.
- During 1st half of plant's growth, plant will assimilate 80% of nitrogen for the whole life of the plant
- Remember that organic matter can release nitrogen in soil as soil warms up.

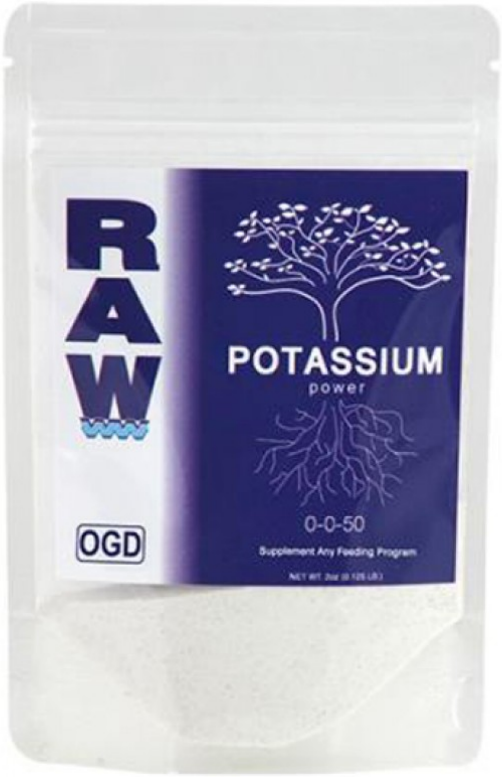
GOOD SOIL: Phosphorus

- **Phosphorous (P): 25-60 ppm**
  Hard to tell what amount of this is available to the plant but this will not leach out of your soil, so if you add too much you are going to have to deal with it.
- Sources: Monoammonium phosphate (20% more roots if used in 1st three weeks), rock phosphate, bone meal (poor source), compost
- Energy element of plants. Helps with flowering and rooting.
- Atlantic giants seem to be able to use what it needs from the soil



GOOD SOIL: Potassium

- **Potassium (K): 375 ppm**
  Pumpkins will consume large amounts of potassium during a season, particularly during pumpkin growth
- Sources: sulfate of potash, leaves, compost, kelp meal, greensand (very slow release)
- During heavy fruit and flower production the plant can deplete potassium to deficient levels in as little as 3-4 days
- Potassium is a catalyst in carbohydrate metabolism
- High potassium soils can be antagonistic to the uptake of calcium and magnesium.



GOOD SOIL: Calcium

- **Calcium (Ca): around 2,200 ppm**
  Another nutrient pumpkins consume large amounts of.
- Sources: gypsum, calcium nitrate, calcite limestone (will raise soil pH), dolomite limestone (will raise soil pH)
- Builds cell walls. Activates enzymes that turn on growth hormones.
- Glycine & glutamic acids (aminos/Omina) can aid in uptake by opening calcium ion channels and make the calcium in the soil more available
- Boron important for calcium uptake (go very, very light)

GOOD SOIL: micronutrients

- Includes: boron, copper, manganese, iron and zinc
- Follow recommendations given from soil test.
- Too much can create toxicity in the soil
- Know what is in it before adding it. The label doesn't always tell everything (i.e. humic acid has potassium in it, leaves are high in potassium, chicken manure is high in salts and nitrogen, etc.)

COVER CROP

- Plant in fall (or early spring). Till planting area two weeks prior to planting. Later till a week or two in front of vine growth.
- Adds organic matter
- Builds biology of soil (myco)
- Adds readily available nutrients
- Suppresses weeds (yea!)
- Keeps soil from getting compacted
- I like winter rye for fall planting

SEED STARTING

- April 1st – 21st
- Sand edges of seeds and soak seeds for 6-24 hours with a drop of liquid seaweed and a touch of humic acid in water
- Paper towel method or pot
- Warm place (80-90 degrees)
- Seed starting mix, myco, Azos, worm castings
- Lots of full spectrum light

PROTECT THE PLANT

- Hoop house
- Wind protection
- Sun protection
- Environment protection (early season heat source & misting)
- Insect protection
- Hail protection
- Root protection (walking boards)

DID I MENTION HAIL PROTECTION?

- Bad things happen to good people
- If at first you don't succeed, try, try again.

GENESIS OF A GIANT PUMPKIN

This would be considered the "ideal" and just what the typical plant will do:

- April 15ish start seeds
- First week of May plant outdoors in hoop house
- 2nd to third week of May plant starts to grow main vine
- 1st week of June vine growth takes off
- Pollinate pumpkin 10+ feet out on main vine 2nd week of June to July 4th.
- Pumpkin starts to really ramp up growth 24-29 days after pollination (25-40+ pounds per day)
- Mid-July vine growth starts to slow down considerably as pumpkin growth takes over
- Pumpkin growth starts to slowly decline 2 weeks after peak growth
- September pumpkin growth declines considerably, with growth dropping down to 3-10 pounds a day by the end of the month

PLANTING

- Warm the soil (hoop house, soil heating cables, warm water, clear plastic on the soil) prior to planting
- Plant so that the direction you want the vine to go is in the opposite direction of first true leaf
- Protect roots
- Add myco to planting hole
- Water well with warm water or aerated compost tea
- May need to shade plant for first few days after planting

WATERING

- Keep the soil lightly moist
- Mist the plants during the heat of the day

VINE BURYING & MAINTAINANCE

- Best way to add hundreds of pounds to pumpkin
- Promotes root growth
- Protects plant from wind (unless it is a tornado)
- Keeps vines in control and uniform
- Grow pumpkin on the main vine Ideal space for an Atlantic Giant pumpkin is 400-800 square feet (any size will do)

VINE BURYING & MAINTAINANCE

- Remove vine tip about 2 feet before edge of growing area
- Remove tertiary vines
- Tendrils can also be removed

S CURVE PUMPKIN VINE

- Reduce vine stress by curving the main vine (slowly over days)
- Move vine during the heat of the day
- Pollinate 10-14 feet out on the main vine
- Remove tap roots from vines near the pumpkin

CONTROLLED POLLINATIONS

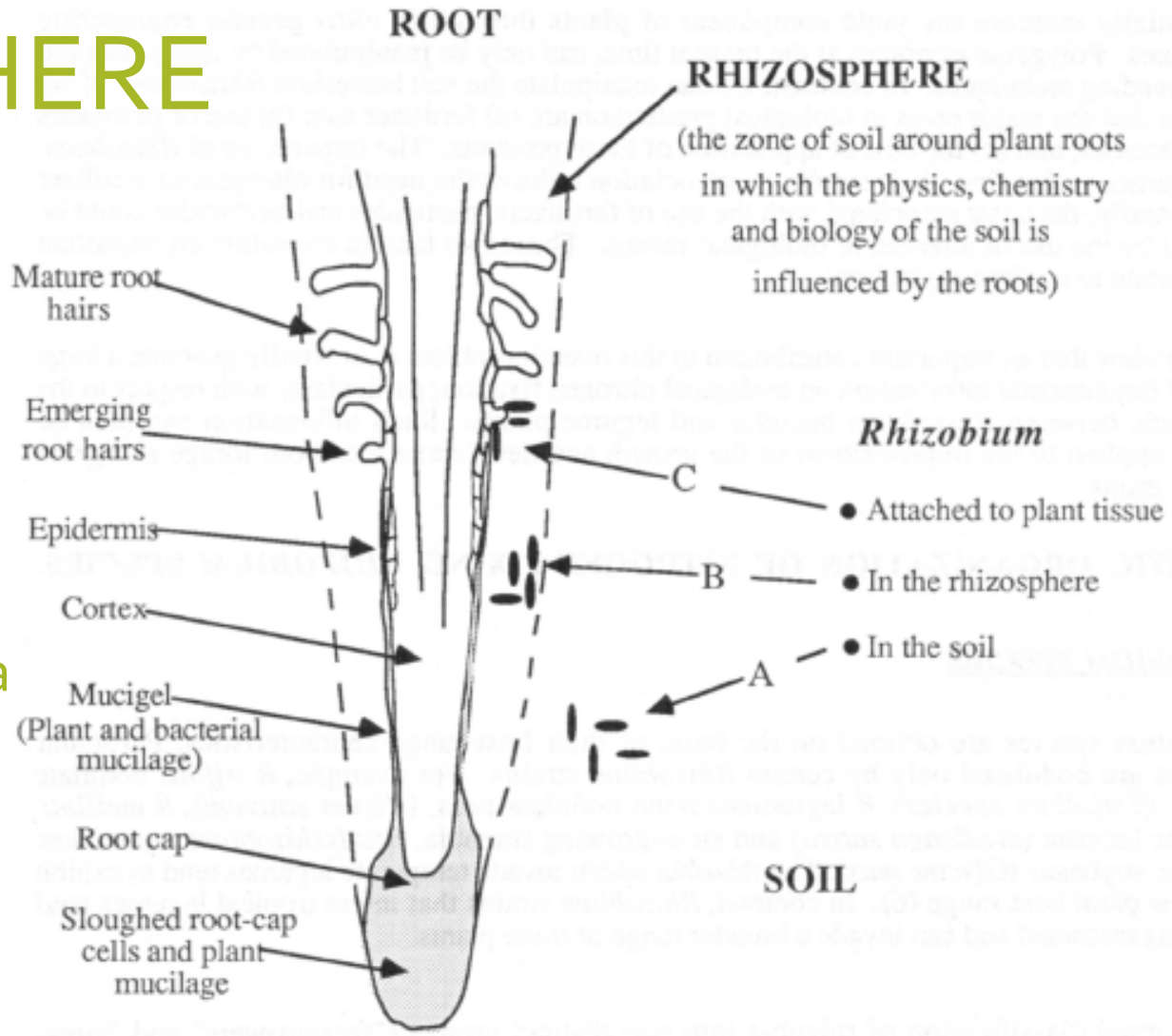
- Cover male and female flowers
- Shade the female flower and protect from rain/irrigation
- Add pollen by hand

FERTILIZING PUMPKIN PLANTS

- Don't be a "more on" (pronounced moron)
- Feed the plant just what it needs when or just before it needs it
- Spoon feeding pumpkin plants continually pushes the plant for optimal growth
- Know the numbers of NPK: 4-4-4

ROOT RHIZOSPHERE

- All roots only come into contact with 2% of the soil they grow in
- Pumpkin roots will grow out 25 feet from the stump
- Myco can help extend the area of the roots



Fertilize the Pumpkin Plant: 101

- Continuous feeding in small amounts is best (spoon feeding
- NPK: 4-4-4
- Inexpensive ($10 from Home Depot)
- Slow release organic nutrients (9-14 days for nutrients to be available).
- Follow the label

MY SPOON FEEDING FERTILIZING PROGRAM: 201 (Advanced but not required)

(This is adjusted according to plant needs & environment)

May (focus on the roots):

- Week 1: B-vitamin, liquid seaweed/kelp, compost tea, myco, microbes/Azos, yucca
- Week 2 Phosphorous/nitrogen (monoammonium phosphate), compost tea (alfalfa), humic acid, yucca
- Week 3 compost tea, humic acid, yucca, fish, enzymes
- Week 4 compost tea, fish & seaweed, Azos, Omina, silica, fulvic acid

MY FERTILIZE PROGRAM

June (vine growing):

- Week 5 blood meal (for nitrate nitrogen), phosphorus, potassium, enzymes, humic acid, compost tea, yucca
- Week 6 foliar multi-mineral, phosphorous (flowering), fulvic acid, microbes, RAW 7-4-5
- Week 7 (pollination) humic acid, compost tea, RAW 3-12-12, Omina
- Week 8 nitrogen, TKO, humic acid, yucca, compost tea

MY FERTILIZER PROGRAM

July (focus on transitioning from vine growing to fruit):

- Week 9 enzymes, NPK, compost tea, fulvic acid
- Week 10 NPK, humic acid, compost tea
- Week 11 (pumpkin gearing up—40lbs a day), TKO, microbes, nitrogen, humic acid, compost tea, B-vitamins, Omina
- Week 12 cane molasses, humic acid, NPK (lower nitrogen, higher potassium), compost tea, iron

MY FERTILIZER PROGRAM

August (focus on the fruit)

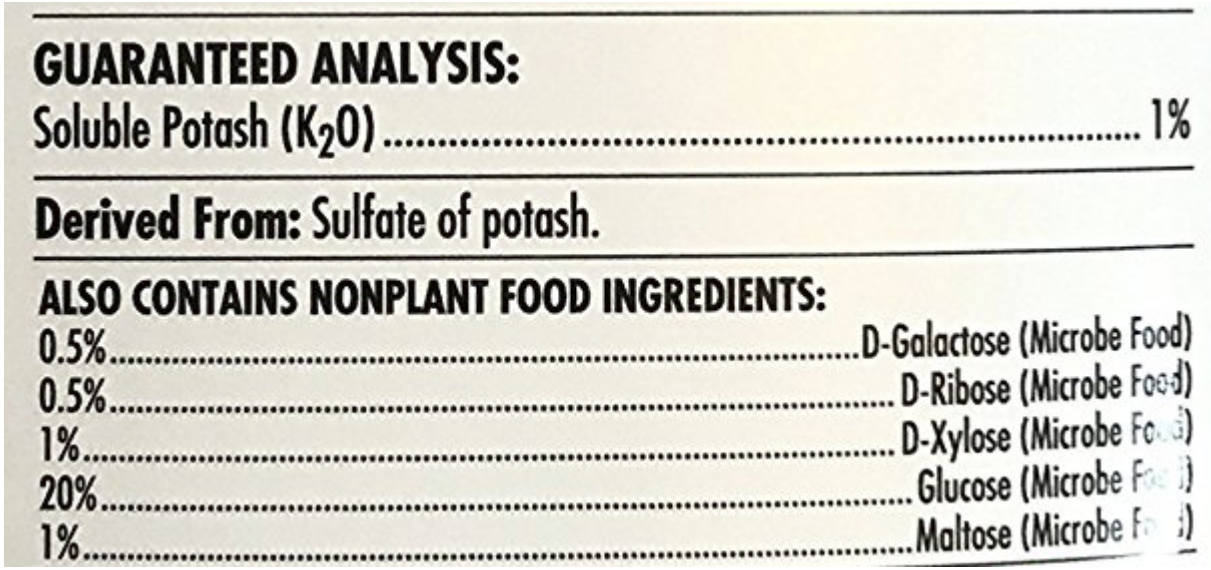
- Week 13 NPK, foliar multi-mineral, compost tea, silica, Actinovate
- Week 14 Azos, yucca, humic acid, NPK, compost tea, Omina, foliar multi-mineral
- Week 15 silica, humic acid, NPK, Actinovate, compost tea, enzymes
- Week 16 TKO, cane molasses, fulvic acid, NPK, compost tea

MY FERTILIZER PROGRAM

September (finish the race)

- Week 17 humic acid, foliar seaweed, B-vitamins, RAW 3-12-12, compost tea, Omina
- Week 18 TKO, nitrogen, foliar seaweed, foliar humic acid, cane molasses, silica, Actinovate
- Week 19 foliar potassium, nitrogen, foliar seaweed, humic acid
- Week 20 foliar potassium, foliar seaweed, humic acid

BUYER BEWARE: PICKING THE RIGHT FERTILIZER



GUARANTEED ANALYSIS:

Soluble Potash (K_2O) 1%

Derived From: Sulfate of potash.

ALSO CONTAINS NONPLANT FOOD INGREDIENTS:

0.5% ..... D-Galactose (Microbe Food)
0.5% ..... D-Ribose (Microbe Food)
1% ..... D-Xylose (Microbe Food)
20% ..... Glucose (Microbe Food)
1% ..... Maltose (Microbe Food)

- $24.97 – 1 liter: 2.74 pounds package weight = <0.02 pounds of fertilizer + sugars
- Not all fertilizers/biologicals have the same quality, quantity or integrity

FUNGICIDES & INSECTOCIDES

- Disease can ruin a season quickly
- Fungicides: Eagle, Actinovate, sesame oil, etc.
- Insecticides : contactants and systemic

RESEARCH, RESEARCH, & TEST

- Ask respected growers & heavy hitters (and sometimes expect to get different answers)
- Research online from credible sources
- Speak to soil scientists
- Do your own testing

GET THE PUMPKIN TO THE WEIGH-OFF

- Don’t sweat it
- Throw a pumpkin party
- Put the pumpkin on a pallet

SUMMARY 101

- Download presentation at: giantpumpkinman.com (product discount code: ugpg for 20% off order)
- Get soil test and prep soil
- Start seeds around April 15th indoors
- Plant outdoors around the 1st week of May in hoop house
- Spoon feed the plant small amounts of fertilizer continuously
- Keep patch weed free
- Don't compact the soil
- Keep the soil lightly moist
- Bury vines & maintain vine pattern
- Protect the plant
- Have fun!!! There are no pumpkins that are too small.