

Organic Apple Field Day

History of apple planting: 2012: 135 trees, 2013: 180, 2014: 34, 2015: 230, 2016:69, 2017: 45, 2018: 287. Currently there are 826 trees (some trees listed above are replantings)

Orchard Layout

- Trees 6' apart in row.
- 2012-2017 plantings are 10.5' between rows, with 5' wide strip of bark mulch under trees. (660 trees/acre)
- 2018 planting is 12' between row, with 6.5' wide strip of bark mulch under trees (605/acre)
- Training trees to permanent tier of lower scaffolds and renewal pruning for higher branches. Try to keep height <8.5 feet.

Varieties and Rootstocks

- Rootstocks are a mix of G.41, G.11, G.16, M.9, B.9, handful of G. 935, G.202, G.222, G.65
- Varieties are all scab-immune or highly resistant. A few susceptible varieties planted but replaced.
- Trees purchased from Cummins Nursery, Adams County Nursery, Stark Brothers

Variety	Ripening in 2018	Notes
Scarlet O' Hara		Susceptible to fireblight, mouldy core, mediocore flavor
CrimsonTopaz		Very weak here (?)
Pristine	7/28	
William's Pride	8/8	
Redfree	8/11	Inferior flavor to two varieties above
Sansa	8/14	Fairly weak and low yielding here
Akane	8/18	Low yields
Initial	8/24	Beautiful, annual, vigorous, so-so flavor
Sir Prize	9/4	Bruises easily. Nice growth habit, reliable bearer.
NovaSpy	9/4	Processing apple... not worth growing.
Prima	9/7	First harvest in 2018 – wonderful flavor
Crimson Gold	9/7	
Priscilla	9/10	Healthy, high yielding, hard to time picking
CrimsonCrisp	9/11	Leaves susceptible to Elsinoe. Great eating.
Pixie Crunch	9/11	Fruit and leaves susceptible to Elsinoe. Great eating.
Liberty	9/21	Healthy, reliable, easy to grow
Florina (Querina)	9/24	Healthy, too vigorous
Winecrisp	10/3	Great eating.
Galarina	10/9	Small fruit, needs heavy thinning. Mediocore flavor
Sundance	10/9	Fruit and leaves susceptible to Elsinoe. Biennial. Great eating.
Enterprise	10/20	Healthy, too vigorous
Goldrush	10/20	Great eating.

Yield

- Bearing begins year 3, peak reached in year 5.
- Max yield 105 lbs/tree in a 6th leaf Priscilla row – too much
- 40-60 lbs/tree is our target for good size and color, a few varieties (Sansa, Akane...) are less
- 2018 75% table grade, 25% processing grade, 50/50 in 2017

Diseases	
Fireblight	Pruning, spring sprays?
Scab	
Cedar apple rust	Cueva 2 qts/acre during infection period
Elsinoe	Microthiols Disperss 10 lbs/acre pink to late June
Alternaria blotch	
Summer rots	
Sooty blotch flyspeck	Have used Cueva 2 qts/acre (sometimes with Double Nickel), may switch to baking soda
Insects	
Leafrollers, green fruitworm, tentworms	Dipel 2 lbs/acre
Apple maggot	Mass trapping with sticky red sphere traps, 2 traps/tree two perimeter rows, 1 trap every other tree interior
Codling moth	Granulosis Madex 1.5-3 oz/acre with 6 cups molasses... mating disruption in future?
Plum/apple curculio	Baited trap trees sprayed with Pyganic, rest of orchard with surround 37.5-50 lbs/acre. Summer sprays with Venerate/beetleGONE?
Aphids	Spot spray with safer soap
Potato leafhopper	Pyganic on young trees when severe
Japanese beetle	beetleGONE 2.5 lbs/acre

Materials, Suppliers, Etc

- Brush washer: AZS brush washer purchased from Nolts Midwest Produce Supplies. 24" overhead brush washer with electric motor, 24" sponge slinger unit, 5' rotary table, low speed receiver belt conveyor
- Best Angle Tree Stakes 1-1/2"x1-1/2" 10' stakes, in 2018 \$7.27 per stake with shipping
- Bark mulch \$8/yard, \$250 trucking per load, 100-120 yards/load
- Irrigation: 1/2" orchard tubing, 1 GPH emitters (2 per tree)
- Peach Ridge Orchard Supply for Aglock chain and rubber tubing tree ties, picking bags
- Tree trunk guards are 18" plantra bark protectors
- Cultivator components from Buckeye tractor company

Branching in Hoophouse Nursery Trees

(1) manual leaf removal – tear off 2-4 young developing leaves near growing tip three times, two weeks apart, starting when leader reached 22" above graft union. Increased branching: 1 more feather>4" per tree.

(2) spray Sea Crop 16 three times, two weeks apart, starting when leader reached 22" above graft union, at maximum label rate (2 cups/gallon water) to top 8-10" of tree. (Only 50 ppm cytokinin, which is only 10-20% of the concentration of cytokinin which is typically used when Maxcel is sprayed). Decreased branching by ~0.7 feathers>4" per tree

Other observations: potato leafhopper and spider mites, iron chlorosis, heat stress in June, no terminal buds, crazy vegetative growth

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