

# Does \$\$\$\$ Grow on Trees?

## Woodland Pawpaw Production

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**SCHOOL OF ENVIRONMENT & NATURAL RESOURCES**



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# Acknowledgements

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## **Collaborators**

- Ohio Pawpaw Growers Association
- Ron Powell
- Chris Chmiel & Michelle Gorman



# Pawpaw Tree



Pawpaw fruit

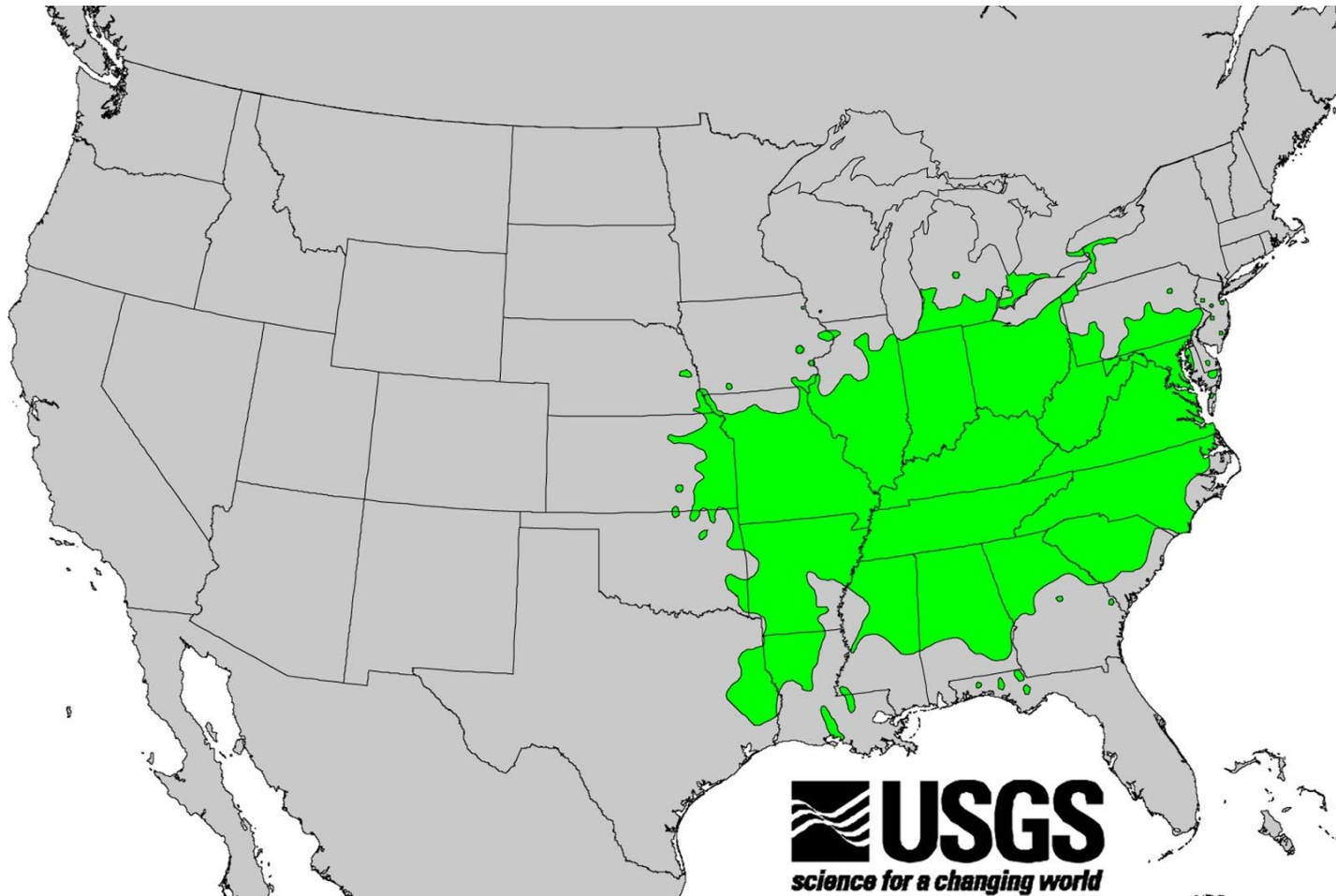


Patch of pawpaw trees



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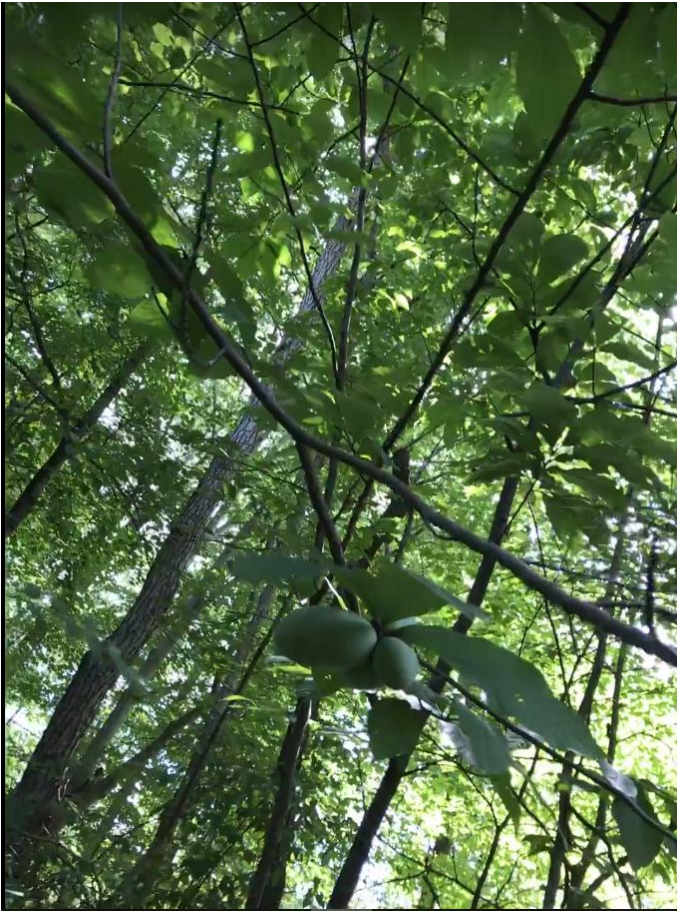
# Pawpaw Tree



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# Wild vs. Cultivar



Wild cluster of  
pawpaws



Sunflower cluster  
of pawpaws



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# Pawpaw for the Farmer

Pawpaw plot with down  
tree



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# Wild Pawpaw Problems

- Low yields
- Variable quality
- Hard to harvest



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Clonal patch

# Potential of Pawpaw

## Jackie O's Beer and Integration Acres's Pawpaw Pulp



<http://jackieos.com/brews/paw-paw-wheat/>



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<https://integrationacres.com/products/frozen-pawpaw-pulp-pawpaw-pleasures-p-44.html?osCsid=ee72c080dec80218ed0f9897a1e0c714>

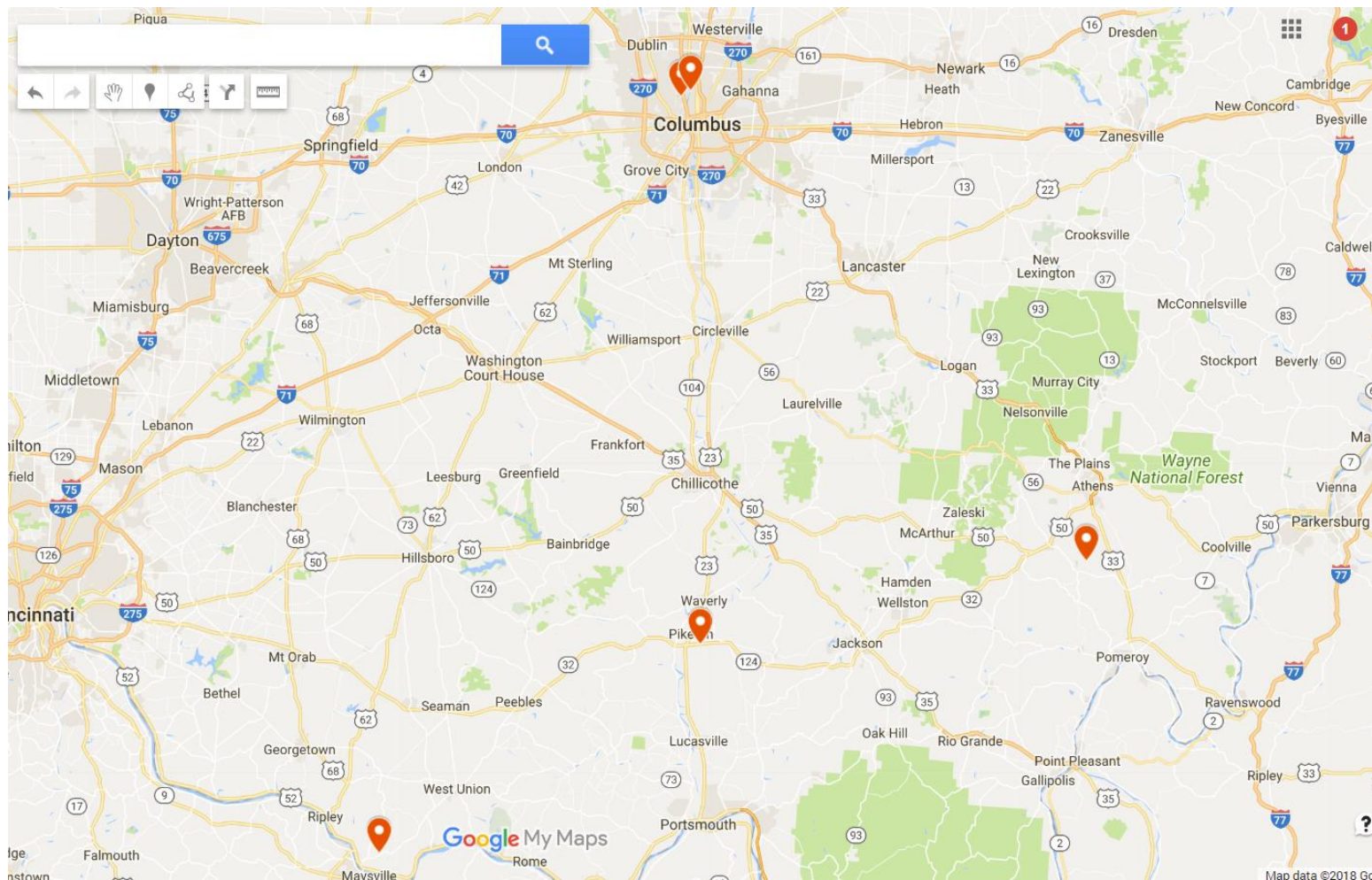


# Research Objective

- Monitor 5 field sites
- Tease out similarities
- Implement plans for increasing stand production



# Wild Pawpaw Patches



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# Data Collection



Pawpaw flower



Pawpaw Fruit with disease  
Phylosticta- Common



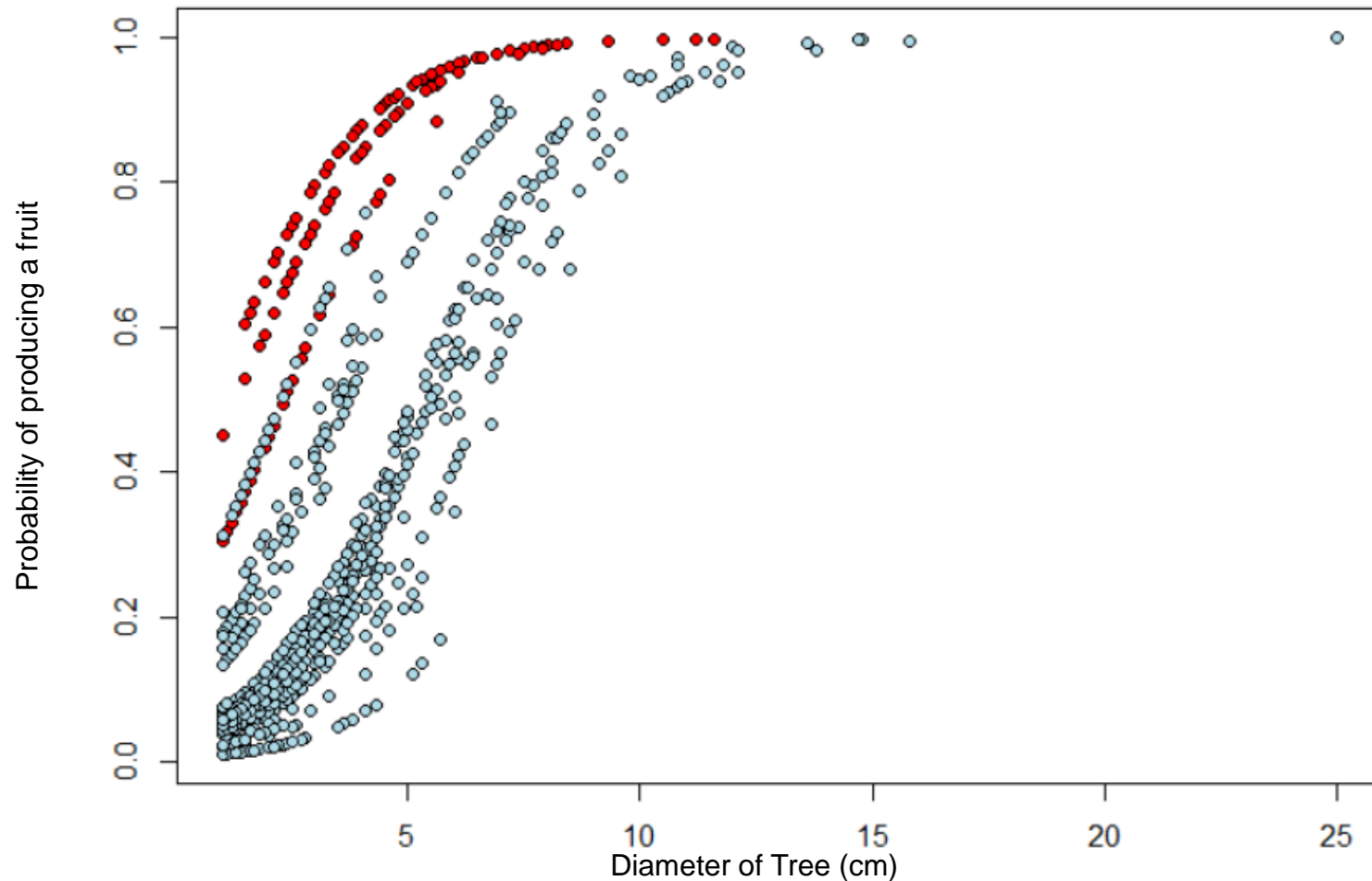
Larvae of the Pawpaw  
Peduncle Borer –  
Uncommon



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# Probability of Pawpaw Producing Fruit



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# Probability of Pawpaw Producing Fruit

OPEN	50-70%	60-80%	90-95%	85-99%
CLOSED	1-50%	1-60%	50-70%	75-85%
Diameter Tree (in)	1"	2"	3"	4"



# Controls on Pawpaw

- More likely to have fruit on smaller trees if in the open
- Light availability
- Moisture and nutrient competition





# Management



Before management



After management



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# Management

- Grafting
- Hand pollination
- Thinning clusters

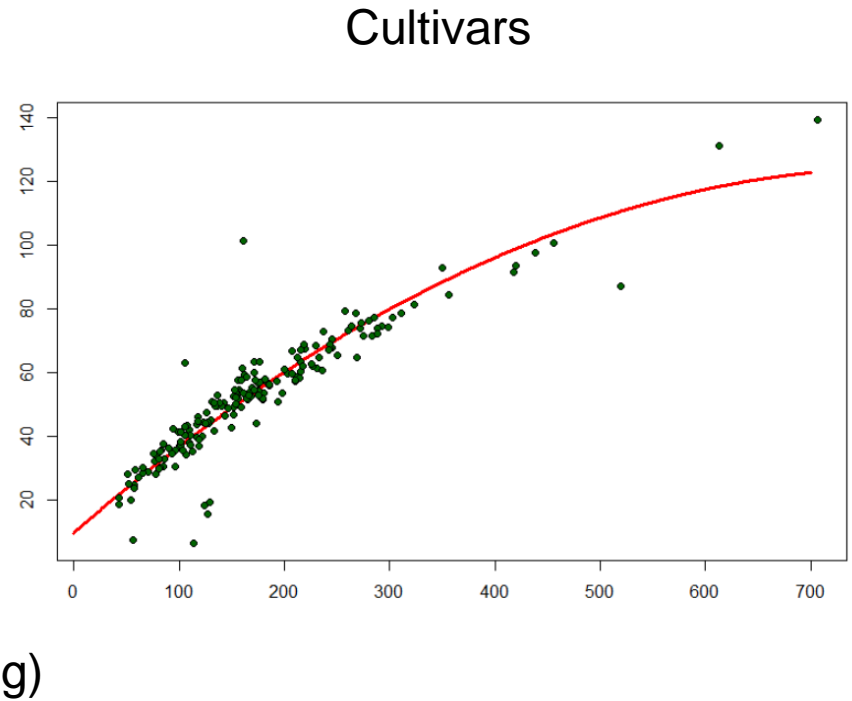
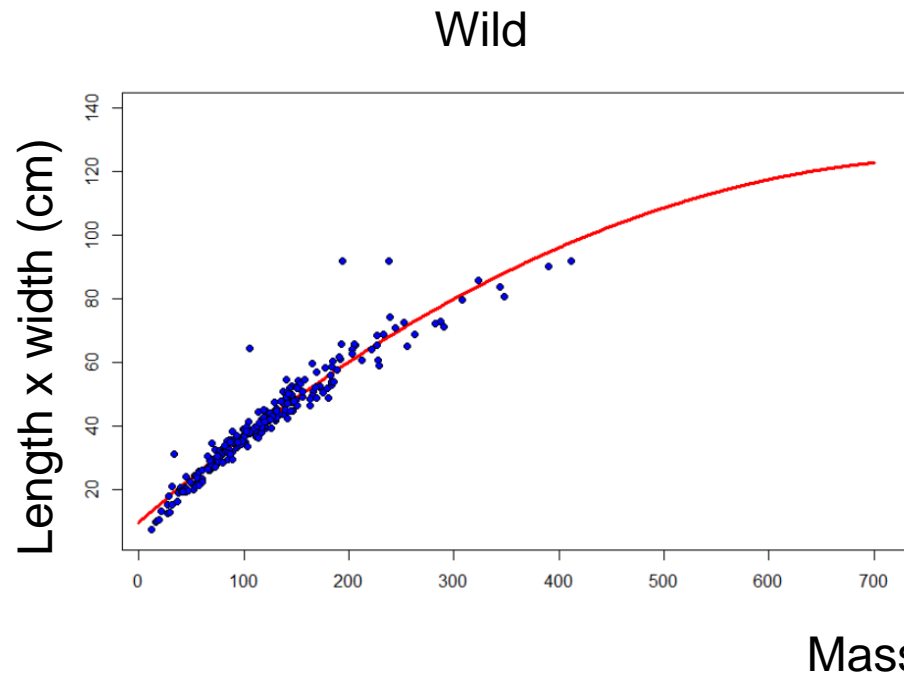


Immature pawpaw  
fruit



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# Wild Vs. Cultivars

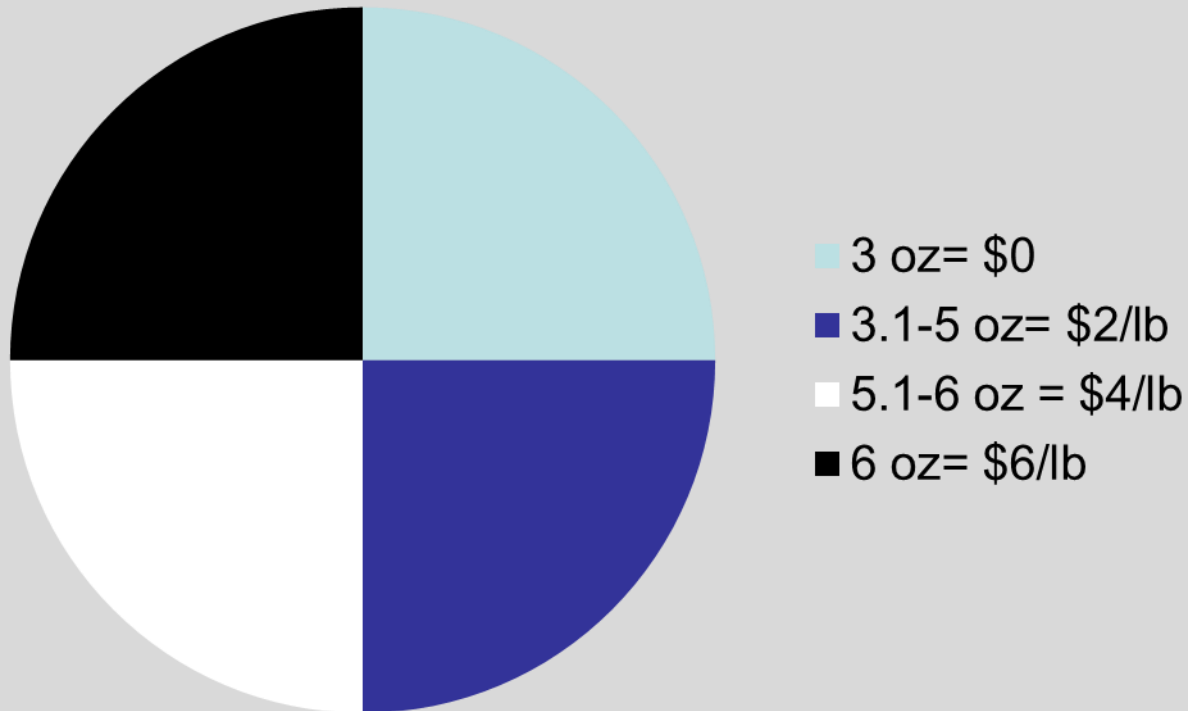


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# Money

## Estimates of Pawpaw Fruit Worth



Average \$3/lb



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# Profit open vs. closed canopy

- Piketon 2017- 327 fruit- \$927
- Piketon 2018- 303 fruit- \$900
- Integration Acres 2017- 1634 fruit- \$4,902
- Integration Acres 2018- 1062 fruit- \$3,186



# Profit open vs. closed canopy

- 0.38 Acres= 5 plots, 2 hrs/ plot harvest, \$11/hr---\$110 labor
- 100 miles transport, @ .40/c, \$40 transport
- \$100 boxes
- $\$1000 - 110 - 40 - 100 = 750 / 0.38 = 1,973/\text{acre}$  based on piketon closed





# Summary

- Management Strategies
  - Increases production
  - Where to plant
  - Control invasive
  - Know where you are going to send fruit
- \$\$\$\$



# OSU Orchards

- Piketon
- Columbus
- 30 cultivars



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# Cultivars for OSU plantings

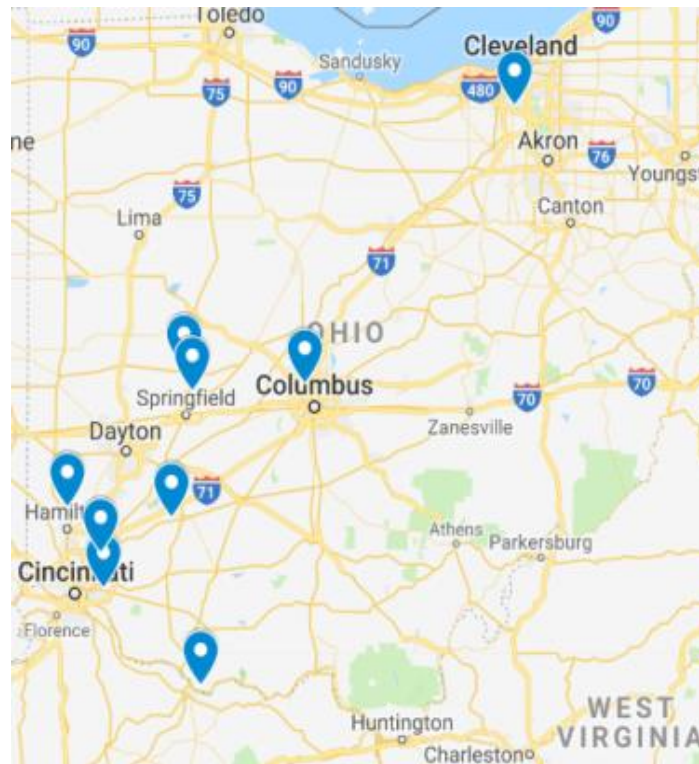
- KSU Atwood
- Kentucky Champion
- Potomac
- Wabash
- Summer Delight
- Allegheny
- Mango
- Rappanhannock
- Shenandoah
- Sunflower
- Susquehanna
- KSU Benson



# Statewide Orchard

- Comparing cultivars across state

- 



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# Pawpaw Events

- May 18<sup>th</sup>- North America Pawpaw Growers Annual Conference- Wilmington Ohio
- May 23<sup>rd</sup> – Piketon Grafting Workshop
- May 25<sup>th</sup> – Columbus Grafting Workshop



# Thank you!

- Gary Gottenbush
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- Marc Stadler
- Ted Beedy
- Lance Sinkowski
- Chis Chmiel



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# Questions



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