

Pawpaw Orchard Establishment in Ohio

Brad Bergefurd

OSU Extension Horticulture Specialist & Agriculture
and Natural Resources Educator

2018 Ohio Pawpaw Festival

Albany, Ohio



THE OHIO STATE UNIVERSITY

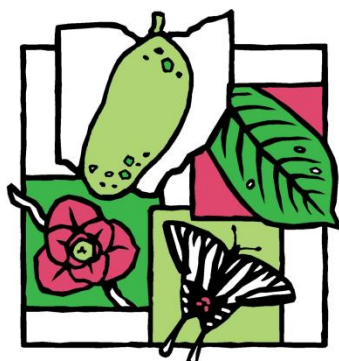
Pawpaw Specialty Crop Project

- Marketing and Orchard Resource Efficiency for Ohio Pawpaw Production (MORE Ohio Pawpaw)
- Project Leaders: Dr. Matt Davies and Brad Bergefurd



THE OHIO STATE UNIVERSITY

All about Partnerships



Ohio
Pawpaw
Growers
Association

State Native Fruit



THE OHIO STATE UNIVERSITY



THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES



THE OHIO STATE UNIVERSITY
South Centers



Thanks to Ron Powell for providing his support and assistance with this and past pawpaw projects.

- OPGA
- % Ron & Terry Powell
- 6549 Amelia Dr.
- Cincinnati, Ohio 45241

■ (513) 777-8367

□ Botrytis@fuse.net

□ www.Ohiopawpaw.com



he hio tate niversity outh enters keton, hio



145 acres

12 – ¼ acre
ponds

2 – 1 acre
ponds

1 – ½ acre
pond

Reservoir
4 ½ - 5 acres

Hops Research and Education



Strawberry Plasticulture Production



he hio tate niversity
outh enters

Small Fruits Program



Wine Grape Research Trials



High Tunnel Production



Grower Assistance & Training



Pawpaw education and demonstration at Piketon South Centers began in 2011

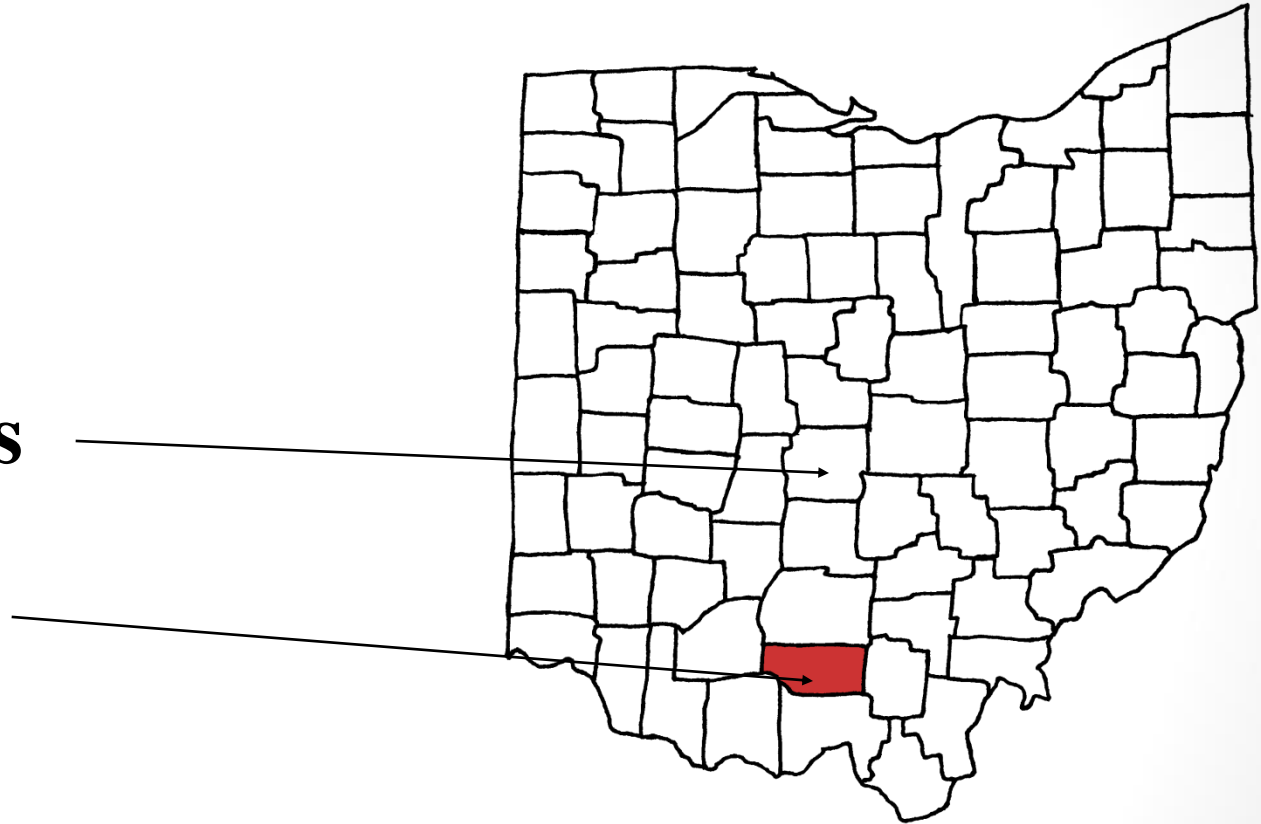
- 16 plants grafted by Ron Powell May 19 2011
- Wells
- Mango
- SAB Overleese
- PAG #1
- Sunflower
- NC-1



OSU Campus and Piketon Research Orchard Locations

Columbus

Piketon



Pawpaw Specialty Crop

- Purpose of our project is to improve the competitiveness of pawpaw crops by providing growers and producers with the knowledge they need to: successfully establish and manage pawpaw orchards, produce high-quality pawpaw fruit in reliable and commercially-viable quantities, and effectively market.
- MORE Ohio Pawpaw will provide the necessary research based information for Ohio nursery growers interested in diversifying their current nursery production to include propagation of pawpaw trees to meet the demand for high quality disease free pawpaw plant material



THE OHIO STATE UNIVERSITY

Pawpaw Specialty Crop

- Explore opportunities for increasing the availability and distribution of pawpaw and pawpaw-based specialty products
- Reduce risk for producers by providing evidence for best-performing varieties and crop establishment methods
- Provide small farmers and land-owners with an opportunity for crop diversification and sustainable utilization of land marginal for traditional crops
- Support new producers, including urban farmers and disadvantaged urban and rural communities, with the technical information on best practices for establishing pawpaw production and marketing their product
- Raise awareness of the nutrition and health benefits of pawpaw and its diverse uses in a range of culinary products



Woodland Production of Pawpaw

- Will utilize an established network of woodland pawpaw monitoring sites across Ohio.
- An adaptive management process will be used to track the success of targeted, site-specific interventions designed to improve production efficiency.
- Interventions will include thinning to reduce competition between pawpaw trees and to increase light availability in the sub-canopy, hand pollination to improve fruit set and grafting-in of cultivars to increase patch genetic diversity.
- Sarah will describe this part of the project on Sunday.



Orchard Establishment for Pawpaw

Thomas Harker, September 15, 2018

CFAES



THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES

Cultivars for OSU plantings

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



Piketon Orchard

The one acre block was deep plowed and disked prior to soil amendment's being applied.

Using soil test results the following was applied prior to beds being constructed.

- 62 lbs. of 18-46-0
- 106 lbs. of 0-0-60
- Lime was not applied to the field

Sample Number	Lab Number	pH		Organic Matter %	Analysis Result* and Rating				CEC	Base Saturation			Mehlich-3 PPM and Rating						
		Soli pH	Buffer pH		Phosphorus P	Potassium K	Magnesium Mg	Calcium Ca		K %	Mg %	Ca %	Sulfur S	Boron B	Zinc Zn	Iron Fe	Copper Cu	Mang. Mn	Alum. Al
PAWPAW	D49741	5.6	6.9	1.0	30 M	79 M	212 G	712 G	5.6	3.0	27.8	47.7							

* P, K, Mg and Ca are extracted by Mehlich-3 (ICP) and are reported in ppm

Sample Number	Lab Number	Year	Crop	Yield Goal	Acres	Nutrient recommendations expressed in broadcast rates of lbs/A except where noted.										
						CaCO ₃ ** Lime	N	P ₂ O ₅	K ₂ O	Mg	S	B	Cu	Fe Foliar	Mn Row	Zn
PAWPAW	D49741	18	PawPaw	0	1	2317	40	103	228	0						



CFAES



CFAES



Piketon

(Arboretum)



CFAES

Piketon Orchard



CFAES

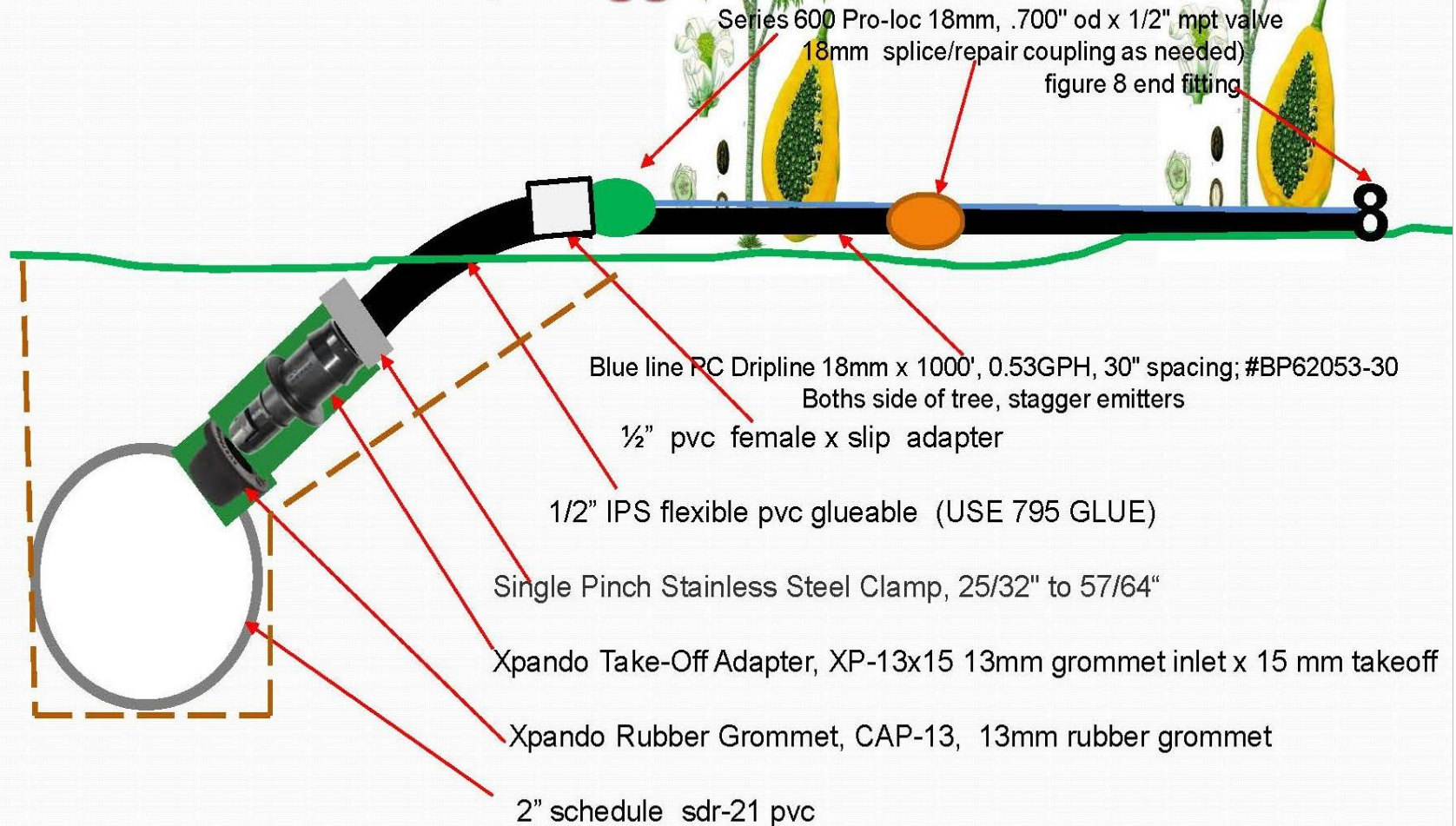
Piketon Orchard



CFAES

Piketon Orchard

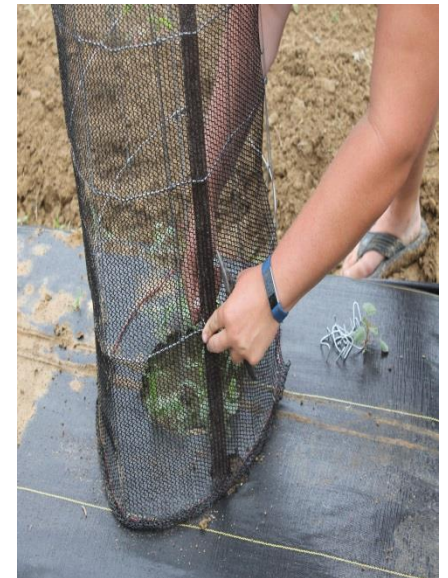
Typical PVC underground header to 18mm drip tubing on ground for Paw Paws Both sides of tree, stagger emitters



Shade Cloth Cage

- Cut 5' pieces of woven wire fence.
- Formed cage
- Attached shade cloth to cage using hog rings.
- Attached cage to steel fence post.
- Shade installed on South west side of tree.





CFAES

Columbus Campus Orchard



Columbus Campus Orchard



THE OHIO STATE UNIVERSITY

Columbus Campus Orchard



THE OHIO STATE UNIVERSITY



CFAES

Columbus Campus

Columbus Campus



CFAES



CFAES

Full research reports, assistance and production information

- Brad Bergefurd
Horticulture Specialist
- Extension Educator
Piketon Research & Extension Center
1864 Shyville Road
Piketon, Ohio 45661
- 1-800-860-7232 ext 136
- OSU Extension Scioto County Portsmouth, Ohio
- 740-354-7879
- Bergefurd.1@osu.edu
- www.southcenters.osu.edu



THE OHIO STATE UNIVERSITY