

Pawpaw Patch Management as a tool to facilitate woodland restoration: Effect of Forest Structure on Fruit Yield

Sarah Francino

Contact: francino.1@osu.edu

Brad Bergefurd

G. Matt Davies



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AND ENVIRONMENTAL SCIENCES



Acknowledgements

Funders

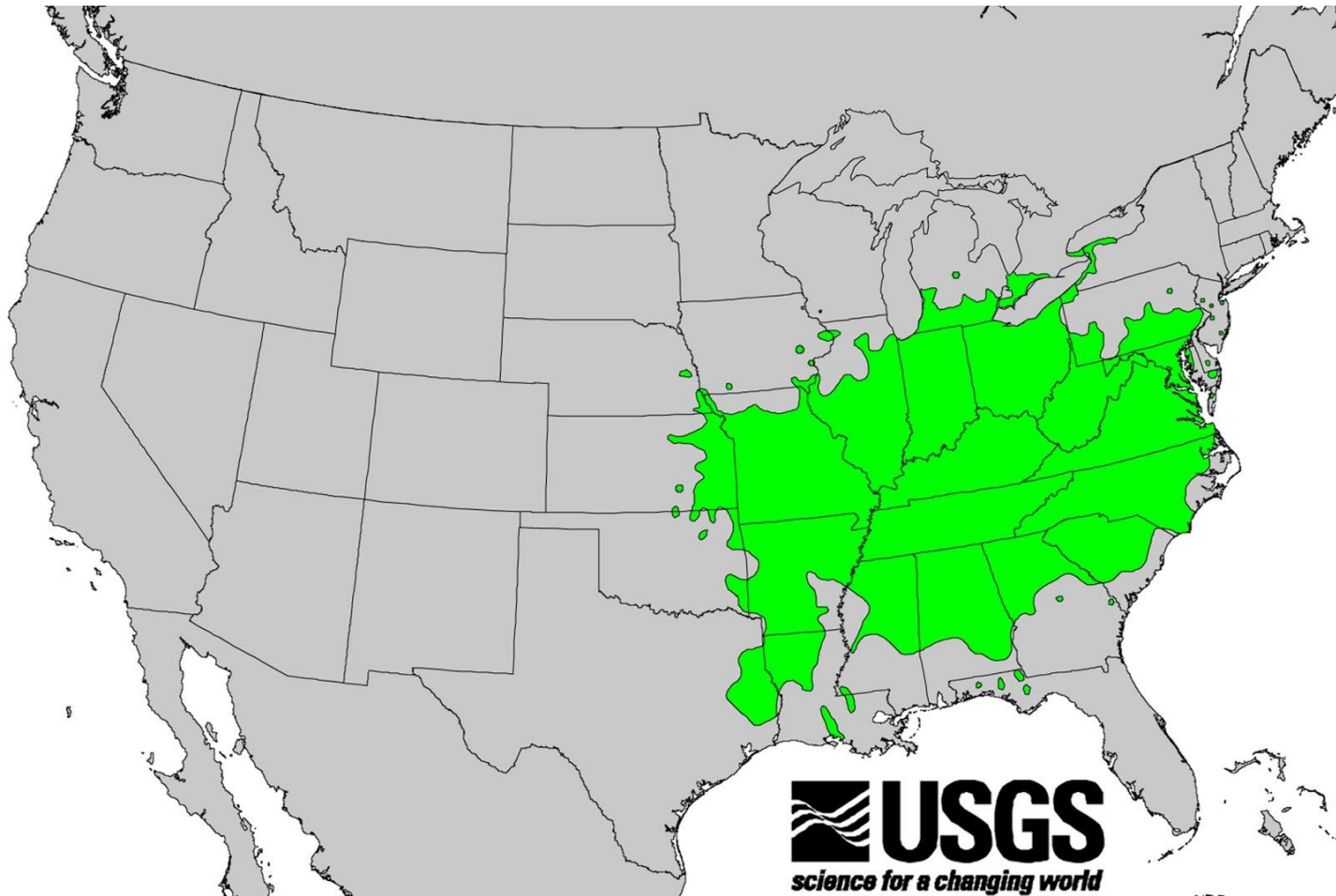
- Ohio Department of Agriculture
- Warner Endowment for Sustainable Agriculture
- OARDC

Collaborators

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



Pawpaw Tree



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Pawpaw Tree



Pawpaw fruit



Patch of pawpaw trees



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Wild Pawpaw Problems

- Low yields
- Variable quality
- Hard to harvest



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Clonal patch

Pawpaw for the Farmer

Pawpaw plot with down
tree



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Potential of Pawpaw

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



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



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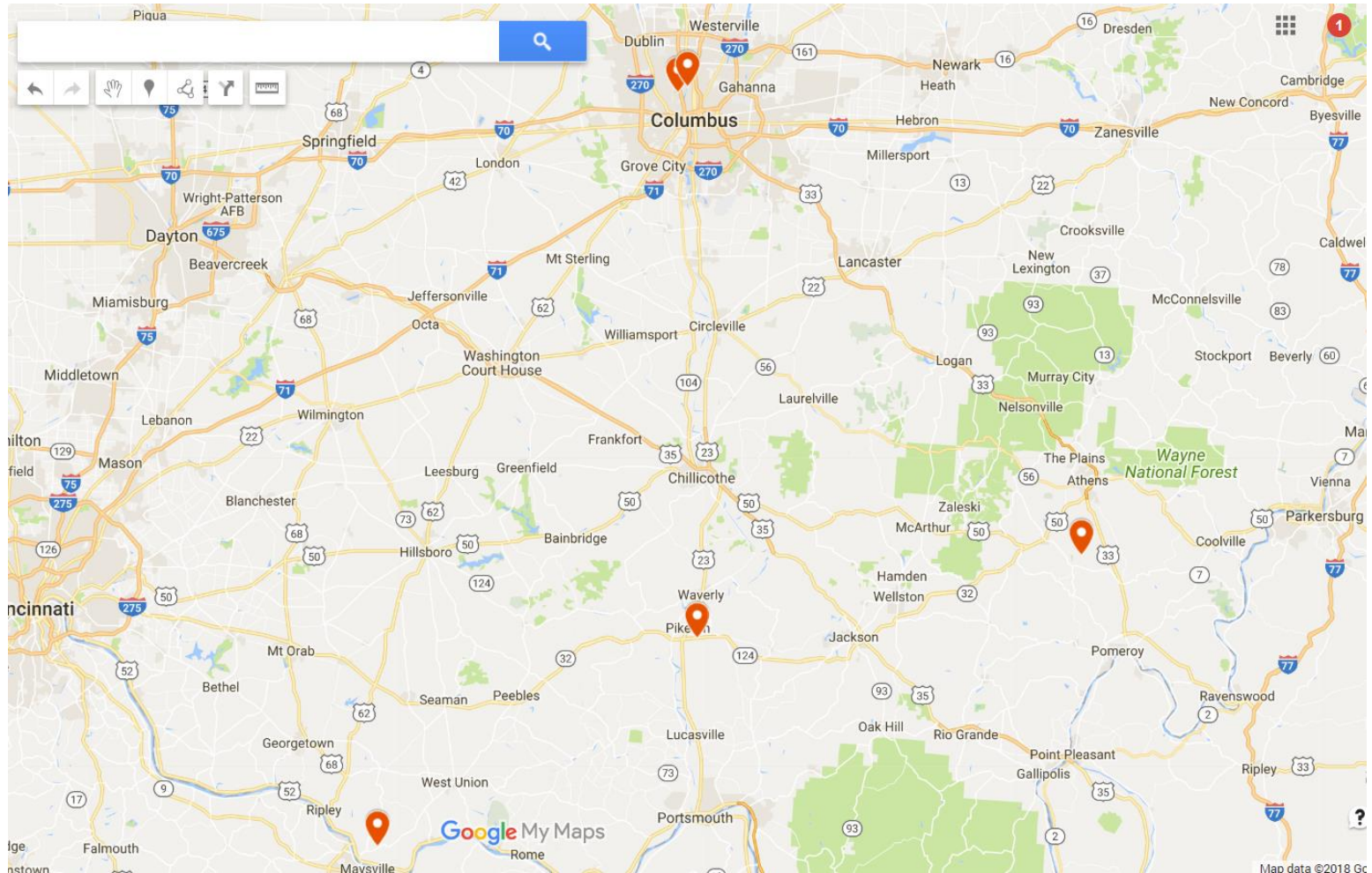
<https://integrationacres.com/products/frozen-pawpaw-pulp-pawpaw-pleasures-p-44.html?osCsid=ee72c080dec80218ed0f9897a1e0c714>

Research Objective

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

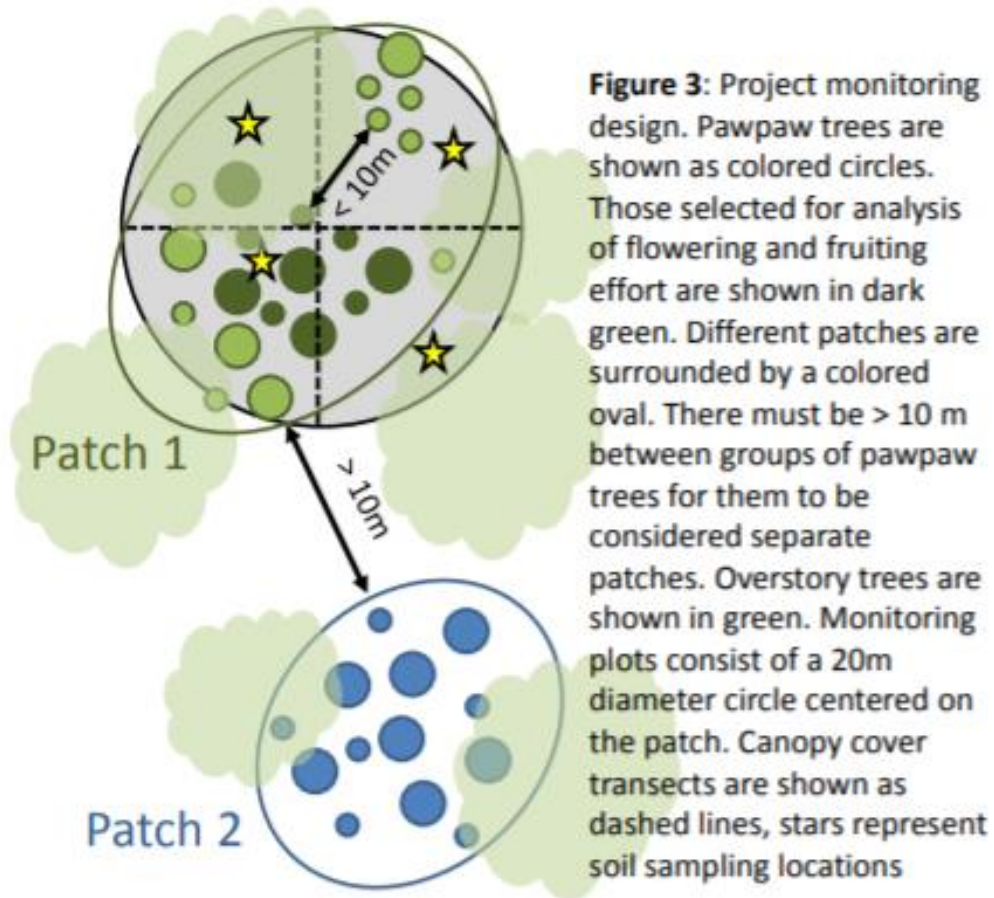


Wild Pawpaw Patches



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Picking 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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Result



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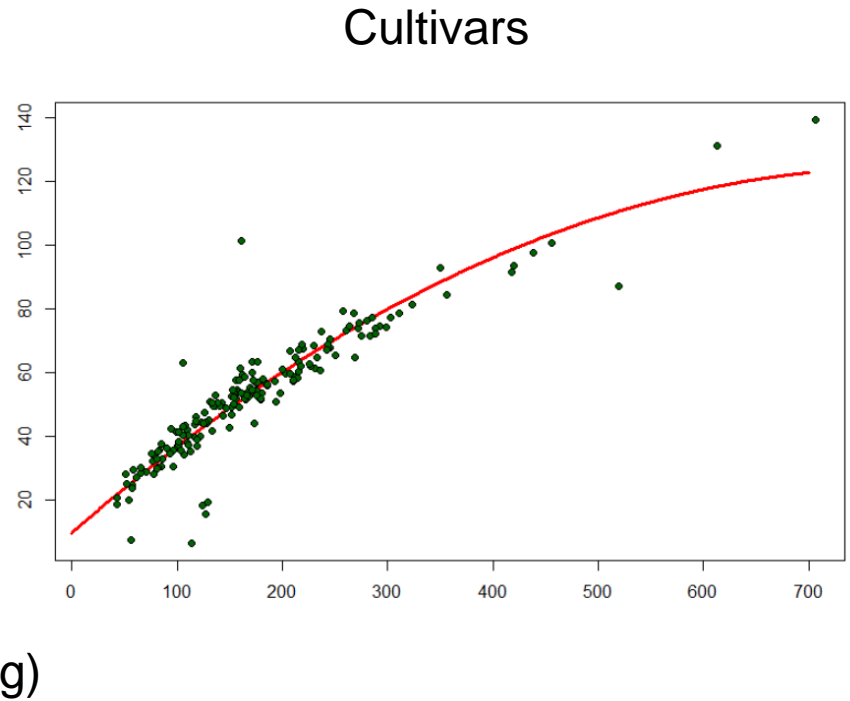
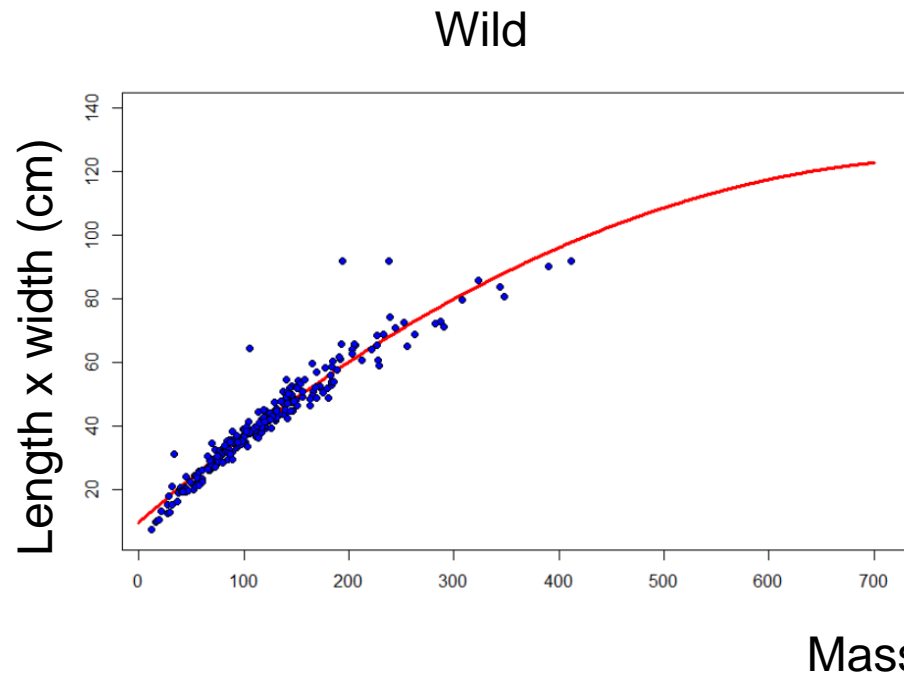
Plot-level Fruit Production Over Time

(g)

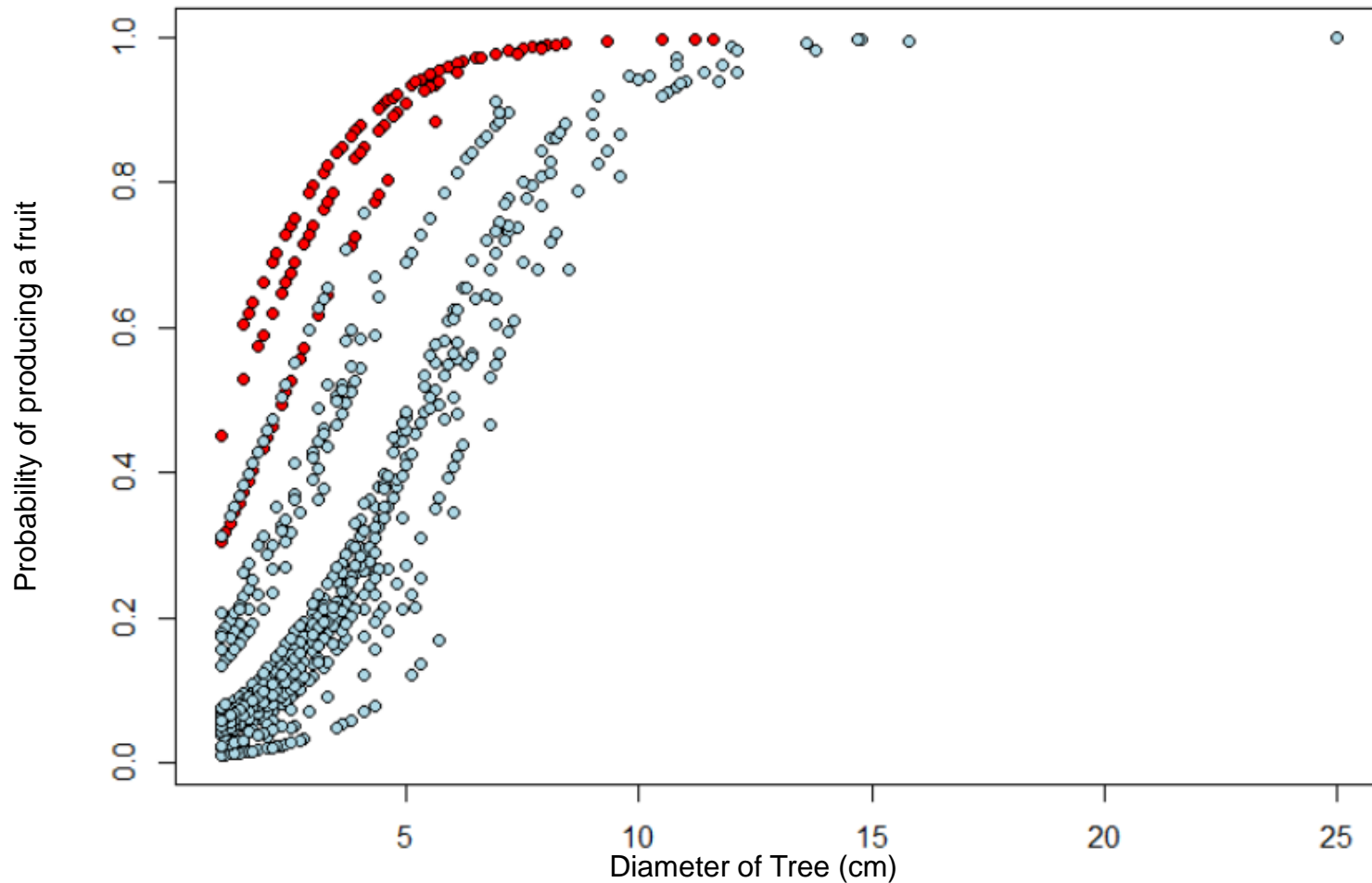


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Wild Vs. Cultivars



Probability of Pawpaw Producing Fruit



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Flowering and Fruiting Relationship



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Controls on Tree-Level Fruit Production



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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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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



Future Management

- Grafting
- Hand pollination
- Thinning clusters



Immature pawpaw
fruit



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Questions



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