Breeding vegetables for flavor

Julie Dawson
Background: Stakeholders

- Urban and peri-urban direct-market growers
- Farms tend to be small-scale, diversified, often organic
- Quality is a key trait for their markets
- University has often not been a resource for urban or organic agriculture
people want good food

• gardeners
• farmers
• consumers
• chefs
Breeding for alternative systems
How do farmers choose new lines to trial?
Wisconsin Vegetable Trials

- Regional Satellite Model
- All crops planted at the research station
- Farmers choose which crops they want to grow
- Qualitative data on-farm, quantitative data on-station
Crops 2015

- Beets
- Carrots
- Corn
- Cucumber
- Greens
- Kale
- Melon
- Onion
- Peppers
- Potato
- Squash
- Tomato
Regional-Satellite trials

- More detailed data collection on regional sites
- More varieties than one farm is able to test
- Each farm is able to take a subset of the trial
- Farmers chose the crops they would like
<table>
<thead>
<tr>
<th>Varieties</th>
<th>Would you grow this again?</th>
<th>How marketable is it?</th>
<th>What did you think of the flavor?</th>
<th>Strongest point</th>
<th>Major flaws</th>
<th>Which variety was the best/worst?</th>
<th>General Notes</th>
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<td>Big Beef - Check variety</td>
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<td>Prudens Purple — Drk. Pink Brandywine</td>
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<td>Bear Creek — Purple/Black Slicer</td>
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Chef Involvement
“What if we were involved in writing a recipe from the beginning?”
- Dan Barber, Chef, Stone Barns Center 2013
UW Organic Vegetable Field Day focused on flavor, fresh-market quality and variety performance in organic systems.

Free and open to the public. Please join us!

September 8th (Tuesday) from 4-7pm
West Madison Agricultural Research Station, 8502 Mineral Point Rd, Verona WI 53593

For more information: Julie Dawson, dawson@hort.wisc.edu

This field day is focused on vegetable variety trials for organic systems, including agronomic performance, insect and disease management, market quality and flavor. Vegetable crops include beets, cabbage, carrots, sweet corn, cucumber, kale, greens, melons, onions, peppers (sweet and hot), potato, winter squash, and tomatoes (high tunnel and field grown). After brief introductions from each researcher, participants will be able to the variety trials and hear results from different organic research projects. Attendees will get to participate in a flavor evaluation of different varieties in the trials represented.

Chef-farmer-plant breeder collaborative

Julie Dawson, Ruth Genger, Irwin Goldman, Phil Simon, Bill Tracy

Northern Organic Vegetable Improvement Collaborative – Erin Silva, Bill Tracy

Carrot Improvement for Organic Agriculture – Phil Simon, Erin Silva

Beet, onion and carrot breeding – Irwin Goldman

Sweet corn breeding – Bill Tracy

Participatory potato breeding – Ruth Genger

Hoop-house and field-grown tomato variety trials – Julie Dawson

Organic disease management for tomatoes and potatoes – Amanda Gevens

Organic insect management – Russell Groves
Many Thanks To:

My research group
Brian Emerson, Kitt Healy, Terri Theisen, Thomas Hickey, Natalie Cotter, Laura Jacobson, Mariana Debernardini, Bradley Mellinger, Sarah Lee, Lucas Holiday, Molly Kreykes, Jamie Lovely

Chefs: Eric Benedict, Dan Bonanno, Anna Dickson, Jonny Hunter, Tory Miller

Farmers: John Binkley, Tricia Bross, Eric Elderbrock, Mark Gallo, John Hendrickson, Amy Wallner, Anna Metscher, Alissa Moore, Mark Voss, Ace Lynn Miller


Students and Staff: Janet Hedtcke, Tom Wright, Rod Denu, Anders Gurda, Anne Pfeiffer, Ken Cleaveland Solveig Hanson, Claire Luby, Lynn Maher, Tessa Peters, Sarah Turner, garden interns and farm crew

This work is supported by an Organic Agriculture Research and Extension Initiative grant of the National Institute of Food and Agriculture.