2015 Dry Farming Demonstration
Oak Creek Center for Urban Horticulture
Three 10' x 100' plots (Fabaceae, Cucurbitaceae, Solanaceae) established to demonstrate dry farming management practices.

**Soil type:** Dayton Silt Loam

**Soil preparation:**
- Broke ground on 3/17 with spader
- Compost (2-3 inches) and lime (1.5 ton/acre) spread and tilled in on 3/30
- Chisel plow – early April
- Till – once early April and once late April
- Seed bed preparation – early May for Dry Beans and Potatoes and mid-May for transplants (tomato, squash, melon)

**Plant Family: Fabaceae**
- Deer ate top 30-50% off of all plants. Yield data was still collected but should be taken with a grain of salt
- Whipple was the highest yielding variety
- Medium density averaged across varieties was the highest yielding

<table>
<thead>
<tr>
<th>Crop</th>
<th>Variety</th>
<th>Direct seed or Transplant</th>
<th>Planting Date(s)</th>
<th>Harvest Date</th>
<th>Low Density *</th>
<th>Medium Density *</th>
<th>High Density *</th>
<th>Seed source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry Bean</td>
<td>Oland Swedish Brown</td>
<td>Direct seed</td>
<td>May 5-7</td>
<td>Sept 11</td>
<td>0.3</td>
<td>0.7</td>
<td>0.3</td>
<td>Adaptive Seeds</td>
</tr>
<tr>
<td>Dry Bean</td>
<td>Titus Cannellini</td>
<td>Direct seed</td>
<td>May 5-7</td>
<td>Sept 11</td>
<td>0.1</td>
<td>0.6</td>
<td>0.5</td>
<td>Adaptive Seeds</td>
</tr>
<tr>
<td>Dry Bean</td>
<td>Wolverine's Orca</td>
<td>Direct seed</td>
<td>May 5-7</td>
<td>Sept 11</td>
<td>0.3</td>
<td>0.7</td>
<td>0.6</td>
<td>Adaptive Seeds</td>
</tr>
<tr>
<td>Dry Bean</td>
<td>Whipple</td>
<td>Direct seed</td>
<td>May 5-7</td>
<td>Sept 11</td>
<td>0.7</td>
<td>1.1</td>
<td>1.2</td>
<td>Adaptive Seeds</td>
</tr>
</tbody>
</table>

* Low Density (1.5 oz or approx. 75 seed/125 sq ft), spacing: 4” in row, 30” between row
* Medium Density (2.5 oz or approx 105 seed/125 sq ft), spacing: staggered 4” double row, 30” between row
* High Density (4 oz or approx 180 seed/125 sq ft), planting technique used by Dick W. – seed broadcast in row and incorporated with Mantis tiller

**Plant Family: Cucurbitaceae**
- Low germination rates in direct-seeded curcurbits (seeded on May 25, 2015), especially melons (‘Eel River’, ‘Escorial’, ‘Little Baby Flower’) and ‘Zepelin’ Delicata
- Notable vigor of dry farmed varieties particularly the ‘Dark Star’ Zucchini
- Dry farmed ‘Little Baby Flower’ watermelon ranked higher in categories of appearance, texture, and sweetness than it’s irrigated counterpart
  - Note: Some local growers have stopped growing this small early maturing variety due to splitting in irrigated systems, but no splitting was observed in this variety in 2015 dry farming demo

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<tr>
<th>Crop</th>
<th>Variety</th>
<th>Planting Date(s)</th>
<th>Harvest Date</th>
<th>Spacing</th>
<th>Seed source</th>
<th>Yield (lbs/plant)</th>
<th>Yield (tons/acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter squash</td>
<td>Zeppelin Delicata</td>
<td>May 27</td>
<td>Sept 25</td>
<td>4’ in row 5’ between row</td>
<td>Wild Garden Seed</td>
<td>8</td>
<td>8.6</td>
</tr>
<tr>
<td>Winter Squash</td>
<td>Stella Blue</td>
<td>May 27</td>
<td>Sept 25</td>
<td>4’ in row 5’ between row</td>
<td>Seed Revolution Now!</td>
<td>12</td>
<td>13.1</td>
</tr>
<tr>
<td>Winter Squash</td>
<td>Blue Hokkaido</td>
<td>May 27</td>
<td>Sept 25</td>
<td>4’ in row 5’ between row</td>
<td>Paul Cauthorn via Dick W.</td>
<td>16</td>
<td>17.4</td>
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<tr>
<td>Cucumber</td>
<td>Trozy</td>
<td>May 27</td>
<td>July - Sept</td>
<td>4’ in row 5’ between row</td>
<td>Paul Cauthorn via Iraqi Seed Project</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zucchini</td>
<td>Dark Star</td>
<td>May 27</td>
<td>Early July</td>
<td>4’ in row 5’ between row</td>
<td>Seed Revolution Now!</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Plant Family:** Solanaceae

- Blossom end rot severe in first flush of tomatoes, and a little less in second flush
- Tomato planting density likely too high @ 12 sq ft per plant (3’ in row, 4’ between row)
- Try varieties in 2016 that are less susceptible to blossom end rot - ‘Early Girl’ and ‘Big Beef’ suggested
- The Yukon Gold potato were hilled 3 times, ready to harvest in mid-July but dug on Aug 10, blemish free at harvest

### Crop Variety Direct seed or Transplant Planting Date(s) Harvest Date (s) Spacing Seed source Yield (lbs/plant) Yield (tons/acre)

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<tr>
<td>Tomato</td>
<td>Jory</td>
<td>Transplant</td>
<td>May 25</td>
<td>Mid July - Sept</td>
<td>3’ in row 4’ between row</td>
<td>Adaptive Seeds</td>
<td></td>
<td></td>
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<tr>
<td>Tomato</td>
<td>Mama Leone’s</td>
<td>Transplant</td>
<td>May 25</td>
<td>Mid July - Sept</td>
<td>3’ in row 4’ between row</td>
<td>Hudson Seed Library</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potato</td>
<td>Yukon Gold</td>
<td>Direct seed</td>
<td>May 5</td>
<td>August 10</td>
<td>2.5’ in row 5’ between row</td>
<td>Wilco</td>
<td>4</td>
<td>7.0</td>
</tr>
</tbody>
</table>

### Dry Farming Resources

**OSU Extension Small Farms Dry Farming Demonstration:** [http://smallfarms.oregonstate.edu/dry-farming-demonstration](http://smallfarms.oregonstate.edu/dry-farming-demonstration)

**Cascadia Drought Group:** [https://cascadiadroughtgroup.wordpress.com/dry-farming/](https://cascadiadroughtgroup.wordpress.com/dry-farming/)


Garrett, A. Common misconceptions and key points about dry farming: Case study of dry farmer with more than 40 years of experience. Oregon Small Farm News. Summer 2014, Vol. IX No. 3.


**Join Participatory Dry Farming Research Project!**

*Please contact Amy Garrett if you are interested in hosting a dry farming trial on your land.*

Amy.garrett@oregonstate.edu or 541-766-3551