

## **Participatory Dry Farming Research**

Below are the crops/varieties that will be included in the 2018 Dry Farming Participatory Research Trials. If you are interested in hosting a trial on your land please **REPLY** to this email stating "I would like to be a Trial Host for 2018" to [anaduncan19@gmail.com](mailto:anaduncan19@gmail.com) . If you decide to become a 2018 DFP Trial Host you can click on the link on the bottom of this email to fill out your **Seed Order Form** online. The sheet below can also be printed to help you plan for the season.

## **Short description below of 3 projects the Dry Farming Collaborative is invited to participate in 2018 growing season.**

### **DFP Varietal Trial:**

Dry farming refers to crop production during a dry season, utilizing the residual moisture in the soil from the rainy season, usually in a region that receives 20" or more of annual rainfall. Dry farmers work to conserve soil moisture during long dry periods primarily through a system of tillage, surface protection, and the use of drought-resistant varieties. The Dry Farming Project funded by the USDA Northwest Climate Hub, had about 30 DFC members in Oregon and Washington hosting on-farm trials in 2017 who collected the following data: soil testing, soil preparation activities, crops, varieties, planting date(s), planting density, harvest date(s), yield, sensory evaluation (color, texture, sweetness), and field notes (pests, disease, weeds). This year we anticipate continuing the DFP varietal trial research on tomatoes, corn, beans, squash and zucchini.

### **Fungal Inoculant Study:**

This year the Dry Farming Collaborative will be researching the use of fungal seed inoculants to improve dry farmed crop performance, led by OSU Postdoc Lucas Nebert, and funded by the USDA. We will be testing a commercially available fungal seed treatment called [BioEnsure](#), which has been shown to improve drought tolerance in various crops. The fungus is naturally found living inside plants (known as an [endophyte](#)), and is registered organic by OMRI. This year, we will be trialing the inoculant in corn, beans, winter squash and tomatoes. We are encouraging DFC members to participate in the study by testing the inoculant on their own farm. Participants will trial the inoculant in at least one variety of corn, bean, squash, and tomato listed below, providing at least two adjacent 100 sq ft plots for each variety for a control vs. inoculant comparison (though replication of both control and inoculant is encouraged), and are asked to measure yield. Inoculated seeds will be provided directly to participants. If you have more questions, please email Lucas at [seedmicrobes@gmail.com](mailto:seedmicrobes@gmail.com).

### **Dryland Squash and Tomato Production Project:**

Objectives: 1) To determine if soil series descriptions and plant available water data can be used to predict site suitability for dryland tomato and squash production. 2) to assess dryland yields of Sunshine and Early Girl across 30 sites

Sites: approximately 30

Varieties: Sunshine squash and Early Girl tomatoes (both shown to be productive when grown under dryland conditions)

Soil series assessment: Red Hill/project staff will describe the soil series of each site by collecting/assessing 1-2 five ft cores.

Plant available water assessment: Watermark sensors will be installed at 15, 30 and 60 inch depths within project plots. Project staff will use handheld readers to read sensors at least twice per month from planting to harvest.

Crop	Variety	Planting Density	# of Plants per 1 Rep (100 sqft.)	DFP Varietal Trial	Fungal Inoculant Study	Dryland Squash and Tomato Production Project	# of Plants:	Total Area to be Planted in Sqft:
Tomatoes	'Early Girl	12 – 20 (sq ft/plant)	5-6	x	x	x		
	'Stupice'	12 – 20 (sq ft/plant)	5-6	x	x			
	'Dirty Girl'	12 – 20 (sq ft/plant)	5-6	x	x			
Winter Squash	'Stella Blue'	20 – 50 (sq ft/plant)	2-5	x	x			
	'Winter Sweet'	20 – 50 (sq ft/plant)	2-5	x	x	x		
	'Hidatsa'	20 – 50 (sq ft/plant)	2-5	x	x			
Zucchini	'Dark Star'	20 – 50 (sq ft/plant)	2-5	x				
	'Goldini Zuchini'	20 – 50 (sq ft/plant)	2-5	x				
	'Costada Romanesco'	20 – 50 (sq ft/plant)	2-5	x				
Melons	'Eel River'	20 – 50 (sq ft/plant)	2-5	x				
	'Christmas' Watermelon	20 – 50 (sq ft/plant)	2-5	x				
	'Desert King'	20 – 50 (sq ft/plant)	2-5	x				
Beans	Volga German	1-2 (sqft/Plant)	50-100	x	x			
	Whipple (Dry Bean)	1-2 (sqft/Plant)	50-100	x	x			
	Early Warwick	1-2 (sqft/Plant)	50-100	x	x			

<b>Corn</b>	Papa's Red	4-8 sq ft/plant	12-25	x	x			
	Open Oak	4-8 sq ft/plant	12-25	x	x			
	Magic Manna	4-8 sq ft/plant	12-25	x	x			

## ***Seed Order Form***

**Link:** <https://ee.kobotoolbox.org/x/#Yza5>

**Note on planting density ranges** - *If you have a heavy clay loam you may want to start with a lower density, and if you have a silt loam you may want to start with a higher plant density. In addition to soil texture, the size of your tractor will have a big influence on your decision of what spacing you use.*