**INTRODUCTION**

We are evaluating winter storage tomato varieties for productivity, quality, flavor, and storability under dry-farmed conditions. Winter storage tomatoes are bred for storability. Traits that are thought to improve their storability include a thick skin, low water content, firm flesh, and high acidity at the time of harvest. Many of the varieties that we are evaluating are traditionally grown in Italy and Spain and are stored as ristras (Photo 8). Winter storage tomatoes could provide a niche market for growers, allowing them to sell fresh local tomatoes beyond the summer months. Additionally, having access to winter storage tomatoes could allow for food insecure folks to have locally grown, healthy, fresh produce throughout the winter.

For the project we chose to dry farm the tomatoes. Dry farming is irrigating once or not at all. Variety trialing is important to many members of the Dry Farming Collaborative because finding successful varieties can be “difficult, frustrating and costly.” Many growers in the Dry Farming Collaborative dry farm out of necessity, due to a lack of water rights and limited water and labor availability. Climate resilience and food security is another important motivational factor.

**METHODS**

The main trial variety was located in an unirrigated field at the Oak Creek Center for Urban Horticulture (See Photos 3-5). For this trial, 17 varieties were planted in four plant plots and there was a single replication for each variety, however for several varieties multiple seed sources were trialed. In addition, dry farmers across Oregon, California, and Washington are trialing a subset of the varieties and will be sharing their data with us.

**RESULTS**

The results from our preliminary analysis can be found in Figure 1 and Tables 1 and 2. Six varieties were dropped from the trial (Table 2). Of the varieties that were not dropped (Table 1), Mallorqui (MAL) had the lowest marketable yield (13.2 lbs.). The varieties with the highest marketable yield were Annarita (ANN 1 and 2) at 57.4 and 47.3 lbs, followed by Petit de Ramallet 1 (PR 1) at 42.6 lbs. Interestingly, Annarita was one of the first varieties to ripen (harvested 8/9/21 to 9/15/22) and Petit de Ramallet was one of the latest to ripen (harvested 8/27/21 to 9/15/21). The varieties with the highest unmarketable yield were Son Gil (SG) and Fakel (FAK) with 22.9 and 18.3 lbs of unmarketable fruit respectively. The varieties with the lowest unmarketable yield were Piennolo Giallo del Vesuvio (PG 1 and 3) and Piennolo del Vesuvio (PV 1), each with “0.8 lbs of unmarketable fruit.

**WHAT I ACCOMPLISHED (SO FAR):**

During this project I had the opportunity to coordinate with and lead farmers all over the west coast (See Photo 11). This has allowed me to build relationships and gain experience facilitating a trial within diverse participants. I learned that I need to communicate consistently and clearly with my stakeholders. I also had the opportunity to develop the protocol for this trial, including the protocol that we shared with our growers. Throughout the course of the growing season we filmed videos demonstrating planting, weed management, tomato storage demonstration, and ristra building, as well as a larger video exploring the different dry farming trials at the Oak Creek Center for Urban Horticulture. We hope to use some of these videos in the future, as a supplement to the written protocol provided to our trial participants.

**AKNOWLEDGMENTS:**

I would like to thank the E.R. Jackman Friends and Alumni for their gracious funding. My Mentors Amy Garrett, Matt Davis, Alex Stone, and Lucas Nebert, my coworkers Kelly, Cassandra and Meghan, Oak Creek Center for Urban Horticulture and The College of Agricultural Sciences for the wonderful opportunities that have brought me here today. I would also like to thank all the growers who took the time to work with us.

**Works Cited:**

Garret, Amy, “Intro to Dry Farming Organic Vegetables”, *Dry Farming in the Pacific Northwest*, Oregon State University, February 2019