



CAHNRS INTERNSHIP

WSU Tree Fruit Research & Extension Center
Wenatchee, WA
Keven Ortega
Summer 2016



Overview:

One of the main goals of the Wenatchee WSU TFREC horticulture department is to figure out how to improve the apple industry here in Washington through innovative scientific practices on various amounts of tree fruit issues the industry is facing today. This allows researchers to uncover any new breakthroughs in order to convey this information out to consumers and the general public. One of the current projects we have been working on this summer is finding a new replacement for the Manchurian Crabapple pollinizer. It has been the standard pollinizer for the Washington apple industry for many decades. It has recently been discovered that the Manchurian is vulnerable to certain amounts of diseases that can lead to post-harvest apple loss. This has had an impact on international trading resulting in an a decrease of total Washington apples being exported in 2014.

- Other activities where I worked on were: Planting, fertilizing, and daily check-up of pollinizer trees irrigation, apple thinning, measuring tree trunks diameters, pear diameters for fruit growth and the training for new leaders in a top grafted old orchard.

Activities:



- Using the Q2850 LiCOR light bar and data logger to measure canopy light interception in sunrise and Quincy.



- SPAD chlorophyll meter
- Planting pollinizers at Sunrise

- Measuring trunk diameter

- Collection of possible pollinizer replacements under evaluation



- My group



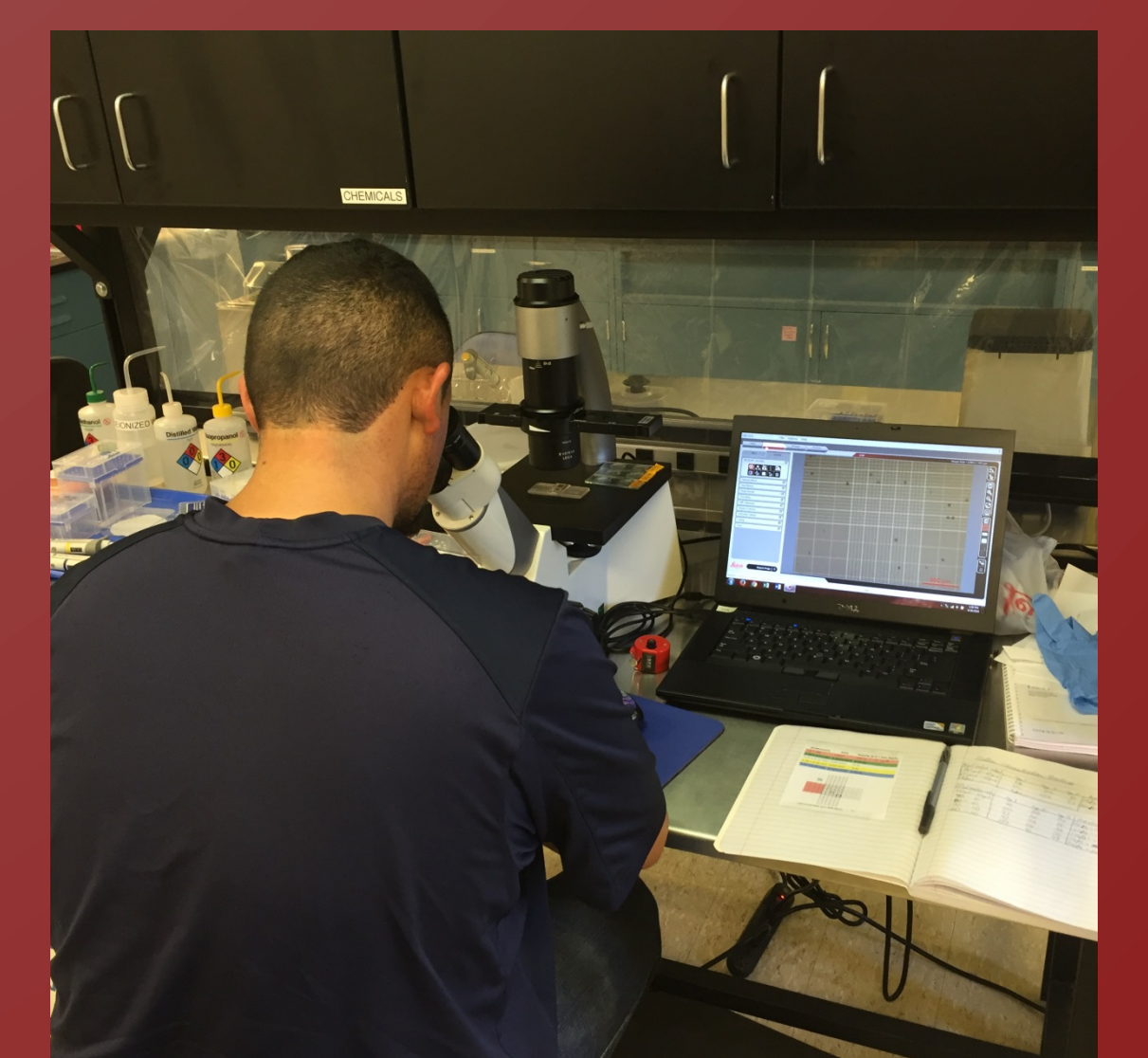
- Training of new leaders in a top grafted Granny orchard



- Pollen germination media



- Pollen germination on slides



- Counting total pollen grain and pollen germination % at the microscope

Summary:

This summer has been an incredible experience interning under my mentors Dr. Musacchi and Dr. Serra as well as my team members here at WSU TFREC in Wenatchee. Being able to be part of a well-organized group has granted me the ability to obtain helpful guidance as I move forward in my agricultural career. Some of the characteristics in which I believe I have improved is my self-discipline of having a professional responsibility as well as a strong working ethic. Having the opportunity to participate in several data dependent projects has taught me how important it is to always go out and do the best job possible and how communication can be a big factor on the success of certain tasks. I am grateful for having mentors who allowed me to express my mind in order to solve certain problems, it gave me the confidence needed as well as experience for future complications in my career. The ability to have an open mind and listen to other peers has also increased my leadership skills which is an important quality to have especially in the agriculture field. The opportunity of being able to visit other commercial orchards has taught me the different advancements made in the apple industry by making visual observations about tree growth, tree physiology and fruit quality. My involvement as a summer intern will definitely help in my transition as an undergrad to the workforce.