



Mercer Canyon Inc. Prosser, Washington Nick Mackay Fall 2015

Mercer Canyon Operations

The Mercer family has been farming land in the high desert plateau in Alderdale, Washington since 1886. In 1976 the Mercer organization planted the first grape vine in what is now known as the Horse Heaven Hills AVA. The first vineyard planted in this world renowned AVA is Champoux Vineyard, which is one of the greatest and best known vineyards in Washington and was established by Paul Champoux and the Mercer organization. Today, Mercer Canyons Inc. is developing new vineyards as quick as anybody in the state and have gone from almost no acreage in 2007 to over 2000 acres today. The company has created a great community in Alderdale, Washington and built amenities like a large park and a boxing gym for the residents of the community as well as reserving many acres for natural habitat. The Mercer credo is to "Protect and Respect the Land". The company does everything they can to ensure they use safe and sustainable practices on all of their land.



Fixing a sub-mainline break in the Spice East Vineyards. Water line breaks make the days more interesting.



This is a sand media filter station that I designed and built. It has two pressure control valves. A 3 inch valve and an inch and a half valve. I designed it with two valves so that we could water the entire 40 acre vineyard at once if desired, or we can water individual blocks or sub blocks as small as one and a half acres.

Internship Overview

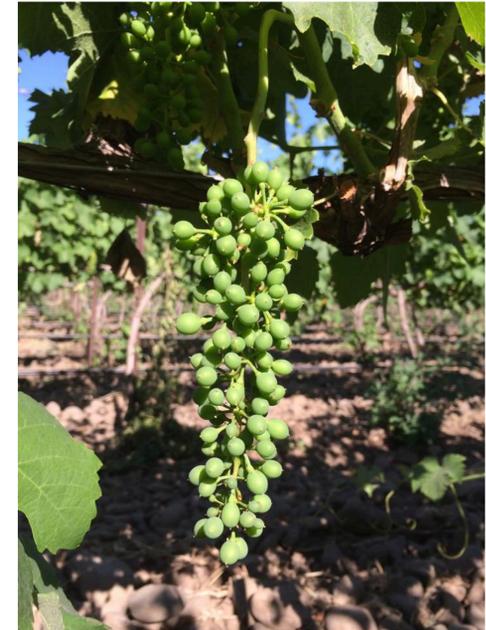
I applied at Mercer Canyons last spring to be a Viticulture Technician Intern. I interviewed and was awarded the position a day later. About a week after that, before I had started the internship, I received a call and was offered a full-time position as their Vineyard Irrigation Manager. I decided to take the position as it was a great opportunity and they were willing to allow me to finish my degree this Fall. As the Vineyard Irrigation Manager I am responsible for the all things related to vineyard irrigation. This includes irrigation design and installation as well as day to day irrigation operation. This requires me to oversee crews of six to twenty people and communicate around language barriers to assure the job gets completed correctly and timely.

The largest part of my job is to manage the day-to-day irrigation. This includes determining weekly irrigation schedules for over 2000 acres of vineyard and ensuring that the correct blocks are getting turned on and off at the correct times and that the blocks are being checked thoroughly for leaks and breaks. Daily I am responsible for 6 workers who are responsible for following the irrigation schedule and checking blocks that they turn on for leaks. The 2000 acres of vineyard that I am responsible for is a lot of vineyard to determine an irrigation schedule for by a hand soil probe and visually inspecting plants throughout the over one-hundred blocks. This made for early mornings and late nights almost every day and work six to seven days a week. As we continue to grow and establish a new vineyard site called Chapman Creek, we will begin to use new and more advanced methods to determine irrigation schedules. Currently I am working with a research professor from UC Davis who is establishing evapotranspiration models on a block to block basis using NDVI satellite images and having an understanding of the local soil profile. We hope that this will make perfecting irrigation strategies on a large scale easier and more efficient.

I am also in charge of irrigation design and installation. This part of my job is what I find most challenging. I communicate with irrigation salesman in order to design irrigation systems to meet our needs. This requires the use of mapping systems like "Google Earth Pro" and "QGIS" in order to determine how the blocks will be oriented and therefore what size of pipe will be needed, how much pipe will be needed, and if things like booster pumps will be necessary. It also requires the use of design programs like "Irricad" to make sure the system is engineered correctly. A mistake in the engineering of the design can be devastating and very costly to the company. Once the design is determined, I manage a crew of about ten to twenty in order to install the irrigation system in a timely manner so that newly planted plants aren't left without water for more than twenty-four hours. This requires the ability to communicate across language barriers in a precise manner so that the job is done correctly.



This is a picture taken above the Spice Cabinet vineyard. Spice Cabinet is the oldest vineyard owned by Mercer Canyons and is a reserve vineyard. It is named after its numerous varieties being compared to a spice cabinet with a multitude of different spices.



This is a picture of a Malbec cluster at right after the caps have fallen off the berries. This is when my job becomes most intense as this is when the most crucial times of regulated deficit irrigation begins and we want to stress the vines to keep berry size small, but not over stress the vines to the point where defoliation of the canopy begins.



This is a trench dug with a mini excavator for a mainline for a vineyard that will be planted in 2016. We worked the ground and applied a micro-nutrient and rye seed in August of this year. The micro-nutrient will contribute to soil fertility and the rye will tell us where the soil is less fertile and it also has anti-pest properties that will contribute to growing healthy vines.

Internship Summary

In the seven months that I have been at Mercer I have learned more than any previous seven months in school or working for other vineyards. The experience has opened my eyes to many aspects of viticulture that I had never previously considered. I am glad to be a full-time employee for the company and excited to see what the future holds. As my time at college is coming to an end this semester I look forward to being able to spend more time with the development that is currently happening at our new vineyard site Chapman Creek, which is located about fifteen miles from the current Mercer farm in Roosevelt, Washington. As I begin to get more comfortable in my role as Irrigation Manager I hope to take on more responsibility and help with the viticulture and machine operations side of things. I am planning on enrolling in several classes in these upcoming months to better prepare myself for next season. I will be taking an online "Spanish in Viticulture" class from Michigan State University to further my Spanish speaking skills. I will also attend spray applicator and chemical consultant classes in February so that I can help write chemical recommendations and become more involved with that aspect over time. I am very fortunate to have found a company as great as Mercer Canyons Inc. right out of college and am looking forward to future seasons. With continued education and hard work I feel as though I could find great success and fulfillment in this industry.