Kiona Vineyard & Dineen Vineyard  
Benton City, WA & Zillah, WA  
Jennifer Kowal  
Summer Semester 2021

Introduction

During my professional work experience I was involved in a research project funded through Washington State University. The project's focus was testing how different kinds and amounts of irrigation affect the growth and development of grapevines in two separate vineyards located in central Washington.

Responsibilities

This picture represents one of the responsibilities I had most frequently.

In this photo, I was using a vacuum pump to put pressure on a lysimeter right after the vines were irrigated. Afterwards, I went though and used a syringe to retrieve water samples from the lysimeters. The water samples were sent to a lab to be tested for nutrients.

This was one of my favorite jobs during my experience.

In this photo, there is a leaf wrapped in tin foil. The tin foil holds the leaf at its highest stage of photosynthesis. After about an hour, I went back and cut this leaf from the vine. We then used a pressure chamber to test the stress of the leaf. We put pressure on the leaf until water spills out of the stem of the leaf. The higher the pressure it takes to do that, the more stressed the vine.

Here is a picture of taking soil samples in the vineyard.

We used a hydraulic press to push a drill down into the soil, about four feet deep. We then pulled the drill out and collected the soil in the drill and put it in tubes. The soil was sent to a lab to be examined.

Summary

During this experience, I was able to learn a lot of things that I will be able to take with me into my future. Not only did I learn a lot about how vines grow and develop, but I also learned a lot about how the irrigation can help or hinder the vines. I got to use a lot of different tools and machines that I had never used before, and I also learned how to drive a tractor. I kept a notebook of every new thing I learned so that I would be able to take all of it with me in the future, both school and career.

My other responsibilities included reading water meters to see exactly how much water the vines were getting, fixing leaks in the irrigation lines, measuring the diameter of the grape vines, and installing soil water sensors.