History of Tukey Horticulture Center

Currently, there is the new site at WSU’s Spillman Farm and the old site at WSU’s Tukey Orchard. The orchard has been moved several times since the first location was planted in 1902 near the current Lewis Alumni Centre. The old site has been there for 40 years before half of the 70-acres was sold for the development of the new runway at the Moscow-Pullman Airport. The new site is around 10-acres and while that seems to be considerably less than the old site, the improvements in orchard industry, and the new styles of trellising will allow for more trees to be planted closer together. The goal at the new site is to be a research facility, available to students that are going to make the fruit tree industry, and orchard management their career.

Conclusion

My internship at the Tukey Horticulture Center, the new site and old site, has provided me with the hands-on learning foundation of my professional career in the agricultural industry. Orchard Manager Deb Perhson and full-time employee Sean McWay exhibited dedication in their ability to adapt to different obstacles and developed solutions to industry related problems. Their level of communication, with the objective of teaching orchard related techniques, their ability to explain daily tasks, and the results of performing these tasks was invaluable. I felt that Deb Perhson and Sean McWay met my questions and ideas with professionalism, acceptance, and guidance that instilled the values of the WSU family. Being a part of Deb Perhson’s legacy project of establishing the new site at the Tukey Horticulture Center at Spillman Farm and the management of the old site has been a memorable and rewarding experience.

Adapting to Weather Conditions During Harvest

The pictures on the far right shows a beautiful day of harvesting cherries, which ended mid to late August. Apple harvest began around mid September and was moving along smoothly with decent yields for the fruit sale. Usually, apple harvest will continue into November but in mid October the weather changed drastically, forecasting for about five days of below freezing temperatures. Under the direction of Deb Perhson and Sean McWay, it became urgent to harvest a good yield and obtain the varietals needed for the weekend fruit sales to remain successful. The above pictures on the left show the impacts of prolonged freezing temperature have on the apples. This unfortunate weather change during harvest caused the apples that were not harvested unable to be sold or utilized.

Tools to Indicate Ripening

A - Refractometer: this device measures the sugar content (Brix) of fruit in order to indicate the maturity of the fruit. To obtain the sugar content for fruit ripeness of the apples, one would place some drops of juice onto the flat angled side and look through the eye piece to visualize the numbered readings for Brix measurement.  
B - This picture is showing the halved apples being tested for starch content. The apples are dipped on the flesh side in a potassium iodide with iodine solution. When apples ripen, starch levels are decreasing, and the flesh will turn from the dark iodine stain shown in the picture to a lighter stain.  
C - This tool is a fruit penetrometer which indicates the hardness of the fruit to measure the ripeness. To use this tool, one must cut a thin slice of skin from the apple and then press the flat silver end into the flesh of the apple. The measurement will read in pounds of force, accurately giving the hardness or ripeness of the fruit.

Special Project at the New Site

The pictures above was a project at the new site of the Tukey Horticulture Center. This project was to section off an area for cider apple research. The different varietals of potted apple trees will stay in their pots for research in development of specific cider apples. To keep these potted trees safe from varmints and other pest, we dug a square trench around the perimeter of this area and applied fencing around the posts. The application of thick weed cloth to prevent pests was then laid down. Then the process of moving the different varietals of potted apple plants was the final completion. This project was invaluable to my internship in gaining the experience of setting up an area for research.

With Gratitude

- Special Thanks to Deb Perhson for making this internship possible. It was an outstanding learning experience for me.
- Thank you to Ade Snider (WSU Academic & Internship Coordinator) for setting up this amazing internship.
- Thank you to Sean McWay for the guidance and expertise at the orchard during this internship.