

Gibbs House Food Forest Hops and Elderberries

The west side of the Gibbs House property is dedicated to a food forest. There are seven layers that make up an edible forest as follows: Overstory, Understory, Shrubs and Bushes, Herbaceous, Ground Cover, Tuber (Underground) and Vine Layer. During the Fall 2016 Semester, I assisted in the caretaking of this area and focused my efforts on the hops and elderberries.

Hops are part of the Vine Layer of the food forest that have been implemented on the Gibbs House Property and are growing on the south and east side of the fencing. Hops are technically considered bines, which are similar to vines but instead of using tendrils to cling to the fence, these plants have rough stems with small bristles that only in cling to the trellising in one spiral direction. We have approximately twenty hop plants on site with several different varieties of hop plants. We have Willamette, Cascade, Mount Hood, and Nugget Hops.

This harvest season, we were able to harvest 1.3 pounds amount of hops, 5% Willamette, 46% Cascade, 21% Mount Hood, 28% Nugget. Therefore, for 2016, Cascade was the most successful because it produced more flower cones than the other varieties. As the years progress, we should keep tract of how many hop flower cones we harvest from each variety. With several years of data, we will be able to analyze these varieties, and determine which kind fairs better for our location.



The hop cones are ready to be harvested when they are dry and papery to the touch but still retain the green shade of color. If they are soft and moist, it is too early, but if they are a brown shade of color, it is too late. Hop flowers are ripe when they emit a pungent scent due to the yellow pollen-like consistency called lupulin that is in located between the cone folds. Once they are ready to harvest, carefully tug them off the bines, making sure to keep the entire cone formation intact. Make sure to wear gloves because the stem of the bines can be slightly irritable to the skin. After the hops are taken off the bines, they will need to be dried out in order to store well. This should be completed by spreading them out in one layer on a graded rack in the sun. After the hops are dried, tightly seal the bags, and place in the freezer. This will preserve the hops longer until they are to be used.

Hops can be used in a variety of ways. They can be used in the process of brewing beer, but also in some soft drinks or herbal teas. In addition, they are used in some herbal medicines because they are known to aid in subsiding anxiety, restlessness, insomnia, and pain.

Elderberries are part of the Shrub and Bushes Layer, and there are several varieties of these in the food forest. There are approximately 15 elderberries shrubs on site, with the following varieties: York, Nova, John, and Adams. Similar to hops, we have several varieties of elderberries in order to determine which variety fairs better for our location. Therefore after harvesting this fall, we were able to accumulate a total 24 pounds of elderberries, with 48% York, 43% Nova, 0% John, and 9% Adams. Therefore, in 2016, York was the most successful variety on site.



In order to know when the elderberries are ripe, they will be a dark shade of violet. The berries are very small and fragile; some might have even started falling off. They come in clusters and the best way to collect them without compromising the berries is by clipping off the entire cluster and placing it in a bag. After collecting a full bag, seal the bag and place the clusters in the freezer. Once the berries are frozen, they will be easier to harvest while keeping the skins intact. One should use their hands in a raking motion, in order to get the most berries off the cluster at one time. One can store the frozen berries detached from the clusters in the freezer until they are needed for their intended use.

Elderberries have medicinal properties and contain large quantities of Vitamin A and C. They can be used for tea, or syrup by simmering them in water on the stovetop, and then straining the berries. We brewed some elderberry tea for a beverage option this fall season during two different events where students and the community visited the Gibbs House Education Space. This provides another avenue for people to experience what the Gibbs House has to offer.

After this fall semester, several developments can be made to truly optimize the use of hops and elderberries. Continue improving the soil by adding compost on the ground right above the root ball of the plants. This will only increase the richness of the soil and consequently improve the quality of hops and elderberries. Issues arose with the different shoots of one hop plant intertwining with the other hop plant next to it. Therefore, this would cause issues when determining which hop flower cones were from what hop plant. Next year, we should train the hops more consistently and keep one hop plant trellised in one direction on one level and the other hop plant trellised on a different level in order to keep them separated. In addition, we should determine efficient methods for harvesting, processing, and storing the elderberries and hops. This will provide more opportunities for us to focus our efforts engaging the community of WMU and Kalamazoo.

Gibbs House Food Forest

Overstory

- a.) Shellbark Hickory
- b.) A.m Chestnut
- c.) MI Pecan
- d.) English Walnut
- e.) Buartnut
- f.) Burr Oak
- g.) Turkish Tree Hazel

Cherry

- h.) Unknown Cherry
- i.) Balaton Pie
- j.) Stark Gold Sweet
- k.) Northstar Pie
- l.) Royalton Sweet
- m.) Stella Sweet
- n.) Starkrimson Sweet
- o.) Emperor Francis Sweet

Bush Varieties

- 1.) Invicta Gooseberry
- 2.) Hinnonmaki Gooseberry
- 3.) Pink Gooseberry
- 4.) Pixwell Gooseberry
- 5.) Red Currant
- 6.) Jostaberry
- 7.) Blueray Blueberry
- 8.) Herbert Blueberry
- 9.) Elliot Blueberry
- 10.) Duke Blueberry
- 11.) Lemonade Blueberry
- 12.) Chandler Blueberry
- 13.) Josee Redblooming Lilac
- 14.) Bloomerang Purple Lilac
- 15.) Viking Aronia
- 16.) Autumn Magic Aronia
- 17.) Nero Aronia
- 18.) Sweet Lifeberry Goji
- 19.) Big Lifeberry Goji
- 20.) Vermillion Sunset Goji
- 21.) Blue Belle Honeyberry
- 22.) Berry Blue Honeyberry
- 23.) Blue Velvet Honeyberry
- 24.) Blue Moon Honeyberry
- 25.) Cinderella Honeyberry
- 26.) Borealis Honeyberry
- 27.) Alba Rugosa Rose
- 28.) Frau Dagmar Rose
- 29.) Aronia ??
- 30.) Gooseberry ??
- 31.) Goji ??
- 32.) Honeberry ??
- 33.) Blueberry ??

Vine Varieties

- 43.) MSU Kiwi
- 44.) Anna Kiwi
- 45.) Kiwi Pollinator
- 46.) Issai Kiwi
- 47.) Marquis Grape
- 48.) Reliance Grape
- 49.) Interlaken Grape
- 50.) Concord Grape
- 51.) Willamette Hops
- 52.) Cascade Hops
- 53.) Mt. Hood Hops
- 54.) Nugget Hops

Shrub Varieties

- 34.) Sea Buckthorn
- 35.) York Elderberry
- 36.) Nova Elderberry
- 37.) Adams Elderberry
- 38.) Johns Elderberry
- 39.) Siberian Peashrub
- 40.) Saskatoon
- 41.) Thimbleberry
- 42.) Rugosa Rose

