

Tree and Site Selection:

Once you have familiarized yourself with the seed needs in your area or work (per the Assessment of Needs viewer, or through the excel data as described in “Attachment 1”), it is time to conduct some Cone Surveys. Cone Surveys are recorded digitally and sometimes offline in the field using Survey123. Please refer to “Attachment 4.” Knowing what trees and structure constitutes a collectable stand can help you determine if a location is worth surveying/ logging in Survey123.

Stand criteria

- The entire stand must be edaphically the same. E.g. same slope, same side of a watercourse.
- Minimum of 10 collection trees per species. Usually the stand area must be \geq 10 acres
 - Exception: in locations where the AON indicates that the bushel “need” is a positive value but less than 20 bushels, the tree number for a viable collection might be smaller. Determined on a case-by-case basis.
- Trees must be mature, cone-bearing, and dominant or co-dominant in the stand
- Stand must be large enough for genetic diversity, i.e. not collecting from adjacent/ sibling trees

Goal: 200' spacing between collection trees



Example: In the satellite view at left there are 9 pins designating the location of 9 trees. The trees were spaced $>150'$ apart, which was verified using Avenza. There were 3 additional trees to the right of the screengrab, along the driveway of the property. The track indicates where vehicles were able to drive to haul heavy climber gear while also reducing the distance to haul cone sacks from trees to trucks.

Tree criteria

- No competing leaders, a.k.a. double leaders, also known as “co-dominant” stems (see photo→)
- Good phenotype (straight branches preferred, per standard silviculture practices/ sawmill considerations regarding knots in the bole / log)
- Viable cone crop volume (2+ bushels in the top third of the canopy). Note: a dry bushel is equivalent to 8 gallons. If the total volumes of cones in the top third of the tree canopy is roughly equivalent to three 5-gallon buckets, it is a worthwhile climb for climbers.
- Good cone cut test – this might be determined at a monitoring visit post-survey, or samples might be assessed upon receipt in Seed Bank (overnight shipping in paper bags, boxed normal).



Photo by Justin Marble