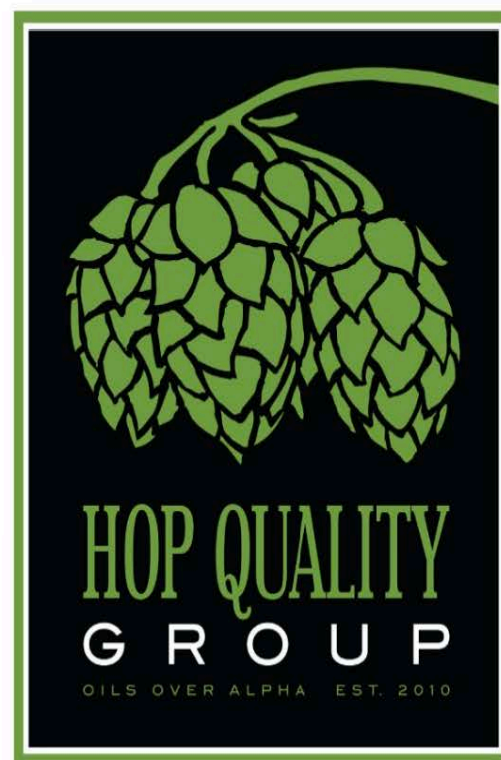


HQG Visit Date:	8/25/22
Farm/Facility:	USDA – Research Station, Prosser
Picker Name & Grower Number(s):	
Grower Name & Phone:	Dr. Kayla Altendorf; 509-786-9267
Physical Address of Farm/Facility:	24106 N Bunn Road, Prosser, WA 99350
Email Address:	Kayla.altendorf@usda.gov
Picker Type(s) & Description:	Wolf 170
Merchant Partners/Direct/Both?	USDA: Public Breeding



HQG Attendee & Brewery	
Jeremy Moynier – Stone Brewing	Steve Luke -- Cloudburst
Matt Gallagher – Half Acre	Josh Waldman -- Cloudburst
Matt Young – Half Acre	Kurt Smith – Smith & Lentz
Brad Benson – Stoup Brewing	

Operations Description:

Molecular based breeding lab. Testing DNA; getting rid of Males. Known marker takes several years (4 estimated) to establish. Developing genetic markers to speed up breeding to quickly identify plant sex and specific resistances. Marker assisted selection and Genome selection. Looking for a couple of years of training data. Working with Henning, Gent, Harbor, etc.
HRC distributes lines for brewers. Hop source during harvest is the feedback loop. Stakeholder advisory committee helping steer priorities (disease resistance, viroid tolerance, pest resistance, brewer acceptance).
Paco: new horticulturist. Abiotic stress in hops. Measuring H2O for heat stress. Drought resistance. Used to work in potatoes. Phenotyping: will work closely with Kayla to provide data. Will get a GC and HPLC. Distillation stills. He has some equipment in the field: sensors to measure H2O. Side by side tests: 1 plant control drip; the other cut off for 14 days. Looking to mimic the water deficit you see used in wine grape production (stress at the end).
Owl Shed: Back-up collection of plants outside – once she proves re-establishment, she can get rid of these. Wolf picker outside and covered until it gets relocated to north end of this building. Working on designing a custom kiln: will be ready in a couple of years. She's had a lot of support and appreciated Alec helping to get the picker. Owl Shed has a lot of great organization and storage.
Male Yard: She will get complete data on these and then can make decisions for crosses.
Seedling Yard: selecting males and identifying hermaphrodites (don't want them) and good females. 1500 seedlings this year. Another block for powdery mildew resistance. Solar moisture meter that she can read from her phone. Cell Phone controlled drip irrigation.
2020 seedlings next door and not strung. Would like to advance and evaluate in 2 nd year (7 Hill = 14 lbs).
Germplasm collection.
Advance plot. Made 50 crosses this year and want to increase (typical public is only 20). 333 is at Roy and Gooding (2 acre plots). She's focused on next one.
Elites: she likes 84A – high geraniol. Good yield and good agronomics. 036 = ranked in hop source 3 years in a row. 071 = sister of the well-liked 059.
Other: different spacing trials. Very cool plant app.

Improvements since last HQG visit (if applicable):

The station is in much, much better shape than several years ago. Owl Shed has been refurbished and is organized. Lab is impressive. She has good future plans for picking and the kiln.

Recommendations:

Keep up the great work! Your passion and energy is refreshing and nice to have someone excited about Public Hop Breeding!

Additional Comments:

What hop varieties are grown? Acreage?

- Several.

Does Grower plan any major upgrades in the near future?

- Placing picker and building custom kiln.

Does Grower operate multiple facilities? If yes, how many? Facility names and locations (grower numbers)?

- N/A

Does Grower custom pick for anyone else? If yes, who?

- N/A

What certifications does the grower possess, if any?

- N/A

Additional Comments about the operation?

- Thank you so much for letting us visit! We are excited about your work so far and look forward to seeing more results in the near future. Cheers!











