**January, 2015 Flavor report**

The flavor project has started to really gain momentum. Recent activities at the Barley Improvement Conference set a new pace for the search for barley flavor.

The New Year starts off with…

1. **Barley Improvement Conference:** Pat gave a presentation over the past, present, and future of the flavor project. Then along with the other presenters at the conference, participated in a panel discussion very much centered on the role of barley in beer flavor.
   1. BIC Beer tasting of barley varieties (Full Pint; Copeland; Klages) grown on Herb farm were assessed for differences in flavor. These beers were brewed at Sierra-Nevada Brewing Co. and New Glarus Brewing Co. Results indicated a preference for Copeland, followed closely by Full Pint, and Klages third. Data and results can be access at the AMBA website and <www.Barleyworld.org>
   2. Both beers have been shipped to OSU for an in-depth sensory assessment to be performed in collaboration with the Shellhammer lab. Training is scheduled for mid-February and final assessment in March. Definitive dates will be set as we get closer.
2. **A return to Phase I:** The BIC sparked great discussion from Dan Carey, Tom Nielsen, Paul Sadosky, Pat Hayes, and Dustin Herb about the importance and logistics of evaluating a wide genetic diversity of barley germplasm for flavor attributes, bringing us back to Phase I.
   1. Phase I summary: Tom Nielsen at Sierra-Nevada made 29 congress worts of samples micromalted by Rahr malting and performed sensory and analytics.
   2. These samples in addition to 19 genetically diverse lines will be nano-brewed by Dan Carey at New Glarus.
3. **3x3:** An abstract of the three varieties grown at three locations project has been submitted by Dustin to the ASBC for presentation at the 2015 ASBC conference in LaQuinta, CA this June.
4. **A new chapter:** As a project for class (brewing science), Dustin is evaluating the effect of malting on flavor compounds in barley. Below is a summary of the proposed project.
   1. Barley grain contains significant amounts of positive flavor compounds; however their interactions with malting and persistence throughout brewing are not well understood. In this study we evaluated the beer flavor potential of barley pre- and post-malting by examining flavor compounds in extracts, worts and beers made from malted and unmalted barley. Two 60 Kg samples of unblended CDC Copeland barley and pale 2-row malt from the same source were brewed at two US barrels each. The two runs had completely identical recipes with the only difference being the source of fermentable carbohydrates and the use of added enzymes to convert starch in the unmalted barley. Samples from the wort and finished beer were collected to assess the differences in flavor between the malt and barley. A baseline control was derived from cold water extracts (CWE) of the barley grain, malt, and rice hulls. Gas chromatography and mass spectrometry (GC-MS) will be used to determine the volatile compounds present in the CWEs, worts, and beers. Blind sensory assessments will be used to determine if there are unique flavor attributes between the two beers, and comparison of the brews will allow for estimation of the malting effect on barley flavor.
5. The **craft brewing conference** is in Portland, OR this year in April…..**flavor meeting?**

**As always, there is a standing invitation to come visit Oregon State University and the barley project at any time.**