



Brewing Trials with the New Alsatian Hop Varieties Aramis and Triskel

**Val Peacock
Hop Solutions Inc.**

In collaboration with:

Beers brewed by

Helped with much of the
taste testing



Want will you learn?

- Brewing properties of new Alsatian hops
- An improved way to evaluate (objectively) new hop varieties
- Things about bitterness in beer you probably did not know!

Aramis – Higher Alpha Strisselspalt

- Mother is Strisselspalt, father a seedling derived from WGV – Whitbread Golding Variety
- 6-8% alpha vs. 2.2% for Strisselspalt, CoH 21% alpha much less variable than Strisselspalt.
- Want crisp, non-lingering bitterness & aroma profile similar to traditional European aroma types.
- Quality of bitterness primary concern

Urban Chestnut Brewing Co.

Pilsner Beers

	Aramis 100%	Merkur 14% Hersbrucker 27.5% Hallertau mf 31% Strisselspalt 27.5% Blend effect!
OG	13.1	13.1
IBU	30	35
pH	4.20	4.25

Comparison of the Beers by Descriptive Panel

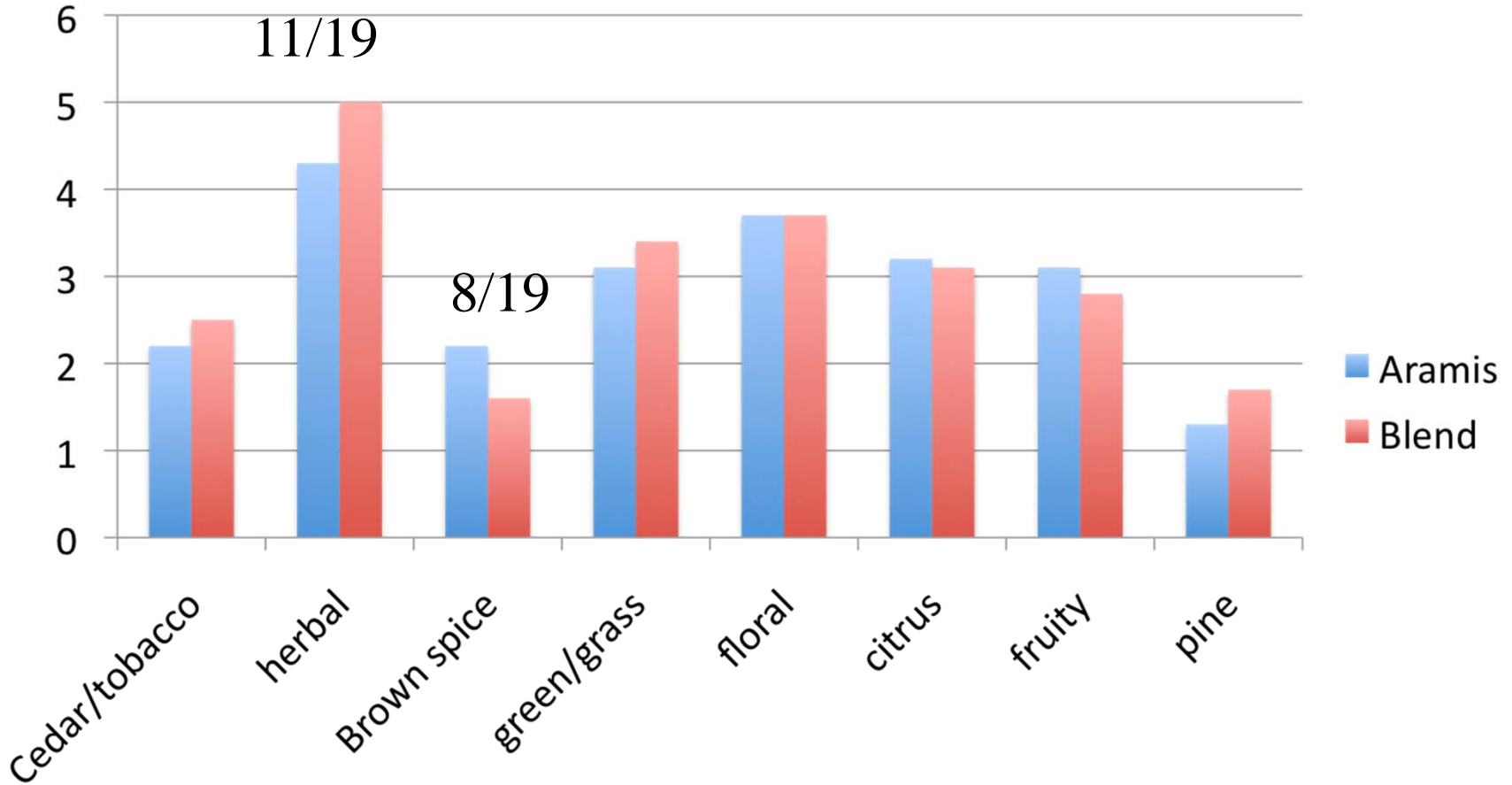
- Panel trained on the attributes (flavor notes) found in the product (beer), agree on standards for these flavors, and calibrate themselves on a common attribute flavor intensity scale.
(Flavor standards)
- Then the panel takes a new product (beer) and gives a score of 0-10 for each flavor attribute. This gives qualitative information about the tested product vs. another.
- No preference is given, just attributes measured.

Pilsner Bitterness Profiles

Average of 19 tasters

	Aramis 100% 30 IBU	Merkur 14% Hersbrucker 27.5% Hallertau mf 31% Strisselspalt 27.5% 35 IBU
Bitterness Intensity	4.9	5.0
Bitter Linger	4.9	5.0
Harmony of Bitterness	6.4	6.7 9/19, 3 ties

Pilsner Aroma Comparison



Conclusions

- Aramis looks to be a reasonable substitute for traditional continental aroma varieties, but may differ a bit with a more brown-spice and fruity character, but less herbal and slightly less cedar/tobacco.
- Lack of off-notes? Catty, onion/garlic, grapefruit? I wasn't smart enough to put these on the ballot!

Triskel – Flavor Hop more so than traditional European aroma hop

- Mother is Strisselspalt, father a seedling derived from English Yeoman.
- 6-9% alpha, CoH 22% - alpha a bit more variable than Aramis
- Was selected from the breeding program based on stone-fruit/orange aroma
- Multi-dimensional, complex flavor – seems different in different styles of beer.

Triskel vs. Cascade Pale Ale

Urban Chestnut brewing Co.

	Triskel 100%	Cascade 100%
Hopping regime	6.0 lbs/bbl kettle & whirlpool, 6.0 lbs/bbl dry-hop	8.5 lbs/bbl kettle & whirlpool, 10.0 lbs/bbl dry-hop
OG	14.1	14.1
IBU	30	35
pH	4.43	4.47

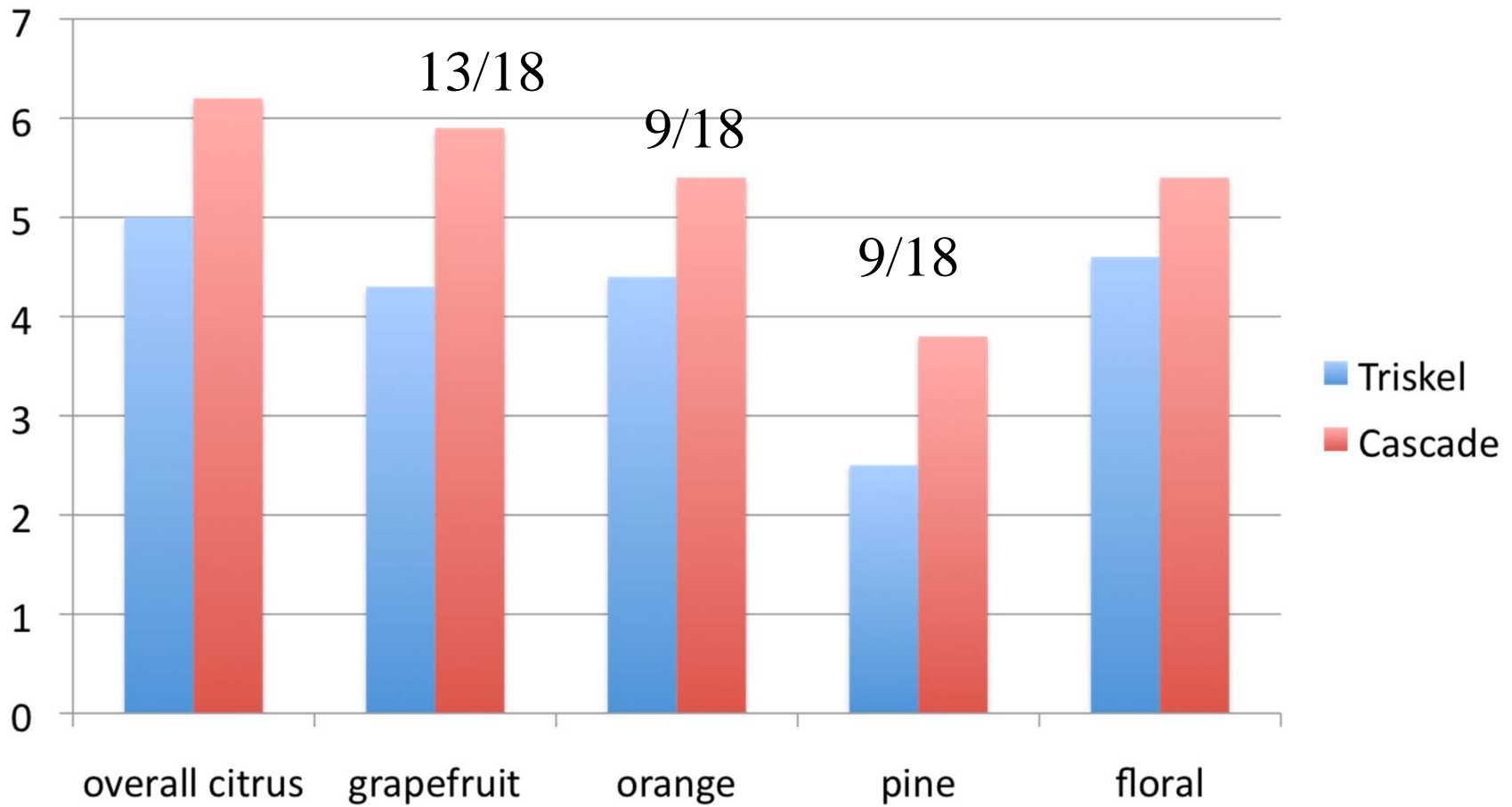
Pale Ale Bitterness Profiles

Average of 18 tasters

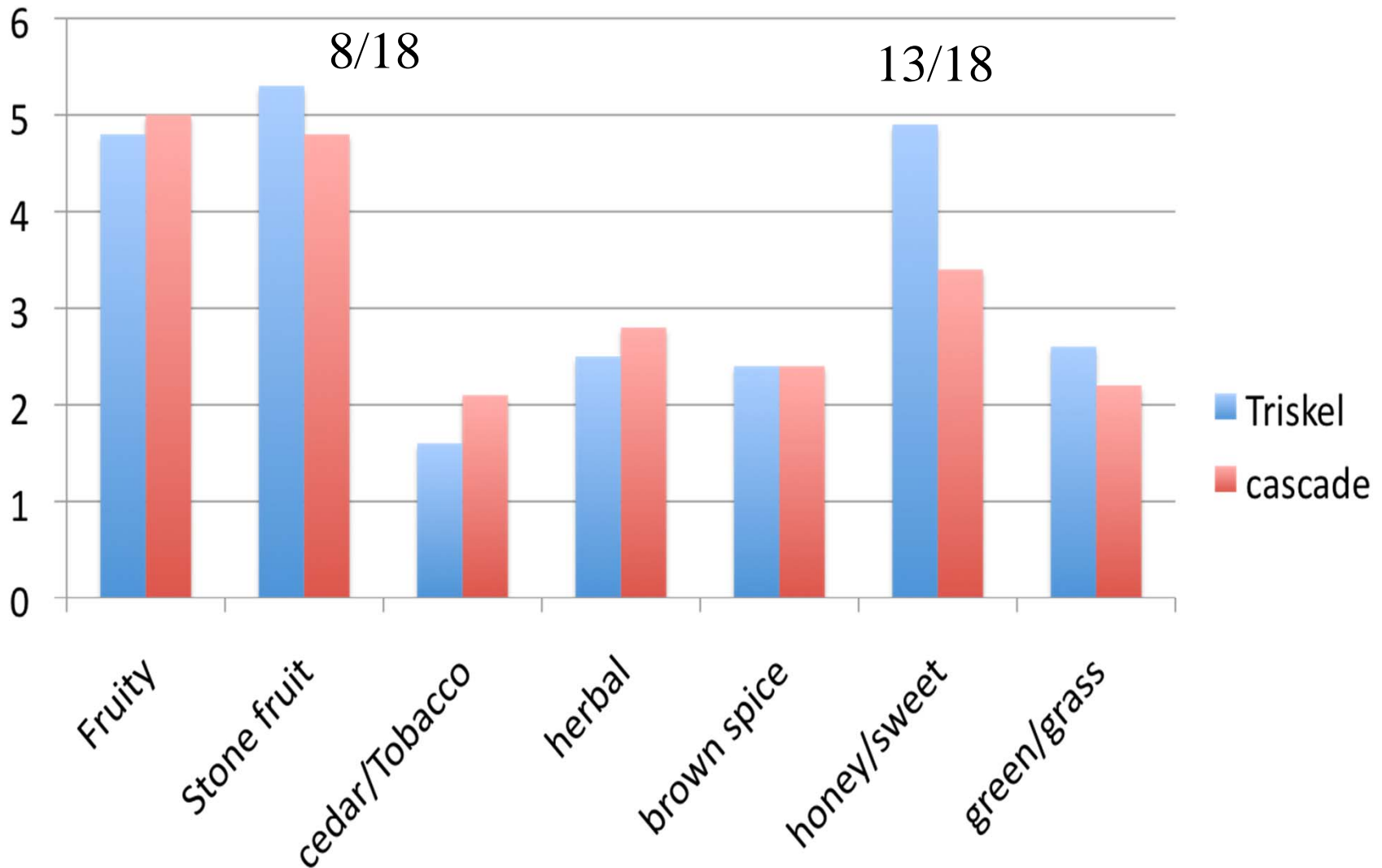
	Triskel 22% CoH 30 IBU	Cascade 32% CoH 35 IBU
Bitterness Intensity	4.4	6.1 (17/18)
Bitter Linger	3.6	5.3
Harmony of Bitterness	6.5	6.6 ??

Pale Ale Citrus/floral notes

Cascade strong points!



Pale Ale Fruity/General flavor notes



Conclusions

- Triskel has a much more refined bitterness than Cascade
- Cascade has more citrus/floral impact than Triskel – especially grapefruit
- Triskel has more stone fruit and much more honey/sweetness than Cascade
- Triskel not a good substitute for Cascade, but has different aroma and bittering flavors that would differentiate a new beer.

Conclusions on New Hop Evaluations

- Descriptive analysis of test beers is a more objective way to assess new hop varieties.
- This method gives detailed information on differences and likenesses of hops.
- Not all hops have similar bittering profiles, and this is also **strongly** influenced by beer pH.

My thanks to the Alsatian hop growers for support of this work

**UCBC for brewing the beers
& helping with the taste tests**

**Our friends at Schlafly for
supporting the bulk of the
taste testing.....**

