

Crowdtasting: Pioneering A Way to Study Beer-Food Pairing

A Presentation of the Beer & Food
Working Group

Craft Brewer's Conference
Thursday, May 5, 2016

#BeerFWG

Beer & Food Working Group

Julia Herz



Nicole Garneau, PhD



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Chef Adam Dulye



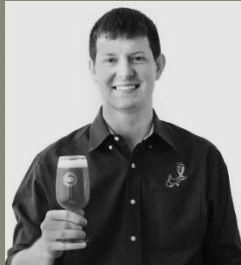
Ray Daniels



Randy Mosher



Pat Fahey



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BrewersAssociation.org/workinggroup

MANIFESTO

The Beer & Food Working Group is comprised of beer sensory professionals from American Society of Brewing Chemists, Cicerone, Brewers Association/CraftBeer.com and Denver Museum of Nature & Science. The group formed in 2014.

To hear the groups' 2015 Craft Brewers Conference presentation *Pairing & Pontificating: Missed Attempts and New Opportunities in Matching Beer and Food* visit:
<https://www.brewersassociation.org/presentations/pairing-pontificating-missed-attempts-and-new-opportunities-in-matching-beer-and-food/>

Mission Statement

The Beer and Food Working Group aims to be the trusted beer and food pairing resource by **collecting, creating and communicating** a sound and scientific understanding behind the common joys of eating and drinking. We want to make beer the model for other beverages in terms of the way we understand, discuss and do beer and food pairings, pushing the thinking into new territory.

Values & Intentions:

- Use scientific research-backed references and resources
- Respect personal preference
- Recognize the value of anecdotes as possible hypotheses and value the community's knowledge base as a tool for education and further research
- Encourage creativity in expression and retain as rich and evocative a language as possible
- Advocate the philosophy that successful pairings come at the intersection
- Acknowledge the validity of different approaches and be inclusive in bring and experience of all those engaged in food and beer work

Goals:

Collecting

We will continuously clarify and classify the evolving pairing vocabulary and vet it literature to standardize the terminology of pairing. We will monitor and assimilate studies of flavor interactions as they relate to beer and food pairing.

Creating

We will take the lead in determining useful consumer preferences and tendencies research related to this topic, and engage the brewing community to further research

Communicating

This group aims to generate and advocate for a research-backed framework to use within the beer and food industry worldwide.

Sitting members:

- **Ray Daniels**, Founder and director of the Cicerone Certification Program
- **Adam Dujie**, Brewers Association/CraftBeer.com Executive Chief
- **Pat Fahey**, Content Manager-Cicerone Certification Program and Master
- **Dr. Nicole Garneau**, Director of the Genetics of Taste Lab at the Denver Museum of Nature & Science Sensory Committee
- **Lindsay Guerdrum**, Sensory Specialist New Belgium Brewing Company at of Brewing Chemists Sensory Committee
- **Julia Herz**, Brewers Association Craft Beer Program Director and Publisher
- **Randy Mosher**, Founder of Rabbit Cerveceria and Brewers Association member

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- Encourage creativity in expression and retain as rich and evocative a language as possible
- Advocate the philosophy that successful pairings come at the intersection of art and science
- Acknowledge the validity of different approaches and be inclusive in bringing together theory, practice and experience of all those engaged in food and beer work

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THE DENVER POST

DENVER AND THE WEST

The science behind why you like (or hate) certain beers, if at all

Denver Museum of Nature and Science is hosting a crowd-sourced experiment to answer questions at the heart of Colorado's beer culture.

By John Frank
The Denver Post

POSTED: 03/22/2016 02:31:01 PM MDT | UPDATED: ABOUT A MONTH AGO

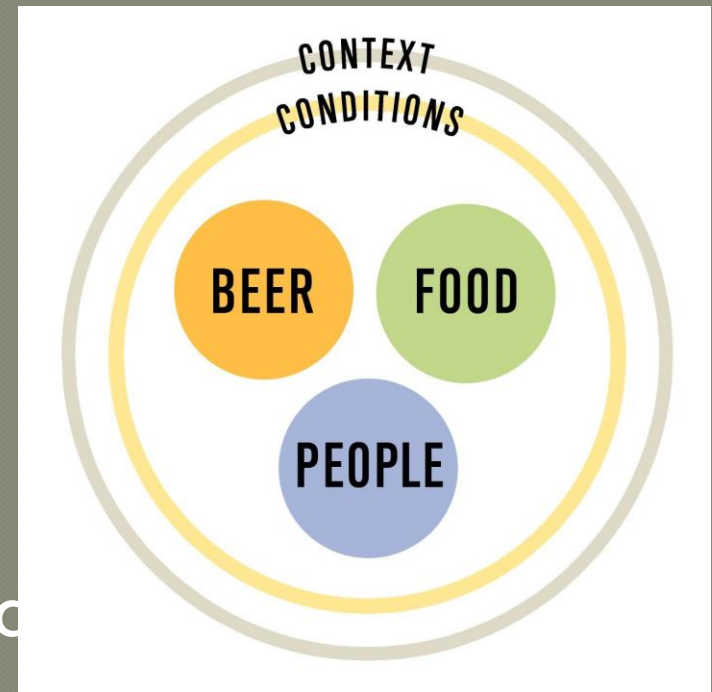
9 COMMENTS



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A Challenging Project

- ◆ Pretty tough task for science
- ◆ So many variables in every encounter
- ◆ How to be precise about something so subjective?
- ◆ This will take a while
- ◆ Can't wait until we understand *everything*
- ◆ We have needs right now



We Have Needs!

- ◆ Clarify terms we all use
 - (And hopefully standardize)
- ◆ Support for practical pairing systems and approaches
- ◆ Understand people
 - Sensory systems
 - Cultural, personal differences
- ◆ Understand what's really happening with interactions



So, How to Make Progress?

- ◆ Common platform (this group)
- ◆ Develop better hypotheses
- ◆ Data-driven science to support hypotheses
- ◆ Improve current systems & approaches with published papers
- ◆ Self-reported pairing successes, failures
 - Wiki approach
 - With enough data, can we tease out rules?

Building a Pairing Foundation

- ◆ 2 Key Goals:
 - Research Backed Interactions
 - Universal Lexicon



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Building a Comprehensive Pairing Lexicon



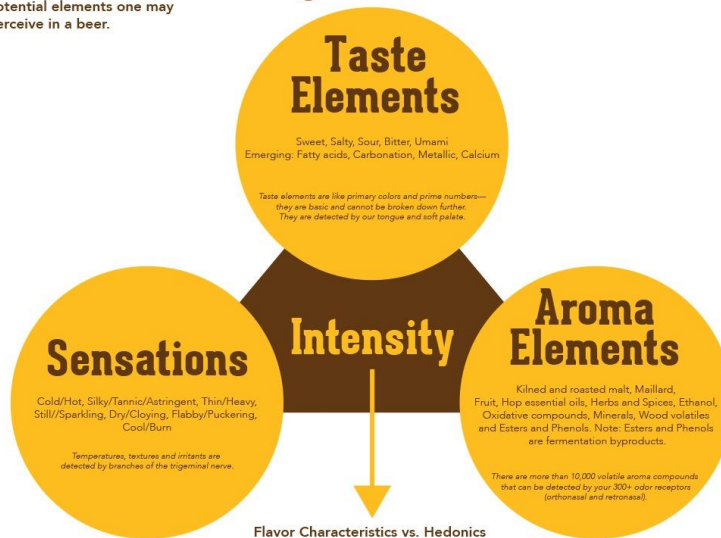
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Flavor Foundation: The Senses

CRAFTBEER.COM

Flavor Triangle

Potential elements one may perceive in a beer.



There are two unique types of intensity that work together when you taste foods and beverages.

1. **Flavor Characteristic Intensity:** how intensely you detect a flavor characteristic.
2. **Hedonic Intensity:** how much you like a flavor characteristic at a given strength (acceptance of a flavor).

Flavor Characteristic Scale



9-Point Hedonic Scale



Each of the Flavor Triangle characteristics are possible to detect in every beer. When tasting a craft beer, it is important to parse out what you do and don't detect.

Perception and intensity are personal and unique to each individual, and are continually modified by experience and circumstance. As you identify what you perceive, you can begin to piece together what interactions (interplay of triangle characteristics) are occurring.

Created via collaboration between Nicole Garneau, PhD and CraftBeer.com.

Download at (<http://www.CraftBeer.com/Culinary>)

Beer Flavor Map: Building a universal vocabulary



Challenges in unifying interaction vocabulary

- ◆ Nuances of language
 - e.g. are “enhance,” “brighten,” and “aggravate” similar interactions?
- ◆ Metric terms vs. Hedonistic terms
 - Enhance/Suppress vs. Home Run/Clash



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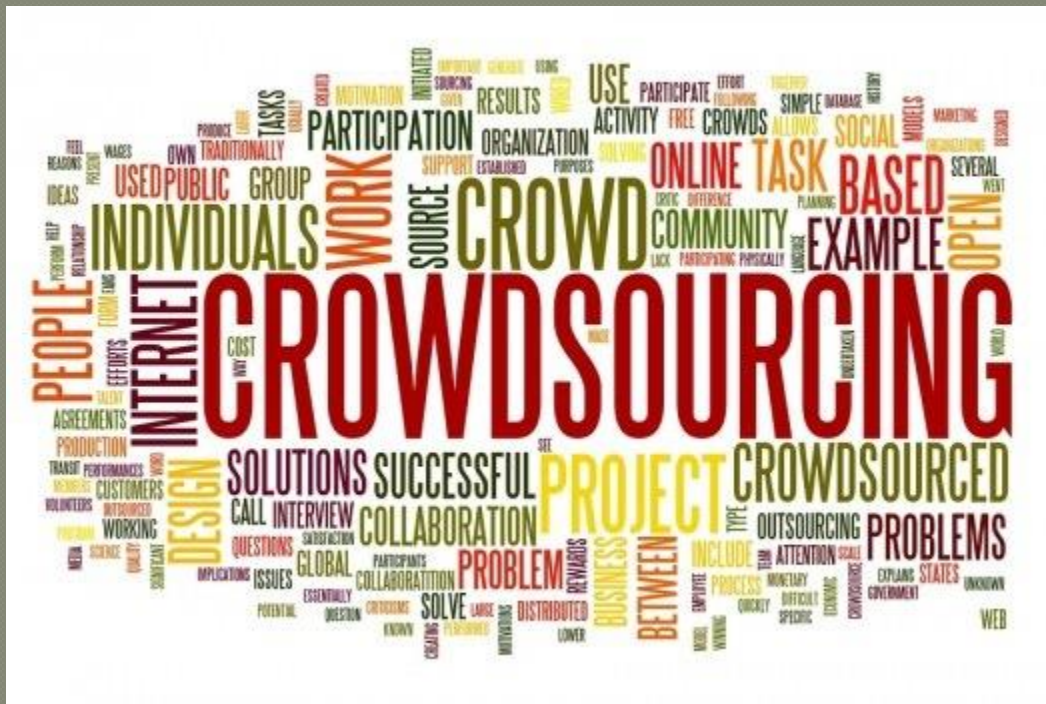
Challenges of research-backed

- ◆ Investigate: What interactions are already science-backed?
 - e.g. Sweet suppresses bitter
- ◆ Discover: What interactions need research to support?
 - e.g. Does bitter really cut fat?



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Crowdtasting: Big data sets to study flavor



Everyday people using their spare time to “create content, solve problems, even do R&D.”

~Jeff Howe
Wired Mag 2006

Big picture: what we did

- ◆ 3 food items and 4 beer styles (blinded)
- ◆ 400 crowdtasting participants
 - Preference-based survey
- ◆ 7 sensory panelists
 - Intensity scaling & descriptive analysis



Denver Museum of Nature & Science
March 25, 2016



New Belgium Brewing Co.
March 26, 2016

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Objectives of Pilot Crowdtasting

- ◆ Explore the logistics of the crowdtasting model
- ◆ Gather preliminary data on interactions to inform future studies



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Food and beer selection strategy

Umami

Sweet

Spicy



Brown Ale

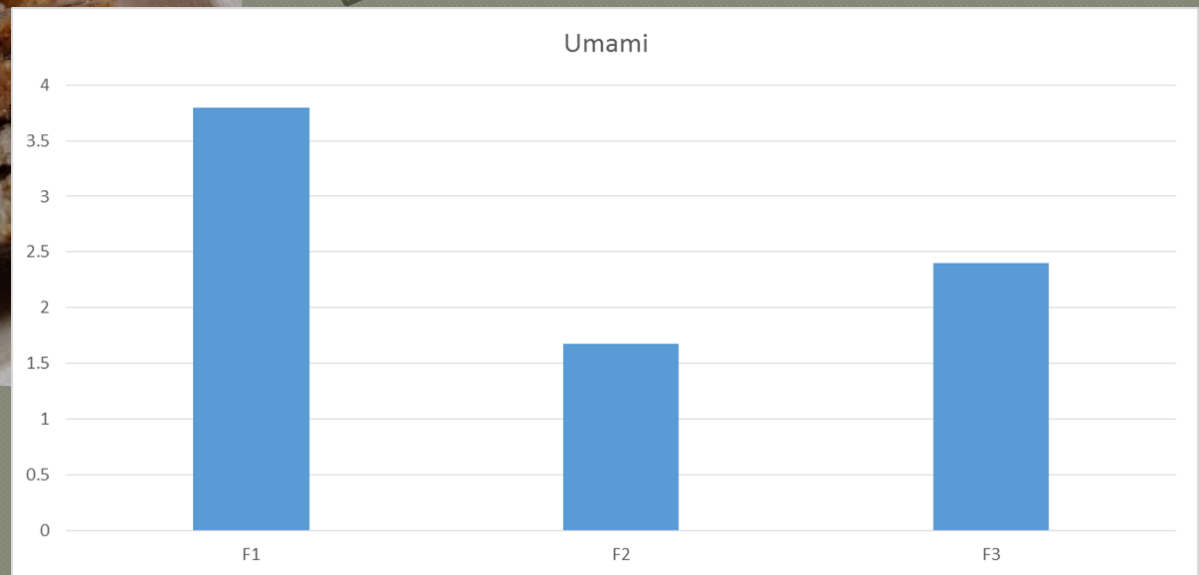
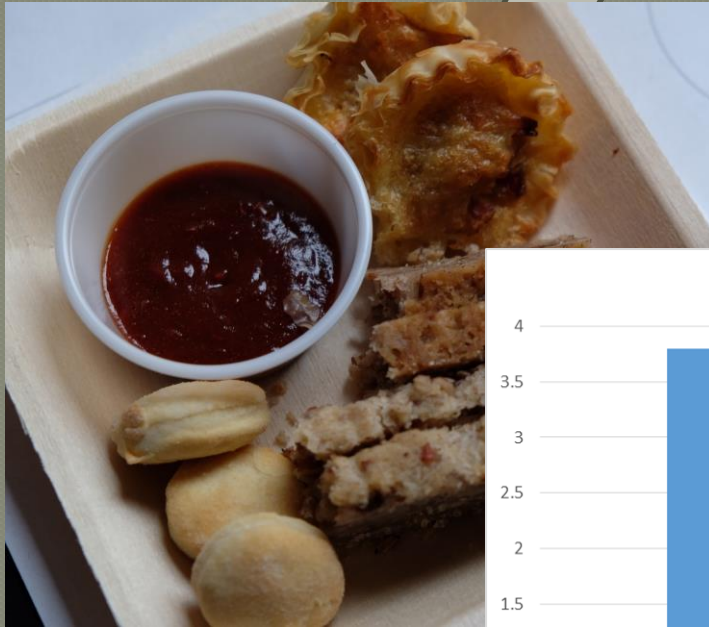
Hefeweizen

American Stout

American IPA

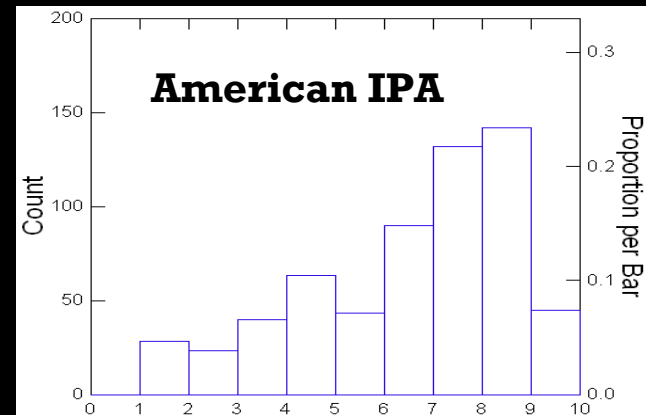
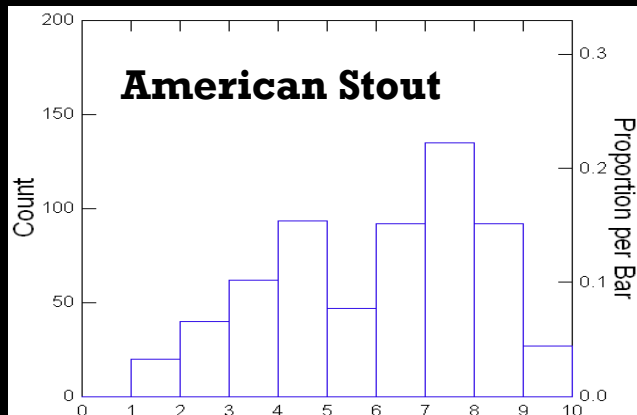
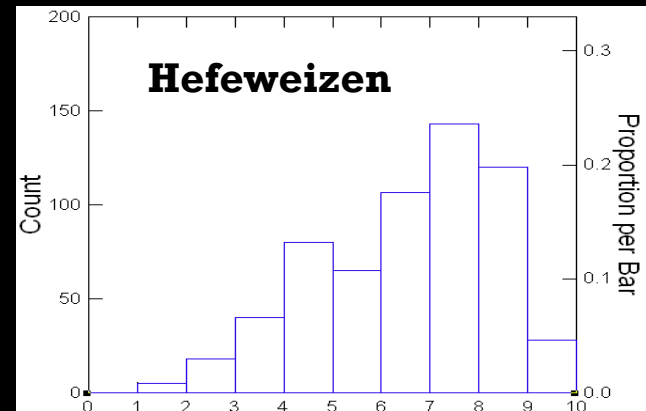
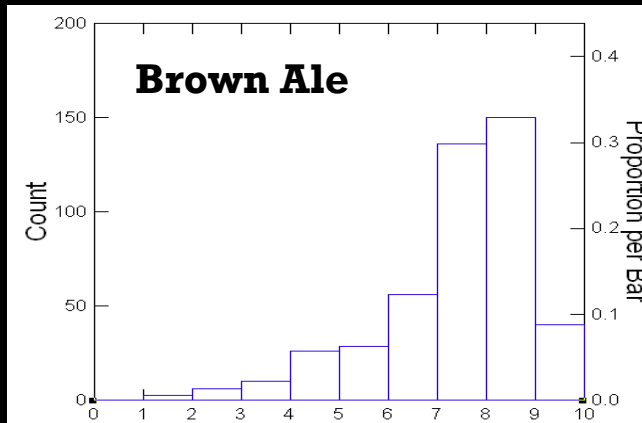
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Results: Descriptive analysis of food



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Results: Beer & food pairing preference



Results: Preliminary Trend

Changes in umami perception changes preference

Expert Panel: Umami taste	Beers	Consumer Preference
	<i>Brown Ale</i>	
No change	<i>Hefeweizen & American IPA</i>	Neutral
	<i>American Stout</i>	

Why it matters



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NEARLY 1/2 OF CRAFT DRINKERS SAY THEY DRINK CRAFT WITH FOOD MORE NOW THAN COUPLE OF YEARS AGO

Which of the following describe how often you drink craft beer with food?

Percentage saying: *“more often than a couple of years ago”*



Craft Beer Drinker

45%



Males: 43%

Age 21-34: 43%



Females: 49%

Age 21-34: 61%

- Additionally, 90 percent of people surveyed indicated they sometimes drink craft beer with food—with 60 percent likely to pick a specific beer style in that occasion.

Immediate next steps

- ◆ More crowdtasting events!
- ◆ Pairing Evaluation Guide
 - Incorporating and unifying various lexicons
- ◆ Virtual Crowdtasting
 - Community engagement