SPARTANS WILL.

Craft Beer Trends & Marketing Strategies

Past, Present, and Future

Aaron J. Staples
PhD Student
Agricultural, Food, and Resource Economics
@microBREWecon
Michigan State University

About me

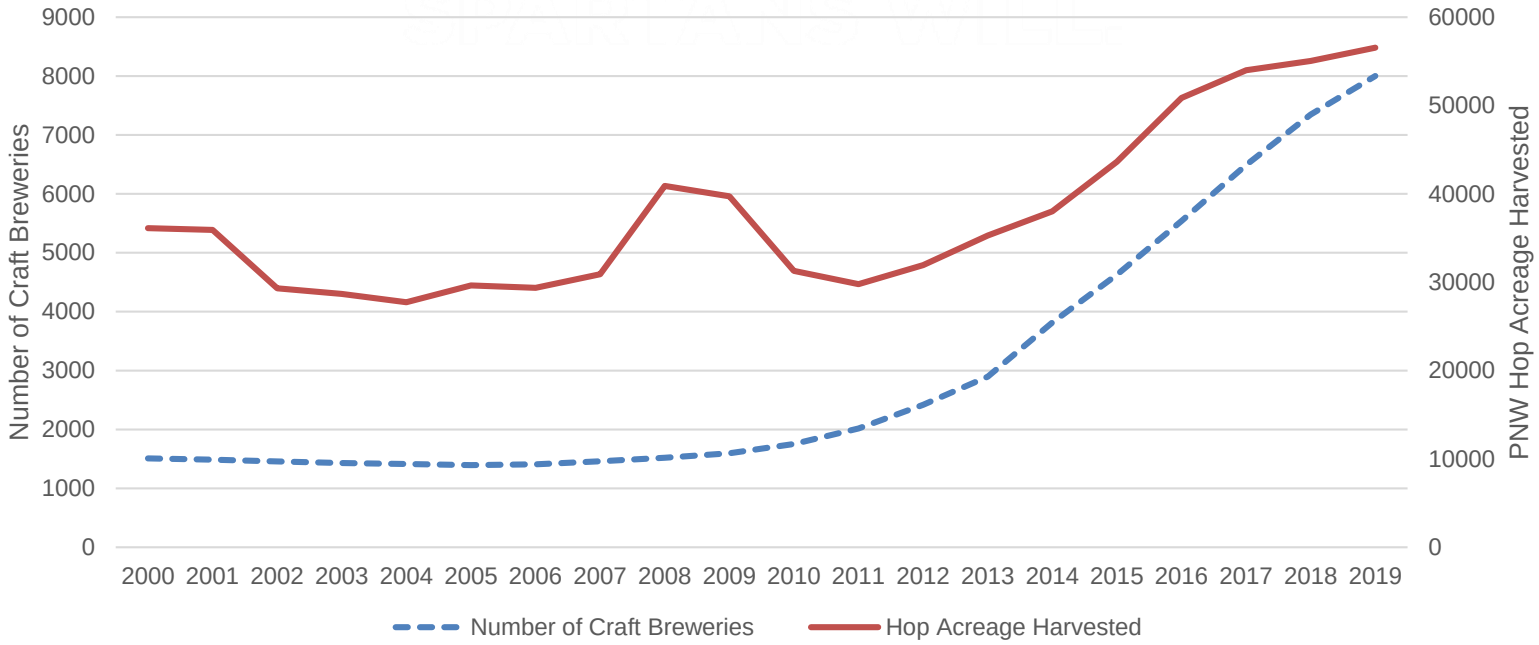
Learning Objectives

1. Connect the craft beer landscape to demand for hops.
2. Examine how variety seeking consumers generate quick turnovers in market trends.
3. Understand how brewers are pushing boundaries and searching for innovative ways to differentiate their product.

Roadmap

- *How did we get here?*
  - Rise of the West Coast IPA
  - Power of Proprietary
- *What's happening now?*
  - Beer consumption is down
  - Blurred lines
- *Where could we be going?*
  - International
  - Hyper-localization
  - Sustainability
  - CBD and THC

Hop production is driven by the craft beer revolution.

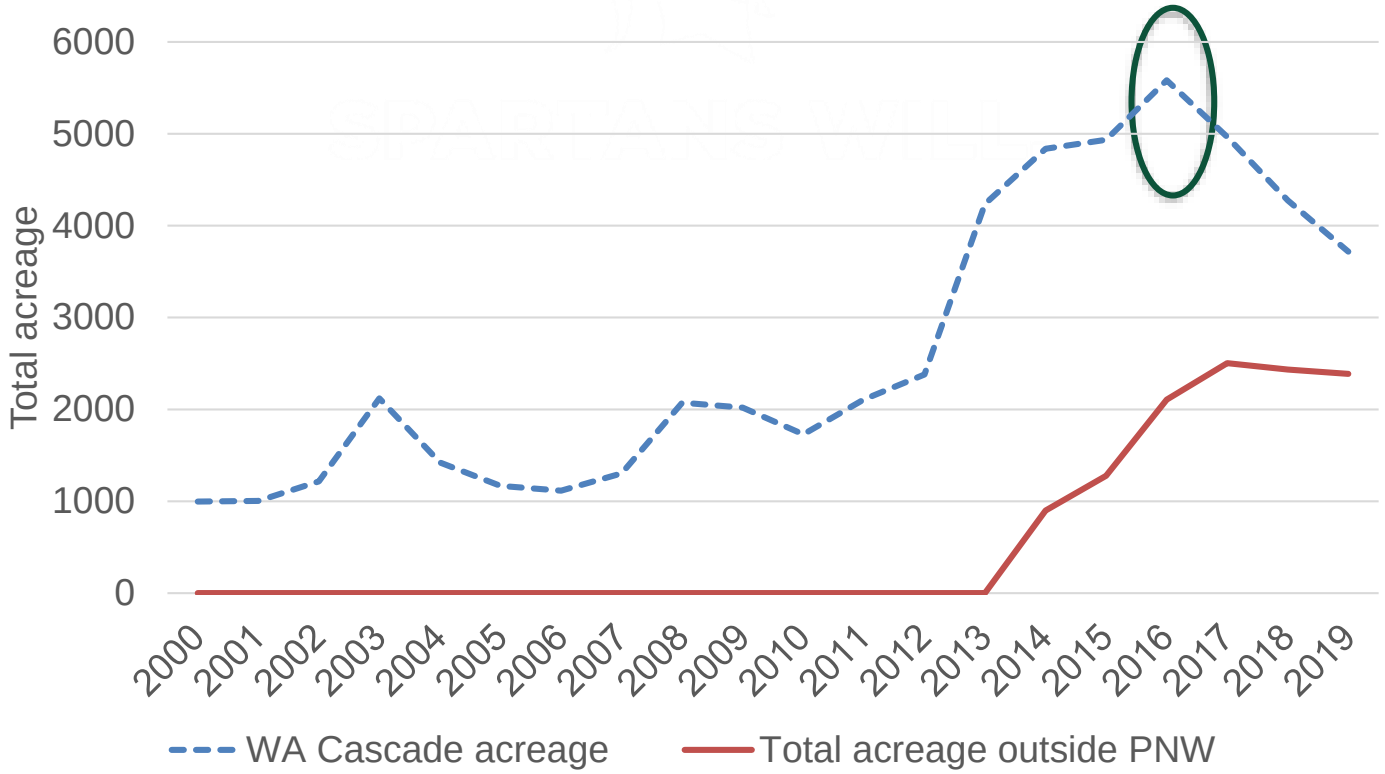


Sources: Brewers Association (2020); Hop Growers of America (2020)

How did we get here? **Rise of West Coast IPA**

- Cascade hop
- Became the face of the craft beer movement in the 1990's
- Floral, citrus, grapefruit notes
- Known for its bittering potential
- Gained traction in the mid 2000s, early 2010s

Washington Cascade Production



Source: Hop Growers of America (2020)

How did we get here? **Power of Proprietary**

- Craft beer finally established a market presence, showing it wasn't just a fad.
- Variety Seeking + Competitive Market = Product Differentiation
  - Mimic less-known styles, use different hops, create new styles
- Hop Breeding Programs
  - Research and development of new hop cultivars

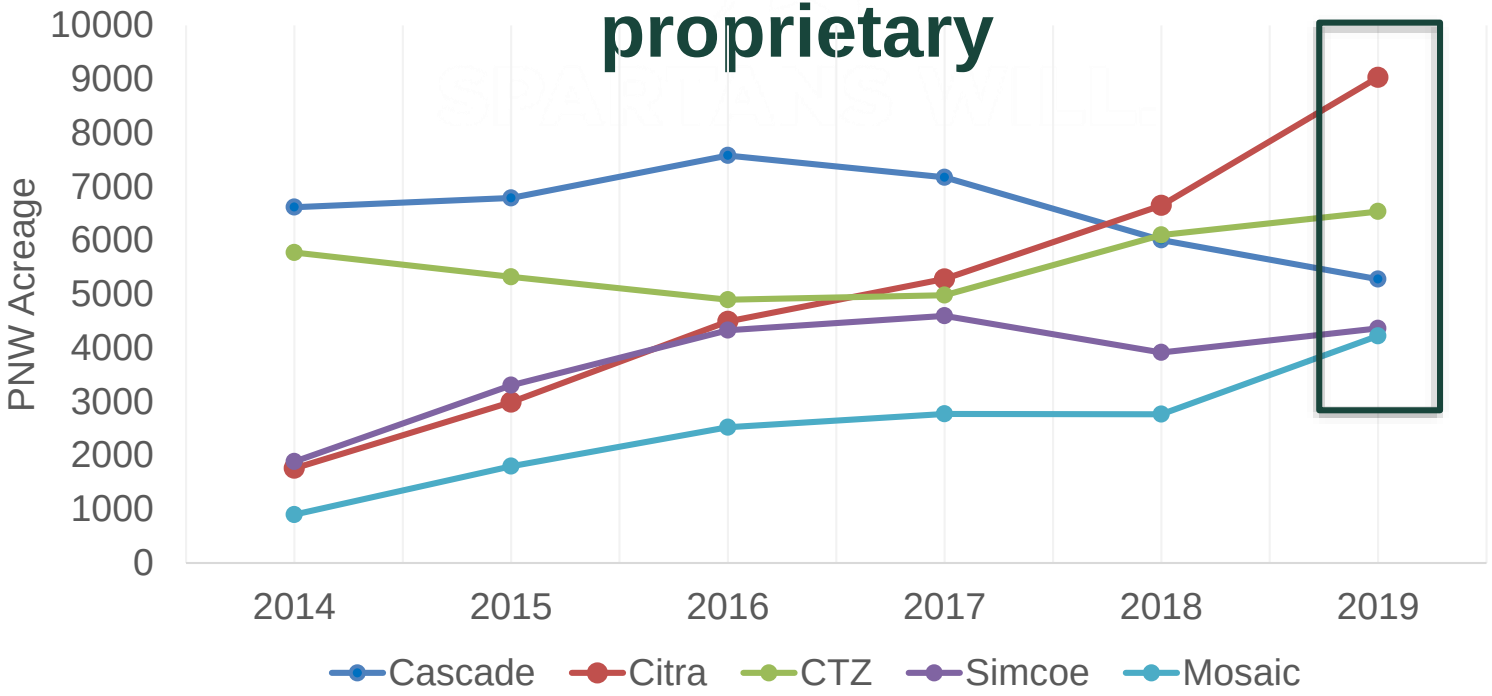
How did we get here? **Power of Proprietary**

- Proprietary hops are varieties created through breeding programs whose rights are owned by the individuals that created them
- Trademarked for certain period
  - 10 to 20 years before it becomes public variety
- Grown under contract
  - Near exclusively in the PNW

Popular Proprietary Hops	
Cultivar	**Year Introduced**
Amarillo	2003
Apollo	2006
Citra	2008
Mosaic	2012
Pahto	2018
Simcoe	2000

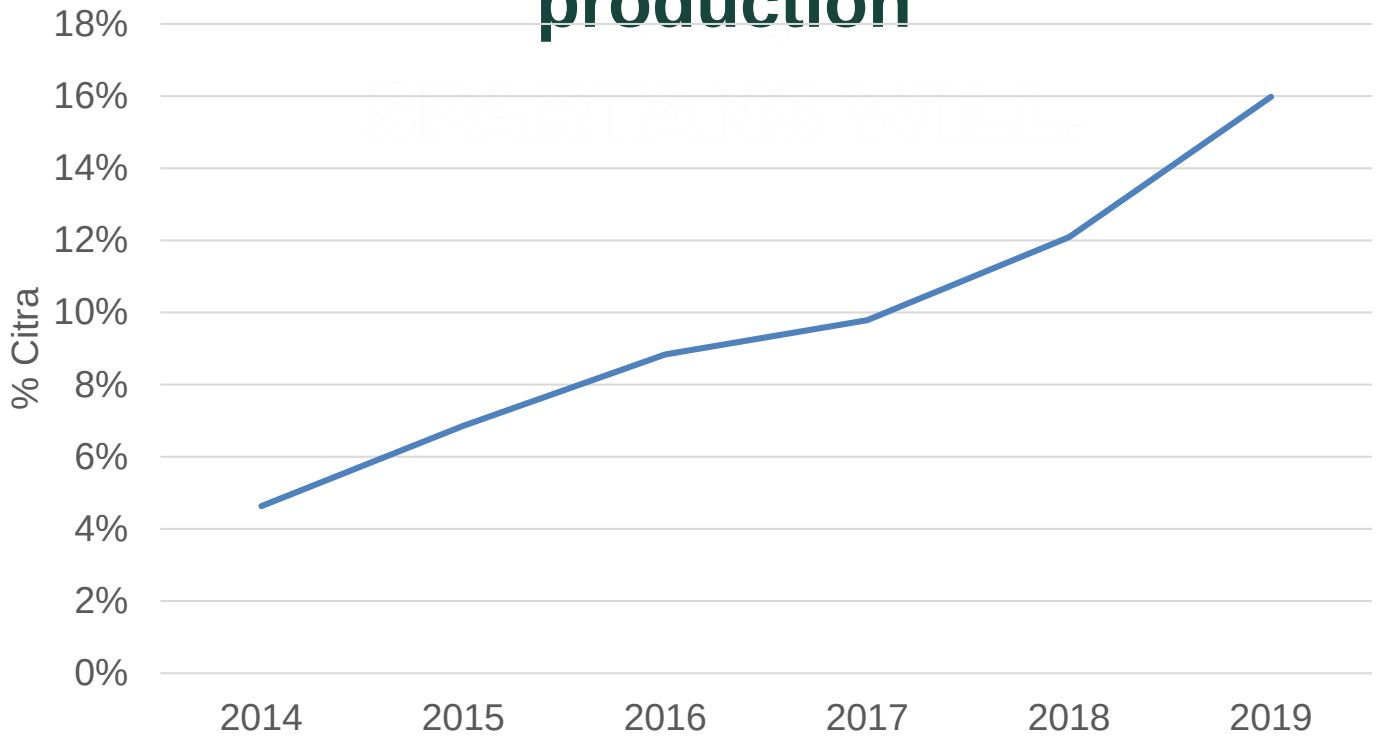
Simcoe set to become first patented hop to become publicly available.

3 of the top 5 most planted hops are proprietary



Source: Hop Growers of America (2020). 2019 Statistical Report. *USA Hops*.

16% of PNW acreage is devoted to Citra production



Brewers Association and USDA Agreement

PROGRAMS

Hop Breeding Program

New trust agreement with USDA will develop hop cultivars for public domain

The Brewers Association has signed an agreement with the United States Department of Agriculture-Agricultural Research Service (USDA-ARS) to fund public hop breeding for the purpose of developing and releasing disease resistant aroma hop cultivars into the public domain, in support of hop growing efforts throughout the U.S. The trust agreement between the Brewers Association and USDA-ARS provides funding for a program located in Washington and Oregon in order to leverage significant existing academic and operational infrastructure.

The U.S. hop and brewing industries are experiencing unprecedented expansion, and currently support over 360,000 jobs and is valued at $33 billion. This growth has created strong demand for new and existing hop varieties nationwide. Concurrently, chronic loss and isolated catastrophic loss from pests and diseases has increased because of the lack of broad spectrum, durable resistance in the varieties demanded by the market place. The net impact is disease management costs and crop damage that approach 15% of total crop value, destabilization of critical supply chains and lost export opportunities.

SPARTANS WILL.

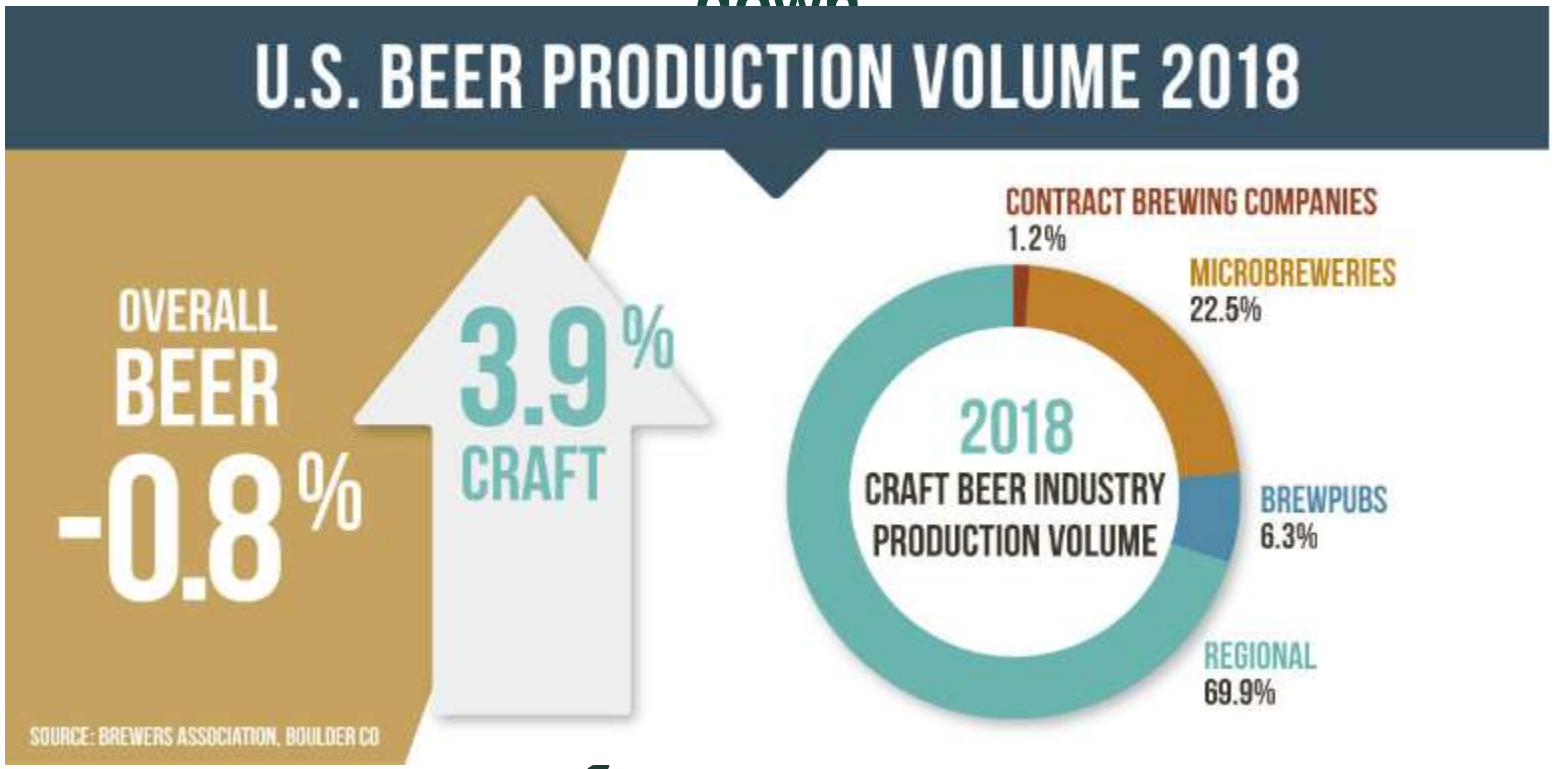
What's happening now?

RUN FOR BEER

EST 2020

MICHIGAN BREWERY RUNNING SERIES

Where are we now? **Beer still the favorite, but consumption is down**



Where are we now? **Beer still the favorite, but consumption is down**

Preferred Drink, by Age

Based on those who drink alcohol

	% Beer	% Wine	% Liquor
18- to 29-year-olds			
1992-1994	71	14	13
2012-2013	41	24	28
Change	-30	+10	+15
30- to 49-year-olds			
1992-1994	48	31	17
2012-2013	43	29	24
Change	-5	-2	+7
50+			
1992-1994	28	37	30
2012-2013	29	46	19
Change	+1	+9	-11

GALLUP

Where are we now? **Blurred lines**

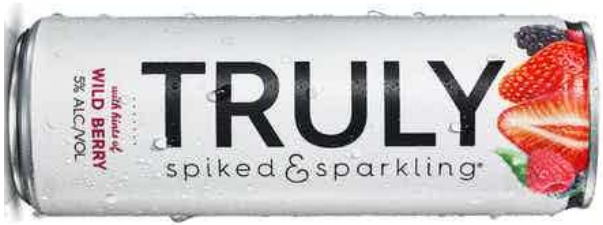
What is

What is beer?

Where are we now? **Blurred lines**

Seltzer Market Share

~5% of IRI tracked “beer” category in 2020



Where are we now? **Blurred line**

Craft Beverage Modernization and Tax Reform Act of 2019

"This provision would provide that for the purpose of label approvals, the "traditional process" for the production of beer shall include the addition of any wholesome **fruits, vegetables, or spices** suitable for human food consumption not containing alcohol and safe for use in an alcoholic beverage."

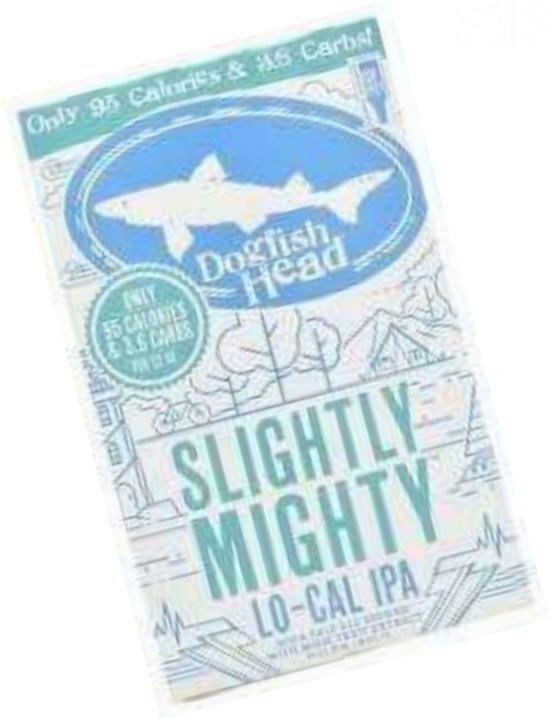
Amount of hops per beer style

A typical keg holds 1,984 oz of beer. These amounts are based on pound per keg.

Source: Hop Growers of America (2020)

Where are we now? **Low-cal, low-to-no ABV**

Where are we now? **Low-cal, low-to-no ABV**



Where are we now? **Low-cal, low-to-no ABV**

BELL'S TWO HEARTED RECOGNIZED AS THE BEST BEER IN AMERICA FOR THIRD YEAR IN A ROW

We (Bell's Brewery) and two of our beers - Two Hearted and Hopslam - were recognized again in this year's Best Beers in America survey from Zymurgy magazine.

Two Hearted was No. 1 in the Top-Ranked Beers category and Bell's in whole was named top brewery.

This is the third consecutive year that Two Hearted has claimed this honor. It came in second to Russian River's Pliny the Elder for seven straight years previously.

Where are we now? **Low-cal, low-to-no ABV**

- Deschutes Brewing Company
  - Bulk pHaze
- Brewed with:
  - 5 lbs. of hops per bbl
  - 3 lbs. of milk sugar per bbl
- Total calories per 12 oz. can:
  - 277 calories

Where are we now? **Low-cal, low-to-no ABV**

- Non-alcoholic beer has also increased in popularity
  - Implies low-calorie
- Small market share
- Biggest difficulty for craft brewers will be achieving desired style.

Amount of hops per beer style

A typical keg holds 1,984 oz of beer. These amounts are based on pound per keg.

Source: Hop Growers of America (2020)

SPARTANS WILL.

Where could we be going?

Where are we going? **Sustainability**


SUSTAINABILITY SPOTLIGHT

Going green: How can craft brewers improve sustainability?

By Beth Newhart

23-Apr-2019 - Last updated on 23-Apr-2019 at 12:53 GMT


NATIONAL

Beer Waste Helps Montana Town Save Money On Water Treatment

February 12, 2020 · 5:06 AM ET

Heard on Morning Edition

RACHEL CRAMER

FROM YELLOWSTONE PUBLIC RADIO


How Craft Breweries Are Saving the Planet, One Pint at a Time

By MEREDITH HEIL

Published On 04/19/2019


How 5 Breweries are Embracing Sustainable Brewing

Michelob Ultra Pure Gold uses its Super Bowl ad to plug program for organic farming

PUBLISHED MON, JAN 27 2020 8:18 AM EST | UPDATED MON, JAN 27 2020 10:03 AM EST

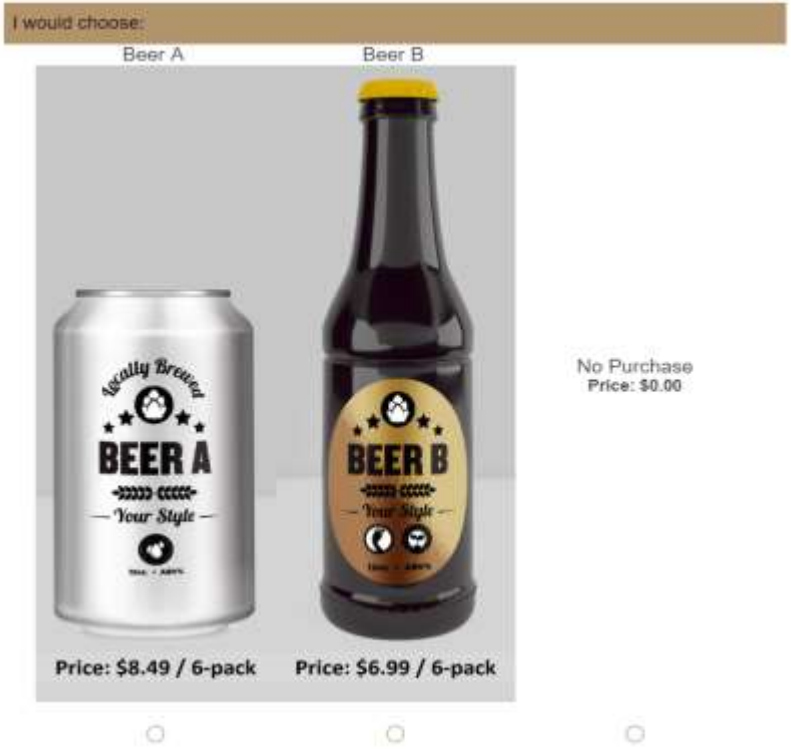
Megan Graham

They'd rather talk about beer. But wastewater is the hot topic for R.I. brewers.

Where are we going? **Sustainability**

Consumer Willingness to Pay for Sustainability Attributes in Beer: A Choice Experiment Using Eco-Labels

- Beer consumers place positive value on different sustainability attributes in beer
- Largest preference was for water and wastewater reduction practices
- Marketing products as sustainable can communicate a commitment to sustainability and simultaneously differentiate your product



Where are we going? **Sustainability**

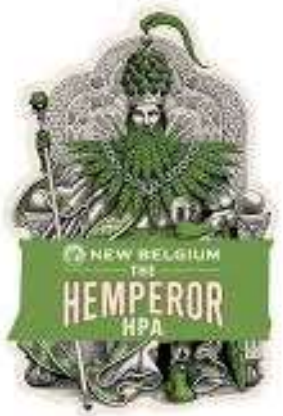
Where could we be going? **CBD & THC infused**

COMMODITIES | Marijuana | News Wire

Jan 7, 2020

Legal pot takes a bite out of beer consumption in Canada

Kristine Owram, Bloomberg News



Climate Solutions

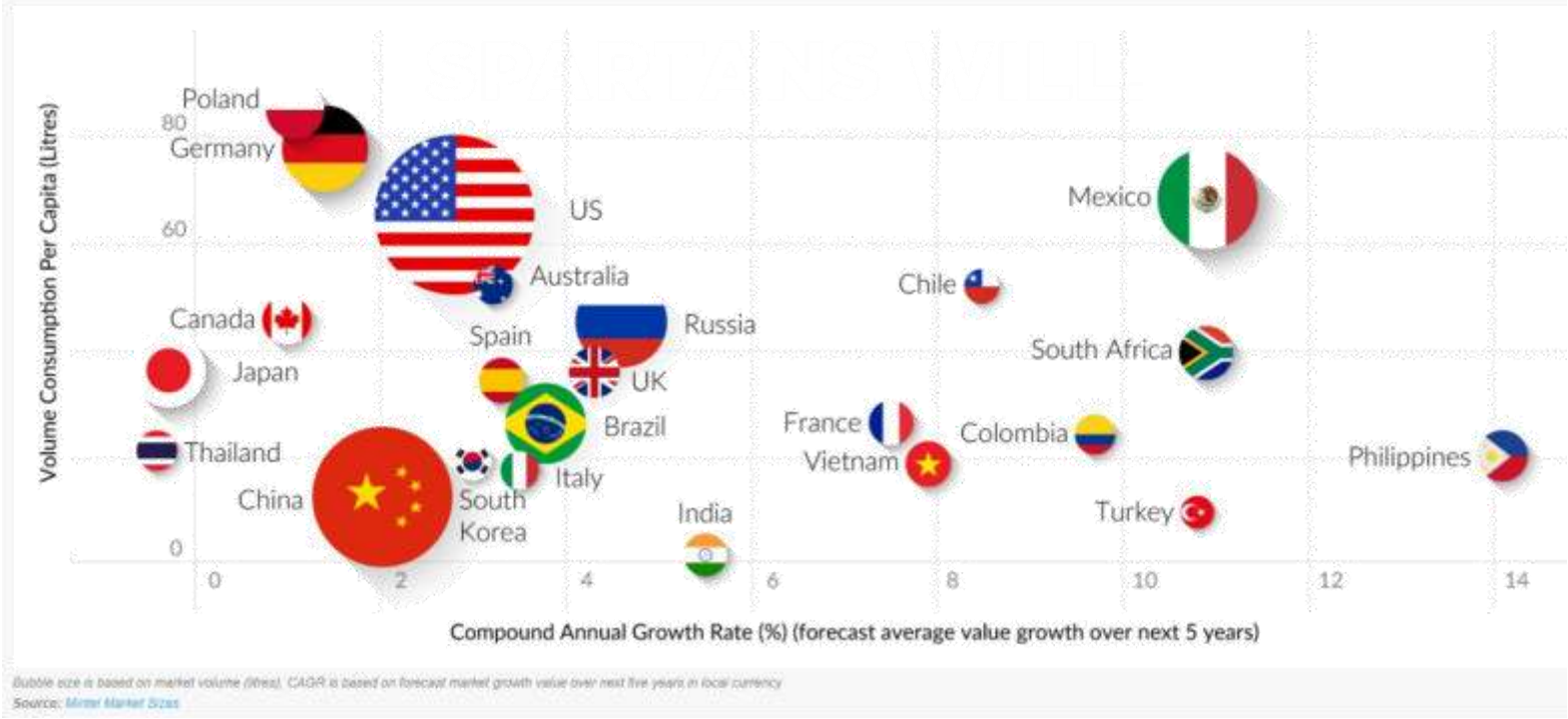
Instead of releasing this greenhouse gas, beer brewers are selling it to pot growers

Where could we be going? **CBD & THC infused beers**

FLYING DOG

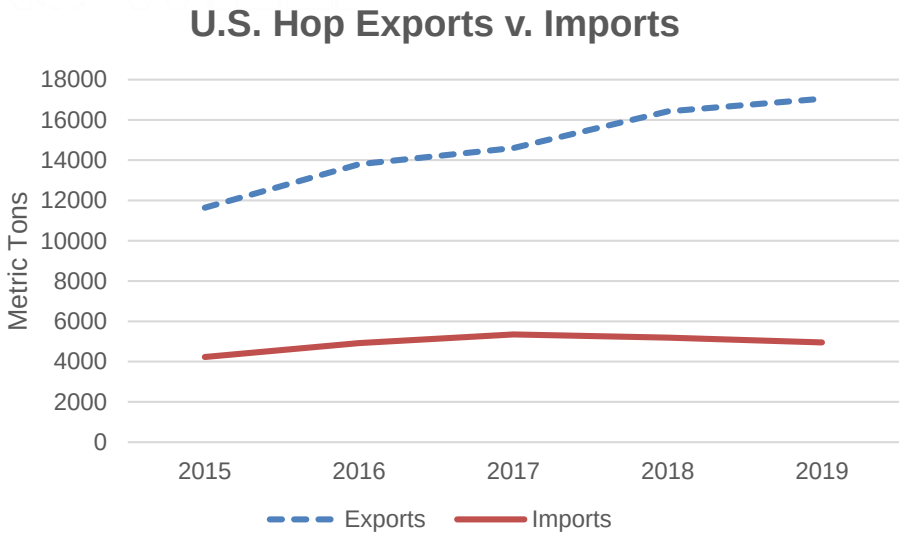
Green Leaf Medical, LLC
Medical Cannabis

Where could we be going? **International markets**



Where could we be going? **International markets**

- U.S. hop exports are growing, while imports are stagnant
- Top 3 markets:
  - Belgium
  - Canada
  - United Kingdom
- Countries to watch:
  - New Zealand (117% growth from 2018 to 2019)
  - Vietnam (52%)
  - Australia (31%)



Source: Hop Growers of America (2020). 2019 Statistical Report. USA Hops.

Where could we be going? **Hyper-localization**

- Consumers habitually support local food and drink
- Local value chains have the potential to:
  - Increase consumer satisfaction
  - Promote environmental awareness
  - Boost local economies

"The Michigan craft beer industry alone generated nearly $500 million in gross state product in 2016, contributing nearly $1 billion and

Twenty-nine states now report some level of commercial hop

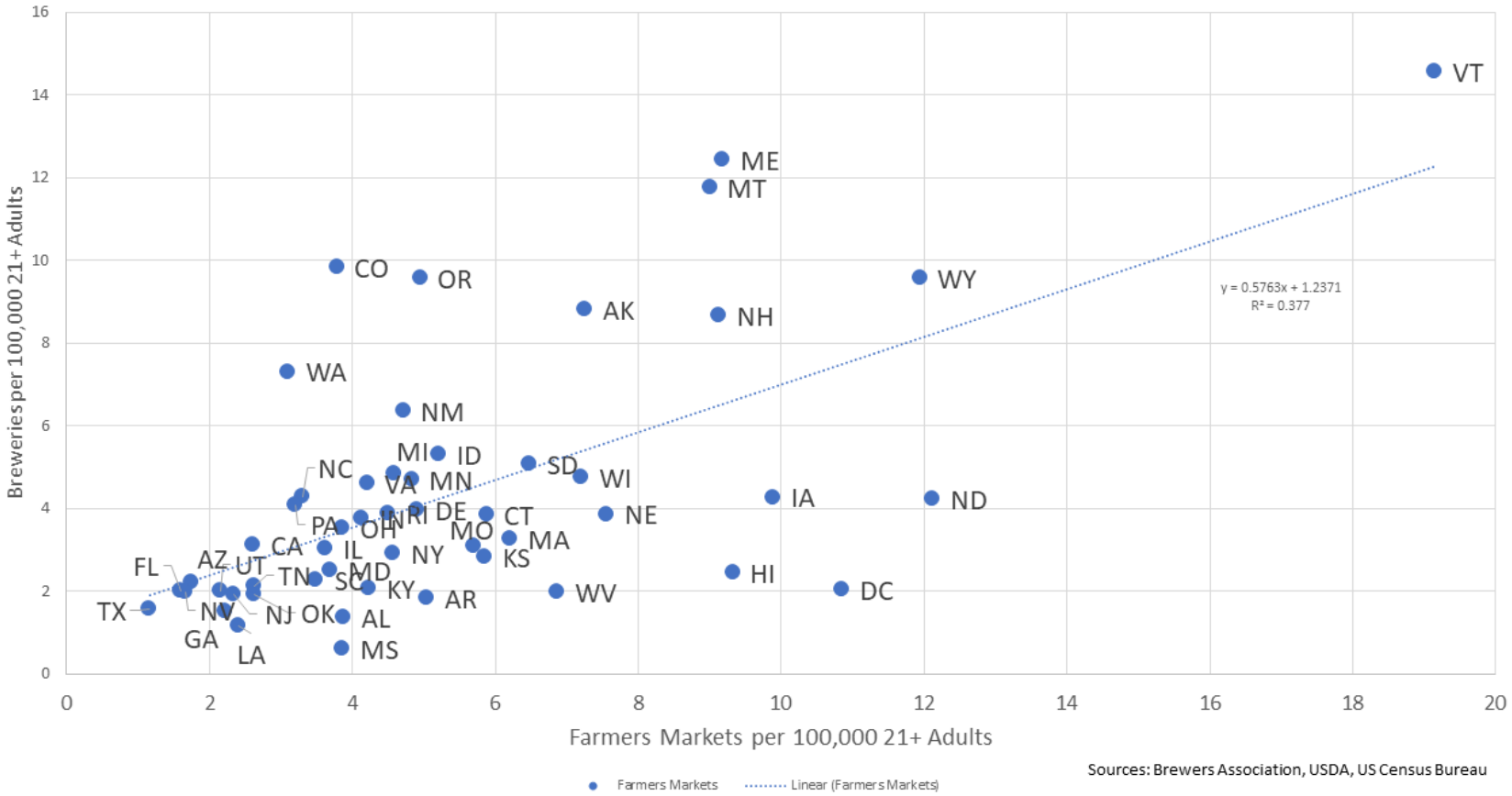
The Role of Craft Breweries in Expanding (Local) Hop Production

Elizabeth A. Dobis [a], Neil Reid [b], Claudia Schmidt [c] and Stephan J. Goetz [d]

Abstract

Hop production has expanded dramatically in recent years along with the number of local craft breweries, but to date the relationship between these two phenomena has not been explored systematically. Using a state-level pooled count data model with observations from 2007, 2012, and 2017, we examine the independent lagged effects of breweries on the number of hop farms and acres grown, holding constant fixed effects and key economic and geographic factors. Our results confirm that the number of breweries is associated with more hop production (farms and acres) five years later, while warmer temperatures and higher land prices discourage it. (JEL Classifications: L66, Q11, R30)

Farmers Markets and Breweries Per Capita by State



Sources: Brewers Association, USDA, US Census Bureau

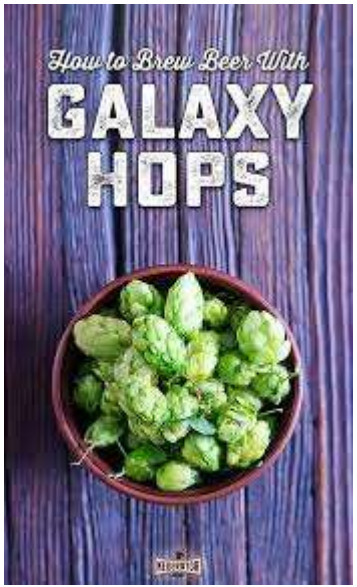
Where could we be going? **Hyper-localization**

Hopping on the Localness Craze: What Brewers Want from State-Grown Hops

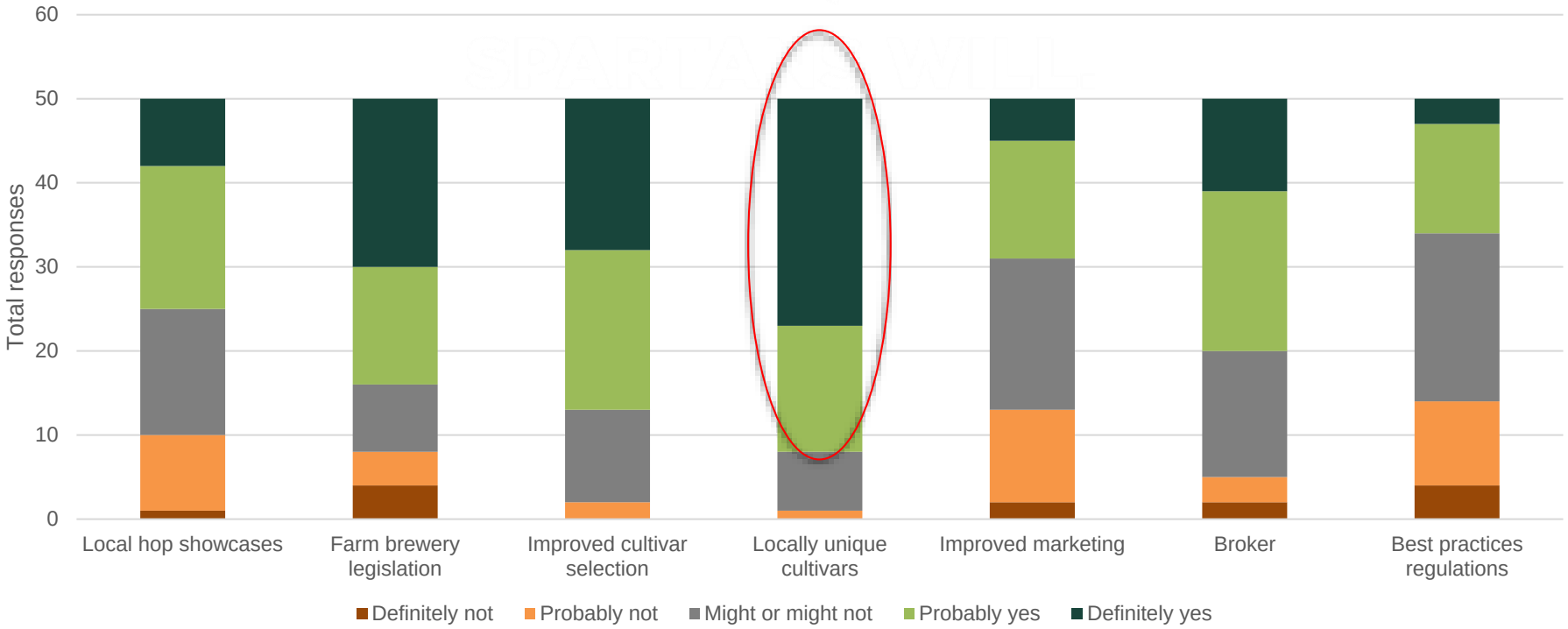
- Survey of 50 Michigan craft breweries asking about:
  - Hop purchasing behavior
  - Perceptions of hop consistency
  - General attitudes towards local
- Perceived consistency is the leading driver of hop purchasing decisions
- Attitudes towards localness was not enough to sway the decision to purchase local hops
  - Brewers that rated Michigan hop consistency as consistent as Pacific Northwest hops were, on average, smaller breweries that bought the majority of their hops directly from the farm
  - Demonstrates the importance of relationship building and trust between brewer and grower

What new and emerging hop cultivars do you think will be important to brewers in the next five years?

- Galaxy (6 respondents)
- Idaho 7 (5)
- Copper (5)
- Mosaic (4)
- Citra (4)
- Neomexicanus (3)



Would the following initiatives incentive you to use more local hops?



Where could we be going? **Hyper-localization**

Terroir: Tastes and flavors are a product of the environment from which a product is produced

Where could we be going? **Hyper-localization**

Developing local

:ary

Key takeaways

1. Consumers are variety seeking, and market trends turn over quickly.
2. Craft beer (and craft-like) sales have slowed but continue to grow, while overall beer consumption is down.
3. Brewers continue to push the boundary on what we define as beer hoping to differentiate their product in a highly competitive market.

For more information…

BREWERS ASSOCIATION

GOOD BEER HUNTING

USA HOPS
HOP GROWERS OF AMERICA

BREWBOUND®
BEER INDUSTRY NEWS, EVENTS, & JOBS

SPARTANS WILL.

Cheers!

Aaron J. Staples
PhD Student
Agricultural, Food, & Resource Economics
staple71@msu.edu
@microBREWecon
microBREWeconomist.com

Appendix: **Power of Proprietary**

TOP 10 PACIFIC NORTHWEST HOP VARIETIES (WITH ACREAGE)

Rank	2014	2015	2016	2017	2018	2019
1	Cascade (6,619)	Cascade (6,790)	Cascade (7,581)	Cascade (7,175)	Citra®, HBC 394 (6,652)	Citra®, HBC 394 (9,035)
2	CTZ (5,775)	CTZ (5,323)	Centennial (5,082)	Centennial (5,534)	CTZ (6,102)	CTZ (6,539)
3	Centennial (3,353)	Centennial (4,401)	CTZ (4,498)	Citra®, HBC 394 (5,284)	Cascade (6,009)	Cascade (5,280)
4	Summit (2,522)	Simcoe®, YCR 14 (3,306)	Citra®, HBC 394 (4,494)	CTZ (4,952)	Centennial (4,864)	Simcoe®, YCR 14 (4,365)
5	Simcoe®, YCR 14 (1,886)	Citra®, HBC 394 (2,993)	Simcoe®, YCR 14 (4,331)	Simcoe®, YCR 14 (4,598)	Simcoe®, YCR 14 (3,916)	Mosaic®, HBC 369 (4,225)
6	Citra®, HBC 394 (1,761)	Mosaic®, HBC 369 (1,800)	Mosaic®, HBC 369 (2,525)	Mosaic®, HBC 369 (2,773)	Chinook (2,839)	Centennial (3,680)
7	Chinook (1,641)	Chinook (1,787)	Chinook (1,940)	Chinook (2,429)	Mosaic®, HBC 369 (2,768)	Amarillo®, VGXP01 (2,369)
8	Nugget (1,628)	Summit (1,620)	Summit (1,769)	Willamette (1,657)	Amarillo®, VGXP01 (2,734)	Chinook (2,368)
9	Willamette (1,159)	Willamette (1,359)	Willamette (1,561)	Summit (1,616)	Pahto®, HBC 682 (1,659)	Pahto®, HBC 682 (2,150)
10	Apollo™ (985)	Apollo™ (994)	Apollo™ (970)	Apollo™ (912)	Summit (1,574)	Summit (1,072)

Source: Hop Growers of America (2020). 2019 Statistical Report. *USA Hops*.

Appendix: **Rise of West Coast IPA**

- Everyone hops on a trend, and what happens…
  - Over-supplied and price falls
- Was not that consistency or quality of Cascade fell
- Change in consumer preference
  - Still have consumers that love West Coast IPAs, but more importantly craft consumers are variety seeking
- With variety seeking comes new trends