Craft Beer Industry Update

Damon Scott
Technical Brewing Projects Coordinator
Brewers Association Technical Committee

Draught Beer Quality
Quality
Safety
Sustainability
Supply Chain
Engineering
Information Technology
Brewers Association Technical Resources

BEST PRACTICES

INDUSTRY UPDATES

BA RELEASES BEER NUTRIENT DATABASE FOR FDA CHAIN RESTAURANT MENU LABELING REQUIREMENTS

New Brewers Association Beer Nutrient Database facilitates compliance with FDA Menu Labeling Requirements for Chain Restaurants Beginning May 5, 2017, the Food and Drug Administration ...MORE
Bart Watson, Chief Economist for the Brewers Association, is a stats geek, beer lover, and Certified Cicerone®. He holds a PhD from the University of California, Berkeley, where in addition to his dissertation, he completed a comprehensive survey of Bay Area brewpubs one pint at a time. You can follow him on Twitter @BrewersStats.

See Bart Watson's recent articles and activities.

Chris Swersey lives in Salmon, Idaho. He serves as supply chain specialist, seeking out long-term opportunities to ensure BA members have access to a sufficient supply of high quality ingredients. He represents the BA at the Brewing and Malting Barley Research Institute, the National Barley Growers Association, and on the Hop Research Council.
BA CRAFT BREWER DEFINITION:

An American craft brewer is small, independent and traditional.

Small
• Annual production of 6 million barrels of beer or less (approximately 3 percent of U.S. annual sales). Beer production is attributed to the rules of alternating proprietorships.

Independent
• Less than 25 percent of the craft brewery is owned or controlled (or equivalent economic interest) by an alcoholic beverage industry member that is not itself a craft brewer.

Traditional
• A brewer that has a majority of its total beverage alcohol volume in beers whose flavor derives from traditional or innovative brewing ingredients and their fermentation. Flavored malt beverages (FMBs) are not considered beers.
It’s 2018

Where are we now?
More Breweries Than Even Before!

Number of Breweries, 1873 - 2017

Sources: Brewers Association and Beer Institute

6200
More Breweries Than Even Before!

179 Regional Breweries
• Produce more than 15K bbls

6000+ Microbreweries/Brewpubs
• Produce less than 15K bbls
CRAFT BEER IS NO LONGER LOCALIZED...IT IS EVERYWHERE

Michigan: 318
Ohio: 213
Indiana: 135
Pennsylvania: 284
New York: 332
Illinois: 195
Minnesota: 158
Wisconsin: 161
More Americans live near a Craft Brewery

83% of Americans live within 10 miles of a brewery!

Those breweries employ ~130,000 people directly!
Annual Growth Rate, 2007-2017

2007: 12%
2008: 6%
2009: 7%
2010: 12%
2011: 13%
2012: 15%
2013: 18%
2014: 18%
2015: 12%
2016: 6%
2017: 5%
Years of double-digit growth lead to large base:

~ 25 million bbls (2017 year-end)

Equivalent of adding 1 New Belgium in one year!

~ 1 million bbls (added over 2016)
<table>
<thead>
<tr>
<th>2016 Size (bbls)</th>
<th>% of 2017 Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;100,000</td>
<td>-11.9%</td>
</tr>
<tr>
<td>10K-100K</td>
<td>38.9%</td>
</tr>
<tr>
<td>&lt;10K</td>
<td>72.9%</td>
</tr>
</tbody>
</table>
Nielsen Surveys: Sum of very/somewhat important

- **Craft**: 67 (Total 21+) 71 (21-34)
- **Beer**: 45 (Total 21+) 53 (21-34)
- **Wine**: 34 (Total 21+) 34 (21-34)
- **Spirits**: 23 (Total 21+) 25 (21-34)
# Growth of “Own-Premise” Consumption

<table>
<thead>
<tr>
<th>Channel</th>
<th>Small &amp; Independent Craft Beer</th>
<th>All Beer</th>
</tr>
</thead>
<tbody>
<tr>
<td>ON-PREMISES</td>
<td>27%</td>
<td>18%</td>
</tr>
<tr>
<td>OFF-PREMISES</td>
<td>64%</td>
<td>82%</td>
</tr>
<tr>
<td>AT THE BREWERY</td>
<td>9.2%</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>
Craft Beer makes up only \(~13\%\) of total beer sales by volume, but accounts for about \(35\%\) of U.S barley consumption!
BA has invested in a research grant program:
• Test current varieties in growing regions outside current dominant regions (ESBN)
• Develop winter barley lines
• Investigate flavor contributions of different varieties

Over $1.2 million invested since 2015
EXECUTIVE SUMMARY

The brewing industry is evolving rapidly, and the barley malt supply chain should likewise evolve rapidly to meet the very different needs of all-malt beer brewers. Brewers Association member craft brewers have identified malt supply mismatch as a potential impediment to growing their brands. To produce all-malt beer brands, craft brewers seek barley malts with

- distinctive flavors and aromas
- lower free amino nitrogen ("FAN")
- lower Total Protein
- lower Diastatic Power ("DP")
- lower Kolbach Index (ratio of Soluble Protein to Total Protein, or "S/T")

Such malts differ significantly from the current suite of available barley malts produced in North America. The demand for such malts will grow significantly as craft production increases.
IPA is still the new IPA

IPAs as % of Craft and Overall Beer

- 2012: 11.7% (Craft), 0.6% (All Beer)
- 2013: 13.9% (Craft), 0.8% (All Beer)
- 2014: 17.6% (Craft), 1.1% (All Beer)
- 2015: 22.5% (Craft), 1.5% (All Beer)
- 2016: 26.5% (Craft), 1.9% (All Beer)
- 2017: 29.3% (Craft), 2.2% (All Beer)
BA is also investing in Public Hop Breeding Program:

- Novel flavor and aroma attributes
- Increased downy mildew resistance
- Increased powdery mildew resistance
- Comparable, or improved agronomic performance
# Top 10 Hop Varieties – Annual Hop Survey Results

<table>
<thead>
<tr>
<th>Year</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cascade</td>
<td>Cascade</td>
<td>Cascade</td>
<td>Cascade</td>
<td>Cascade</td>
<td>Cascade</td>
<td>Cascade</td>
<td>Cascade</td>
</tr>
<tr>
<td>Centennial</td>
<td>Centennial</td>
<td>Centennial</td>
<td>Centennial</td>
<td>Centennial</td>
<td>Centennial</td>
<td>Centennial</td>
<td>Centennial</td>
</tr>
<tr>
<td>Chinook</td>
<td>Chinook</td>
<td>Simcoe</td>
<td>Chinook</td>
<td>Chinook</td>
<td>Chinook</td>
<td>Chinook</td>
<td>Chinook</td>
</tr>
<tr>
<td>Willamette</td>
<td>CTZ</td>
<td>Chinook</td>
<td>Simcoe</td>
<td>Simcoe</td>
<td>Simcoe</td>
<td>Simcoe</td>
<td>Simcoe</td>
</tr>
<tr>
<td>Simcoe</td>
<td>Simcoe</td>
<td>CTZ</td>
<td>Citra</td>
<td>Citra</td>
<td>Crystal</td>
<td>Crystal</td>
<td>Crystal</td>
</tr>
<tr>
<td>CTZ</td>
<td>Amarillo</td>
<td>Amarillo</td>
<td>Hall Mitt (Ger)</td>
<td>Amarillo</td>
<td>Citra</td>
<td>Citra</td>
<td>Citra</td>
</tr>
<tr>
<td>US Golding</td>
<td>Crystal</td>
<td>Crystal</td>
<td>Amarillo</td>
<td>Mosaic</td>
<td>Nugget</td>
<td>Amarillo</td>
<td>Amarillo</td>
</tr>
<tr>
<td>Crystal</td>
<td>Willamette</td>
<td>Willamette</td>
<td>Crystal</td>
<td>Crystal</td>
<td>Amarillo</td>
<td>Amarillo</td>
<td>Amarillo</td>
</tr>
<tr>
<td>Amarillo</td>
<td>Saaz (CZ)</td>
<td>Citra</td>
<td>Magnum (Ger)</td>
<td>Hall Mitt (Ger)</td>
<td>Mosaic</td>
<td>Mugam (Ger)</td>
<td>Mugam (Ger)</td>
</tr>
<tr>
<td>Ahtanum</td>
<td>US Golding</td>
<td>Saaz (CZ)</td>
<td>CTZ</td>
<td>CTZ</td>
<td>Magnum (Ger)</td>
<td>Magnum (Ger)</td>
<td>Magnum (Ger)</td>
</tr>
</tbody>
</table>
CHEERS!