Agenda

- National Craft Picture
- Shifts within Craft
- Challenges
  - Total demand
  - Varieties
  - Fractured market
National Statistics

2014 Small & Independent

U.S. CRAFT BREWERS’

Growth in the Beer Category

Volume Share for Craft Brewers

<table>
<thead>
<tr>
<th>Year</th>
<th>Volume Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>5.0%</td>
</tr>
<tr>
<td>2011</td>
<td>5.7%</td>
</tr>
<tr>
<td>2012</td>
<td>6.5%</td>
</tr>
<tr>
<td>2013</td>
<td>7.8%</td>
</tr>
<tr>
<td>2014</td>
<td>11.0%</td>
</tr>
</tbody>
</table>

U.S. Operating Breweries

- Total Breweries: 3,464
- Craft Breweries: 3,418
- 46 Other Breweries

Craft Retail Dollar Value Growth

$19.6 BILLION
27% GROWTH OVER 2013
(Craft Dollar Share = 19.3%)

1,413 Brewpubs
(16% increase over 2012)
1,871 Microbreweries
(16% increase over 2012)
135 Regional Craft Breweries
(19% increase over 2012)
22,159,327 barrels of craft beer were produced in 2013.
2015 Early Trends

• **Continued Growth**
  – 17% YTD in scan data
    • Micros becoming a volume force
    • “All other” is now 18\textsuperscript{th} largest vendor
    • Growing at 198% YTD

• **Moving into mainstream**

• **Lots of capacity coming online to match production**
  – Ratio not statistically different from last year
Craft – Volume Share Change, 2014

Source: IRI (2015)
Craft Volume Change vs YA, YTD by Style
IRI MULO+C Scan Data, through 12/28/14

- IPA
- Everything Else
Drives Per Barrel Hoping Rate

YOY Change in PPB

Production Year

<table>
<thead>
<tr>
<th>Year</th>
<th>YoY Change in PPB</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>2.2%</td>
</tr>
<tr>
<td>2009</td>
<td>17.9%</td>
</tr>
<tr>
<td>2010</td>
<td>5.8%</td>
</tr>
<tr>
<td>2011</td>
<td>8.0%</td>
</tr>
<tr>
<td>2012</td>
<td>1.3%</td>
</tr>
<tr>
<td>2013</td>
<td>5.1%</td>
</tr>
<tr>
<td>2014</td>
<td>5.0% (est)</td>
</tr>
<tr>
<td>2015</td>
<td>2.0% (est)</td>
</tr>
</tbody>
</table>
Hops/Barrel

US Craft Beer Hopping Rates (TTL Pounds / TTL BBL)

Production Year

Hops/Barrel
<table>
<thead>
<tr>
<th>IPA Style</th>
<th>Dollar Sales (000s)</th>
<th>% Chg vs YA</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMERICAN IPAs</td>
<td>$217,147</td>
<td>42.3%</td>
</tr>
<tr>
<td>IMPERIAL IPAs</td>
<td>$85,845</td>
<td>20.9%</td>
</tr>
<tr>
<td>SESSION IPAs</td>
<td>$11,440</td>
<td>338.8%</td>
</tr>
<tr>
<td>ENGLISH IPAs</td>
<td>$7,185</td>
<td>22.5%</td>
</tr>
<tr>
<td>BELGIAN/WHITE IPAs</td>
<td>$2,145</td>
<td>-21.5%</td>
</tr>
<tr>
<td>OTHER IPAs</td>
<td>$1,758</td>
<td>-12.2%</td>
</tr>
<tr>
<td>BLACK IPAs</td>
<td>$1,402</td>
<td>6.3%</td>
</tr>
</tbody>
</table>
Imperial IPA Hopping Rates

- Surveyed producers of top 10 craft Imperial IPAs
- 6 responses
  - Represent about 2/3 of imperial sales in scans
  - Market weighted average usage 2.3 lbs/barrel
  - Half using more than 3 lbs/barrel
Future Hop Usage
Future Craft Segment Growth

• Demographics
  – Good and bad news, mostly good

• Market Trends
  – Blue oceans (Southeast)
  – Current Growth
  – Premiumization

• Brewery Trends
  – When does the exponential curve stop?
The Millennials

Sources: U.S. Census Bureau, Census 2000 Summary File 1 and 2010 Census Summary File 1.
Population by Race and Hispanic Origin: 2012 and 2060
(Percent of total population)

<table>
<thead>
<tr>
<th>Race/Multi-Race Category</th>
<th>2012</th>
<th>2060</th>
</tr>
</thead>
<tbody>
<tr>
<td>White alone</td>
<td>78</td>
<td>69</td>
</tr>
<tr>
<td>Black alone</td>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td>American Indian and Alaska Native alone (AIAN)</td>
<td>1.2</td>
<td>1.5</td>
</tr>
<tr>
<td>Asian alone</td>
<td>5.1</td>
<td>8.2</td>
</tr>
<tr>
<td>Native Hawaiian and Other Pacific Islander (NHPI) alone</td>
<td>0.2</td>
<td>0.3</td>
</tr>
<tr>
<td>Two or More Races</td>
<td>2.4</td>
<td>6.4</td>
</tr>
<tr>
<td>Non-Hispanic White Alone</td>
<td>63</td>
<td>43</td>
</tr>
<tr>
<td>Hispanic (of any race)</td>
<td>17</td>
<td>31</td>
</tr>
</tbody>
</table>

AIAN=American Indian and Alaska Native; NHPI=Native Hawaiian and Other Pacific Islander
Figure 1. Historical Craft Production Growth Rate vs. 11% Growth and 2005-2014 Average

- Production Growth
- 11%
- 2005-2014 Average

Source: Brewers Association
Figure 2. Paths to Craft 20 Share by Share Growth Rate; Year 20 Share achieved in Parentheses

- **Historical**
- 5% (2027)
- 8% (2023)
- 11% (2020)
- 14% (2019)
- 17% (2018)

*Craft brewer definition changed between 2013 and 2014

Source: Brewers Association
Source: Brewers Association
Concerns on the Horizon?

- **Hop Usage**
  - At 20% share, craft hop usage is 2/3 of current national production – even without increase in usage/bbl

- **Hop Varieties**
  - Larger scale only part of the challenge
  - Issues like growing windows necessitate further investment
Source: Brewers Association
Approaching 110 million lbs?

Source: Brewers Association
Getting to 20/20 - Hops

• 25% increase in hop volume
• Greater increase in acreage/resources
  – 30% increase in acres
  – Acreage needed greater than hop increase
    • Aroma vs Alpha
    • Starting to run out of acres to switch
    • More resource intensive
  – $10K an acre + processing ($5K)
    • Capacity is fine – but harvest windows tightening
    • “New” acres cost more
Aroma Hop Acreage as % TTL US Acres

- 2003: 25.3%
- 2004: 22.2%
- 2005: 22.2%
- 2006: 20.3%
- 2007: 21.8%
- 2008: 19.8%
- 2009: 20.9%
- 2010: 26.0%
- 2011: 31.9%
- 2012: 41.6%
- 2013: 62.7%
- 2014: 69.9%
Getting to 20/20 - Hops

• 12,000 new acres? + Export growth?
• $180 million minimum in acreage investments?
• Growers get it, but more work
• 25 million more pounds of hops
  – Pelletizing infrastructure
  – Storage (even 25 cents a pound adds up)
  – New technologies/products
  • Hop Hunter anyone?
Getting to 20/20 - Hops

• Other investments may double cost
  – Collective half a billion $’s not out of the picture
• Will new areas help?
• Yes, but right now at the margins
  – Lack of scale
  – Higher cost
  – Uncertain demand
  – More fragmented
<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cascade</td>
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<tr>
<td>Centennial</td>
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<td>Centennial</td>
<td>Centennial</td>
<td>Simcoe</td>
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<tr>
<td>Chinook</td>
<td>Chinook</td>
<td>Chinook</td>
<td>Chinook</td>
<td>Simco</td>
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<tr>
<td>Amarillo</td>
<td>Willamette</td>
<td>CTZ</td>
<td>Simco</td>
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<tr>
<td>Willamette</td>
<td>Simco</td>
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<td>CTZ</td>
<td>Simco</td>
<td>CTZ</td>
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<tr>
<td>CTZ</td>
<td>CTZ</td>
<td>Amarillo</td>
<td>US Golding</td>
<td>Crystal</td>
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<tr>
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<td>Citra</td>
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<td>Simco</td>
<td>Crystal</td>
<td>Willamette</td>
<td>Saaz (CZ)</td>
<td>Saaz (CZ)</td>
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<tr>
<td>US Golding</td>
<td>Amarillo</td>
<td>US Golding</td>
<td>Saaz (CZ)</td>
<td>Saaz (CZ)</td>
<td></td>
</tr>
</tbody>
</table>
Varieties Drive Volume Growth

Total Number of Varieties Used BY U.S. Craft Brewers
Varieties Create Challenges

2014 Crop Approximate Harvest Window

- Approx. 38,000 acres grown in 2014, closer to 40/60 mix of high alpha to aroma hops
- Fewer early and late maturing varieties, many of the aroma/flavor varieties clustering into mid-Sep
Figure 2: Domestic craft beer volume production and malt imports

Imports
(1,000 metric tons)

Barrels
(million barrels)

Malt and malt extract
Imports (left axis)

Craft beer volume
Production (right axis)

Sources: U.S. Census Trade Data and Brewers Association.