From Propagation to Pint: Creating Value in A Dynamic Market

2.16.18
About Me

Native Yakimaniac

Love all things beer

Enjoy being outside and spending time with my wife and daughter

Nearly completed with an MS in Ag from WSU

Dedicated to serving the needs of our growers

Incredibly excited to be visiting Vermont for the first time, and grateful to be here with you all today!
Outline

- Company background
  - Mission, Vision, and Values
  - Structure of Company

- Developing hop varieties
  - Breeding for Value
  - Sensory

- Creating value throughout the supply chain
  - Crop Management
  - Supply Chain Integration
Company background

Integrated Botanicals Management focused on breeding hops for the global brewing industry. Started in late 1980s by three families:

- Perrault Farms

- Carpenter Ranches

- BT Loftus Ranches
Purpose, Vision, and Values

Our **Purpose** is to create, grow, and protect value for all within our footprint through developing first class hop varieties, relentlessly pursuing quality, and building meaningful relationships.

Our **Vision**
A new normal in the hop trade where mutual benefit between stakeholders is the key driver of success. A truly sustainable industry.

Our **Values**
Be Bold
Be Creative
Be Accountable
Contribute
Grow
Structure of Select Botanicals Group, LLC

Research and Development

Member of Hop Breeding Company, a joint venture between Select Botanicals Group, LLC and Haas

Brand Management

Create and sustain value throughout the supply chain for all stakeholders through our Footprints® program
Hop Breeding Company

Hop Breeding Company breeds and evaluates thousands of genetically different plants, looking for hops that have novel brewing and agronomic qualities to brewers and growers.
# The Breeding Process

## 11 year Process

<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td><strong>Parental Selection and Crossing</strong></td>
</tr>
<tr>
<td>Year 2</td>
<td><strong>Early Selection</strong>&lt;br&gt;Greenhouse Screening, High Density Field Screening, 10% Selection Rate</td>
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<tr>
<td>Years 3-5</td>
<td><strong>Intermediate Selection</strong>&lt;br&gt;Remaining plants trellised on commercial sized 18’ Trellis 1% Selection Rate</td>
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<tr>
<td>Years 6-8</td>
<td><strong>Advanced Selection</strong>&lt;br&gt;Expand selection to multi plant plots 2% selection rate</td>
</tr>
<tr>
<td>Years 9-11</td>
<td><strong>Elite Trials</strong>&lt;br&gt;Commercial Trials &lt;1% selection rate</td>
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</tbody>
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Breeding to create value

Agronomics and value to grower
- Yield
- Pest Resistance
- Storageability
- Pickability

Novel brewing quality

Value to all stakeholders
Developing varieties that bring value to the brewer

Requires sensory and feedback

• Working with brewers to understand their needs and desires
• Brewing trials with breweries
• Sensory training panels annually
Developing varieties that bring value to the brewer
Varietal Release

- Proven to have value to stakeholders and desire to grow and brew with
- Trademarked and planted to cover initial volume
- Transferred from R&D into brand management program
Select Botanicals Group Brands

Released Prior to joint venture through Hop Breeding Company

Ahtanum™ Brand YCR 1
Released in 1997
Sensory Notes: Citrus, Earthy, Floral

Palisade® Brand YCR 4
Released in 2003
Sensory Notes: Apricot, Grass, Floral

Warrior® Brand YCR 5
Released in 2000
Sensory notes: Very clean bittering hop

Simcoe® Brand YCR 14
Released in 2000
Sensory notes: Piney, Citrus, Passion Fruit, Earthy

Hop Breeding Company Brands

Citra® Brand HBC 394
Released in 2007
Sensory Notes: Tropical Fruit, Grapefruit, Melon, Gooseberry, Lychee Fruit, Citrus

Mosaic® Brand HBC 369
Released in 2012
Sensory Notes: Fruity, Floral, Citrus, Earthy, Melon, Tropical, Blueberry, Grassy

Ekuanot™ Brand HBC 366
Released in 2014
Sensory Notes: Melon, Berry, Citrus-Lime, Apple, Papaya, Green Pepper

Loral™ Brand HBC 291
Released in 2016
Sensory Notes: Floral, Citrus, Peppery, Dark Fruit
Brand Management

We define our footprint as everything and everyone from grower to beer drinker

What is Footprints™?

Footprints™ is the name we have given to our whole brand management program, including the following areas:

- Vertically integrated supply chain
- Fair, sustainable returns and pricing to growers and brewers
- Quality and food safety guidelines
- Employee development
- Community Stewardship
Footprints™ Supply Chain

All hops produced under our Footprints™ program are sold through Yakima Chief Hopunion, another grower owned organization that is focused on long term value and sustainability.

YCH and SBG work together:
• Fair, sustainable Pricing to Brewers and growers
• Feedback to growers
• Best Practice guidance
• Food safety standards
• Transparency through the supply chain
• Traceability
• Aligned Supply and Demand
  • Over 40 growers covering three states in the pacific northwest

Footprints in the field

Varietal Purity
• Clean plant propagation
• Site prep requirements for plantings
• Dedicated field quality program with interns from around the country

Crop Management
• Guidance on training and pruning dates
• Research on best practices for growing different brands

Harvest Quality
• Optimum picking date
• Proper harvesting techniques
• Proper handling of harvested hops
**Building on What Matters Most**

**Employee Development**

We invest time and resources in our people by offering training and educational opportunities to grow personally and professionally.

**Stewardship**

Footprints™ in the Community

Our way of investing in the community around us.

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**Washington State University**

**USC University of Southern California**
Questions, Comments, Concerns?

• Thank you so much for inviting me to be a part of today’s conference, I look forward to getting to know many of you over the rest of the day!