CIDER: A Guided Tasting

Chris Negronida
-West Haven Organic Farm
-Black Diamond Cider

Steve Selin
-South Hill Cider
The Apples Make the Cider

• The cider making process starts in the orchard.
• Once you understand the way to get from fruit to a fermented beverage you realize that your “beverage manipulation” begins long before the fruit reaches the press.
Growing Cider Apples

WHAT IS TERROIR?

- local winds
- humidity
- climate
- temperature
- rainfall
- birds
- fauna pollinating insects
- composition
- microorganisms
- soil
- fertility
- pH levels
- organic practices
- horticultural skills
- permaculture
- unspoiled countryside
- region
- distance from pollution
- slope
elevation
- terrain
- proximity
to coast
Apples for Cider

Common - Plentiful table varieties

Heirloom – Antique, old varieties, generally Multi purpose.

Crossover – Good for cider and good as table fruit.

Hard cider Apples – Not for eating

   Bittersweets
   Bittersharps
   Sharps
Hard Cider Apples

- **SHARPS:** Tannins < 0.2%       TA > 0.45%
- **SWEETS:** Tannins < 0.2%       Total Acidity < 0.45%
- **BITTERSWEETS:** Tannins > 0.2%  TA < 0.45%
- **BITTERSHARPS:** Tannins > 0.2%  TA > 0.45%

(Mainstream dessert apples are all Sweets or Sharps...)}
What are Tannins?

- Tannin is a loose term for a whole collection of non-volatile phenolic substances found in apples, grapes and many other fruits, and which provide 'body' to fermented beverages.

Figure 4-1 Typical phenolic components in cider apples (from Lea, 1991). (a) Chlorogenic acid; (b) phloridzin; (c) (-)-epicatechin; (d) procyanidin B2.
Acid in Cider

- “Sharp” apple varieties contain large quantities of malice acid along with lesser quantities of other acids.

- Acids contribute to cider pH (stability)

- Acids also contribute to the amount of titratable acid (TA) in a cider - a measure of the amount of acid 'anions'

- TA relates pretty well to the 'acid taste' of a cider
Hard Cider is the “Wine” of the Apple

- Brewing Beer is as different of a process to making hard cider as making wine is to brewing beer.

- Making Hard cider (any scale) is generally the same process as making a white wine or a sparkling wine, and cider can be made following typical Red wine techniques.
Where do Flavors Come From?

- **Fruit**
  - Aroma (fruit, “barn yard”, spice)
  - Tannins
  - Acids
  - Mouthfeel (alcohol, sugar, pectins)

- **Microbes**
  - Wild fermentation/yeast selection
  - Aroma (Brett, diacetyl, H2S)
  - Acid (ML, Acetobacter)

- **Adjuncts**
Where do Flavors Come From?

• **Cellar Practices**
  • Fermentation Temp
  • Oxidation/anti-oxidation
  • Lees aging/stirring
  • Fruit sweating
  • Filtering
  • Aging (wood, bottle)
  • Sanitizing/rinsing (chlorine)

• **Equipment**
  • Neutral (stainless steel, glass, new plastic)
  • Barrels
  • Used plastic barrels
Tasting Cider

- **Appearance**
  - Clarity
  - Color
  - Bubbles

- **Aromatics**
  - Fruity
  - Woody
  - Herbaceous
  - Spicy
  - VA (Vinegar)

- **Taste**
  - Sweet/Savory/Salty
  - Spicy/Woody

- **Mouthfeel**
  - Bubbles
  - Astringent
  - Smooth
  - Acidity

- **Finish**
  - Length
  - Sweet/acid
  - Smooth/rough
<table>
<thead>
<tr>
<th>CODE</th>
<th>ANALYSIS</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>pH</td>
<td>3.52 g/l</td>
</tr>
<tr>
<td>b</td>
<td>Titratable Acidity</td>
<td>8.6 g/l</td>
</tr>
<tr>
<td>c</td>
<td>Volatile Acidity</td>
<td>g/100ml</td>
</tr>
<tr>
<td>d</td>
<td>Soluble Solids (Brix)</td>
<td>% (w/v)</td>
</tr>
<tr>
<td>e</td>
<td>Glucose</td>
<td>0.5 g/l</td>
</tr>
<tr>
<td></td>
<td>Fructose</td>
<td>1.9 g/l</td>
</tr>
<tr>
<td></td>
<td>Residual Sugar: sum of glucose and fructose</td>
<td>0.2 % (w/v)</td>
</tr>
<tr>
<td>f</td>
<td>Alcohol (ethanol)</td>
<td>7.8 % (v/v)</td>
</tr>
<tr>
<td></td>
<td>Organic Acids: Tartrate</td>
<td>nd g/l</td>
</tr>
<tr>
<td></td>
<td>Malate</td>
<td>6.6 g/l</td>
</tr>
<tr>
<td></td>
<td>Lactate</td>
<td>nd g/l</td>
</tr>
<tr>
<td></td>
<td>Acetate</td>
<td>0.1 g/l</td>
</tr>
<tr>
<td>g</td>
<td>Sorbate</td>
<td>mg/l</td>
</tr>
<tr>
<td>h</td>
<td>Citrate</td>
<td>mg/l</td>
</tr>
<tr>
<td>i</td>
<td>Acetaldehyde</td>
<td>mg/l</td>
</tr>
<tr>
<td>j</td>
<td>Free SO2 (Ripper or HPLC)</td>
<td>&lt; 5.0 mg/l</td>
</tr>
</tbody>
</table>
Questions?

Chris Negronida
Email: cnegronida@gmail.com

Steve Selin
Email: south.hill.cider@gmail.com