

Great Lakes Fruit, Vegetable & Farm Market EXPO

December 9-11, 2008

DeVo Place Convention Center, Grand Rapids, MI



Hard Cider

Thursday morning 9:00 am

Where: Gallery Overlook (upper level) Room E

CCA Credits: PD(1.5)

Moderator: Nikki Rothwell, District Horticulturist and NWMHRS Coordinator, MSU Extension

9:00 a.m. Hurdles of Opening a Hard Cidery: From Farm Markets to Tasting Rooms, Two Case Studies

- Dan Young, Tandem Ciders, Inc., Suttons Bay, MI
- Ed Robinette, Robinette's Cider Mill, Grand Rapids, MI

9:30 a.m. Growing and Fermenting Real Cider Apples to Make Quality Hard Ciders

- Steve Wood, Farnum Hill Ciders, Lebanon, NH

10:15 a.m. The Changing Flavors of Hard Cider

- Lee Lutes, Black Star Farms, Suttons Bay, MI

10:30 a.m. Hard Cider Varieties: Exploring the Differences Between Sweet, Bittersweet, Sharp, and Bittersharp

- Nikki Rothwell, District Horticulturist and NWMHRS Coordinator, MSU Extension
- Lee Lutes, Black Star Farms, Suttons Bay, MI

11:00 a.m. Great Lakes Cider and Perry Association - A Progress Report

- Mike Beck, Uncle John's Cider Mill, St. Johns, MI
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HARD CIDER VARIETIES: EXPLORING THE DIFFERENCES BETWEEN SWEET, BITTERSWEET, SHARP, AND BITTERSARP

N.L. Rothwell, District Horticulturist, NWMHRS
L. Lutes, Winemaker, Black Star Farms

Often hard cider is a combination of apple juices with different brix levels, tannin contents, acidities, and elemental complexes that are unique to each apple variety; these juices are blended to produce flavorful hard cider. Different cider makers and drinkers prefer varied combinations of these qualities, which can fluctuate between brands, batches, and years. Nonetheless, some apple varieties possess a natural equilibrium of all essential components necessary to complete fermentation as well as yield superior flavor, and these apples are used to produce a ‘vintage’ or single-variety cider. A cider variety classification system is used to categorize cider apple varieties when establishing their qualities for blending and fermentation. Based on threshold levels of tannins and acid, cider apples are broken down into four types:

1. **Sweet (SW):** tannin < 0.2 g/ml, malic acid < 0.45 g/ml (low tannin, low acid)
2. **Bittersweet (BSW):** tannin > 0.2 g/ml, malic acid < 0.45 g/ml (high tannin, low acid)
3. **Sharps (SH):** tannin < 0.2 g/ml., malic acid > 0.45 g/ml (low tannin, high acid)
4. **Bittersharps (BSH):** tannin > 0.2 g/ml, malic acid > 0.45 g/ml (high tannin, high acid)

Hard Cider Apple Variety Classification

Sweet (SW)	Bittersweet (BSW)	Sharp (SH)	Bittersharp (BSH)
<i>Neutral</i>	<i>Tannic, astringent</i>	<i>Acidic, tart</i>	<i>Tannic, Acidic</i>
<u>T<0.2, A<0.45</u>	<u>T>0.2, A<0.45</u>	<u>T<0.2, A>0.45</u>	<u>T>0.2, A>0.45</u>
Binet Rouge	Bedan	Brown’s Apple	Dufflin
Sweet Coppin	Brown Snout	Cox Pippin*	Kingston Black**
	Brown Thorn		Stoke Red
	Bulmer’s Norman		
	Ellis Bitter		
	Harry Master’s Jersey		
	Major		
	Medaille D’or		
	Michelin		
	Nehou		
	Reinette de Pommes		
	Vilbrie		
	Yarlington Mills		

*Not specifically a cider apple, but used for particular cider-making qualities

**Vintage variety

Table 1. Partial list of hard cider apple varieties at the NW Horticultural Station, Traverse City, MI.

Exploring the four taxonomic differences in fermented single varietal products is important to better understanding the attributes of these traditional cider apples. For this session we will investigate the characteristics of four traditional cider varieties: Reine de Pomme (bittersweet), Brown's Apple (sharp), Kingston Black (bittersharp), and Macintosh (not a cider variety, but is considered a dessert or sweeter apple).

Reine de Pomme is an old French apple. In 1987, in France, the only reference West County, MA cider makers could find was a listing in a nursery catalog from the 1920's at an apple museum in Normandy; few cider makers in France were aware of this apple. Despite its obscurity, Massachusetts cider makers were struck by the taste: the apple had considerable tannins and iron that made it inedible, but they were intrigued for using it in a cider. When Reine de Pomme is used to make cider, the product has a deep, dark-fruit, honey-like taste. Brown's Apple is an apple from the South Devon region in England. This apple is grown specifically for cider, and most likely comes from the village of Staverton. The juice is acidic with very little astringency but has extremely good quality. Kingston Black is probably the most well known English cider variety. According to the West County cider makers, cider made from Kingston Black is frequently described as the most wine-like of ciders; they also believe that the aroma is very intense and would support this apple's legendary status. The cider is full bodied with a deep golden hue and spicy licorice flavors. Lastly, we will explore using the standard Macintosh as a cider apple. When fermenting to dryness, Macintosh produces a clean, slightly tart, and easy drinking cider. Some cider makers keep some residual sugar in this cider, so the end product is akin to eating a freshly picked Macintosh off the tree.