

Market Opportunities and Challenges for Cider Apple Production in Vermont: Results from the 2014 surveys



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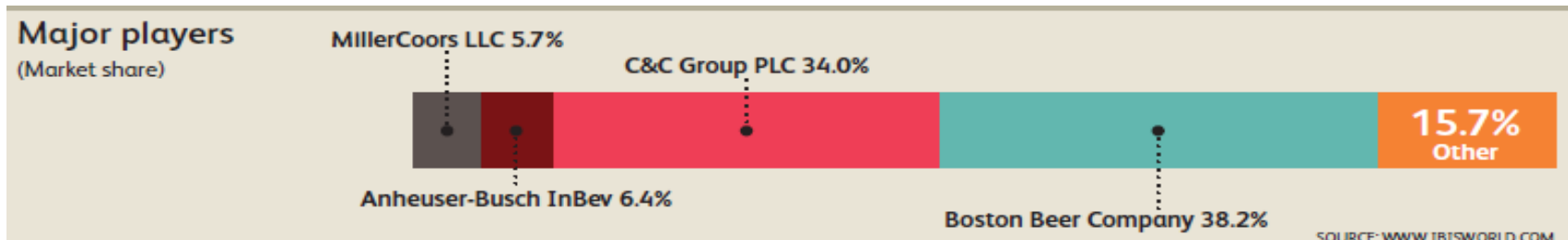
Cider Market at the National Level

- Dramatic increase in cider production in recent years:
 - Volume of cider sold in US from 6.4 million gallon in 2007 to 54 million gallons in 2014 (Alcohol and Tobacco Tax and Trade Bureau).
 - Domestic cider sales close to \$500 million in 2014, expected to exceed \$1 billion in next 3 to 5 years



Cider Production at the National Level

- 351 businesses producing cider in 2014
 - Most are small scale
 - Handful of big producers produce 84.3% of the market shares (Petrillo, 2014)



Cider Market at the National Level

- Cider accounts for less than 1% of the U.S. beer market (Russel Lucha et al, unpublished)...
- But cider is the fastest growing segment of the alcohol beverage industry and domestic cider accounts for 95% of consumption.
- Consumers are young: 66% of consumers are between 21 and 44 years old (Petrillo, 2014).



Apple Needs

- US cider industry required 18 million bushels of apples in 2014
 - Equivalent of 7% of all US grown apples
 - \$256 million at average price of \$0.35 per pound
- Uncertainties about future needs for apples in terms of quantities and cultivars
- Likely increase in apple prices due to rapid growth of the cider industry



Project Goals

- Compare fruit needs of Vermont cidermakers with present cider fruit availability in Vermont orchards
- Identify opportunities and challenges for growth of both industries



Two surveys

- Apple growers: 24 complete responses, 60% response rate of commercial growers.
- Cideries: 8 complete responses, 57% response rate.



Apple Growers Survey

- Orchard size and production levels

	n	Mean
Orchard size		
Acres owned	23	44.6
Acres leased	1	13.0
Total acreage	24	43.3
Number of years in operation	22	28.7
Orchard production levels		
Bushels in 2013	23	18,914.9
2013 yield per acre	23	302.0
Anticipated bushels in 2014	24	13,706.4
2014 anticipated yield per acre	24	217.3



Apple Growers Survey

- Market channels

	Mean percent sales
Apple sales market channels	
On the farm sold as apples	33.6
On the farm sold as juice	11.5
To wholesalers	18.4
Directly to stores	15.3
To sweet cider processors	7.6
To cideries	8.4
Other	5.1



Apple Growers Survey

- Within next 5 years:
 - 9.5% will decrease production
 - 33.3% will stay the same
 - 38.1% will increase production
 - 19.0% will greatly increase production



Apple Growers Survey

- Apples to cideries:
 - 6 of the growers have sold to cideries
 - 3 growers interested in starting to sell to cideries in next 5 years
- Handshake/verbal agreement with ciders for 4 of the growers and one grower used its own apples for cider production



Apple Growers Survey

- Apples to cideries:
 - Proportion of apples sold to cideries: ranging from 2 % to 100% of production. Average 28% of production.
 - 13 different cultivars sold, most popular: ‘McIntosh’, ‘Macoun’, ‘Cortland’ and ‘Empire’



Apple Growers Survey

- Prices per bushel for apples

Apple variety	n	Price received			Target price			Average price difference in \$
		Mean	Min	Max	Mean	Min	Max	
Specialty cider/bittersweet	2	8.25	4	12.5	13.7	10	17.5	-5.45
Dessert variety tree pick	2	5.75	4	7.5	8.0	6.0	10.0	-2.25
Dessert variety cull	1	7.5	7.5	7.5	7.5	7.5	7.5	0
Dessert variety drop	1	-	-	-	7.5	7.5	7.5	-



Apple Growers Survey

- Cultivars for cider production

Dessert	Dual-Purpose	Specialty cider
McIntosh (3)	Baldwin (3)	Bulmer's Norman (1)
Cortland (1)	Northern Spy (3)	Fillbarrel (1)
Empire (1)	Ida Red (2)	Kingston Black (1)
Gala (1)	Hudson's Golden Gem (1)	Medaille D'Or (1)
Jonagold (1)	Liberty (1)	Muscadet Dieppe (1)
Macoun (1)	Roxbury Russet (2)	Orleans Reinette (1)
Mutsu(1)		Wickson (1)
Zestar! (1)		



Cider Makers Survey

- Cideries size and production levels

	Mean	Median
Cideries size		
Number of years in operation	7.9	4.5
Number of full time employees	25.1	2.0
Number of part time employees	3.8	2.0
Cider production in gallons		
2013 cider production	1,129,575.00	1,350.00
2014 anticipated cider production	1,130,150.00	1,350.00



Cider Markers Survey

- Market channels

	Mean	Median
Cider market channels		
Sales to distributors	65.7	75
Direct sales to consumers	33.6	20
Other	0.7	0
Location of customers		
Within county	12.1	5.0
Vermont, beyond county	36.4	35.0
New England	30.0	30.0
Rest of the US	20.8	15.0
International	0.6	0.0



Cider Makers Survey

- Apples Purchased for cider production

	n	Mean	Median
Bushels of apple purchased in 2013	4	2,525.0	300.0
Gallons of apple juice purchased in 2013	2	300,750.0	300,750.0
Total amount of apple purchased in bushels	6	41,783.3	450.0
% of apples in cider from own orchard	4	47.7	45.0



Cider Makers Survey

- Types of apples purchased

<u>Dessert</u>	<u>Dual-Purpose</u>	<u>Specialty cider</u>
McIntosh (2)	Golden Russet (2)	Kingston Black (2)
Empire (1)	Northern Spy (2)	Reine des Reinettes (2)
Honeycrisp (1)	Ashmead's Kernel (1)	Wild Apples (2)
Jonagold (1)	Calville Blanc (1)	Hewe's Virginia Crab (1)
Mutsu (1)	Cox's Orange Pippin (1)	Mixed bittersweet (1)
Pinova (1)	Hudson's Golden Gem (1)	
	Ida Red (1)	
	Roxbury Russet (1)	
	Esopus Spitzenburg (1)	



Cider Markers Survey

- Prices paid per bushel

	n	Mean	Median
Specialty cider/bittersweet variety	3	\$19.00	\$20.00
Dessert variety (orchard-run)	2	\$4.30	\$4.30
Dessert variety (packing house culls)	1	\$5.00	\$5.00

Notes. When answer to quantity purchased was given in gallons, price was converted to \$U.S. per bushels where 1 bushel yields to 2.5 gallon of juice.



Cider Makers Survey

- Favored apple cultivars to source locally

Dessert	Dual-Purpose	Specialty cider
Cortland (1)	Ashmeads Kernel (4)	Ashton Bitter (1)
McIntosh (1)	Calville Blanc (1)	Bittersweet (1)
Organic empire (1)	Cox's Orange Pippin (1)	Chisel Jersey (1)
Pinova (1)	Esopus Spitzenberg (4)	Dabinett (4)
	Golden Russet (4)	Ellis Bitter (2)
	Liberty (1)	Foxwhelp (1)
	Lodi (1)	Kingston Black (5)
	Northern Spy (3)	Major (1)
	Roxbury Russet (1)	Orleans Reinette (1)
		Reine des Reinette (1)
		Somerset Redstreak (1)
		Stoke Red (1)
		Wickson (4)
		Yarlington Mill (2)



Threats in the Next Five Years

- Apple growers
 - Climate change and changing weather patterns
 - Foreign imports
 - Overproduction
 - Fruit prices and cost of production

- Cider makers
 - Low quality cider
 - Apple supply
 - Competition



Opportunities in the Next Five Years

- Apple growers:
 - Hard cider
 - Increased demand
 - Direct marketing
 - New cultivars
- Cider makers:
 - Development of new cider products
 - Improved quality of cider
 - Growth of the market



Market Opportunities

- Apple growers:
 - Most anticipate increasing production
 - More likely to sell to local markets
 - See opportunities in the growth of the hard cider industry
- Cider makers:
 - Increase in quality of ciders
 - Growers interested in growing dual purpose cultivars



Market Challenges

- Apple growers:
 - On average prices received are below target prices as receiving inadequate pricing is a key threat
- Cideries:
 - Adequate apple supply
 - Limited interest from growers to grow specialty cider cultivars



Next Steps

- Quantify production costs for apples managed specifically for hard cider production:
 - Over the next two growing seasons... we still need growers
- Quantify the economic impact of hard cider and cider apple production on rural Vermont economies

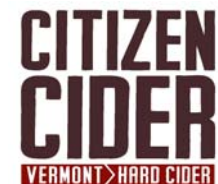


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VERMONT HARD CIDER COMPANY



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