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# ***Staff Paper***

**Potential Supply and Demand for Apple and  
Cherry-Apple Hard Cider Markets in Michigan,  
and Constraints to Market Development**

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## Executive Summary

The current research explores the potential to develop a cherry-apple hard cider market as a potential means to increase demand for and the value of Michigan fruit growers' product. Factors affecting both the development of hard cider markets in Michigan and cherry-apple hard cider were explored. Research results show that the potential value of Michigan hard cider market is relatively small but significant, estimated at ranging between \$580,000 and \$2,900,000 per year. Microbrews would be primary actors to promote HC market. They are willing and able to dabble in it, promote it. But they are constrained by need for license and this impedes participation of many who would be otherwise interested. Some microbrews uninterested in state-wide push because they feel it will focus on sweet product that they are uninterested in producing. This position is reflective of a seeming contraction inherent in current enthusiasm over the potential of the market, as figures recent market growth is largely fueled by the current trendiness of "malternatives" as a beverage category, while the maintenance of the market, and the interests of some microbrewers and other purveyors is primarily derived from the traditional image of hard cider, with "traditional" vs. "trendy" hard cider products reflecting significant taste differences. Hard cider is also potentially an important product for wineries. There is a high sales potential for a Michigan-brewed hard cider product, however producing a hard cider that is produced exclusively from Michigan-grown fruit could be more difficult due to supply limitations, logistical constraints, and cost.

Constraints to growth of hard cider industry include licensing requirements, taxation issues, primary ingredient sourcing and transport, and fluctuating prices, particularly for cherry juice. The research showed high potential for hard cider that blends cherries (and many other fruits) with apple, however such a product would be rotated with current hard cider, not added as a new product in most cases. Its demand increasing potential still exists, however, even if offered as a substitute to hard cider, due to its novelty and variety.

### 1 Introduction

The paper reports the results of consumer and marketplace research for fermented cherry/apple blend beverages utilizing Michigan-grown fruits. The objectives of the research were to determine potential demand, constraints and parameters for the supply of fermented cherry/apple blend beverages within the state of Michigan. The impetus for the research was the identification of possible opportunities to expand demand for Michigan-grown cherries and apples, as well as opportunities to add value to these products by processing them into fermented beverages, a sector which is, to date, relatively undeveloped, and which shows substantial potential for growth. Beneficiaries to the development of such an industry would include cherry and apple growers, processors (such as microbreweries), retail and food service establishments, and consumers.

Earlier research (Mainville et al 2005) offered the following insight into the potential to develop a Michigan-based hard cider industry: There is much enthusiasm over HC market potential among purveyors interviewed, particularly among microbrewers, brewpubs, and specialty retailers. Respondents estimated the potential value of Michigan hard cider market to be relatively small but significant—from 1-5% of purveyors' alcohol sales, and as high as 20% in some cases. Potential hard cider consumers are diverse and include 1) traditional microbrew connoisseurs, 2) young, adventurous drinkers who are driving the “malternative” trend, and 3) the “significant others” and other companions of microbrew connoisseurs who seek an alternative to the heavier beers served in microbrews. While microbrew connoisseurs are likely to gravitate toward a more traditional, drier cider, “malternative” drinkers and the “significant others” are likely to prefer a sweeter product. Compared to other respondents, microbrews showed particular enthusiasm for producing and marketing hard cider. While microbrews and brewpubs would market the product on tap, restaurants and retailers will more likely market a bottled product. The primary impediment to consumer acceptance of the product is a lack of familiarity, and numerous promotional efforts that could overcome these constraints were suggested. Demand for hard cider is likely to be somewhat seasonal, however there are numerous hard cider themes and products that might serve to mitigate this seasonality. While strong enthusiasm for the marketability of a Michigan-brewed product was expressed by respondents, an organic or “all-natural” product was not felt to have potential due to both demand and supply constraints. The primary constraints to supply of hard cider in general are the cost and availability of ingredients, as well as regulatory and taxation issues.

The current research seeks to further this research through investigation of supply, demand and regulatory issues. The paper is outlined as follows: following an explication of the research methods used, the structure of the hard cider marketing chain is outlined, major players are introduced, and the major regulatory influences on the sector are identified. In the next section, demand issues are discussed, with particular attention the potential establishment and acceptance of a cherry/apple blend hard cider product. Then, supply issues are reported on, with a focus on scaling-up issues that might come into play as growth of the hard cider industry is pursued.

## 2 Background

This research built on previous research funded by the USDA, the Michigan Department of Agriculture, and Michigan State University's Project GREEN to establish a fermented and distilled apple beverage program for the State of Michigan and the Midwest.

Initial research investigating consumer preferences for Michigan apple hard ciders and wines was funded by the USDA in the 2002 VADG program with a grant given to the Michigan Apple Committee. Dialog with industry members, microbreweries, and others through this work demonstrate an opportunity to market hard apple cider and a potential to add a highly palatable cherry/apple blend to extend the product offerings to consumers.

Historically, the focus on fermented “cider” has been on apples. To date there hasn’t been a comprehensive effort to explore marketplace acceptance for fermented cherry/apple beverages.

Michigan has an extensive infrastructure poised to create and successfully launch new fermented cherry/apple beverage products. Large acreages, experienced growers, storage and transportation facilities, extensive processing capabilities, and support organizations are well established in the state. In fact, over 80% of the nations tart cherries are processed in Michigan. The state is also home to many important apple processors.

Apples are Michigan's largest fruit crop by volume, and tart cherries are Michigan’s second largest tree fruit crop. A recent survey conducted by the Michigan Apple Committee ranked new product development and marketplace research as high priorities for the growers, cider makers, major cherry and apple processors, and wineries. Producers are challenged to innovate new products and alternative marketing channels. Development of high value products from tart cherries would offer important opportunities to Michigan apple and cherry growers by stimulating overall demand. Currently, the average return to cherry growers, for example, has been around 20 cents per pound (before a recent series of freezes), with estimated break even over the last several years at 32 cents per pound.

### 3 Methods

The initial thrust of the current research was to determine issues and constraints in the development of a market for cherry-apple hard cider. The market for apple hard cider is in an incipient stage of development, however, and research was expanded to accommodate unresolved issues relating to Michigan’s hard cider markets in general, and cherry-apple hard cider markets specifically. The research was oriented to understanding the structure of the Hard Cider market, retail and food service purveyors’ views on the potential of the product, and issues and constraints that they might face in production, distribution, marketing and the regulatory & fiscal environment that affect its attractiveness to diverse purveyors.

The market research was carried out in three stages. First, expert interviews and a literature review were conducted to determine the general structure of the market, the major players, and the regulatory environment, previous work in the area, and issues needing attention. The expert interviews were also used to identify candidates for industry interviews. Information sources for this market overview were key informant interviews (Rex Halfpenny and Patrick O’Conner), reports from related research, the internet, and industry publications.

Second, telephone interviews were conducted with an initial set of the industry members who were identified as potential candidates for interview during the key informant interviews. Letters of introduction were sent and follow-up phone calls were made to schedule and conduct the interviews. In all, a total of 13 industry members were

interviewed (these included one brewer, 6 microbrews, 4 brew-pubs and 2 wineries. A sub-set of candidates were not contacted, as they were held in reserve for follow-up interviews following the analysis and write-up of the results.

The telephone interviews consisted of open-ended discussions about issues that included but were not limited to 1) the purveyors' experience to date with hard cider and their interest in these products, 2) the market potential for hard cider among their clientele, and specific requirements that they or their clientele might have for these products, and 3) factors affecting the production or purchase and marketing of hard cider, such as ingredient supply, transportation, and regulatory constraints, and their anticipated effects on the purveyors' participation in the market.

Third, additional desk research was conducted to follow-up on issues that were identified during the interviews, such as the regulatory environment and tax laws, in order to increase the detail and depth of the analysis.

## 4 Results & Discussion

### 4.1 Hard Cider Market Environment

#### 4.1.1 Market structure

**Brewers:** Hard cider can be, and is, produced by diverse firms, as well as by home-brewers for personal consumption. Potential commercial producers include apple growers who press their own apples and produce their own cider (such as Uncle John's), microbreweries, brew-pubs, wineries, and brewers (such as KBC, aka Bell's). There are approximately 65 microbreweries and brew-pubs in the state, 42 wineries and one large commercial brewer. With the exception of brewers, each of these can sell direct to consumers. Currently, few of these firms actually produce hard cider, though some do sell bottled cider that they source from suppliers both in and out of the state. In-state commercial brewers include Stony Creek Brewing and New Holland Brewing Co. Most hard cider consumed in Michigan is brought in from out of state, however, with Woodchuck (out of Vermont) and Ace (out of California) being the two most common brands cited.

Hard cider can be marketed by these firms for on-site or off-site consumption, or sold to a distributor for sale in retail outlets, such as supermarkets and party stores. The specific marketing activities that are permitted depend on the type of liquor license that a purveyor is eligible for, as outlined below and subject to state marketing regulations as outlined below.

**Distributors:** There are a total of about 20 distributors in the state of Michigan. Producers/Brewers can only have a relationship with one distributor in a market area. Big distributors tend to be focused on mainstream markets. Smaller ones tend to be more diversified and can offer better prospects for a fledgling hard cider company that seeks to sell to retail outlets.



**Purveyors:** In addition to the brewer-purveyors introduced above, hard cider can be sold to consumers by restaurants, retailers and liquor stores. Previous research showed that high-end specialty retailers and restaurants are more likely to market Michigan-brewed hard cider than those catering to a more mainstream clientele

Home Brewers are also a potential market for a hard cider industry—currently there are no hard cider kits available on the market for home brewers. Home brewers who make wine without kits usually buy apples from their local cider mill.

#### 4.1.2 Regulatory environment

There was considerable confusion among respondents about the different way that hard cider is regulated in different areas (such as taxation vs. distribution and licensing requirements). For example, though hard cider is taxed like wine, it is not exempt from the three-tier marketing structure as wine is. This confusion is also likely due to the ways that potential producers and purveyors themselves understand hard cider—whether they see it as belonging in a category with wine, beer, “malternatives”, etc.

##### 4.1.2.1 Distribution

Michigan has a mandatory three-tier structure for sale of any alcohol-based beverage except wine, requiring that a distributor serve as intermediary between the brewer and retailer, and prohibiting direct sales between brewers and retailers. Exceptions to this general rule are those micro-brews, brew-pubs, and wineries that are licensed to produce their own product and sell it directly consumers, with differing restrictions based on the type of liquor license that they hold.

##### 4.1.2.2 Licensing requirements

In order to produce and market hard cider, firms must have a Small Wine-maker’s License. This involves a relatively low financial cost but substantial red tape, and micro-brews and brew-pubs who operate with beer licenses (either micro-brew or Class C for the brew-pubs) cited this as an impediment to their participation in the hard cider market.

##### 4.1.2.3 Taxes

Another issue affecting purveyors’ interest in participating in the hard cider market is taxation. There is a shortage of materials that makes clear how hard cider is regulated, and in particular taxes, in relation to other alcohol products, for example how the percentage alcohol affects the tax rate, how using non-apple ingredients such as cherry affect taxation, etc.

## 4.2 Demand

### 4.2.1 Potential market value

Earlier research (Mainville et al 2005) showed the potential value of Michigan hard cider market to be relatively small but significant—from 1-5% of purveyors' alcohol sales, and as high as 20% in some cases. It was noted, particularly among micro-breweries, that the industry's development is at such an incipient stage that there are significant complementarities among the activities of different purveyors in hard cider—that is, rather than there being competition among breweries or other purveyors, respondents felt that the more breweries that carried hard cider the better, as familiarity with and interest in the product would increase. “A rising tide floats all boats.”

Microbreweries manifested the most enthusiasm for the potential for hard cider within their establishments, estimating that sales would range between 1-5%, but be as high as 20% in some cases. If the potential market value were estimated, thus, to be between 1-5% of specialty brew sales in Michigan, a market worth about \$58 million in Michigan, the value of hard cider sales could range between \$580,000 and more than \$2.9 million per year.

Previous research showed that retailers perceive the potential value of the hard cider industry differently depending on their niche and target clientele. Specifically, retailers (such as party stores, specialty retailers (e.g. Dusty's Wine Cellar) and supermarkets) anticipated that hard cider sales might represent from 1-5% of their sales. These responses varied significantly depending on the type of retail outlet that was being interviewed. Specialty retailers and those in areas heavily frequented by tourists felt that hard cider would have the best chances (closer to 5%) while party stores and markets serving more mainstream, cost conscious consumers were less optimistic, more frequently anticipating that hard cider might represent 1% of their market. This could reflect to some degree differences in the ways that these retailers and their clientele view hard cider—in the alcohol industry in general, hard cider fits in the “malternatives” category which has been growing quickly over the past 5-10 years though is now seeing stabilization (Mintel, 2003). Malternative include such products as wine coolers, Zima, Smirnoff Ice, and Hard Lemonade, and have represented a quickly expanding trend market in the late 1990s and early 2000s, growing from a value of \$612 million in 1998 to \$1,488 million in 2002. Hard cider has not yet established a firm place in this market as it does not currently consistently project the trendy image that malternatives are sought for. The malternative category is that which more mainstream retailers, who generally felt that hard cider had relatively low sales potential, cited as being relevant to hard cider. In contrast, more specialty retailers tended to identify hard cider more with a traditional product, one that offered an alternative to relatively heavy brews, but one that was still high quality and reflected a more “specialty brew” image that their clientele sought.

Hard cider, including a cherry-apple blend, has strong potential to fill a relatively small, but significant niche, in Michigan. There is a market for both dry and sweet hard cider,

however the “malternative” market should not be expected to drive sustained or phenomenal growth in the hard cider market. This is because hard cider represents only 4% of the HC market, with its value having fallen by 23% between 2000 and 2002 as spirit-branded drinks (such as Bacardi & Seagrams) which grew 680% between 2000 and 2002 with a significant portion of that growth coming from other categories such as hard cider (Mintel 2003). Thus, unless a very strong commercial advertising campaign were generated that could compete against products like Seagrams and Bacardi, it is unlikely that the malternative trend will drive sustained growth in the hard cider market.

#### 4.2.2 Cherry-Apple Blend Hard Cider Potential

In general, respondents were very open to the idea of producing a cherry-apple cider. Those who brewed beers have tended to already integrate numerous different fruits into their brewing operations, including apricot, pear, raspberry and cherry. One suggested that a cherry cider alone (no apple) was an exciting prospect, and several of them already market pear ciders in bottles. It should be noted, however, with respect to a cherry-apple cider, that it would most frequently be marketed in rotation with other cider offerings, rather than sold in addition to a straight cider or cider of any other flavor. Micro-brews and brewpubs that showed an interest in marketing hard cider typically planned to devote one tap to cider. Thus, in most cases, a cherry-apple cider would serve as a substitute to ciders of other flavors, and the effect of its availability on total consumption might be negligible.

#### 4.3 Supply

Given indications of significant demand, the history of hard cider, and potential brewers’ interest in experimenting with and developing new products, respondents indicated much interest in producing and marketing hard cider. Though there may be numerous constraints to the proliferation of a hard cider market in Michigan, there are also many indicators of potential, particularly for small-scale activity with micro-brews and wineries leading the way. In previous research (cite), microbreweries showed themselves to be the most enthusiastic respondents to questions about their interest in marketing hard cider, as well as showing a high degree of familiarity with hard cider production and marketing in general. Brew-pubs were also knowledgeable, however their enthusiasm was mitigated by the fact that they faced more limitations to production, and were not able to market off-premise. Many brew-pub respondents indicated that they would out-source hard cider, if they were to carry it, and at the same time many indicated their unwillingness to push a product that they themselves did not produce, even if they were to stock it.

The primary impediments to participation in the hard cider market were related to regulatory constraints and supply-side constraints. In terms of regulatory constraints, respondents reported that the need to get a Small-Winemaker’s License (which involves a relatively small inspection and annual fee, but a significant amount of red-tape) was the primary impediment to them producing hard cider. The lack of clarity about how hard

cider would be taxed, and potential purveyors' impressions that using fruit blends would result in higher tax rates also affected their willingness to invest in producing for the hard cider market, particularly for a product like cherry-apple hard cider.

Following the regulatory and fiscal constraints were supply constraints. Those micro-brews and wineries that either already produced hard cider either produced their own juice to ferment (especially among the wineries) or purchased it from local orchards. Some micro-brews indicated that they were interested in producing hard cider, but anticipated problems with cost given that they were not in the proximity of any ingredient sources (i.e. orchards). In addition to the simple cost of finding a source of juice (particularly for those brewers who seek specific varieties), is the cost and logistical difficulty of transporting the juice to the brewery. With the exception of those firms that are on-site of large orchards and that have their own apple presses, firms were unanimous in their need for juice rather than un-pressed apples, due to the space, machinery and transport costs that would be involved in pressing one's own apples.

#### 4.3.1 Cherry-apple cider with Michigan-brewed and Michigan-grown fruit

Earlier (cite) and current interviews with industry members revealed very strong enthusiasm over the potential success of a "Michigan-brewed" product. In terms of a product that is not only Michigan-brewed, but also produced exclusively with Michigan apples and cherries, some constraints were identified. These relate primarily to potential difficulties in obtaining ingredients, the commitment to produce only using Michigan-produced fruit could limit brewers' options, particularly if a firm were to attempt a larger volume of production. For example, a number of respondents suggested that they would make their cider from apple juice concentrate, due to the high cost of transporting juice and seasonality of production. However, brewers also pointed out that microbreweries are unable to restrict their fruit juice sources to Michigan-only with beer that they produce (that has cherry) due to the fact that some of the cherry juice and/or concentrate they use has both Washington and Michigan cherries mixed. Thus it might be logistically difficult and cost prohibitive to try to isolate Michigan sources for these ingredients.

#### 4.3.2 Sourcing and logistical issues

Respondents differed in their views of what would be an appropriate source of juice as an ingredient to the hard cider making process, and the form it should take. Some respondents indicated that they would want to use fresh juice (that they would generally source from local orchards or cider mills). Others, however, felt that they would prefer to use a concentrate—benefits of using a concentrate over juice include year-round supply, lower cost, and easier and lower cost transportation to the brewery. While there are numerous apple orchards and cider mill that could press apples into juice as well as sources of concentrate, those producers who wanted to produce a more traditional, drier cider, expressed some concern over being able to access the appropriate varieties, and were unaware of there being sources of information about what varieties different

orchards in the state grow. With the exception of the few respondents who had their own orchards (who were either wineries or cider mills), no respondents would consider pressing their own juice from fresh apples—this is because of the extra shipping cost, and the cost and space requirements involved in obtaining a press.

Another unresolved issue that many potential hard cider brewers face is how to transport juice from the press to the brewery—there is a shortage of appropriate containers, particularly for larger volumes of juice. One respondent, who does not currently produce hard cider but did previously while working for a brewery in another state, indicated that he had previously purchased used drums from a local pepsi plant and used those. For those brewers requiring a larger volume, the possibility of obtaining a decommissioned, stainless steel tanked milk truck was raised.

In terms of a cherry/apple blend product, some respondents were concerned over the high cost of cherry juice or concentrate, yet others felt that access to cherry juice as an ingredient would not be excessively difficult—for example one respondent thought he could get runoff juice from the pitting machine of a local cherry canner. In general, the sourcing issues around cherry supply paralleled those around apple supplies—for those firms who were close to production areas it was felt to be relatively accessible (except when specific varieties were sought), however as distance grew, so do costs and logistical constraints.

These constraints that are expressed among firms who are likely candidates for relatively small-scale production are magnified as the scale of production increases. Of the firms interviewed, only one winery and one beer brewer reported that they were producing hard cider. The winery produces and markets its hard cider using juice from its own orchards, and markets it in conjunction with its wine lines, thus taking advantage of its established presence in retail circles both within Michigan and in several large Mid-Western cities. The brewer reported that he was, at the time, brewing his first commercial batch of hard cider, and would be marketing it in one of his local brew-pubs. Even at a relatively limited scale of operations, this brewer was already facing constraints in sourcing adequate volumes of apple juice to ferment, given his desire to source from within Michigan. An additional problem that this brewer was facing was that there was no good means to transport the juice he needed—his requirements were approximately 1800 gallons of juice per batch, and while a decommissioned milk truck with a stainless steel tank could have been appropriate to transport it, none was available to his best knowledge.

On top of the supply-side constraints is the possibility that a brewer of hard cider might face some constraints on marketing. Michigan's three-tier marketing system requires that any alcohol (with the exception of wine) be marketed through a distributor. While a brewer/producer who already has an established relationship with a distributor would be able to integrate a hard cider into an existing line with relatively little difficulty (at least in the short run—the product would have to sell to maintain its shelf space), a new brewer with a more limited line might have trouble gaining access. Further, even well-established hard cider lines, for example Woodchuck, have relatively limited and

unfavorable shelf space. For example, Goodrich where one must ask to be able to find it at below floor level, and Meijer where HC was on bottom shelf, literally had to get on hands and knees to buy.

Apart from marketing to retail is the possibility of marketing kegs or bottles to brew-pubs and restaurants. There are two likely impediments to success here. One is that, as outlined above, many of the independent brew-pubs are reluctant to push a product that is not their own. Thus, there is a risk of the product gathering dust on the shelves. The second is that many brew-pubs serve a relatively traditional clientele, and the sweet cider which would be most pleasing to a mainstream palate are contrary to the values of the brew-pub managers and owners. To wit, several of the respondents indicated that they were unwilling to partake in a serious hard cider promotional effort either because they felt that it would be focused on a “sweet American cider for the coca-cola drinker” which was unappealing to them and their clientele, or, related, because the only products on the market are again not what they would feel good about promoting—in the words of one respondent, the hard cider brands that currently sell “taste more like a jolly rancher than cider” to him.

The production of more traditional, dry ciders, would face some additional constraints on the supply side. In particular, dry ciders are best made using high quality ingredients from specific apple varieties that are relatively tart, as well as varieties that are high in nitrogen, which promotes fermentation. The extent to which these varieties are grown in Michigan is relatively low, and specific information about the varieties that individual orchards have is unavailable in public forums to the knowledge of some producers.

#### References

**Cite hard cider research staff paper:** Mainville, Denise Y. and H. Christopher Peterson.  
*Title, etc. of staff paper.*

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