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## Crafting sustainability through small, local, open and connected enterprises on the Canadian prairies:

### The case of Manitoban craft breweries

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### Abstract

Craft beer is the fastest growing network of enterprises in the craft food and beverage sector of Manitoba, Canada. Craft breweries are emerging as a space that potentially links urban consumers to rural producers through ingredient sourcing chains. Our research considers whether craft breweries are resulting in small, local, open and connected (SLOC) craft food and beverage systems.

Through a series of interviews with craft brewers we found that there is a desire to source ingredients locally but that barriers exist. Challenges include a lack of consistent supply of regionally produced quality ingredients and the industrial scale of malting barley, which makes it difficult to preserve the identity of barley produced by small farmers. While craft brewers are supportive of a sourcing network linked to farmers in the region, this transition requires attention to adequately scaled malting enterprises and increased production by farmers of hops and barley in the region.

Keywords: craft brewing, small-scale food systems, biocultural design

## 1.0 Introduction

This paper considers the role of craft breweries in creating a Manitoba craft food and beverage system within the Prairie region of Canada. It is part of a larger project considering innovation in small scale food systems cases (Davidson-Hunt et al. 2017). We consider innovation through the emerging conceptual framing and practice of Biocultural Design (Davidson-Hunt et al. 2012; Janzen et al. 2017; Kuzivanova and Davidson-Hunt 2017). Biocultural design, in short, is rooted in relational ontologies of place and considers innovation to be an emergent creativity of an epistemological practice of collaborative making through the intersection of people, values and biological materials of a place (Ingold 2013). Recently, we have been engaging with Manzini's (2015) ideas on social innovation and Irwin's (2015) on transition design. In particular, the way by which they have centred the idea of cosmopolitan localism and distributed networks that are small, local, open and connected (SLOC). This informs the central focus of our work on craft breweries in Manitoba in considering the role they might play in transitions to sustainable food and beverage systems in the Prairies.

Small and local food producers and processors can contribute to sustainable futures but recent work has cautioned against too singular a focus on scale as the solution (Born and Purcell 2006). Brinkley (2017) has suggested that a relational approach would provide an understanding of the linkages amongst rural producers/processors, urban processors and consumers who have shared value sets. In highly urbanized countries, such as Canada, these relational networks include spaces in urban settings that gather consumers interested in specific values they want to support creating a flow from the rural to the urban of food and beverage products; farmers' markets and food hubs being the best known of these insertion points of the rural into the urban. The reverse is also possible as some rural producers create sites that attract urban visitors to learn and experience about the food and beverages they produce. Such relational, or topological approaches, bring to light that values are not only shared within bounded spaces but also across space through the linkages that are created. This has led to calls for attention to be paid to multidimensional sets of values that can create a shared identity and goals for food and beverage systems to support transitions to sustainability (Cleveland et al. 2014). There is a need to think about new ways by which significant levels of demand for agricultural production can result in rural revitalization through networks of shared values. Multidimensional value sets will need to think beyond just scale and start to consider the inputs utilized to make processed products, increase interaction of consumers and farmers, increase consumer knowledge, create economically strong small scale farmers and rural communities as well as viable urban food and beverage businesses, and think about how capital can be retained in communities and regions .

The question we pose in this paper is whether the craft brewery, brew pub or tasting room is emerging as one of these urban spaces that create linkages with the rural and whether their value sets consider, as Ballantyne-Brodie and Telalbasic (2017) put it, the weaving together of a relational network. A craft brewery is a small and local production site that transforms biological materials produced by rural farmers into something desired by urban consumers. The terms craft, and artisanal, are used for a way to produce food and beverages in small batches, with care and attentiveness to technique and cultural traditions, attachment to place all of which results in a distinct and quality product. What we wanted to know is whether their craft included attention to the source of the ingredients they use. Is a relational network emerging with rural producers who share similar values of craft production and, if not, what are the barriers? After briefly describing our methods we turn to what we found out from Manitoba craft brewers before ending with some concluding reflections.

## 2.0 Methods

This research was undertaken as part of a larger set of cases which follow a similar methodology described in Davidson-Hunt et al. (2017). Following regional scans of innovation in small scale food systems cases are chosen that are underrepresented in the literature. One such innovation was identity-preserved sourcing by urban food and beverage processors of inputs from regional small scale farmers. In particular, we were interested in craft producers and whether the values of craft extended into their sourcing of ingredients. Along with a review of existing literature and reports we met with government and industry representatives to create a production model for craft breweries and the types of ingredients that are needed, an overview of the size, growth and current actors of craft brewing in Manitoba, and from this developed a semi-structured interview guide. Approval was obtained from the Joint Faculty Research Ethics Board to carry out the interviews, which we did with five craft brewers, or 35% of the current total. Following pre-testing of the interview and modification of the script, interviews were conducted on-site at breweries and were followed by guided tours of the facilities during which follow-up questions were asked and photos were taken. Interview data was transcribed and coded using general themes of biocultural design (materials, values and techniques) along with specific codes to identify values and barriers to regional sourcing.

### 3.0 Findings

#### 3.1 Who are craft brewers in Manitoba?

The term, ‘craft brewing’, is ambiguous and hard to define in a Manitoba context as, unlike other jurisdictions, there has been no process to create a legal or industry association definition. As B. Wescott of Barnhammer Brewing says “you kind of know it when you see it” (Interview, Feb. 12, 2019). The five Manitoban craft breweries included in this research (Barnhamer, Torque, Nonsuch, Halfpints, and Farmery) brewed 58 different beers including seasonal, limited run, or flagship at the time of the research. Each craft brewer was asked what makes their beer craft and from the transcripts we distilled five key values: Ingredients Used; Ownership; Locality; Diversity of the Product; Production Process. The quality of ingredients was seen as important as was local and independent ownership. Local had the added values of being locally/regionally distributed and sold. Diversity of the product emphasizes values of craft brewing related to creativity, taste, flavour, fun, and exploration and is related to the process by which they brew, which is small scale allowing to play around with creating different types. There is a notion amongst craft brewers of the values held although they have not moved to codify these at this point in time; in essence craft brewers are those who say they are and are recognized by their peers as being so.

#### 3.2 Do craft brewers value regional sourcing?

Through our interviews it became clear that as a general principle craft brewers recognize the value of sourcing from farmers within Manitoba. Key values that they held in relation to local sourcing of ingredients were: non-homogenous; differentiated in terms of identity and flavours; reduction in the distanced travelled; local flavours; preference for buying local; freshness; reciprocity (if we ask others to buy local we should buy local); creating connections with farmers (we know who we are buying from, not just from a faceless corporation); attention to detail of local producers; and knowing the reputation of who you are buying from. In terms of valuing local sourcing of ingredients, it was clear that most craft brewers considered this as part of their core value set.

#### 3.3 What have they been able to source locally?

While most of the craft breweries are urban there is one, who consider themselves as an estate brewery, that is located in a rural community. They are the one example in which the key ingredient, barley, is sourced from not just Manitoba but their own farm. As they have expanded, this has led to positive discussions with farmers in their immediate region producing barley that they could then purchase (E. Warwaruk, Interview, Nov. 8, 2018). Not only are they producing barley in Manitoba they also selected from heritage varieties that had been produced over the last one hundred years in Manitoba and sourced seed from local seed producers (E. Warwaruk, Interview, Nov. 8, 2018). Other ingredients that have been sourced regionally by brewers have been minor ingredients; quinoa, strawberries, honey, and hemp, although only in small quantities. One ingredient that has shown promise is Manitoba grown hops as they yield well on the prairies, are relatively easy to process and the craft brewers are creating a consistent demand. C. Young, brew master at Half Pints, hopes to use locally grown hops as the main hop in one of their flagship beers, Little Scrapper; however, achieving this goal requires having a year’s supply of consistent quality hops. He feels that this should be achievable in the short term (Interview, Feb. 7, 2019).

#### 3.4 Barriers to and Opportunities for local sourcing

The barriers that breweries encountered for sourcing local ingredients varied from brewery to brewery and depended on aspects such as brewery type, size, and amount of ingredients required per batch.

The barriers that Farmery identified were unique to them, as they are the only estate brewery operating in Manitoba, and some of the barriers they identified were associated with the farming end of the operation. In particular, they saw the scale of available farming equipment as a barrier. Most farming equipment is designed and priced for large-scale farming, but Farmery grows all of the barley they require for two years on a ¼ section (160 acres) and they produce the hops they need on an additional 20 acres (E. Warwaruk, Interview, Nov. 8, 2018). This is in comparison to the average prairie farm size of 1,668 acres (Statistics Canada, 2011). Therefore, finding the appropriate scale of farming equipment has meant that Farmery has had to rely on old, unreliable equipment needing a lot of maintenance (E. Warwaruk, Interview, Nov. 8, 2018).

The issue of scale also translated into the realm of local ingredient production for other brewers. For instance, some of Winnipeg’s breweries have tried to use local hops in their beers and they have praised the quality of local producers, but due to the lack of required quantities, they are only able to make limited runs of beer that use these

hops or mix them in with other, non-local hops during the brewing process. The low quantity of hops has also meant that they typically sell at a premium, which is a difficulty for brewers who have to keep the prices of their beer consistent (C. Young, Interview, Feb. 7, 2019; B. Westcott, Interview, Feb. 12, 2019; J. Heim, Interview, Nov. 20, 2018).

Finding malt barley has also been difficult for Winnipeg brewers. The only malter in the province, Malteurop, produces malt in quantities not designed for local small scale breweries and when some brewers have tried to source their orders of base malt from there, they have had limited success in making contact and placing orders; assumedly because Malteurop focuses on larger clients and volumes (B. Westcott, Interview, Feb. 12, 2019; E. Warwaruk, Interview, Nov. 8, 2018). Farmery has their barley malted at Malteurop; it's shipped to the facility in railway grain cars, and they have been told that their barley is kept separate from the other barley being malted there, thus preserving its identity. However, E. Warwaruk believes that Malteurop is doing Farmery a favour by malting their barley and he feels that the arrangement with Malteurop is tenuous, he does not believe that Malteurop works with Farmery as a money making venture and therefore does not consider them a priority (Interview, Nov. 8, 2018). Lastly, Winnipeg brewers do not believe that local (Canadian) malt has reached the quality and consistency of the malt that they can source from Europe (B. Myers, Interview, Nov. 20, 2018).

Lastly, product pricing represents a barrier to the use of local ingredients. Based on the format and type of beer that Manitoban craft brewers are producing, they must compete with craft-style beer made by large beer producers. Although taste and identity play a role in what beer people buy, price also plays a large factor. As the Farmery has discovered, the identity of their beer, being made of nearly all local ingredients, does not translate into the ability to charge a much higher price for their beer, otherwise it would not be competitive (E. Warwaruk, Interview, Nov. 8, 2018). This speaks to a pricing barrier represented by using local ingredients. If a craft brewery must pay higher prices for local ingredients, then that cost will translate into more expensive beer. Emphasizing the use of local ingredients (like Farmery), using larger format bottles and alternative narratives (like Nonsuch), or producing stronger beer (most breweries in Manitoba produce a strong beer), may be adequate to justify more expensive beer, but there are challenges when competing in a market that uses homogenized ingredients and large scale brewing while still using the craft narrative, especially if consumers place a high value on the cost of the beer that they are buying.

As with the barriers to local sourcing, Farmery is able to capitalize on unique opportunities for local sourcing by being an estate brewery. This may be a niche opportunity for small farmers in Manitoba since the quantity demanded and the production methods may not be of interest to large industrial farms. The Farmery, for example, has been able to produce all of their barley on a small amount of land and their familiarity and access to scale appropriate farming equipment (e.g. small combines and grain silos) has enabled them to harvest and store their barley. However, given the lack of a small scale malter (see below) there is a need to produce a minimum volume of barley for a malt production run in order to preserve the identity of the barley source and for the malting process financially viable.

The next opportunity identified was the regional flavour of barley. Being located in the barley producing region of Canada could bring the advantage of being able to access different malt flavour profiles, the way wine regions produce different grapes and flavours. This is seen as a potentially alluring to discerning customers (C. Young, Interview, Feb. 7, 2019). Craft brewers also recognize that traditional-style beers can be made with traditional ingredients along a spectrum of flavour profiles. Diversity and flavour are values held by the local craft industry, so even if local malts differ in flavour from European specialty malts, making good beer with them is still seen as a possibility, the beer will just taste different (B. Westcott, Interview, Feb. 12, 2019).

The size of craft breweries and their malting quantity requirements may also provide an advantage for locally sourcing ingredients. For instance, a local malter would not have to produce large-scale quantities of malt in order to satisfy local demand. Local brewers believe that with Manitoba's cheap utilities, proximity to barley producing areas (i.e. lower shipping costs), and the consistent demand for malt would make a local maltster viable (J. Heim, Interview, Nov. 20, 2018; B. Westcott, Interview, Feb. 12, 2019; B. Myers, Interview, Nov. 20, 2018; C. Young, Interview, Feb. 7, 2019). In addition, Winnipeg brewers have recognized that people are willing to pay for specialty and small batch beers, which means that there is a potential market for premium malts that can be used for making these beer types (J. Heim, Interview, Nov. 20, 2018; B. Myers, Interview, Nov. 20, 2018). Another way that brewery scale can play a role in utilizing local ingredients is batch size. Brewery batch sizes range from 1200 to 3000 litres, which is the low end of brewery volume size in Canada. Breweries such as Torque are also equipped to produce 350 litre batches of specialty brews (J. Heim, Interview, Nov. 20, 2018). This small batch capacity means that the volume of local ingredients required is scalable. Limited runs, small specialty batches, or consistent amounts of small scale produced ingredients may be supportable by this scale of brewing, as it does not require the large amounts of inputs needed by large-scale breweries.

Lastly, the unpredictability and costs of shipping ingredients from distant locations was brought up as a challenge in the current ingredient sourcing system. Ingredients must travel across the country in trains and trucks, sometimes spoiling or degrading along the way. In addition, some ingredient's availability and delivery times can be unpredictable, which can be problematic when trying to plan out a brewing schedule (B. Myers, Interview, Nov. 20, 2018; J. Heim, Interview, Nov. 20, 2018). For small breweries, the majority of the costs of brewing come from the labour involved, it's only in large-scale brewing where ingredients become a significant proportion of a beer's costs. If local ingredients were available and good quality, then any additional costs associated with them would only moderately affect the costs of brewing, while the savings in shipping ingredients over long distances may balance out other costs (B. Westcott, Interview, Feb. 12, 2019).

### 3.5 Clients, Markets, and Local Networks

Manitoba's craft brewers have been unable to source a significant amount ingredients for their beer; however, they still maintain a local ethic in sourcing other things they use in their breweries, brew pubs and tasting rooms. Tables and bar tops are made from salvaged Winnipeg Elms, bottle openers included in beer packs are handcrafted by a local blacksmith, they partner with local food makers to include their beer in fudge and beer nuts, they host barbeques with local butchers, and participate in local markets and popup shops (e. g. Third and Bird, Alleyway).

The efforts of Manitoba's craft breweries to participate and include aspects of Winnipeg and Manitoba culture in their marketing and engagement demonstrates that they see the caché in the narrative of local and community. The craft brewing community itself is still relatively small and close knit, with many start-up brewers beginning their life in the brewhouses and fermenters of established breweries. The local craft industry is not so competitive that these breweries see each other as opponents. They participate in local beer festivals, put on by the Manitoba Brewers Association, and describe how they are able to call up their neighbouring breweries if they are short on particular ingredients (J. Heim, Interview, Nov. 20, 2018; B. Westcott, Interview, Feb. 12, 2019). These breweries are leveraging more than the flavour or local brewing of their beer, they are actors and contributors in the local community and they understand the power that the term 'local' embodies. While backward linkages with rural farmers are incipient and thus craft brewers have had limited impact to date on rural revitalization in Manitoba they do see the value of linkages and the formation of relational networks to support a regional food and beverage system. It is just that there has not yet been enough time to establish the relationships with small scale farmers and the possibilities of local malt barley production.

### 4.0 Concluding Thoughts

In Manitoba, craft brewing is experiencing rapid growth with the number of breweries doubling in the last few years and, as in Canada in general, establishing a significant market percentage. All but one of the craft brewers in Manitoba are urban with the one rural brewery representing itself as an estate brewery as they produce most of the ingredients they use themselves from their own land or obtain minor ingredients from other local farmers. There is an emerging identity of craft brewers, demonstrated by the establishment of their own association based in Winnipeg and, as seen through our interviews, as a set of values related to the practice of craft brewing, which focuses on localness, quality ingredients and products, the process by which their beer is made with more hands-on attention and smaller batches, ownership by local people, the ability to make diverse, unique beers, and also due to batch size, all of which responds to emerging desires of urban consumers. In the urban setting craft brewers are forming small, local, open and connected networks amongst themselves and with other local food and beverage actors by inviting them to events at their sites or working jointly to host festivals. In this sense there is an emerging SLOC within the urban setting and the one estate brewery is creating a different set of linkages by drawing people out to the rural to experience the production of beer from the field to the final beverage. However, outside of the estate brewery, what appears to be more challenging is the formation of linkages backwards to the rural farmers in the region as many of the ingredients are coming from not just outside of Manitoba but Canada. This suggests that while a product may be local it is not enough to pay attention to how far the product travels but also the ingredients utilized to make it and who is producing those ingredients. This is a possible intersection for a design approach interested in transition to sustainable futures and craft production of food and beverage products.

As noted from our interviews with craft brewers there is an aspiration to form linkages with rural farmers but this is restricted by two main impediments. First, the emergence of what we might call 'craft farmers' who share values with craft brewers for producing quality barleys at a scale significantly smaller than the current model of production agriculture in the prairies. Second, a 'craft malter' who can retain malt at a scale that matches the production of barley in smaller amounts with the quantity and quality of malt needed by craft brewers for their smaller batch sizes while retaining the identity of the source of barley. As Ballantyne-Brodie and Telalbasic (2017)

and Brinkley (2017) note, a relational framing to understand food systems can reveal what hinders and what enables the emergence of the networks that will be needed for transitions to sustainable futures through a cosmopolitan localism. There is an opportunity to leverage the interest of urban consumers in craft food and beverage products and for design to play a role in thinking through the emergence of networks that go beyond the craft brewery itself and creates linkages with like-minded farmers in rural regions.

A potential avenue that emerged through our review of the sourcing of ingredients by craft brewers, is the use of the term craft to identify relational networks that would link rural farmers through to food and beverage craft products. There is also an unspoken tension, recognized by some craft brewers themselves, in that a craft brewery may buy ingredients from an industrial farmer or a multinational malting corporation and see this both as necessary and unproblematic. As Cleveland et al. (2014) note there is a need to identify a value-set that goes beyond the single dimension of local and while small-scale may be another dimension there are other values such as the care and attentiveness to the way something is produced, who produces it, how it contributes to building urban and rural places and connections amongst those places, the quality of what is produced, transparency in what a product contains and where it comes from, amongst others, that could be captured in an identity of craft food and beverage products that linked rural farmers through to urban spaces of consumption (Donald 2009). Craft production signifies a practice of making that stands in tension to the industrial. It opens the possibility of a relational authenticity emerging through reflection and meaning-making when internal dichotomies are resolved through discursive processes. By moving beyond a marketing discourse to a more substantive reflection on the relations amongst materials, between materials and makers, amongst makers, and between maker and consumers can create a relational authenticity recognized by members who identify with the craft value set (Kettley 2016). Unlike food and beverage systems, which are characterized as being alternative, local, or small-scale, craft opens the possibility of thinking about relational systems rooted in ways of knowing, making and consuming with multidimensional value sets. This relationship between craft, design and transitions to sustainable futures has been explored within more traditional craft domains (Zhan et al. 2017). It is this type of rich conceptualization and debate that is missing from the practice of craft brewing and limiting its potential to contribute to sustainable futures in Manitoba.

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