Local Food Systems in North America A Review of Literature

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1. INTRODUCTION

The following report is a survey of the prominent North American literature from academic, governmental, and non-governmental sources published within the last thirteen years on the subject of local food systems. The goal of this report is investigate current discussion on North American localized food systems and to identify the terms of engagement of participants seeking to access the perceived benefits of this form of food marketing. The literature is organized into six categories. Section One: Beyond Commodification looks at consumer perception, social benefits, and community development. Environmental issues and concerns are addressed in Section Two: The *Environment*, in terms of environmental and ecological impacts and how civil society organizations are helping the cause. Health and nutrition, food sovereignty, and concerns about food security are reviewed in Section Three: Food Access. Section Four: Barriers And Opportunities begins with tackling common criticisms, examines barriers for both producers and consumers, lists opportunities and recommendations, then takes up the issues of infrastructure, capacity building, feasibility and assessment, scaling-up, agricultural extension, and concludes by addressing government programs, planning and policies. In Section Five: Marketing and Economics, local economic opportunity, market demands and consumer trends, indirect and direct marketing, and regional food labels and other certifications are outlined. Finally, Section Six: Other Considerations deals with foodsheds and urban-rural linkages. This is followed by a brief conclusion, list of resources, references, and additional readings.

2. BEYOND COMMODIFICATION

2.1 Consumer Motivations

Much of the literature suggests that the driving force behind the local food movement in North America is consumer demand (COIC, 2012; FamilyFarm.org, 2012; DCPDD, 2011; Wormsbecker, 2007; and Durrenberger, 2002). Consumers are largely motivated to participate in local food systems range by: wanting access to fresh food, wanting to support local farmers, wanting to support the local community and wanting to engage in social interactions (Vecchio, 2012; Feagan, Morris & Krug, 2004; Durrenberger, 2002).

This research indicates that the reasons for consumer participation in the local food system are more complex than the mere exchange of goods and services.

Kloppenburg Jr. et al. (2000) interviewed 125 people, largely from the mid-westerns states and from a broad cross-section of the alterative farm/food community, asking what the characteristics of a sustainable food system would be. Respondents indicated that they envision a sustainable food system to be relational, proximate, diverse, ecologically sustainable, economically sustaining, just and ethical, sacred, knowledgeable and communicative, seasonal and temporal, healthful, participatory, culturally nourishing, and sustainably regulated. These characteristics are reinforced throughout much of the literature as to why consumers participate in the local food system and what they want their local food system to be. Smithers et al. (2008) found that consumers' "desire to support farmers through a local farmers' market was tied to more nostalgic considerations", particularly for older customers who "cast their support of farmers in terms of tradition and inherent belief about the contributions of farming to social life" (p. 344). Hinrichs (2000) found that farmers' markets and communitysupported agriculture (CSAs) tend to 'soften' the economic transaction. Through interactions "farmers and consumers learn more of each other's circumstances. interests and needs to create a more integrated community, centered on food and a common identity as eaters" (Hinrichs, 2000 p. 300).

1.2 Producer Motivations

Producer participation is, on the other hand, often largely due to the increased returns they can receive for their products in local markets compared to what they would receive in the global industrial food system (Stevens, 2013; Bendfeldt, Walker, Bunn, Martin & Barrow, 2011). Producers may also be motivated to take part in the local food system as a means of keeping both money and jobs in their community and to help strengthen the local economy (Norberg – Hodge, Merrifield & Gorelick, 2002). Local food systems often employ direct marketing strategies which can be particularly important for small-scale producers because they offer a market that does not dictate production decisions (Matson & Cook, 2011; Feagan et al., 2004).

1.3 Social Benefits

In most studies, consumers identified purchasing local, healthy, fresh food and supporting local farmers as top reasons for supporting their local food system, but often consumers almost also mentioned something beyond the economic exchange. The need for community and fellowship, a sense of community, social interaction and atmosphere, and environmental factors were all mentioned as top reasons consumers participate in their local food system. This demonstrates the social embeddedness of local food and that engaging in local food systems has been correlated with many positive social benefits (Vecchio, 2009; Brown & Miller, 2008; Durrenberger, 2008; Smithers et al., 2008; Feagan et al., 2004). For example, Stroink and Nelson (2009) worked with two First Nation communities to research how participation in local food activities and garden projects affected nutrition, activity, and health. The study found that by engaging in local food activities, such as hunting, fishing, gathering, and growing food, participants experienced an increase in both life satisfaction and social capital, which results in enhanced social cooperation at the community level.

1.4 Community Development

Local food system initiatives have often been described as a tool for community development. This is because they have the potential to connect farmers and consumers, engage people of all socio-economic backgrounds, support the rural economy, engage people of varying capacities, increase social connectedness, increase accessibility to both healthy and fresh food, and increase quality of life (Connelly, Markey & Roseland, 2011; Levkoe & Wakefield, 2011; Stroink & Nelson, 2009; Cone & Myhre, 2000). Used as a tool for community development local food systems can play a transformational role. Connelly et al. (2011), in *Bridging Sustainability and the Social Economy: Achieving Community Transformation through Local Food Initiatives*, chose two case studies that exemplified 'just and sustainable local food systems', they were the Good Food Box in Edmonton and the New City Market in Vancouver. Connelly et al. (2011) argue that local food systems have the opportunity to transform communities due to their appeal to community, health, and

quality of life. The findings suggest that the two case study organizations demonstrated both a strong sustainability as well as socio-economic approach. The two organizations accomplished this through the establishment of community infrastructure that made both sustainable and socially-just food options accessible, by being economically sustainable via generating their own revenue, by focusing on projects that aim to shift consumer behaviour, and by working towards a decentralization of the food system for the purpose of fostering increased local self-reliance. Another example of a local food initiative acting as a community development tool is through Community Supported Agriculture (CSA). Cone & Myhre (2000) argue that CSA's have the potential to mitigate 'individualism' and 'separateness' that is prevalent in modern society through building communities of farmers and consumers. They found that the CSA members who participate more extensively in their farm experienced greater social rewards, such as providing an avenue for civic responsibility, developing a heightened sense of morale, and increasing spiritual well-being.

Lyson (2004) writes of the need for a reconnection of agriculture and food production to community development. His argument for 'civic agriculture' - 'civic' because of the increased level of community involvement and investment in 'place' for this production model - tightly links community social and economic development to local food systems which, Lyson (2004) argues, has potential to be more sensitive to local environments. Blay-Palmer et al. (2013) make the case that it is important to recognize the place-based nature of each community food system.

One of the challenges for local food initiatives is to "leverage resources out of the dominant system to support their own growth while navigating an infrastructure and policy environment designed to support the mainstream system" (Stroink and Nelson, 2013 p. 633). Stroink and Nelson (2013) argue that we need to know more about how food initiatives are able to adapt to changing circumstances while others are not.

1.5 Community Building: Case Studies

FoodShare Toronto, founded in 1985 and Canada's largest community food security, is a non-profit organization that works to empower communities through food-based initiatives, while advocating for public policies that ensure everyone has adequate access to sustainably-produced healthy food (FoodShare 2013). Working from field to table, FoodShare's interest is in the entire food system, from growing, processing, distribution, purchasing, cooking and consumption. Their programs reach over 155,000 children and adults each month in Toronto. The Good Food Box, as an example, distributes 4,000 food boxes each month through 200 neighbourhood drop sites.

The Stop, a community food centre based in Toronto, defines itself as, "a neighbourhood-based, physical space that uses food as an entry point to promote the physical and emotional health of individuals and communities, and to develop community-based and state-level strategies to address challenges within the food system" (Levkoe & Wakefield, 2011 p. 250). The Stop started as an emergency food service but has expanded to encompass additional programs: the community kitchen, the healthy beginnings program for expectant mothers (as well as family support), and the community action initiative, social enterprises, urban agriculture projects, farmers' markets, and sustainable food systems education (Levkoe & Wakefield, 2011). The Stop aims to replicate their work through their Community Food Centre model (CFCCanada 2013).

Just Food is a community initiative in Ottawa that has a mission "to work towards a vibrant, just and sustainable food system in the Ottawa region" (Just Food 2013). The organization is a grassroots non-profit that broadly seeks directions from community partners, and draws feedback from project advisory/steering committees. Just Food has many initiatives in the region, including a Local Food Guide, the Just Food Farm, a Community Gardening Network, the Savour Ottawa culinary project, and CSA farming. Ballamingie and Walker (2013) argue that Just Food has the potential to transform how community members connect with their food, how children perceive nature and agriculture, and the ability to participate in a community-based economy.

2. THE ENVIRONMENT

2.1 Environmental Impacts of the Industrial Food System

The industrial food system's reliance on conventional/industrial farming and long-supply chains has been shown to contribute to numerous forms of environmental degradation. O'Kane (2012) lists soil erosion, soil depletion, water diversion, water contamination, and loss of biodiversity as some of the resulting impacts. Greenhouse gas (GHG) emissions that contribute to climate change are another environmental impact. GHGs can be a direct result of the current food system's heavy reliance on oil and gas (Peters, Bills, Wilkins & Fick, 2009; Xuereb, 2005; Pirog et al., 2001; Van Pelt, Enshayan & Cook, 2001). Some of the ways local food systems can mitigate these effects are by reducing food miles¹ and hence lowering GHG emissions, and through the utilization of small-scale farming techniques and agronomic organic farming methods because they help cultivate biodiversity and promote land stewardship. Studies conducted in the state of lowa and in the Waterloo Region conclude that thousands to tens of thousands of tons of GHG emissions could be reduced through strategically sourcing specific foods based on proximity (Blay-Palmer, 2012; Selfa & Qazi, 2005; Xuereb, 2005; Pirog et al., 2001)

2.2 Ecological Sustainability

While the transportation of food accounts for a significant proportion of fossil fuel consumption and CO₂ emissions, local food products do not necessarily mean greater energy efficiency. It is important to acknowledge that local food systems are not inherently ecologically sound (Peters et al., 2009; Born & Purcell, 2006; Hinrichs, 2003). Energy requirements to produce certain crops in specific areas and farming techniques must be taken into account (Selfie & Qazi, 2005; Pirog et al., 2001). The studies from lowa and Waterloo Region, mentioned above, provide recommendations on how to make local food more accessible to consumers. It has been suggested that increasing

¹ A food mile is the distance food travels from where is to grown to where it is consumed (Pirog et al., 2001).

the accessibility of local food and prioritizing energy efficiency within the food system has the potential to reduce environmental impacts such as food miles. Other recommendations from the lowa study call for national, state, and local food policy councils to address energy efficiency in food systems in their work; the modification and/or elimination of state and federal rules that limit commerce of local and regional food systems; and the formulation of policy that provides incentives and regulations to develop new food labels that inform consumers on the relative level of external environmental and community costs (Pirog et al., 2001). The Waterloo Region Public Health study offers strategies to reduce consumption of food imports such as increasing urban agriculture projects, expanding farmers' markets, establishing farm to institution programs, and encouraging the local food processing and distribution sector (Xuereb, 2005).

2.3 Civil Society Organizations

In the examples from Iowa and Waterloo Region, civil society organizations (CSOs), such as the Food Policy Councils and the Department of Public Health, were identified as key players in the shift toward strengthening local food systems and reducing environment impact. Blay-Palmer's (2012) insights from the European Union (EU) suggest that progress may be achieved in creating a more robust and supportive environment for local food activism with CSOs playing an increased prominent and effective role. To achieve this, Blay-Palmer (2012) maintains that Canada needs a more supportive environmental policy "that includes principles of subsidiary, multifunctionality, and a robust definition of the precautionary principle modeled on EU principles" (p. 39). The main goal of the policy paradigm shift, described by Blay-Palmer (2012), is to support the civil society innovators who are already working toward changing the food system.

2.4 Canadian CSOs

The following is a list of CSOs working within the Canadian food system:

Alternative Land Use Services (ALUS) is a farmer-led grassroots organization that provides wider society with the opportunity to compensate farmers for environmental stewardship. Originally started in Manitoba, ALUS has spread to various rural farming communities throughout Canada. ALUS encourages the protection of wetlands, the creation of riparian buffer zones, and the preservation of natural areas and ecologically sensitive land through financial incentives. Farmers are compensated based on their land management techniques. While the progressive farming techniques that ALUS advocates has significant value for all of Canadian society, ALUS struggles to receive stable funding from the federal and provincial governments. Key informants identified the Agriculture and Agri-Food Canada (AAFC)'s inability to respond to community-based initiatives as a barrier (Blay-Palmer, 2012).

Local Food Plus (LFP) is a third-party certifier that was developed to assist the University of Toronto in designing and implementing a food service contract that would require the successful transnational food service corporation to use local and sustainable farm products. LFP-certified products must meet the minimal requirements for six standards including proximity, sustainable agronomy, wildlife management, energy, animal welfare and labour standards (Blay-Palmer, 2012; Friedmann & McNair, 2008).

Community Public Health in Waterloo Region is the driving force behind the creation of a local food system for the region. To date, Public Health has worked to indentify crops that can be grown locally to reduce food miles and ensure access to local, nutritious food for residents; sponsors farmers' markets; and collaborates with planning, housing and community services departments as well as other stakeholders to explore food system issues (Blay-Palmer, 2012; Pothukuchi, 2010).

Food Policy Councils are emerging across the country (Blay-Palmer, 2012), with the Toronto Food Policy Council seen as a leader in North America. As an example of how food policy councils affect change, the Toronto Food Policy Council works with the

Toronto Food Strategy to facilitate access to community kitchens, shaping the policy environment through official channels but also through community-based endeavours (Fridman and Lenters, 2013).

3. FOOD ACCESS

3.1 Health and Nutrition

Growing populations, environmental degradation, inequalities in distribution and access, crop selection, and highly processed foods all challenge the ability for people to access nutritious food (Holt-Gimenez et al., 2012; O'Kane, 2012; Desjardin et al., 2010; Stroink & Nelson, 2009;). This is evident through the rise in diet-related chronic diseases, the increase in fats, oils and sugars in North American diets, the existence of food deserts throughout North America, and the decline in arable land worldwide (Central Oregon Intergovernmental Council, 2012; O'Kane, 2012; Blay-Palmer, Turner & Korelsen, 2011; Pothukucki, 2010; Walker, Keane & Burke, 2010).

O'Kane (2012), in an exploration of the real cost of food in terms of the environment and public health, concluded that while local food systems show promise in addressing the negative social, environmental and health outcomes that are prevalent in the conventional/industrial system more research is needed to establish clear links. While furthers studies may be needed, it has been suggested that a "more intentional evolution of the food and agriculture system could potentially create better opportunities to improve nutritional health" (Desjardins, et al., 2010, p. 130) (See also Hawkes, 2007; Xuereb, 2005; Nugent, 2004; Heller & Keoleian, 2003; and Peters, Fick & Wilkins, 2003).

In their work entitled *Linking future population food requirements for health with local production in Waterloo Region, Canada*, Desjardins et al. (2010) found that Waterloo Region has the potential to meet production amounts anywhere from 10% to 100% for several key nutritious foods through only a 10% shift of currently cropped land. Desjardins et al. (2010) explain that, due to population size, nutrition requirements and

geographic limitations, Waterloo Region will still require some imports to meet optimal needs. That said, the proposed shift to meet growing populations would require technical and financial support from the province, development of a guided action plan with targets, change to zoning bylaws as required to enable increased food production, and expanded infrastructure for food processing, storage and distribution (Desjardins et al., 2010).

3.2 Food Sovereignty

Food sovereignty is rooted in the concept that people have a right to define their own agriculture and food policy. Some of the key features of sovereignty include the democratic process, member participation, power and control in the hands of stakeholders, and accessible right to produce (Andrée, Cobb, Moussa & Noragang, 2012; Hansen, 2011). Food sovereignty focuses on the process of how food decisions are made. Andrée et al. (2012) argue that if local food system programs are to be sovereign then they "should be judged less on the content than on how they were arrived at [...] food sovereignty lies in decision making structures rooted in the principles of deliberative democracy and the inclusion of those more marginalized by current structures" (p. 155). To demonstrate how community gardens serve as a local practice of food sovereignty Hansen (2011) investigated three community gardens in Saskatchewan, concluding that the gardens all exemplified food sovereignty. This was because of several reasons. First, the gardeners were both the producer and the consumer and there was active participation in decision-making and social structures. Second, they had a commitment to reducing financial barriers to plots and food, and maintained management in the hands of the gardeners. Finally, they allowed for control over personal food production, and connected the right to produce with access to land (Hansen, 2011).

3.3 Food Security/Insecurity

At an international level, agroecology and locally-based food economies have been identified as one of the best strategies for combating poverty and hunger. In North

America, food insecurity stems from poverty and inequality, not lack of food. Contributing factors vary from community to community, with the greatest differences lying between rural and urban communities (Holt-Giménez et al., 2012). Other factors contributing to food insecurity in North America include rising food prices, loss of agricultural land, food availability or lack thereof, decreased job opportunities, low wages, high housing costs, and inadequate social welfare assistance (Holt-Giménez et al., 2012; People's Food Policy Project (PFPP), 2011; Nelson & Kuluski, 2004).

In their study, *Achieving Food Security: Learning from users of Community-Based Food Assistance*, Nelson and Kuluski (2004) sampled emergency food users in Thunder Bay and found major solutions to food insecurity, and decreasing reliance on emergency food, to be better jobs, higher wages, steady employment, and higher rates of social assistance. After examining community-based responses to household food insecurity through a qualitative study of community kitchens in southwestern Ontario, Tarasuk (2001) concluded that, "financial barriers to food access…remain unchanged by projects that promote local food production and consumption" (p. 495). This is not to say they have no purpose. The power that local food initiatives do have, according to Tarasuk (2001), should they remain accessible to low income groups, is their strength as a community development strategy and their potential capacity to break down social isolation that can often characterize the poor in affluent societies (Tarasuk, 2001).

Food sovereignty is also a growing issue for the rural poor. In the policy paper, "Food Sovereignty in Rural and Remote Communities", the People's Food Policy Project (2011) points out that poverty is more widespread in rural remote communities than in urban areas, with approximately 11-32% of residents affected by food insecurity in the Yukon, Northwest Territories and Nunavut. In order to reduce food insecurity in rural remote areas, The People's Food Policy Project (2011) offers five recommendations:

- 1. Increasing protection of agriculture and forest land,
- 2. Localizing and decentralizing of processing, inspection and storage of food products,
- 3. Increasing support for local knowledge related to food production and preparation,
- 4. Identifying food as a priority area in order to strengthen rural economies, and

5. Improving infrastructure and support for research and post-secondary training in food production that reflects diversity of rural and remote bioregions, and that is inclusive of a range of food sources.

(The People's Food Policy Project, 2011)

4. BARRIERS AND OPPORTUNITIES

4.1 Critiques

The local food movement has many supporters and champions; there are, however, numerous criticisms as well, from both proponents and challengers. One widespread issue has to do with defining both 'local' and 'regional' food, as there are no consistent definitions of either (Tregear, 2011; Kneafsey, 2010; Landman et al., 2009; Selfa & Qazi, 2005; Hinrichs, 2003). Based on an exploration of the social construction of 'local' through an analysis of the food system localization effort in Iowa, Hinrichs (2003) suggests a reframing of the local food system, one that acknowledges the interdependence of the global and the local. Furthermore, Hinrichs (2003) writes, "what is 'global' and what is 'local', as well as the processes of globalizing and localizing, are fundamentally related within an overall system" concluding that the spatial context of the 'local' needs to be more critically defined (p. 35).

Another commonly-held critique is that much of the literature pertaining to local food systems assumes that 'local' is inherently more ecologically sustainable, socially just, democratic, more nutritious, fresher, of higher quality, and addresses issues of food security (Tregear, 2011; Ostrom & Jussaume, 2008; Born & Purcell, 2006; Hinrichs, 2003). Born and Purcell (2006), and Hinrichs (2003), point out that there is nothing inherent about scale and that is why local food does not inherently lead us to desirable outcomes. Born and Purcell (2006) suggest scale research strategies in geography may offer tools to avoid this local trap².

Critics of local food systems and localization also contend that the only solutions provided are for a small subset of farmers. There is also apprehension that the capacity

 $^{^2}$ *The local trap* refers to the tendency of food activists and researchers to assume something inherent about the local scale (Born and Purcell, 2006).

may not exist to counter powerful corporate entities at the transnational scale, there is insufficient acknowledgement of the problems of market place trading, and that there cannot be a one-size-fits-all solution to solve food problems. While some argue there may be the undesirable makings to cultivate social inclusiveness, others are concerned there is a lack of consumer perspective in the research (Tregear, 2011; Kneafsey, 2010; Ostrom & Jussamume Jr., 2008; Hinrichs, 2003). In response to these criticisms, Ostrom and Jussamume Jr. (2008) surveyed Washington farmers and consumers to investigate marketing strategies, policy views, consumer attitudes, and purchasing practices. They found that direct marketing is viewed as more legitimate and practiced more widely than expected and that not just small farms are engaging in direct marketing. Ostrom and Jussamume Jr. (2008) report "around 20 percent of farms statewide practice some form of direct marketing" (p.254). This refutes the notion that food system localization only benefits a small subset of farmers. Both farmers and consumers expressed the desire to expand direct marketing relationships, suggesting it is more than just a niche market (Ostrom & Jussamume, 2008). Direct marketing is used to supplement rather than replace wholesale marketing, allowing farmers to reduce risk and gain control over uncertainties (Ostrom & Jussamume, 2008). Therefore, local food systems do not necessarily need to be powerful enough to counter transnational corporate trade entities, but rather the two may co-exist. Ostrom and Jussamume Jr. (2008) conclude that overall direct marketing in Washington appears to be more practical for farmers and consumers rather than idealistic, and more individual than collective.

4.2 Barriers to Producers

There are many examples and opportunities for successful local food systems throughout North America; however, many barriers remain that must be addressed in order to allow local food systems to thrive. Access to long-term stable income appears to be a recurrent theme across all initiatives, as investigated by (Mount et al., 2013), but income sources dramatically change how these initiatives prioritize their barriers.

One of the overarching challenges to a thriving local food system is that it is trying to operate within an export-oriented system. Ohberg (2012) reasons, in What's Stopping Us: Identifying Barriers to the Local Food Movement Using Ontario, Canada as a Case Study, that the "barriers are reflective of the broader challenges associated with attempting to create food systems change from within the dominant system" (p.ii). This is particularly challenging for producers. For instance, Wormsbecker (2007) explains that trying to compete with food service transnational corporations (TNC) can be difficult for producers because of the influence the corporations have on agri-food policy, market access, and price. Price is particularly problematic when local producers are unable to compete with low prices (Wormsbecker, 2007). Martin and Andrée (2012) raise the issue that foodservice TNCs often have a monopoly over institutional food contracts. According to Martin and Andrée (2012) the structure of TNCs, in terms of corporate supply chain, centralized management, and deskilled labour, does not lend itself to local food procurement. TNCs also have a tendency to green-wash their product, increasing competiveness with local food produce, while not creating substantive change (Martin & Andrée, 2012).

While TNCs appear to be a major barrier to producers participating in the local food system, they are by no means the only one. Lack of access to funding and capital have also been identified as barriers by Ohberg, 2012; Cantrell & Lewis, 2010; and Landman et al., 2009. While lack of access to markets and distribution channels, particularly for rural producers, mainstream market channels and year round supply chains have been identified by Ohberg (2012) and Peters, Hansen, Clingerman, Hereford & Askins (2012). Lack of resources in the form of time and knowledge can also deter producers from engaging in direct marketing activities (Ohberg, 2012; Wormbecker, 2007), while a shortage of local food processing and storage infrastructure and small-scale abattoirs also hinder participation (Peters et al., 2012; Landman et al., 2009; Wormsbecker, 2007)

Many of the barriers listed above have been directly created by both domestic and international government regulations and policies. For example, land use policies

prevent farmers from exhibiting innovation and starting up farm businesses while federal and provincial agriculture policy is often export-oriented (Ohberg, 2012; Landman et al., 2009; Wormsbecker, 2007). International trade obligations require the acceptance of cheap, imported products year-round even during times of peak production of certain local crops making it very difficult for producers to compete (Ohberg, 2012; Wormsbecker, 2007). Within the current supply chain management system, alternative/ small producers are restricted by the quota system and are further hindered by federal and provincial labeling standards (Ohberg, 2012; Landman et al., 2009). Finally, scaleinsensitive health and safety regulations prevent farmers from processing food on the farm (Wormsbecker, 2007).

Sometimes the snags to producers are more localized, such as existing competition within farming communities or unreliable return at farmers' markets (Wormbecker, 2007). Other times insufficient production to meet demand can be a limiting factor (Peters et al., 2012; Landman et al., 2009). Loss of farmers and farmland, lack of compliance with regulations required by high volume buyers, and populations not big enough to support healthy local food systems are also barriers to producers (Ohberg, 2012; Peters et al., 2012; Wormsbecker, 2007).

4.3 Barriers to Consumers

While on the consumer side it seems that the barriers are less daunting, they exist nonetheless. As mentioned previously, multiple definitions of what is 'local food' often confuses consumers while there is also often a consumer lack of education and awareness of the average consumer in terms of understanding the implications of purchasing choices, what local food really means, and how local food production is connected to the long-term viability of the near-urban landscape and rural communities (Ohberg, 2012; Landman et al., 2009; Wormsbecker, 2007). If consumers are aware and want to support the local food movement they are often unable to source local food through mainstream channels (Wormsbecker, 2007). Price is often a barrier since North Americans demand inexpensive food while low income earners simply cannot afford it

(Ohberg, 2012; Wormsbecker, 2007). There is also a lack of diversity in the local food movement as Wormsbecker (2007) found, older demographics tend to support the local food market more than younger demographics and CSA and farmers' market participants tend to be of a certain demographic according to studies by Vecchio (2009), Feagan et al. (2004), and Durrenberger (2002). Vecchio (2009), who completed a qualitative case study of a farmers' market in Washington, DC, Feagan et al. (2004), who surveyed customers from three farmers' markets in the Niagara Region, and Durrenberger (2002), who surveyed CSA participants from eight CSAs in Central Pennsylvania, all reported similar results in terms of participant demographics. Both Feagan et al. (2004) and Durrenberger (2002) found that price was not a significant factor in customer motivations. For the Feagan (2004) study the average customer age was 50-69 and the median income was \$20,000 - \$40,000, the Durrenberger (2002) study respondents were predominantly white upper class, and the Vecchio (2009) study reported the average farmers' market customer in Washington DC to be a collegeeducated female with an above average income. More studies may be needed to identify this apparent market limitation and offer possible solutions.

4.4 Opportunities and Recommendations

Despite all the barriers and challenges to food localization, and probably because of them, there exist numerous opportunities and recommendations for moving forward. In terms of policy change, Ohberg (2012) proposes increasing flexibility in supply management, and health and safety regulations for small and alternative local producers. Ohberg (2012) also advises expanding the definition of agricultural land use to facilitate on-farm value-added processing and retailing, as well as preserving farmland. Additionally, supplementing income assistance to include a budget for food, supporting agricultural employers by subsidizing minimum wage, and adopting holistic food policies or charters at all levels of government are also recommendations suggested by Ohberg (2012). Ohberg (2012) and Wormsbecker (2007) both call for an adjustment of zoning and land use by-laws to facilitate food markets in urban places. Landman et al. (2009) suggest the creation of small-scale sensitive regulations and

infrastructure to assist small producers, as well as the linking of "sustainable' and 'local' as sound economic, social and environmental policy in keeping with green economy initiatives" (p. 17).

Where funding and infrastructure are concerned, Ohberg (2012) and Wormsbecker (2007) recommend increasing funding available for local food initiatives from both the public and private sector, making more funding available for operational costs and infrastructure, and encouraging established organizations (including municipalities) to host local food programs, particularly Food Policy Councils. Furthermore, Ohberg (2012) contends that the government needs to back loan programs to help local food businesses access startup capital. Peters et al. (2012) and Wormsbecker (2007) propose the need for infrastructure such as regional food hubs that allow producers to gain access to larger markets through processing and storage, online, community based local food stores that would offer year-round sales opportunities.

Internal governance of supply chains have the potential to assist the development of local food systems. According to Ohberg (2012), one way of doing this is through the design of menu schedules that maximize local seasonal availability. Another is by breaking supplier contracts down by product or product category to make contracts more accessible to local suppliers and to facilitate local procurement policies (Ohberg, 2012). Furthermore, Ohberg (2012) recommends embedding criteria for local procurement in request for proposals (RFPs) in new contract periods, and by encouraging collective, cooperative, or other producer aggregation arrangements. Landman et al. (2009) advise increasing local institutional procurement while Martin and Andrée (2012) support the development of third-party certifiers, such as Local Food Plus, as an option in terms of initiating institutional contracts. However, accompanying the scaling-up of local food procurement is the challenge of scaling-up local food production.

While there is growing consumer demand and interest, there remains room for continued and increased education for both consumers and producers. Consumers can

benefit from learning about seasonal availability, food literacy skills, and how to access local food retailer locations (Ohberg, 2012; Landman et al., 2009; Wormsbecker, 2007). Ohberg (2012) also recommends building awareness of good food goals and encouraging citizens to challenge their food systems to achieve these goals. Producers can benefit from education as well, especially in business, marketing, customer service skills, and RFP and certification processes (Ohberg, 2012; Wormsbecker, 2007).

Some of the trends that are helping boost the local food movement include certifications and local labels that appeal to both consumers and retailers and add value to producers, growing consumer and institutional demands for local food procurement, and consumers' growing interest in supporting local farmers and the local economy (Peters et al., 2012; Martin & Andree, 2012; Wormsbecker, 2007). Climate change, the obesity crisis, and rising energy costs are also motivating food systems players to seek out more environmental, healthy, and sustainable options (Wormsbecker, 2007).

4.5 Infrastructure

Many challenges faced by local food producers, as stated above, have to do with limited infrastructure (Ohberg, 2012; Peters et al., 2012; Wormsbecker, 2007). Cantrell and Lewis (2010) identify that "gaps in food system infrastructure block access to new agrifood opportunities [for local producers], such as sales from local farms to nearby hospitals, schools and restaurants" (p. 24). Bloom and Hinrichs (2011) found that both urban and rural local food networks faced two major challenges. The first was making local produce accessible and the second was redistributing value to all members of the supply chain. In response to these findings, Bloom and Hinrichs (2011) explain that "[a]ddressing the broader infrastructural needs of local and regional food systems could foster economic development and meet the divergent needs of both producers and consumers (p. 22)". Other infrastructure gaps identified in the literature include: limited access to packing sheds serving multiple producers, a lack of full service food hubs able to provide processing, and adequate business development support (Peters et al., 2012; Cantrell & Lewis, 2010; Wormsbecker, 2007). According to Cantrell & Lewis (2010) not

only is there a decrease in banks that work in agriculture but also a lack of awareness of the emerging market opportunities and reformation of the agri-food business model by the banks that still do. Thankfully there are also some emerging strategies for addressing these gaps in a developing food system infrastructure. One popular strategy involves expanding communication and networking between producers, buyers, sellers, and others (Bloom & Hinrichs, 2011; Cantrell & Lewis, 2010). Bloom and Hinrichs (2011) also support producer co-operatives/shared ownership business models as a viable solution. Finally, Cantrell and Lewis (2010) suggest creating incentives for equipment and facilities to accommodate mid-scale volumes, providing information and technical support and pushing for regulation reform.

4.6 Capacity Building and Agriculture Extension

As the local food movement gains momentum, increasing numbers of local food producers want to participate. The current literature identifies numerous barriers, mentioned previously, that are preventing local food systems from flourishing (Ohberg, 2012; Cantrell & Lewis, 2010; Landman et al., 2009; Wormsbecker, 2007). Agriculture extension provides a means to build capacity in local food system actors through community programs and activities, regional food hubs and regional food hub networks, and government strategies (Matson, Sullins & Cook, 2011; Regional Food Hub Advisory Council, 2010; USDA, 2010; Landman et al., 2009). In addition, producers confronted with handling multiple aspects of production and marketing have led to the development of intermediary organizations to help them reduce some of these challenges (Bloom, 2012). Intermediary organizations, such as those in Southwestern Ontario affiliated with the Buy Local, Buy Fresh brand, and Sustainable Agriculture Organizations (SAOs) in the United States, such as the Pennsylvania Association for Sustainable Agriculture (PASA), build capacity in their membership. They do this through stakeholder involvement, the creation of marketing opportunities (e.g. local food maps, web lists, branding initiatives), facilitating exchanges between farmers, building community support through networking and local economic development, advocacy initiatives, and research (Bloom, 2012; Carnes & Karsten, 2003). The development of food system

initiatives does not happen uniformly across regions; the deliberate development of social capital can contribute to the economic development potential of food initiatives (Nelson, Knezevic and Landman 2013).

4.7 Feasibility and Assessment

Demand for local produce in communities throughout the United States has spawned investigations into what it would take to make local food more accessible. Through regional food hub feasibility studies and local food hub assessments in Central Oregon (Central Oregon Intergovernmental Council, 2012), Southern Wisconsin (Dane County Planning and Development Department, 2011) and North Virginia (FamilyFarm.org, 2010) barriers, benefits and risk mitigation strategies have been identified in the hopes of advancing their local food systems. In Canada, Blay-Palmer et al. (2011) identify the need for a measure that takes numerous factors into account, in addition to economics. Through the Food Counts Project the creation of such a measure was initiated in the form of a sustainable food system report card. The aim of the report card is to provide policy makers and community stakeholders with a set of indicators to aid in decision-making (Blay-Palmer et al., 2011).

4.8 Scaling-Up/Clustering

As local food systems develop, questions of scale often arise. Food hubs, farmers' markets, and third party certifiers offer a means for local producers to gain a competitive advantage (Beckie, Kennedy & Wittman, 2012; Gooch, Marenick, Felfel & Vieira, 2009; Friedman, 2007). Clustering provides a means for local producers to come together and gain access to larger markets that require larger scales. However, the logistics of distribution for growers is a challenge when aggregation is required to create scale efficiencies (Campbell & MacRae 2013). Mount (2012a, 2012b) and Lang (2010), too, offer a word of caution as local producers scale-up to meet consumer demand. Scaling-up has the potential to depersonalize the local food system and compromise the intangible qualities that consumers are attracted to (Mount, 2012a, 2012b; Lang, 2010). In addition, Mount (2012b) found that as farmers increase scale their range of options

and decision-making power decreases and the pressure toward conventionalization increases.

4.9 Government Programs

With the rise of interest in local food, governments are starting to take notice. This is evident in the emergence of government programs addressing the local food movement. An example of a provincial government program is Select Nova Scotia which was launched in 2007, with the goal to raise awareness and consumption of Nova Scotia produced and processed agri-food products (Knight, 2012). Furthermore, as noted by Knight (2012), the program was started due to the growing evidence demonstrating that local products in the marketplace are significantly enhanced by a local branding strategy. There are three other provinces across Canada with a government-run local food program, including Ontario. Knight (2012) reported findings which suggest that Select Nova Scotia "is reaching a wider audience then just those predisposed to local food initiatives" (p. 29). An example of a federal government program is the Know Your Farmer, Know Your Food (KYF2) initiative launched by the United States Department of Agriculture (USDA) under the Obama administration. With a commitment to strengthening local and regional food systems, the mission of KYF2 is to:

- 1. Stimulate food and agriculturally-based community economic development
- 2. Foster new opportunities for farmers and ranchers
- 3. Promote locally and regionally produced and processed foods
- 4. Cultivate healthy eating habits and educated, empowered consumers
- 5. Expand access to affordable fresh and local food
- 6. Demonstrate the connection between food, agriculture, community and the environment

(USDA, 2013)

While there is no particular office, staff or budget dedicated to the KYF2 project, strategies in which to accomplish the mission of the project are identified by a task force chaired by Deputy Secretary Kathleen Merrigan and with representation from each department of the USDA (USDA, 2013). In 2008, policy changes where put forth in the

2008 Farm Bill to further support local and regional agriculture (USDA, 2013). The task force has also been instrumental at creating the KYF2 Compass, an online interactive map that shows local and regional food system efforts support by the USDA and other federal partners for the years of 2009-2012 (USDA, 2013).

While these government efforts are welcome and helpful, Marsden and Franklin (2013) argue "that we need to tackle the scalar politics of institutional rigidity, blindness and inertia with regard to the potential convergence and scaling out of alternative food movements" (p. 639). Marsden and Franklin (2013) go further by stating that these new food initiatives may be contributing to the development of new governance models based on changing public priorities.

4.10 Planning and Policy

There is an emerging sub-field of food systems planners that could play a pivotal role in local food systems development by addressing infrastructural shortcomings (Soma & Wakefield, in press). More and more planners are finding a new role for themselves in food system planning (Pothukuchi, 2010). In 2007 the American Planning Association developed a Policy Guide for Community and Regional Food Planning Policy. The guide identifies the seven principles in which the planning profession has centred its approach to food planning. These seven principles are as follows:

- 1. Comprehensive food planning at community and regional levels
- Strengthening the local and regional economy by promoting community and regional food systems
- 3. Food systems that improve the health of region's residents
- 4. Food systems that are ecologically sustainable
- 5. Food systems that are socially equitable and just
- 6. Food systems that preserve and sustain diverse traditional food cultures of Native American and other ethnic minority communities
- 7. The development of state and federal legislation that facilitates community and regional food planning, including addressing existing barriers

(Potukuchi, 2010)

According to Pothukuchi (2010), several local food planning actions in both the United States and Canada have successfully contributed to enhancing the viability of agriculture. They have helped by promoting regional and local markets for regional foods, increasing access to food sources by low-income households, encouraging the availability of healthful foods, supporting food system activities that minimize energy use and waste, and supporting food production on the grounds of public agencies and institutions (Pothukuchi, 2010).

Since the APA's 2007 report, and building on the Ontario Professional Planners Institute's subequent 2011 Call to Action: Planning for Food Systems in Ontario which raised planners' awareness on their roles in food system planning, Hayhurst et al. (2013) found a ready willingness on the part of policy planners to bring food planning language into official documents to foster improved access to healthy food.

5. MARKETING AND ECONOMICS

5.1 Local Economic Opportunity

The local food system, in contrast to the global food system, benefits the local economy. Local food systems have the potential to keep both money and jobs in the local vicinity and therefore help to strengthen the local economy (Norberg – Hodge, Merrifield & Gorelick, 2002). The local food system has also been associated with increased farm income and providing the economic incentive and capacity to build local food infrastructure (Bendfeldt et al., 2011; Stevens, 2013). Linking local food to chefs and other local food entrepreneurs in the local food supply chain is yet another benefit that has positive impacts on the local economy (Bendfeldt et al., 2011). The global food system, on the other hand, has received criticism for contributing to the decline of rural economies, to economic leakage, and to farmers working more while earning less (Bendfeldt et al., 2011; Norberg – Hodge et al., 2002). Bendfeldt et al. (2011), in their report *A Community-Based Food System: Building Health, Wealth, Connection and Capacity as the Foundation of Our Economic Future,* investigated the potential for a community-based food system in Virginia. Based on their findings they argue "that a community-based food system approach may be the best path toward economic recovery and resilience because it builds health, wealth, connection, and capacity in the local economy and community" (p. 8). A study of U.S. consumers showed that \$1.2 trillion dollars is spent on food each year and food was the second highest household expense in 2008 (Bendfeldt et al., 2011). Bendfeldt et al. (2011) explain that these numbers demonstrate an economic opportunity, arguing that, "[i]f each household in Virginia spent \$10 of its total weekly grocery expenditure on locally grown food, it would have a direct, state-wide economic impact of \$1.65 billion" (p. 9). In terms of developing a community-based food system Bendfeldt et al. (2011) suggest that a local and/or regional "brand identity can be a key initial strategy to increase demand and foster a culture of food and farm entrepreneurship to serve local and regional markets" (p. 10).

Stevens (2013), in *Food Hubs Present New Economic Opportunities for Farmers*, explains that food hubs offer potential for farmers in greenbelts to increase economic prosperity. He explains that in the US, foods hubs associated with the National Good Food Network more than doubled sales with an average gross of \$1 million. Stevens (2013) acknowledges that to be successful requires the right infrastructure, a realistic business plan and committed customers. In Ontario, Stevens (2013) indentifies three economic barriers for food hubs: limited investment for the agricultural sector, limited government support, and the historically unfavourable relationships between farmers and processors. Stevens (2013) concludes that food hubs offer economic opportunities for farmers and processors but in order to be successful they must learn to work together.

5.2 Direct Marketing

In terms of market access, an important benefit of local food systems is the potential for direct connections and exchanges between producers and consumers. Therefore it is no surprise that several direct marketing strategies are being used. A number of these strategies have already been mentioned, such as community supported agriculture and farmers' markets (Friedmann & McNair 2008; Feagan et al., 2004). An interesting finding from a review of research on farmers' markets by Brown and Miller (2008) was the conclusion that farmers' markets appear to be a keystone for rebuilding a local food system while CSAs will probably remain a small component. Other direct marketing approaches that are emerging include food-box programs, community food cooperatives, and virtual food hubs (Matson & Cook, 2011; Friedmann & McNair, 2008; Feagan et al., 2004).

Based on the literature, there are multiple advantages to direct marketing, many of which have been identified through studies of farmers' markets, CSAs, and virtual food hubs in North America. According to Feagan et al. (2004), direct marketing has the potential to reduce the distance between producers and consumers while also increasing face-to-face interaction, both of which serve to shrink both the physical supply chain and socio-cultural distance between producers and consumers. An added benefit from increased face-to-face interaction is that it facilitates feedback and communication between producers and consumers (Feagan et al., 2004). Consumers participating in direct marketing, in turn, may develop a heightened awareness of social and environmental costs while also reaping the benefits of increased selection. Consumers also benefit from having a place for social activity and community along with other urban revitalization spin-offs (Brown & Miller, 2008; Feagan et al., 2004). On the producer side, direct marketing strategies are particularly important for small scale operations because they offer them a market for their products, while all producers can benefit when production decisions are not dictated by external forces, and the local economy, in general, can benefit via capital being re-circulated (Matson & Cook, 2011; Feagan et al., 2004).

5.3 Indirect Marketing

While direct market channels appear to be most important to producers within the local food system it would be erroneous to discount the advantages of other marketing channels. Existing and emerging indirect market channels can take the form of wholesalers, large supermarkets, small local retailers, and institutional food contracts (Martin & Andrée, 2012; Abatekassa & Peterson, 2008). Abatekassa & Peterson (2008) present findings from a local food supply chain study conducted in 2007 in the five-county region of Southeast Michigan. Retailers, wholesalers, and distributors were interviewed about current food product sources, the local food concept, experience in sourcing local foods, future prospects for sourcing local food, relationships and linkages with local food producers and suppliers, and benefits, risks, and challenges associated with sourcing local food. The findings suggest that local food has better market access through small local retailers and lack of trust appears to be a key barrier to accessing larger retailers and distributors (Abatekassa & Peterson, 2008).

5.4 Regional Food Labels and Other Certifications

Regional food labels and other certifications offer a means for producers to increase the value and demand for their products. Regional labels offer a means to increase awareness and knowledge that surrounds locally produced food, help create new opportunities for the industry, promote benefits of buying local food, and increase opportunities for growth and development in the agricultural sector (Knight, 2012). As Wormsbecker (2007) points out, there is consumer interest in a local label. Regional food labels and other certifications also have the potential to increases producers' access to larger food channels. Abatekassa & Peterson (2008) found that large supermarkets give priority to "organic, natural and niche/specialty products" (p. 8). A regional food label or other certification would allow local producers to tap into these specialty markets. As demonstrated with Local Food Plus, third-party certification allows local producers a means to enter into institutional food services that would have otherwise remained inaccessible (Martin & Andrée, 2012).

6. REGIONAL LINKAGES

6.1 Foodsheds: a Regional Approach

Due to the conceptual success of 'the watershed' to understand the flow of water through our environment, permaculturalist Arthur Getz coined the term 'foodshed' (Kloppenburg, Hendrickson & Stevenson, 1996). A foodshed is defined as a geographical area from which a population derives its food supply (Peters et al., 2009). Consequently, foodshed analysis "refers to the study of the actual or potential sources of food for a population, particularly those factors influencing the movement of food from its origin as agricultural commodities on a farm to its destination as food wherever it is consumed" (Peters et al., 2009 p.2).

Peters et al. (2009) argue that, due to the increasing price of food and the challenges that are arising due to climate change and declining reserves of fossil fuel, the question must be asked: "To what degree can society continue to rely on large-scale, long distance transportation of food" (p. 1)? Peters et al. (2009) state that tools are needed in order to better understand how foodshed environmental impacts and vulnerabilities are linked in terms of where food is produced in relation to where it is consumed. Foodshed analysis is a tool that has the potential to help answer these questions by tracing the flow of food. It encompasses the multidimensional components of the geographical areas in which we live and eat (Peters et al., 2009; Kloppenburg et al., 1996). Foodshed analysis allows for the synthesis of both qualitative and quantitative information including, but not limited to, local data on exports, capacity of local landfills, distribution of edible plants, patterns of human hunger, organization of harvest festivals, and content of local institutional menus (Kloppenburg et al., 1996). Foodshed analysis also offers a means of evaluating food system strategies, vulnerabilities, and environmental impacts. It has the potential to help inform the geography of future food system planning and a way to calculate the different 'costs' of producing and transporting products through the food system, such as energy consumption, greenhouse gas emissions, and prices paid at every stage of the food (Peters et al., 2009). In addition, foodshed analysis can increase clarity and communication by means of strong graphic imagery

while also offering a sense of connection and responsibility to a particular locality (Kloppenburg et al., 1996).

6.2 Urban-Rural Linkages

Sonnino (2009) identifies that there is a tendency to divide the rural and urban landscape. The divide, Sonnino (2009) explains, has been responsible for food planning and policy remaining largely a rural affair in North America given its link to agriculture. However, this divide is counterintuitive, as urban areas are where the greatest number of people reside and thus require the largest supply of food. Sonnino (2009) explains that urban areas are where the people are and where the economic opportunities subsequently lie. For this reason, the type of urban food strategies emerging today are attempting to integrate urban, periurban and rural areas into a coherent entity that fosters new synergies across a landscape "where much is neither 'urban' nor 'rural' but has features of both (Tacoli, 2003, p. 3, as cited in Sonnino, 2009).

Jarosz (2008), drawing on findings from a statewide study of Washington state involving farmers and consumers, puts forth that "alterative food networks (AFNs) are not static objects or sets of relationships. They emerge from political, cultural and historical processes, and they develop out of the interactions between rural restructuring and urbanization in metropolitan areas" (p. 242). Jarosz (2008) findings suggest that as agro-industry relocates, farms near cities become smaller and city suburbs grow larger. Since smaller farms lend themselves to direct marketing opportunities, this goes hand-in-hand with Jarosz (2008) findings that show urbanization leads to increases in farmers' markets and demand for local produce given certain population demographics. The acknowledgement that urban areas need to be included in food policy and planning has the potential to not only better feed urban populations but provide new economic opportunities for small farmers and retailers. Sonnino (2009) argues, in agreement with Allen (2003, as cited in Sonnino, 2009) that we should move toward designing bioregions "characterized by reciprocal and environmentally-sustainable relations between urban, peri-urban, and rural areas" (p. 429).

Food initiatives are often complex and complicated through the range of networking that takes place. These networks often blur the lines between government, public, non-profit, co-operative, multi-stakeholder and private entities (Mount & Andree, 2013), and these linkages range from rural to urban and back again.

From a study of opportunities and barriers for a local food system in Guelph and Wellington County, Landman, et al. (2008) suggest several strategies on how to strengthen urban-rural linkages. One way is through the facilitation of face-to-face contact in order to build relationships within and across stakeholder groups. Another strategy is to establish the presence of a convener or coordinator whose legitimacy is recognized by all stakeholders. The creation of a supportive policy framework using input from local actors, creating alternatives to address infrastructural challenges in order to increase rural-urban distribution, and documentation of successful business models to assist further expansion of local food production and consumption across the province is additional strategies put forth by Landman et al. (2008). Finally, Landman et al. (2008) recommend the development of agricultural/food curricula in primary and secondary education to address the evident lack of consumer awareness and education.

CONCLUSION

The preceding survey of some of the prominent North American literature on the subject of local food systems, from the last thirteen years, had six main themes. The themes were: food beyond commodification, environmental concerns, food access, barriers and opportunities, marketing and economics, and linkages. Food beyond commodification revealed consumer demand for local food to be driven by want of an alternative to the global industrial system and motivations were shown to be more complex than the mere exchange of goods and services (COIC, 2012; FamilyFarm.org, 2012; Vecchio, 2012; DCPDD, 2011; Wormsbecker, 2007; Feagan, et al., 2004; Durrenberger, 2002). For producers partaking in direct exchanges with consumers meant more money in their

pockets and the potential creation a more integrated community, centered on food and a common identity as eaters (Hinrichs, 2000). Increase life satisfaction and social capital were two of the most notable social benefits (Vecchio, 2009; Stroink & Nelson, 2009; Brown & Miller, 2008; Durrenberger, 2008; Smithers et al., 2008; Feagan, Morris & Krug, 2004). Local food system initiatives that focus on sustainability as well as a socio-economic approach could prove a successful tool for community development (Connelly, Markey & Roseland, 2011; Levkoe & Wakefield, 2011; Stroink & Nelson, 2009; Cone & Myhre, 2000).

As an alternative to the conventional food system, it was revealed that local food systems are often assumed to be inherently better for the environment. For that to be true, a local food system would have to reduce reliance on oil and gas and address the numerous forms of environmental degradation that are resulting due to the current food system (see O'Kane, 2012; Peters, et al., 2009; Xuereb, 2005; Pirog, et al., 2001; Van Pelt et al., 2001). Civil society organizations (CSOs) were identified as key players to strengthen local food systems and reduce environmental impacts, in part by pushing for more supportive environmental policies (Blay-Palmer, 2012).

It was shown that numerous factors challenge the ability for many people to access nutritious food as evidenced by rises in diet related chronic diseases, and other factors (see COIC, 2012; Holt-Gimenez et al., 2012; O'Kane, 2012; Blay-Palmer et al., 2011; Desjardin, et al., 2010; Pothukucki, 2010; Walker et al., 2010; Stroink & Nelson, 2009). While further studies are needed, it has been suggested that a "more intentional evolution of the food and agriculture system could potentially create better opportunities to improve nutritional health" (Desjardins et al., 2010, p. 130) (See also Hawkes, 2007; Xuereb, 2005; Nugent, 2004; Heller & Keoleian, 2003; Peters, Fick & Wilkins, 2003). While factors contributing to food insecurity in North America may not entirely change through local food initiatives, there is the capacity to break down the social isolation often experienced by those living in poverty (Holt-Giménez et al., 2012; PFPP, 2011; Nelson & Kuluski, 2004; Tarasuk, 2001).

The notion of a local food system is not without criticism. One widespread issue is the lack of a consistent definition for 'local' and 'regional'; a reframing of the local food system acknowledging the interdependence of the global and the local is needed. (Tregear, 2011; Kneafsey, 2010; Landman et al., 2009; Selfa & Qazi, 2005; Hinrichs, 2003). Also, scale research on food strategies may offer tools to avoid the local trap (Tregear, 2011; Ostrom & Jussaume, 2008; Born & Purcell, 2006; Hinrichs, 2003). A noted challenge to a thriving local food system is that it is trying to operate within an export-oriented system (Ohberg, 2012). Particularly difficult for producers are the barriers that have been directly created by both domestic and international government regulations and policies that are scale-insensitive (Ohberg, 2012; Landman et al., 2009; Wormsbecker, 2007). An existing lack of awareness of the average consumer is a common hindrance (Ohberg, 2012; Landman et al., 2009; Wormsbecker, 2007). A notable lack of diversity within the consumer population participating in local initiatives is also troubling (Vecchio, 2009; Wormsbecker, 2007; Feagan et al., 2004; Durrenberger, 2002). The literature offers many recommendations in terms of policy change, funding and infrastructure, internal governance of supply chains, producer aggregation arrangements, institutional food, third party certifiers, education, and advocacy (Martin & Andrée, 2012; Wormsbecker, 2007; Ohberg, 2012, Peters et al., 2012, Landman et al., 2009.

Local food systems have the potential to keep both money and jobs in the region and therefore help to strengthen the local economy, and may be the best path toward economic recovery and resilience (Stevens, 2013; Bendfeldt et al., 2011; Norberg – Hodge et. al, 2002). Local brand identity was indicated to be a viable strategy for kick-starting the movement in some markets (Bendfeldt et al., 2011), while direct marketing strategies are becoming popular, often facilitating feedback and communication between producers and consumers (Matson & Cook, 2011; Friedmann & McNair, 2008; Feagan et al., 2004). Existing and emerging indirect market channels are also playing an important role (Martin & Andrée, 2012; Abatekassa & Peterson, 2008).

Foodshed analysis was shown to offer a means of evaluating food system strategies, vulnerabilities, and environmental impacts with the potential to help inform the geography of future food system planning (Peters et al., 2009). The perception of a rural-urban divide is responsible for food planning and policy remaining largely a rural affair in North America, needs to change (Sonnino, 2009). Urban food strategies emerging today have the capacity to integrate urban, peri-urban and rural areas into a new kind of landscape where there are features of both urban and rural (Tacoli, 2003, as cited in Sonnino, 2009).

RESOURCES

The following is a list of some of the emerging resources, guides, tool-kits, and websites pertaining to local food systems:

A Policy Guide for Community and Regional Food Planning has as its overarching goal to help build stronger, sustainable and more self-reliant community food systems. It also suggests ways that the industrial food system may interact with communities and regions to enhance benefits such as economic vitality, public health, ecological sustainability, social and cultural diversity (American Planning Association, 2007)

Regional Food Hub Resource Guide targets food entrepreneurs and their supporters who are interested in starting food hubs and operators of food hubs who are interested in expanding. It is also intended to help philanthropic foundations, public agencies, lending institutions, and economic development organizations understand the nature, function, and operating models of food hubs, helping them to engage hubs in their areas (Barham et al., 2012).

Building Successful Food Hubs: A Business Planning Guide for Aggregating and Processing Local Food in Illinois is a resource for communities, businesses, not-forprofits, and others interested in establishing food hubs. This guide includes descriptions of key functions, best practices, and how-to strategies for food hub establishment and operation that are based on successful models operating in other regions that have been specifically adapted for application in Illinois (Illinois Department of Commerce and Economic Opportunity, 2012).

A Practitioner's Guide to Resources and Publications on Food Hubs and Values-Based Supply Chains is a synthesis of some of the recent reports, analyses, how-to manuals and practical case studies geared towards practitioners working to develop value-based supply chains or similar marketing channels. It outlines common themes that emerged from the literature such as the need for food hubs and values-based supply chains and provides descriptions, benefits, and challenges for both. It also provides best practices for stakeholders involved in VBSCs and food hubs in addition to including a section that describes the research methods used in the reports (Lerman, Feenstra, & Visherl, 2012).

FoodHub (www.food-hub.org) is a dynamic marketplace and online directory that makes it easy and efficient for professional food buyers and sellers to research, connect, and do business in the states of Oregon, Washington, Idaho, Montana, Alaska, and California.

The Food Commons (www.thefoodcommons.org) is a nonprofit that has designed a model that will connect local and regional food system enterprises in a cooperative national federation that enhances their profitability and sustainability while creating and supporting a robust system of local community financing, ownership, management, and accountability. Built on three integral components of trust, funds and hubs, the Food Common models a new economic paradigm and whole systems approach to regional food.

Know Your Farmer, Know Your Food Compass Map (www.usda.gov/maps/maps/ kyfcompassmap.htm) is an interactive map that shows efforts supported by USDA and other federal partners as well as related information on local and regional food systems for the years 2009-2012.

Mad River Food Hub (www.madriverfoodhub.com) is a fully equipped, licensed vegetable and USDA inspected meat-processing facility located in Waitsfield, Vermont. Their website contains information on how to get involved, what the facility offers, news, and press.

The Wallace Centre (www.wallacecenter.org) supports entrepreneurs and communities as they build a new food system that is healthier for people, the environment, and the economy through networking, knowledge sharing, linking funders with research and practice, and building capacity. The Wallace Center website contains open access resources, research, and publication on creating a local food system in the United States.

Nourishing Ontario Sustainable Local Food Systems Research Group Community Food Toolkit (www.nourishingontario.ca/community-food-toolkit/) was designed to help build more resilient food communities. The toolkit provides suggestions about how to run a workshop in your community and includes ideas about how to define a vision for your community food system. Additionally, the toolkit provides suggestions as to whom to include to make the process empowering and community-driven. Input is also provided regarding how to identify resources and existing capacities as well as how to define where challenges lie. Nineteen detailed case studies of innovative examples of existing projects in Ontario are included.

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