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> Presented to: Lauren Baker, Sustain Ontario December 9, 2009

FOOD AND FARM INNOVATION STUDIO

FINAL REPORT



December 9, 2009

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Preamble

In September 2009, Sustain Ontario, under the directorship of Lauren Baker, engaged a group of graduate planning students from Ryerson University (from here forth collectively known as the "Farm Studio") in exploring how land use planning approaches in the Greater Golden Horseshoe of Ontario affects on-farm food and agricultural innovation. As a goal, Sustain Ontario is working towards a sustainable food system, one that is ecological, equitable and financially viable. Recognizing the multiple foci of sustainable food and agricultural issues, this project aims to fill a gap in the planning knowledge surrounding these concerns.

Throughout the subsequent three months, the Farm Studio was tasked to develop a broad understanding of the important planning, policy and broader economic, environmental and social implications of agricultural practice. In order to fully understand these various issues, and how their influences are played out, the project was grounded in four peri-urban municipalities within the Greater Golden Horseshoe: the County of Simcoe and the Regions of Waterloo, Halton, and Niagara. Using them as case study areas, investigation into regional policy and agricultural context analyzsed the land use planning opportunities and barriers to food and farm innovation at the regional level.

Ultimately, the Farm Studio, through a rationalization of the implications for more integrated, adaptive and flexible approaches to agricultural land use planning, developed an approach through which the following group of students in Ryerson University's graduate program in planning will be able to proceed in order to recommend how land use planning policy may become more adaptive, integrated and flexible with regard to agricultural and food policy at the regional or municipal level.

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Introduction: Setting the Table

"If a society does not value its farmers and farmland, then it does not value the capacity to grow its own food, and both eventually will be lost." (Lister, 2007, p. 160)

As the above quote asserts, agriculture represents a case of 'use it or lose it'. For reasons of food security, economic viability and cultural value, agriculture is an important practice to support, sustain, grow and celebrate in the province of Ontario. At present, as farmers are experiencing increasing economic uncertainty and a large portion of the younger generation of Ontarians are not entering the sector, agriculture is at a crossroads. The industry can either continue to decline and Ontarians can continue to rely on food from elsewhere for our subsistence, or, we can reinvigorate our agricultural sector and reap the countless benefits – economic, social, cultural, environmental, and health – that will come from strengthening and reimagining the agricultural sector.

Although the trend for North American farms has been a shift towards fewer farms to much larger ones, many smaller-scale farmers have been unable, or unwilling, to industrialize to that extent (Gray, 2005, p. 23). Often this has meant those farmers have found sustaining agricultural livelihoods difficult, but with the right elements in place, smaller-scale farmers can survive and even thrive. To do that, emphasis is placed on non-commodity crops, finding local and regional market niches, diversification of food products and explicitly linking food to the social, economic and environmental aspects of the region in which it was grown or made. Through new, innovative farm practices, the industry can meet the needs of the current and future market, and reach a higher level of economic sustainability.

How, then, can innovation in farming be allowed for and encouraged?

This question can be answered in countless ways from a wide range of perspectives and disciplines. For the purpose of this project, the Farm Studio have approached this from a land use planning perspective. Specifically, we are interested in the effect that provincial and regional planning policies have on innovation in the agricultural sector. To tackle this problem, the Farm Studio narrowed our focus to a specific area – the Greater Golden Horseshoe in Southern Ontario – and analyzed planning policies that governed agriculture in a set of case study regions. This exercise, in tandem with research from academic, government, non-government, and media sources have led us to identify a set of key issues where planning can hinder or support innovation. Overall, it was determined that the degree of flexibility – the balance between responsiveness and restrictiveness – in provincial and regional planning policies has a clear impact on the ability of farmers to engage in on-farm innovation.

The following literature review uses peer-reviewed literature, governmental and nongovernmental reports to make an argument in response to the issue of allowing for and encouraging innovation in agriculture. It must be recognized that it is a broad overview of the subject area, and further analysis could expand upon these issues considerably, but nonetheless represents several main bodies of literature that can be consulted for further reference. First, there is a discussion of the role planners play in food and agricultural planning, culminating in the guiding research question.

Subsequently, a discussion of the place that innovation and creativity have in the food and agricultural sectors have to give weight to the research question and approach taken with the methodology. This will be followed by a rationalization of food and agriculture's importance within regional sustainability, social and economic security, and their culmination within healthy food systems. The literature review will conclude with an acknowledgement of some of the challenges and opportunities -- within issues of pricing and valuation, infrastructure, a hollowing out of the middle size farm and farmland preservation -- that can provide further background into the context of food and agriculture.

After the groundwork for the food and agricultural issues has been laid out, this report will discuss the development of the research question driving the land use planning aspects of these topics, to be followed by a grounding of the research in an investigation of the policies affecting agriculture in the broader Greater Golden Horseshoe and the more delineated regions that will serve as case studies moving forward. It will then conclude with a discussion of important ideas to bear in mind while moving forward with the further investigation of these issues grounded at regional and local levels and in the development of policy recommendations that seek to best contextualize the capitalization and encouragement of existing practices, policies and mindsets of agricultural innovation in the land use planning spectrum of the Greater Golden Horseshoe.



Greenbelt Foundation, Tim Hagan

Literature Review

Approaching Food and Farm Innovation through Land Use Planning

Planners Roles in Food and Agricultural Planning: A Research Question

The objectives of rural planning are multifold: to realize goals surrounding environmental protection, land preservation, food sustainability, economic development, public health, as well as to maintain and support rural culture (Province of Ontario, 2005a; van Lier, 1998). It aims to do so efficiently and ethically within the planning framework by employing a primary set of tools that includes provincial policies, official and secondary plans, and municipal zoning by-laws. These land use planning policies and tools take many forms that encompass different understandings of, and approaches to, agriculture. The institutional structures that surround farmland protection and use change over time and reflect social norms, power structures and politics, food security, recreation and resource management (Feitelson, 1999). While these notions of what agricultural land and practices are may change, the policies that govern their use often take a very long time to respond to the contemporary reality.

The goals of food security and a viable agricultural sector call for a deeper valuation and appreciation of food. Betsy Donald makes a compelling argument for food's special status as a commodity: "...food, unlike any other commodity on the planet, is intimate: we eat it," and, as noted above, its effects are far-reaching (Donald, 2009, p.25-6). More fundamentally, food is essential for our health, culture and daily life. Because of this, the agricultural sector is incredibly important to support and protect, as opposed to any other sector that may be on the decline. A renewed recognition of and appreciation for food is key to any solution to the challenges facing the agricultural sector, which, to some extent, is already beginning (Donald, 2009; Ilbery & Kneafsey, 2000; Seccombe, 2007).

With these changing social norms, in which power structures and political environments that food and agriculture are wrapped up, planners must play an active and hands-on role in navigating farmers, consumers, governments, and other stakeholders, all with their own interests, through these complex systems. Planners have been trained and have experience in dispute resolution, through stakeholder analysis, consensus building and visioning, all of which "can [and will necessarily have to] be applied to search for common ground in food systems discourse, coalition building, policy advocacy and grassroots activism" (Campbell, 2004, p. 342). Planning must continue to be a bridge between those tensions that arise while trying to achieve an economically vibrant, environmentally sound, socially equitable and secure food system.

With a focus primarily on environmental protection, land preservation, public health, economic development and the maintenance of a rural culture, rural and agricultural planning are well-established and important processes in rural areas (Campbell, 2004; Heimlich, 1989; van Lier, 1998). The ways in which these approaches to planning policies have been undertaken represent different understandings of agriculture and shed light on its relative importance in any given region. As this report will show, many approaches to planning policies and their on-ground regulations currently show a more traditional understanding of agriculture – one that focuses on the preservation of rural land for agricultural purposes – which often place limits on the types and methods of agriculture allowed, limiting innovation.

One subset of broader rural and agricultural planning, food-systems planning is a relatively new concept to the field of planning (APA, 2007). Representing the "the flow of products from production, through processing, distribution, consumption, and the management of wastes, and associated processes" (APA, 2007, n.p.), the American Planning Association adopted its Policy Guide to Community and Regional Food Planning on food system and policy issues in mid-2007 as a response to the gap that exists within the professional and academic realms of planning and that of food policy, production and distribution. The Policy Guide highlights the many interconnections food systems and policies have with and amongst other facets of planning including (but not limited to): land use, energy and water consumption, environmental impacts, built form, social equity, emergency preparedness, and community and regional legislative governance. Food systems and policy planning is a growing field of study and practice within the profession, one that is framed by the theories of sustainability.

There are a number of ways to develop this emerging food system discourse: collecting and analyzing the data on the state of regional food systems, being an active participant in local community food projects, and revising local land use plans and regulations to better enable and promote locally-focused agriculture and food consumption. It is within this last point that we focus our interest. We have developed a background case for the importance of food and agricultural planning at the local level, and we have discussed some of the challenges it faces, both at the global and at the local scales. The next step, with a focus on land use planning policy, involves acknowledging the roles these policies can have on creating ripe conditions for facilitating emergent agricultural practices that are adapted to a twenty-first century view of the role agriculture plays in sustainability and the relocalization of food. We ask the following research question with that in mind:

How do land use planning approaches at the regional and provincial planning levels impact innovation in agricultural practices in the Greater Golden Horseshoe?

We posit that one key to creating a sustainable and equitable agricultural sector in the Greater Golden Horseshoe is through policy reform at all levels. We challenge that the level of

Restrictiveness found in provincial and regional policy documents (and done so for legitimate reasons) contributes to the hindrance of true agricultural innovation and we recommend a more permissive approach to agricultural and on-farm food issues that can lead to a more agile and flexible practice of agriculture. However, we do concede that this shift will not be an easy task to accomplish, as it requires an incremental approach to changing the institutional structures and fundamental shifts in planning and regulatory paradigms – or, at the very least, "a loosening of the resistance to entertain what is currently defined as alternative thinking" (Dale, 2001, p. 116). Indeed, the progression toward sustainable practices must be made in an evolutionary, systematic way. This is expected to be done in order to combat the restraining forces of these postmodern societies that are still operating under long-standing, and arguably outdated, values and ideologies resulting in an organizational, structural and bureaucratic inertia resistant to those forces that dare challenge the dominant planning, development and political paradigms (Dale, 2001).



Ontario Growth Secretariat, Ministry of Energy and Infrastructure

The Role for Food and Agricultural Innovation

The key challenge for agriculture today is economic. The increase of financial uncertainty for farmers that has resulted from the rise of global food competition is the single greatest threat to the sustainability of the agricultural sector. If farmers cannot expect to make a living from farming, how can we expect the industry survive, especially without subsidies to say of nothing of growth and expansion? Without a fundamental restructuring of our food system, through changes in supply and demand, national and local policies, farm innovation and support, the agricultural sector is susceptible to decline and decay. Changes on the part of producers, consumers, governments and organizations are all key to making this shift.

For farmers, it is necessary to acknowledge that the agricultural industry has shifted from being supply-driven to being largely demand-driven, as consumers have more food choices available due to the rise of imported and processed food products (Charlebois, 2008). The abundance of imported foods today has made it difficult, if not impossible, for Ontario farmers to compete on the basis of price (Donald, 2009; Feagan, et al., 2004; Lister, 2007; Seccombe, 2007). As well, factory farms – the large-scale, usually monocultured farms that supply many of the cash crops and meat and dairy – dominate the landscape, selling large quantities of relatively-cheaply produced foodstuffs to producers and grocery chains which pass along savings to the consumer in this manner. For these reasons, there is a need for the agricultural industry to develop new markets and attract customers in order to prosper (Charlebois, 2008). This can be done by being more aware of and adaptive to changes in the marketplace, as well as through the development of new agricultural products and services, finding new, creative ways of connecting producers and consumers, and through regulations, policy and programs that support local food.

With regard to the market surrounding food and agriculture, one potential area of growth that farmers may look to is the rise of what Betsy Donald refers to as the "creative food economy" – specifically, the group of niche food products that include local, ethnic, organic and other specialty foods. It has been estimated that this area has grown at a rate of 15 to 25 percent over the last decade, compared with growth of 2 to 3 percent in the traditional agricultural sector (Donald, 2009). While this growth is relative to the size of the initial market (so a small increase in the much larger traditional sector would result in more net growth overall), this trend still indicates a shift in consumer demand that will likely continue. The creative food economy is an industry prompted by broader society's changing views of sustainability and local and regional economic and social development, and furthered through innovation; that is, the way to adapt to constantly changing markets and shifting targets. It is considered to be a key for the further viability of future sustainable economic growth within the agriculture and agri-food sector.

In a matter of a decade, the word 'creativity' and its application to a group of people – the creative class -- have gone from a look at the movement of educated, well-to-do urbanites to form part of the basis for the economic development strategies of many regions, cities and, increasingly, rural areas. Richard Florida's influential 2002 book *The Rise of the Creative Class* has become the inspiration for many subsequent scholarly pursuits surrounding this idea of the creative class and how it is transforming economies everywhere.

Initially, the creative class hypothesis suggested that creative class occupations and those people employed in them are drawn to larger urban centres for the amenities and diverse lifestyles not afforded in peripheral or rural areas. While the level of 'urbanity' plays a very strong role in determining incidences of the creative class, there are also what may be considered "creative capital 'hot spots'" (Petrov, 2007, p.464) – rural and peripheral areas that exhibit high levels of creative occupations and conditions favourable for the creative class. These conditions include a level of vibrancy, diversity and, crucially, innovation and adaptability to changing market needs.

It would be premature to suggest that the rural agricultural areas in the Greater Golden Horseshoe are experiencing a rapid influx of traditionally creative employment, artists, musicians, architects, software designers – the lens through which many still view the creative class. Instead, and in response to critiques put forth almost immediately after the creative class theory gained widespread academic and policy attention, there has been a move to emphasizing the creative aspects of all jobs and occupations. This involves adapting to new situations and products, innovating creative solutions, and being agile enough to make fast changes to the development, creation, harvesting and marketing of products to maintain an appropriate level of efficiency. Indeed, farmers themselves will be the first to say that they are engaged in creative processes, adapting surprisingly quickly to changing market demands:

Many subscribe to the notion that farmers may be less adaptive than they could or should be, or that institutions, regulations and traditions bind and limit farmers' creativity. Farmers would argue, and the facts bear it out, that this is not true. Productivity improvements on the farm have averaged 2.3% per year, which is better than most other sectors of the economy, and the diversity of products has increased substantially. Farmers have demonstrated the ability to adapt and change product lines quickly (Saskatchewan Agrivision Corporation Inc., 2007).

However, it remains unclear to what extent that agility by mainstream farmers represents a shift toward the 'creative food economy' that is a representation of a need to become more economically, socially and ecologically sustainable. While advances in the mainstream agricultural industry may be significant, they seem to merely better optimize the Fordist postwar infrastructural model of efficiency rather than what Florida calls for, a "hybrid Post-Fordist multicultural and ecological economy and society" (Donald, 2009, p. 27). This may be achieved through the recommendations that Donald makes (borrowing liberally from Michael Pollan's *In Defence of Food*), which have been articulated above: "resolarizing the farm" (that is, orienting production to take advantage of natural processes for fertilization, water and sunlight); "re-regionalize the food system, and "rebuild a food culture" (2009, p. 27). While the 'traditional' creative food economy – that one pejoratively made up of wine and artisanal cheese – is one strategy for adapting to market shifts, it is not necessary or even desirable for a majority of so-called mainstream farmers (those who employ more traditional techniques to produce staple fruits, vegetables, grains, dairy and meat products) to shift over to this kind of product. In order to meet the food needs of Ontarians, there needs to be growth – in terms of production numbers, employment and the overall economic value – in this traditional agricultural sector through innovative and creative practices and approaches.

As it has become clear, then, the economic context for food and agriculture has changed in recent decades, and that mainstream agriculture in practice and the policies that govern its operations have been slow to adapt (Donald & Blay-Palmer, 2006). As a result, an increased emphasis on on-farm innovation is necessary for future provincial, regional and individual agricultural viability.



It is through innovation the agricultural sector is enabled to respond to the increasing demand for ethnic, organic and specialty food products while developing new techniques and processes for production, distribution and marketing. Agricultural and farm innovation may also take the form of ancillary on-farm services and practices, such as bed and breakfasts, artisans' workshops or winery tours.

More specifically, an option for producers would to shift some or all of their production to take advantage of new increased demand for these goods. A related strategy may be to engage in

value-adding (the process of creating a new food product from raw initial products) in order to diversify products offered and potentially tap into new markets (Barlas et al., 2001; Charlebois, 2008; Donald, 2009). The above figure of an Innovation Pathway illustrates the process that agricultural innovation may take. Innovation through products or process leads to an increased productivity and output. This then helps the farm operation become more competitive on the market, leading to an increased profitability. To sustain profitability, the process must be sustained.

Both of the strategies mentioned in the preceding paragraph result in products that are differentiated and unique, and may face less competition if they fill a void in the market as well as further extending the way in which a producer can profit from an initial raw product. This would mark a shift away from undifferentiated and generic products, and change the playing field so that these products are not necessarily in direct competition with imported food products (Lyson & Guptill, 2004).

Literature Review

Why Local Food and Agriculture?

Implications for Sustainability

Food, despite its initial simplicity, affects many policy directives—health, hunger, jobs, economic development, environmental and ecosystem protection, cultural awareness and diversity (Donald, 2009). In fact, Morgan (2008) articulates the argument that food is a particularly appropriate prism through which to develop an understanding of current sustainability issues and potential solutions because it permeates on so many levels of both the person as well as society. Furthermore, food is inherently tied to a specific local place but is often traded and transported at the global level, giving it a unique position that lends itself to equal comparative analysis between two divergent, yet inextricably linked, approaches to food sustainability.

Agriculture and food, because of their links to everyone, everywhere, are crucial components of broader sustainability movements. With that, then, in order for sustainable development to "retain an explicit connection to the location, shape, scale, and quality of human settlements," Berke and Conroy (2000, p. 23) identify six principles it must operate within. Collectively, they offer a foundation upon which to base policy and land use planning decisions for achieving sustainability. The six are:

a) land use and development that should protect, enhance, and be harmonious with natural systems;

b) the provision of livable built environments for their inhabitants that offer cohesion, community and access between land uses;

c) the development of a place-based economies that function within natural systems limits;

d) equitable access by all people to important social and economic resources;

e) a 'polluters pay' approach that penalizes polluters for their adverse effects on the environment; and

f) a responsible regionalism.

Balancing these six principles in the process of operationalizing sustainable development requires a new planning agenda that works within the "multiple emergent realities" (Dale, 2001, p. 37) of postmodern democratic societies. They must be brought to the planning forefront and policy-making levels in both the political and social contexts within which they exist in order to begin to address sustainability issues.

Linking localized sustainable development back to the food and agricultural sectors requires a recognition and understanding of the processes currently shaping these industries. Overall, there has been a noticeable shift to more industrial forms of food production, replacing traditional systems with those that proceed with high levels of mechanization and intensification that require greater degrees of capital and technology and less human labour as a result (Smithers & Johnson, 2004). While agricultural profits have benefitted from this approach, the costs stemming from environmental, social, cultural and, more recently, economic externalities have been mounting steadily. This industrial agri-business approach of production has enabled food to become an internationally traded, global commodity. While few are advocating for a complete cessation of international food transactions, there is a growing need to focus on the health and viability of the local regions in which food is grown. Given the uncertainty of the global food system (Donald, 2009; Hendrickson and Hefferman, 2002), locally focused food systems "should not be overlooked for their real work of protecting existing spaces of action or enlarging those spaces" (Hendrickson and Hefferman, 2002, p. 366). Becoming food secure, retaining employment and protecting natural ecosystems and cultural landscapes have become priorities for municipalities, regions, states and provinces, and remaking how agriculture is undertaken will play a vital role in this shift of both policy and practice to being more sustainable.

From the perspective of sustainability, "a focus upon the local and regional is more than simply an attempt to combat and resist 'global forces': it is the beginning of a process of rebuilding more agro-ecological systems which begin to integrate space and nature into production processes" (Marsden, et al., 1999, p. 299). As Feagan et al (2004 p. 237-8) develop further, the concept of sustainability in the local food system places, the values of the community at the forefront, encouraging self-reliance, place-based production that is economically viable for consumers and producers, and enhances the social, environmental and democratic equity of all community members. Moving forward, Barlas et al sum up the call to action for local food producers: "the need for flexibility of production has increased as a result of the growing instability of world trade, with all its consequences for farmers' incomes and employment" (Barlas, et al., 2001, p. 355). Without a focused look at agricultural space – the land, ecological systems and political jurisdictions on and in which agriculture occurs – and practice, and how changes in their policy directions and implementation affect local environmental protection, social equity and economic well being, the potential for food and agriculture to be a forward-looking, successful economic sector in Ontario is weakened considerably.

Food Security and Food Equity Concerns

Food security, or food equity as it has come to be known, "stresses equitable access to food for all people, regardless of income or location" (Metcalf Foundation, 2008, p. 33). Expressed in such documents as Canada's Action Plan for Food Security (1998), food security exists when all people have both economic and physical access to safe and nutritious food at all times that meet their dietary needs for an active and healthy life. Many municipalities, including the City

of Toronto in its Council-passed Food Charter, have made it a commitment to pursue the goal of being a food secure community for its residents by institutionalizing (through civic policy) its concepts and to give advocates a policy basis on which to stand up for food rights (Donald, 2009, p. 25).

At this local level, community food security represents an ideal. However, food secure communities are difficult to achieve. Income inequities and the erosion of the welfare state serve as barriers to many people acquiring healthy food (Johnston and Baker, 2005). As a result, this is leading to unhealthy eating patterns (including fast food and convenience stores as primary sources of food) as well increased visits to food banks. Municipal planning processes may adversely affect access to healthy food through zoning regulations (Wegener, 2009), leading to food deserts – the gaps in the urban or rural fabric where quality food is nowhere near to be found (Lister, 2007). Smoyer-Tomic, Spence and Amrhein (2006) found that zoning and planning emphasize optimal locations for supermarkets rather than for populations in need (p. 322) while Pothukuchi (2004) observes that planning decisions, such as advising against locating a food pantry in a mixed-income neighbourhood for fear of who it may attract, have negative impacts on food security.

However, market forces play a much larger role for the existence of food deserts. Supermarkets or other food stores often pull out of, or do not locate in, neighborhoods when they determine it is no longer economically profitable to do so, creating these gaps in food provision. Bedore (2007) observes this in Kingston, Ontario where a low-income neighbourhood's only full-service grocery store announced its intention to close due for economic reasons. Furey, Strugnell and McIlveen (2001) notes that as the supermarket industry becomes increasingly consolidated, the trend has been to move toward fewer and larger stores, leading to the closure of a chain's smaller outlets that can not compete on the basis of price and availability.

However, while the community food security movement is most visible at the consumption end, especially in urban areas, distribution networks and geography affect access to food in rural areas as well, where cash crops and monocultures controlled by large corporate farms dominate the landscape, leaving little room for fresh fruit or vegetable production (Hinrichs, 2003). Community food security, then, is a reaction to the loss of control and homogenization of food – the standardization and uniformity of food products (Metcalf Foundation, 2008) grown or produced for their reliable taste and appearance – that has resulted from the largescale industrialization of agriculture. It aims to bring back local decision-making and improve long-term access to locally grown food (Allen, 1999), as well as an economic purpose—in rural communities, as in larger urban centres, little money spent on food actually stays within local economies (Hultine et al., 2007). In this sense, community food security projects must address local consumptive inequities – "scaling out" – while also devoting considerable attention to "scaling up", that is addressing structural concerns further along the food chain such as the types of agriculture and its local (or global) focus (Johnston and Baker, 2005). This new approach "seeks to re-link production and consumption with the goal of ensuring both an adequate and accessible food supply in both the present and the future" (Allen, 1999, p. 117). A healthy and sustainable agricultural system for food security, proper education and government regulations to inform the consumer of the benefits that local and regional food systems can have on their overall health are all needed for food security. A region focused on securing its food production in order to secure the consumption patterns of its residents, then, needs a strong local agricultural sector committed to supplying the local market.

Economic Viability of the Agricultural Sector

The largest determinant of whether or not Ontario achieves future food security is the health of the agricultural industry. The goal of food security will never be realized until farming is an economically viable pursuit (Seccombe, 2007; Walton, 2003). At present, the agricultural industry is wrought with financial risk and uncertainty due to corporate food downsizing and rationalization, as well as an exodus of private capital from the province, eliminating jobs and further emphasizing large-scale food production for export rather than domestic consumption (Donald, 2009). In order to make the industry more profitable for current farmers, and more appealing to prospective farmers, it is key that farmers can expect a fair and reasonable return for their products (Walton, 2003, p. 19). Many, however, simply are not receiving enough of a return for their agricultural product. In 2004, 62% of farm families had more income coming from outside the farm than from it (Galant & Wekerle, 2009). Of those 62% of farm operators, statistics from the Ontario Ministry of Agriculture, Food and Rural Affairs (Province of Ontario, 2009a) note that they receive approximately three-quarters household income is from off-farm sources. This indicates that farmers on farms with operating revenues of more than \$10,000 per year are often not able to rely on farming for their livelihood.

The continuity of farming in Ontario is important for retaining and sustaining local food production, but it is also important for the health of rural communities in terms of economics, culture and social considerations. It has been argued that the family farm is more than just a business – rather, it is a social unit as well as an economic one, with strong ties to communities and culture (Smithers & Johnson, 2004). Thus, if the agricultural industry is threatened, there are major implications for the well-being of rural communities.

The Healthy Local Food System

There are multiple reasons people choose local foods (Metcalf Foundation, 2008). Pull factors include: better taste, support for local farmers, and economies (Donald and Blay-Palmer, 2006),

and because the act of purchasing local food – such as through farmers' markets or at roadside stands – is often a more pleasant and cultural experience, with opportunities for community and social interaction (Feagan, Morris & Krug, 2004; Gurin, 2006; Metcalf Foundation, 2008) and an emphasis of the values of connections between consumers and producers. On the other hand, there are several push factors: environmental concerns including climate change and "foodmiles" (the distances travelled by food from field to plate), the harmful effect of chemicals on soil and groundwater, uncertain effects of monocultures, economic concerns (Ontario imports \$4 billion more food than it exports), worries about peak oil, human health, and animal welfare on farms.

In recent years, local food system movements have articulated sustainability directives that call for a decentralization, democratization, and self-sufficiency of food chains (Bellows & Hamm, 2001; Donald, 2009; Feagan, 2007; Lockie, 2009). These food chains help realign the gaps that currently exist in mainstream food systems while, at the same time, achieve a more intimate connection between producers, consumers and the place where the food is produced. For producers and marketers, the global markets are no longer the important ones to capture—food should begin to be directly oriented and marketed to nearby regional centres (UNDP, 1996, p. 5).

Here the concept of 'foodsheds' is helpful to conceptualize local food systems. By replacing "water" in the more common concept of 'watershed' with "food", our eating patterns, and they effects they have, may be oriented within specific delineated spaces and the premise of a unity between nature and society emerges (Kloppenburg, Hendrickson, & Stevenson, 1996). Within these spaces, reframing local food systems as 'foodsheds' implore a further investigation into the places where food is produced, where it travels and, ultimately, where it is consumed. A key to the concept of the 'foodshed,' as developed by Kloppenburg et al., is that of self-reliance, rather than self-sufficiency. Whereas self-sufficiency implies a closed food system, self-reliance "[reduces] the dependence on other places, but does not deny the desirability or necesseity of external trade relationships" (1996, p. 38). Many places, with many regions in Ontario included, are far from self-reliant and their raw agricultural products need to be shipped elsewhere at low prices for processing, manufacturing and subsequent marketing at much higher prices.

Local food systems are about relocalizing the food consumed in an area. The main ways in which these respatialized orientations towards food are conceptualized and articulated include viewing them as shortened food chains, as foodsheds, through the concept of 'terroir' (of and influenced by the conditions of a certain place) and labels of origin, as place building, and as embedded levels of quality and rigor (Feagan, 2007). In areas where large-scale industrial or commodity farming remains the dominant agricultural practice, this becomes one of the major challenges, as the distances food travels between large-scale producers and the consumers' mouths are significant. Local foodsheds can, very crucially, trigger a "revitalization of the

infrastructure needed to grow, process, distribute and consume those foods" that inevitably "create new opportunities for interaction between rural residents and rural farmers" (Hultine, et al., 2007, p. 62).

Regional planning reached a pinnacle in the 1920s with Lewis Mumford, Clarence Stein, Alexander Bing, Henry Wright and Benton MacKaye forming the Regional Planning Association. They embodied a thinking of 'regionalism' that the "we should replace centralized and profitoriented metropolitan society with a decentralized and more specialized one made up of environmentally balanced regions" (Sussman, in Hodge & Robinson, 2002, p. 51). For the first time, food was brought to the forefront of this push to connect urban dwellers with their food producers on the outskirts in the more pristine countryside (Campbell, 2004), having been disconnected as cities, generally initially emerging in productive food-producing regions, grew and distinct divides between urban and rural dwellers emerged.

These ideas resurfaced in the 1960s with the environmental justice movement that placed significant attention to the empowerment and social justice goals of community populations, especially at reducing the risk of environmental harm to vulnerable communities. Now, through alternative food systems which place emphasis on sustainable agriculture, regional "foodsheds", "civic agriculture" and community food security, there is an overall "democratic process [dedicated] to create change in all levels of the food system" (Campbell, 2004, p. 346). For example, civic agriculture is rooted in the social and demographic characteristics of local regions, a stark contrast to commodity agriculture, "which produces undifferentiated products for the mass market" (Lyson & Guptill, 2004, p.375).

Challenges and Opportunities to be reconciled within Local Food and Local Agricultural Systems

Apples and beef consumed in southern Ontario may come from New Zealand or Montana, respectively, despite the local availability of those products within the Greater Golden Horseshoe. Challenging the ability local producers' viability, though, are current agricultural policies at the federal and provincial levels, multinational trade agreements and business practices and relatively cheap transportation costs that often make the importation of food from half a world away more economically viable and politically appealing. Along with a lack of foodrelated infrastructure and the growing disappearance of the middle-sized and family farms (with a reluctance by younger generations to pursue agriculture as a career or selling land for sub- or exurban development becomes attractive income alternatives for farm) challenges abound for the implementation of local food systems in the Greater Golden Horseshoe.

It has been suggested that increased local food production brings with it both advantages and social complications. At the non-local scale, these concerns include such as displaced labour in parts of the world as those areas of the world whose economies are based on the export food trade can suffer due to job loss if foods in importing countries begin to produce locally (Bellows & Hamm, 2001). Locally, it has also been suggested that local food unequally distributes the benefits it professes as it has appealed, at the consumption level, to those of a higher social standing - the phrase 'yuppie chow' has been colloquially used - excluding people with lower incomes, education levels or of different ethnicities (Guthman, 2003; Hinrichs & Kremer, 2002), though it is argued that local foods have the ability to "offer opportunities for a more socially inclusive... model" (Donald & Blay-Palmer, 2005, p. 1914), but also generally environmentally sound protection practices and the possibilities for economic vitality and food security, as discussed above. However, it is extremely far-fetched to envision food systems that operate entirely independently and in a local vacuum as they are inevitably shaped by global forces (Bellows & Hamm, 2001). Gottlieb (in Campbell 204, p. 346) describes the food system as "the place where the local meets the global". While it is easy to categorically call the local 'good' and the global 'bad', based on popular debates about globalization, it has also been noted that there has to be a more nuanced bracketing of these terms, because the interrelated dynamics of food systems cannot simply be categorized one way or the other: inherently, all food is both a global and local phenomenon and there is a need to get past the binary conception of the 'local' versus the 'global' (Campbell, 2004; Hinrichs, 2003).

This is the inherent tension that exists within the food and agricultural industry in Ontario; it is important to note that very few would ever think of calling for the all-out restrictions of food imports or exports. International trade agreements and partnership agreements with other provinces and countries make this concept economically and politically unfeasible, which, too, threatens food security, at least in its current state where much of the population relies substantially on a degree of imported food and its elimination would cause significant disruption in consumption patterns. However, without concerning ourselves with the health of the local food system level to a greater extent, and strengthening the ties between producers and consumers who share the same country, province or region, we may very well lose what has made the Greater Golden Horseshoe region agriculturally important in the first place. There is no alternative but to do something proactive with regard to modern agricultural practice (Caldwell, 1998).



Ontario Growth Secretariat, Ministry of Energy and Infrastructure

Further Challenges: Global Competition and Pricing Structures

Clearly, issues of inequality and access emerge when discussing a rise in food prices. Here, it is important for governments and possibly non-government organizations to help bridge the price gap for healthy, local foods for lower income people. Further, it is tantamount to achieving a sustainable agricultural sector that pricing is fair, both to producers and consumers. As Lister (2007, p. 159) observes: "when the food supply is ruled by the laws of commerce rather than respectful of the laws of nature, and food retailers can cater even more exclusively to the affluent, the result further marginalizes the poor". It seems appropriate to include struggling farmers in the group of those who are marginalized by this pricing system. Adjusting food prices to ensure fairness and proper valuation is crucial for the future of these farmers and of farming itself.

Finding the balance between affordable local food and the assurance of a profitable and viable food production system remains an elusive goal. Feagan (2004) has noted that "we need to 'move beyond the price signal' as the accepted and often sole arbiter for food choice decisions, because it is a narrow and short-term means of attributing value, and contrary to inherent human social interaction needs and realities" (p. 238). It must be part of a sustainable process. However, as Allen (1999) articulates, there is a clear contradiction between meeting the economically sustainable needs of an ecological, socially just, and economically sound food system for both producers and consumers. This becomes one of the largest challenges moving forward on broader food policy that must be approached by all parties holistically – governments, producers, consumers, non-government organizations and others.

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Government at all levels can facilitate this adaptation through policy (Walton, 2003). Initiatives such as Foodland Ontario are used to generate demand for Ontario foods and awareness of local food issues. Policies and programs that allow for, support and promote farmer's markets and other direct marketing initiatives, particularly in cities and areas with low-income populations, would increase access and demand for local food, which in turn would bolster the local food economy (Wegener, 2009). Governments can also incorporate agriculture into economic development planning and provide supports for farm innovation and transitions to new forms of production.

Food producers themselves act as an important gateway into local food. Distribution at farmers' markets and through direct sales can cut out overhead associated with having middle-level handlers, distributors, and sellers, cutting down distribution processes. (Feagan, et al., 2004). Organizing around marketing efforts to promote local food, through the concept of a certification system or 'protected geographical indication' (PGI) that labels where local food originates, inherently ties a the food to that place and the methods that were used in its production (Ilbery & Kneafsey, 2000, p. 319). That said, it cannot be left up to producers to entirely adapt to the current market context of global competition and highly diversified consumer demand. As Wally Seccombe (2007) observes, this laissez faire approach simply is not working for many of Ontario's farmers. For their part, consumers must realize that the true cost and value of food may not be reflected in the current pricing system (Seccombe, 2007). If local food security is a goal of the people of Ontario, there must be some personal responsibility for making it a reality and demand it within a framework of planning, policy, production, and distribution changes.

Innovation leading to farmer competitiveness and access to local food can be limited by largescale retailers and commodity boards, especially those, such as eggs, milk and poultry, which have the powers to set quotas and prices. Both demand high volumes of uniform agricultural products that can serve as barriers for small and middle-sized farm operations to participate (Carter-Whitney, 2008; Metcalf Foundation, 2008). Requiring farmers to produce set amounts of undifferentiated commodities is a significant restriction on the way that farmers operate. Quota systems may be unnecessarily burdensome for those not in it -- the small-scale, local farmers (Carter-Whitney, 2008). This means that there is not much room for these smaller producers to compete with larger firms when they all must fight for their share of the quota, leaving a new consumer market potentially untapped. In addition, with this kind of commodity agriculture, the driving force is productivity and efficiency (Lyson & Guptill, 2004). This system rewards farmers who engage in production of standardized commodity agricultural products, and does not accommodate farmers who produce on a smaller scale, or who have more individuated products. However, there is progress being made to encourage a more innovative use of these products. The Dairy Farmers of Ontario have an exemption for domestic dairy innovation for artisanal cheese makers using traditional production methods, but limiting it to three million litres of milk annually for five years. Chicken Farmers of Ontario allow up to 300 chickens to be

If mainstream supermarkets were able to adapt their buying practices to make it more feasible for them to sell local food, this would allow more local farmers to reach the broad consumer base of large-scale grocery stores. It was also return more control over production decision to farmers (Feagan, et al., 2004). For their part, farmers may also form cooperative initiatives that can sell larger quantities of produce to these mainstream supermarkets. If consumers are less concerned with uniformity in the food that they buy, such restrictions on farmers could be eased. Through changing the relationship between mainstream supermarkets and local farmers, more local food can reach more people in Ontario. By tapping into the growing market for local food, and doing their part in increasing this demand through marketing strategies, all affected parties – growers and consumers – stand to gain.

Further Challenges: An Infrastructure Deficit

One way to adjust prices to bring the production costs and market prices of local foods down is through a "revitalization of the infrastructure needed to grow, process, distribute and consume those foods" which, inevitably, "create new opportunities for interaction between rural residents and rural farmers" (Hultine, et al., 2007, p. 62). The decline in viable domestic agricultural production, which forms the basis for this project, has subsequently resulted in a decrease of the infrastructure and facilities needed to produce, package, transport, market and sell food. Through the 1990s, these agricultural support systems – the suppliers, processors, and service providers who support farming – decreased drastically. Costs to comply with new health and safety regulations in Ontario were too high for many facilities, and market forces encouraged large-scale consolidation of processing facilities. This, in turn, creates a 'snowball effect', as a lack of local food-related infrastructure to process local food means fewer such products are available to consumers, allowing cheaper imported food to fill the void, thus reducing the consumer demand for local food, who now know that such food is no longer readily available or inexpensive.

Responses to public health and safety issues developed for large-scale operations, have created unintentional barriers to small operations (Carter-Whitney, 2008). For meat, federal inspection is required if the meat is being imported out of province or country, which means that large chains will almost exclusively purchase large-scale produced meat. Provincially, abattoirs have closed at a rapid scale since 1991, decreasing access for local producers to provincially-inspected facilities (affecting the lamb industry especially), the geographic dispersion of which provides the backbone of direct marketing and custom slaughtering. A strong local food system requires convenient access to food (Carter-Whitney, 2008). A self-reliant foodshed, then, should be built around the small and mid-sized operations that add value to food grown or raised in

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an area: canneries, dairies, greenhouses, cheese makers, specialty markets and restaurants (Kloppenburg, et al., 1996).

Practically, local food systems should have a convenient central point where food communities can meet, buy and sell, and exchange news and ideas (Hultine, et al., 2007). As a provinciallyrun facility, the Ontario Food Terminal serves as one kind of model such a central point can take. It offers an avenue for purchasers to acquire local food, and should can be a stronger governmental push for more localized food systems, the Terminal would be in a position to encourage or mandate a greater emphasis on such food, especially through an amendment to the Ontario Food Terminal Act.

Though it may not seem it, an unorthodox yet important piece of soft infrastructure, are the people involved in facilitating it. Governmental officials, when receptive to new ideas, may be visionary to recognize their potential for local community and economic development, and provide skills and knowledge to help visionary local food system leaders, producers and retailers gain traction within the community from the regulatory and political side of things. Where these officials work, too, plays an important role: increasing the amount of local food procured by government institutions ('leading by example') and engaging through support of organizations such as Farmers' Markets Ontario and the Ontario Farm Fresh Marketing Association, governments can showcase strong leadership and lead to a greater community cohesiveness and pride, better communication between producers and officials, and more invested consumers, all elements critical for the success of a newly-implemented local food project (Hultine, et al., 2007).

The lack of infrastructure prompts the postulation that, if the demand for local food had remained the same or international trade and advances in crop and transportation technologies had not occurred, many of these facilities and the infrastructure connecting them would still be in place. The Metcalf Foundation writes that these processors are a "critical piece of the 'middle'" (2008, p. 32), and that by 'refilling' the middle-sized farms again, Ontario can move toward a time when locally-grown and produced food is valued.

Further Challenges: A 'Hollowing Out' of the Middle

Wally Seccombe begins his paper "A Home-Grown Strategy for Ontario Agriculture", published by the Toronto Food Policy Council in 2007 with an important statement: around the world, the number of smaller farms are dramatically being reduced as the remaining farms increase in size and become more specialized and more capital-intensive and 'productive' (as measured purely by the cost per unit of output without taking into account resultant environmental, social or economic problems that arise). According to Seccombe's observation, Ontario has not been immune to this trend (2007). From 1999 to 2004, smaller farms in Ontario – those grossing incomes of less than \$100,000 per year – have lost money. These farms make up roughly 50% of total farms in Ontario (Sparling & Laughland, in Seccombe, 2007) and, using Holland Marsh as an example of an intensively-cultivated region with mid-sized family-run farms, it is these regions that are best able to feed their regions and improve on food security by providing a balance between total yield and a dedication to the food they grow.

This 'hollowing out' of middle-sized family farms, or "bipolar organizational structure" of North American agriculture (Thompson, 2000, p. 217), as it has been called, may result in a "landscape of agricultural production [that] could be characterized by many small, civically oriented enterprises in and around metropolitan areas and a relative few very large, geographically concentrated commodity producers" (Lyson & Guptill, 2004, p. 382). This is confirmed by Ontario agricultural statistics: between 1996 and 2006, the number of farms more than 560 acres large increased by 25%. During the same time period, the number of farms smaller than 560 acres, which represent the vast majority of farms in the province, decreased by almost 18 percent. However, the number of the smallest farms, those under 70 acres, has been on the rise since 2001, an increase of more than one thousand farms, or almost ten percent (OMAFRA, 2008).

Why has this been happening? One of the main reasons is that as farmers grow older – the average age of a farmer in the Greenbelt is almost 53 years old (Petrie, et al., 2008) – fewer and fewer of their children are willing or able to take over the farming operations (Metcalf Foundation, 2008; Walton, 2003). If no one is able to farm the land, it degrades, as it is not kept up in active agricultural rotation, making it more difficult for future potential farmers to use that land. A study of family farms found "issues relating to risk and the life cycle of both the enterprise and the household were clearly important in understanding the current status and likely near-term future of family farms" (Smithers & Johnson, 2004, p. 206), concluding that farming is a difficult way to earn a living at the best of times. It is thus understandable that young people, more exposed than ever opportunities elsewhere, may be tempted by a more stable or less strenuous way of life.

There are other individual reasons that are contributing to a hollowing out of the middlesized farm. Land is expensive to acquire (Metcalf Foundation, 2008; Mitchell, et al., 2007). If farmland remains inaccessible to purchase, and rental or lease terms too short, farmer confidence to put roots down in the region is liable to be decreased (Mitchell, et al., 2007). Another reason identified as limiting to the growth of this middle sector has been the reluctance or inability of new immigrants to engage in their own farming practices as most live in cities (though programs such as Farm Start are trying to shift this) (Mitchell, et al., 2007).

If 'hollowing out the middle' is a problem, then its solution is to 'remake' it. One way to do

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this, as identified by the Metcalf Foundation (2008) is to connect small- and mid-size food producers to distribution networks more effectively, either to large supermarkets themselves or with a more proactive approach whereby a "food Purolator" is used around the region to collect and distribute food. As an interconnected issue, local food processing capacities should be re-established, while emerging e-commerce linking producers and consumers in new food procurement methods are encouraged.

Further Challenges: Farmland – Static or Dynamic Preservation?

Peri-urban regions, or those areas between the newest built-up suburban development and the outer limits of the commutershed, are those areas among the most likely to be pulled in all different directions as the complex mix of uses—rural farm and rural non-farm, residential and recreational uses—inevitably leads to some degree of tension and conflict (McKenzie, in Houston, 2005) and place the Greater Golden Horseshoe under threat (Walton, 2003). Indeed, these regions are geographic units both stable and ever changing, "where internal and external forces are continuously transforming and reinforcing [them] in a multitude of ways" (Feagan, at al., 2007, p. 31).

Conflict centered on urban development and agricultural uses can be explained historically. Initially an agrarian society, areas first settled in Ontario were those where agricultural production was easiest and most convenient. As more people were attracted to these areas, increasing areas of land were used for non-agricultural purposes, eventually growing into additional towns and cities, and, more recently, the infrastructure that connects them. Today, there are concerns about land being squeezed for further development, putting additional pressure on local infrastructure.

According to Heimlich (1992), "neoclassical spatial economic theory treats the location of agricultural land uses as a trade-off between attraction to urban markets and competition from urban land users" (p. 457), though the locational links between urban centres and agricultural uses have been more-or-less eroded as food has become a globally-produced and traded commodity. However, even as cities have become less dependent on the nearby agricultural areas for agricultural yields, those areas nonetheless have to compete with ever-encroaching built-up urbanity in terms of intensified land use and the associated higher rents. In addition, each time a piece of farmland is sold to speculators or developers looking to construct a new subdivision, the rural landscape is fragmented, destroying a little bit of the ecological, social and aesthetic value of the region each time (Lister, 2007). Once agricultural land is lost, it cannot be replaced; for this reason, it must be protected in order to maintain strong local food connections and to increase the Greenbelt's, and thus the Greater Golden Horseshoe's, overall sustainable impact.

Without government policy, through provincial legislation or regional plans, land on the urban periphery is always subject to be threatened by urban development. In Ontario, the most obvious example of such a place-based policy was the Greenbelt Act. Recognizing that much of southern Ontario's best agricultural land was under threat by encroaching urbanization and suburbanization, the Province enacted the Act in 2005 which protects more than 1.8 million acres of prime agricultural land in a ring around the western half of Lake Ontario and the Greater Toronto and Hamilton Area, from Niagara in the southeast to Northumberland in the northeast. It serves to protect against urban sprawl while preserving some of the best agricultural land in Canada. In addition, it serves to keep natural systems intact and ensure that the rural landscape, with many historic communities and settlement areas, is preserved for perpetuity.

In areas outside the Greenbelt legislated area, more attention is now being paid to friction between different rural residents (farm and non-farm) and how this is reflected in policy and community development strategies (Smithers & Johnson, 2004). Much of the 'whitebelt', or the areas primarily in the Regions of Halton, Peel, York, and Durham situated between the built-up urban areas and the protected Greenbelt where major suburbanization may still take place, is in the hands of developers, ready to go under when the time is right to develop (Metcalf Foundation, 2008, p. 18).

In order to be effective, land use policies such as the Greenbelt Act "must encompass dependable, high-quality farmland, not merely undevelopable land that happens to be available. Cities like Toronto need to consider seriously a concomitant approach to greenbelts for near-urban agricultural planning that includes, for example, farmland trusts, agricultural preserves, and –most important—tax incentives to keep farmers on the land and the land working" (Lister, 2007, p. 175). At the same time, farmers in the aforementioned whitebelt areas should not feel that the only way to 'cash in' is to sell to a residential developer. If governmental policy forces cannot be used to protect against this, then social and, especially, economic forces (as mentioned above) must be significantly valuable enough at keeping near-urban farmland in active agricultural production.

Where large-scale industrial or commodity farming prevails, this land use dilemma between policy protection and value justification becomes one of the major challenges. As Hultine et al note (2007, p. 62), these types of agricultural systems distance themselves from not only the end consumers, but everyone else in the food chain as well, even in rural areas where agriculture was traditionally the raison d'être. The benefits of establishing a more localized foodshed are the greater availability of more diverse foods and the establishment of connections between producers and consumers, which lend themselves to creating opportunities for creating market share and diversification of agricultural products. In addition to policy levers that municipalities or regions can implement if they make farmland preservation and active agriculture priorities in the future, farmers must find new or improved ways to be economically viable.

Moving Toward a Better Understanding of Land Use Planning for Food and Agriculture

Many of the land use planning tools that are used in rural and agricultural areas of Ontario are employed to minimize the risk of lands being taken out of agricultural production. These policies have been progressively strengthened by successive governments – provincial, regional, and municipal – over time as urban development has continued in southern Ontario and the need to protect this limited resource has grown more clear. These policies aim to give farmers and those employed in the agricultural sectors some certainty that their labour and investments in the land will be worth their while (Walton, 2003). Provincial level policies aim to protect and preserve farmland from fragmentation (through severance and new lot creation) and increased development as well as to keep agricultural lands, particularly prime agricultural lands – the "land that includes specialty crop areas and/or Canada Land Inventory Classes 1, 2, and 3 soils" (Province of Ontario, 2005b, p. 34) – in perpetual agricultural production.

Agricultural land preservation efforts have gained traction in recent decades as a response to the voracious appetite of suburban land developers and the consequent urban sprawl. The primary notion behind many of these policies of preserving prime land often seems to do this at the expense of creating the conditions of allowing many contemporary agricultural practices to establish modern, on-farm innovation requiring polices that move beyond simple land preservation and toward a more updated understanding of what is necessary in order to keep these lands in agricultural use. As opportunities in agriculturally-dominated areas dwindle, so too does the potential to attract new generations of people to mainstream farming, as we currently understand it. In an industry where the average age of farmers is increasing and there are fewer willing to pick up where they leave off, there is a risk that replacement on-farm labour will be difficult to find. If there is an ongoing lack of those willing to farm the land, the likelihood of these lands being underused and eventually converted to other increases dramatically. While land preservation is a worthy goal, how can a balance be reached between its protection and allowing some room for increasingly necessary on-farm innovation? To promote policy and land use flexibility that will encourage new generations of farmers to engage with the industry in new and sometimes unorthodox ways that do not fit with the typically traditional definitions of what constitutes agriculture in provincial policy and Official Plans today.

Study Regions

Regional Analysis: Situating the Problem Geographically

REGIONS OF STUDY

The Greater Golden Horseshoe, located in Southern Ontario, is situated on much of Canada's prime agricultural land, as defined by exemplary soil conditions conducive for agriculture. More than half of the country's very best land, Class 1 agricultural land, is found in southern Ontario (Watkins, Hilts & Brockie, 2003). However, 18 percent of that Class 1 land has already been urbanized and thus irreversibly removed from food production and another 22 percent of this developing rural agricultural landscape that is facing constant urban development pressure (Petrie et al., 2008). The Greater Golden Horseshoe is comprised of a total of twenty regions and single-tier municipalities. Within these regions there is a vast representation of the agricultural industry, development pressures, and economic characteristics. This research focuses on four regions – the County of Simcoe, Region of Waterloo, Region of Halton and the Region of Niagara – that encapsulate the diverse aspects of the agricultural industry.

Significant policy measures have been put in place to protect agricultural land in the Greater Golden Horseshoe. The most significant of these is the Greenbelt Act. It protects approximately 1.8 million acres of protected land spanning Southern Ontario, stretching from south of Peterborough, across the north of Toronto to Lake Simcoe, north on the Niagara Escarpment to Tobermory at the top of Bruce Peninsula and around Hamilton to Niagara Falls . The Greenbelt area located in this region has become vital to the quality of life of Ontarians with strong environmental leadership in terms of its green space, vibrant communities, wetlands, forests, watershed and leading farmland inventories.

Regions of Study – Selection

In order to better understand and explore the opportunities for agricultural innovation in this area, our research began by studying representative peri-urban municipalities within the Greater Golden Horseshoe region which will allow for a more grounded and focused scale of investigation on farm innovation barriers and their manifestation. This will eventually lead to strategies that encompass more responsive, adaptive, and contemporary approaches to land use planning.

To effectively narrow down our research focus, a preliminary study on representative regions within the Greater Golden Horseshoe was designed as the first step of scoping meaningful cases or issues on farm innovation. By determining the geographic profiles, further investigation and exploration of the specific issues based on localities, would be more substantial and grounded.

In order to select the most desirable regions of study, different criteria are established to evaluate the areas of interest. The process of setting such criteria is a critical research practice that aims at seeking measurements for: regional agricultural capacity (ie. farming performances, how agriculture is addressed and visioned); and maturity of the existing regional regulatory framework for agriculture development. Focusing on these two major aspects as background studies, the objective is to reach a list of no more than five regions that present the most diversity and potential in fostering farm innovation.

For the purpose of pinpointing regions that varied in total land mass encompassed by the



Greenbelt legislation, a geographic criteria is first used to pare down the twenty singletier municipalities and upper-tier regions. As well as covering the far east, south and north of the Greater Golden Horseshoe, the desirable regions for this project also represented a range of backgrounds with a broad range of agricultural priorities, economic profiles and planning issues.

Based on this geographic criteria, we narrowed the twenty regions within the Greater Golden Horseshoe by half and collected additional quantitative and qualitative information about the regions. This included: land use data (proportion of land in region covered by the Greenbelt Act; proportion of land in region that is classified as farmland), economic data (regional

farm receipts; farm capital; proportion of employment in the region that is in agriculture sector; regional taxation rate for agriculture), agricultural data (top agricultural sectors; number of farms; average farm size; area of farmland; presence of farmer's associations), and policy (attention given to agriculture in the regional Official Plan).

Through an in-depth research process that scrutinizes the relevant quantitative and qualitative indicators, the selected focus regions of analysis are the County of Simcoe and the Region of Waterloo, the Region of Halton, and the Region of Niagara. The client had indicated a strong interest in focusing some of our research on agriculture in the Region of Waterloo and in Holland Marsh (primarily located in the Region of Simcoe), while the other two regions were selected to ensure a range of characteristics among the four regions.

County of Simcoe

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Under \$10,000 \$49,999

\$99,999

\$249,999

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\$499,999 \$999,999 \$1,999,999

and over

33

to

The County of Simcoe is located in the central portion of Southern Ontario and north portion of the Greenbelt, bounded along the north by Georgia Bay and the District of Muskoka, on the east by the City of Kawartha Lakes and the shores of Lake Simcoe, on the south by the Regional Municipalities of Peel, York, and Durham and on the west by the Counties of Grey and Dufferin.

In 2006, the county was home to 2,402 farms (equaling a total of 216,002.2 hectares), which accounts for about 4.2 percent of the total farm area in the Province (Statistics Canada, 2006). Agriculture is the predominant land use activity in the County, reporting total gross farm receipts of \$269.7 million and employing over 9,800 people in the agricultural sector (Statistics Canada, 2006). Comparing the agricultural statistics from 2006 and 2001, the county experienced a 1.3 percent drop in total area of census farms, and a 0.36 percent decrease in agricultural employment rate which is defined as the percentage of persons employed by agricultural industries (Statistics Canada), however an overall 60 percent increase in total farm capital value which includes the value of all farmland, buildings, farm machinery and equipment, livestock and poultry (Statistics Canada, 2006). From Figure 1-3 below, it can be deduced that Simcoe contains mostly small- and medium- size farms in terms of both size of operation and value of sales. Figure 4 indicates that the most popular farming industries in the County are cattle, diary, grain and nursery farming.



Feather and agg production Hog and pig farming

Board cattle servicious and farming

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The Places to Grow publication Simcoe Area: A Strategic Vision for Growth (2009), builds on the Provincial Growth Plan for the Greater Golden Horseshoe and states that "protecting the valuable farmland and recreational areas upon which the area's agricultural and tourism industries depend" is one of the key priorities for ensuring sustainable long-term growth (Simcoe Area: A Strategic Vision for Growth, 2009, p.2). In the report, the importance of the Simcoe area's agricultural industry is emphasized as a consideration when planning for long-term job growth. It is recognized that nearly half of the county's land base is agricultural and its related industries remain a "productive and vibrant industry, particularly in the south and central portions of Simcoe County" (Simcoe Area: A Strategic Vision for Growth, 2009, p.19).

The significance of agriculture development is not only articulated in regional official documents, but also in the existence of local farming associations. An example is the Simcoe County Farm Fresh Marketing Association, that was formed as a grass-roots organization in 2005 and later incorporated as a non-profit organization in 2007 (Simcoe County Farm Fresh, 2008). Comprised of farmers, farmers' markets, restaurants and community partners, the association focuses on marketing to raise awareness on locally grown food through various farmers' markets and specialty niche markets located on several farms within the county.



Greenbelt Foundation, Tim Hagan
Region of Waterloo

The Region of Waterloo is located in the west proportion of Southern Ontario, however, away from the Greenbelt area. It is in the centre of the triangle bounded by the Great Lakes of Ontario, Erie, and Huron. Consisting of three urban municipalities and four rural townships, the Region of Waterloo is one of the fastest growing areas in the Province.

The region has 1,444 farms (91,614.4 hectares of farm area) which accounts for about 1.7 percent of the total farm area in Ontario, with a total gross farm receipts of \$313.9 million and an employed population of over 9,200 people in the agricultural sector (Statistics Canada, 2006). Comparing the agricultural statistics of 2006 and 2001, the region experienced a 0.02 percent decrease in agricultural employment rate, yet a 0.3 percent increase in total area of census farms and a 33.74 percent increase in total farm capital value (Statistics Canada, 2001 and 2006). In addition to such impressive growth in the farming industry, Figures 5-7 below show that over 80 percent of the census farms in the region demonstrate a medium to high capital value (\$500,000 and over) with the majority of the farms in the region engaging in relatively high volume of sales (Statistics Canada, 2006). The top three agricultural sectors in terms of number of farms are cattle, dairy, and grain (see Figure 8).













Development of agricultural industries is mentioned in a number of regional documents in Waterloo. Adopted in June 2003, the Regional Growth Management Strategy (RGMS) provides direction for the long-term growth management of Waterloo over the next several decades. This strategic plan articulates preservation of agricultural industry as the 4th Goal ("Protecting Our Countryside") with an emphasis on its contribution to the region as a whole. It advocates the "Buy Fresh, Buy Local" Initiative and the need to explore the possibility of developing a Regional Agricultural Strategy in conjunction with the area municipalities, agricultural agencies, and farm commodity groups.

Moreover, the Waterloo Region 2007-2010 Strategic Plan specifically states the regional vision as "an inclusive, thriving and sustainable community committed to maintaining harmony between rural and urban areas and fostering opportunities for current and future generations" (Waterloo Region 2007-2010 Strategic Plan, 2007, p. 2). It also identifies preservation of agricultural land and sensitive environmental areas to be consistent with the goals of the Regional Growth Management Strategy.



Greenbelt Foundation, Tim Hagan

Region of Halton

The Region of Halton is located in the south central area of Southern Ontario with approximately one third of the Region's land covered by the Greenbelt. It is bounded by the Lake Ontario on the east, City of Hamilton on the south, County of Wellington on the east, and Region of Peel on the north. Despite the unprecedented growth in residential development in Halton during the past decade, agriculture and the protected landscapes along the Niagara Escarpment have always been the predominant land uses.

The Region has 566 farms (35,976.2 hectares of farm area) which accounts for about 0.7 percent of farmland in Ontario (Statistics Canada, 2006). Halton has a total gross farm receipt of \$72 million and over 7,400 people are employed in the agricultural sector (Statistics Canada, 2006). Comparing the agricultural statistics of 2006 and 2001, the region experienced a 10 percent decrease in total area of census farms, a 0.17 percent decrease in agricultural employment rate, yet a 15.14 percent increase in total farm capital value (Statistics Canada, 2001 and 2006). Figure 9 shows that nearly half of the census farms in the region are recorded to have a rather high capital value (\$1,000,000 and over), however, Figures 10 and 11 imply that more than half of the farms in the region are on a smaller scale (both in terms of farm size and total value of sales). While most farms are engaged in miscellaneous specialty production, such as nursery and fruit farming (30 percent), beef cattle and grain farms are also prevalent (see Figure 12).



Being one of the strong supporters of the Greater Toronto Area Agricultural Action Plan, the Region of Halton has a well-organized Agricultural Advisory Committee that "advise and assist the Region in its effort to develop and maintain a permanently secure, economically viable agricultural industry as an important component of Halton's economic base, and as a source of employment for Halton's rural community" (Halton Agricultural Advisory Committee website). The region also has established an Agricultural Community Development Fund that is to support and develop the agricultural industry and community in Halton. Such programs help agricultural organizations to openly seek assistance as well as share information and expertise with other organizations.



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Niagara Region

Comprised of twelve municipalities in the south proportion of Southern Ontario, Niagara Region occupies most of the Niagara Peninsula. It is bounded by Lake Ontario on the north and Lake Erie on the south, and by the Niagara River on the east – which is also the border with the United States. Niagara Region is well known for its agriculture and tourism industries because of its unique natural landscape. The tender fruit production and proliferation of the estate wine industry is recognized as a major economic driver of the region.

The Niagara Region has 2,236 farms (93,777 hectares of farm area) which accounts for about 1.7 percent of the total farm area in the Province (Statistics Canada, 2006). Niagara has a gross farm receipt total of \$562.7 million, with over 16,400 people employed in the agricultural sector (Statistics Canada, 2006). Lincoln, Niagara-on-the-Lake and West Lincoln generated the highest gross farm receipts; and Fort Erie, Niagara Falls and Welland had the lowest (Petrie, et al., 2008). Comparing the agricultural statistics of 2006 and 2001, the region experienced a 0.5 percent decrease in total area of census farms, a 0.45 percent decrease in agricultural employment rate, however a 36.7 percent increase in total farm capital value. Figures 13, 14 and 15 indicate a proportionate distribution of different capital value categories amongst census farms, meanwhile there exists a relatively large percentage of small-scale farms in the region. This suggests an overall healthy environment for farm development. In terms of the types of agricultural industries, the region is apparently predominated by nursery, fruit and tree-nut farming (over 53 percent as shown in Figure 16).









Recognizing agriculture as one of its key economic engines, Niagara has already made concentrated efforts in addressing the importance of on-farm development in comparison to other regions. For instance, value-added agriculture processing is suggested as a major industry cluster in Navigating Our Future: Niagara's Economic Growth Strategy 2009-2010 - a regional document which presents strategic directions and the corresponding supporting action plans to foster economic growth.

The Niagara Regional Agricultural Sub-Committee is a sub-committee of the Regional Planning Services Committee established in 1972, that aims to provide input from the agricultural industry on planning issues and specific development applications, as well as supporting programs promoting the agricultural industry in the Region. This Agricultural Sub-Committee has been effectively proposing advice to the Planning Services Committee and Regional Council on agricultural land use issues.



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Study Regions

Policy

Situating the Problem within Policy

Flexibility in Land Use Planning to Allow Agricultural Innovation: The Approach Taken

Land Use Policy

The role of Provincial legislation is to regulate land use planning in Ontario. Land use planning policies take many forms that encompass different understandings of, and approaches to, agriculture. In rural areas land use planning serves an important function by employing a set of tools, including; the Ontario Planning Act, the Provincial Policy Statement, Places to Grow Act and Greenbelt Act, and municipal official and secondary plans, and zoning by-laws, to realize goals around environmental protection, land preservation, food sustainability, economic development, public health, and to maintain rural culture.



The Planning Act, as an official piece of legislation with legal authority in the Province of Ontario, regulates planning at a broad level. This Act intends to

...promote sustainable economic development in a healthy natural environment ... provide for a land use planning system led by provincial policy ... integrate matters of provincial interest in provincial and municipal planning decisions ... provide for planning processes that are fair by making them open, accessible, timely and efficient ... encourage co-operation and co-ordination among various interests ... [and] recognize the decision-making authority and accountability of municipal councils in planning (Planning Act, 1990).

All provincial and municipal policies must comply with the Act.

The Provincial Policy Statement (PPS) is issued under the power of Section 3 of the Planning Act (Province of Ontario, 2005b). The PPS "provides direction on matters of provincial interest related to land use planning and development and promotes the provincial "policy-led" planning system" (Province of Ontario, 2005b, p. 2). The PPS is implemented through provincial, regional, and municipal planning documents such as the official plans and local zoning by-laws. This Statement reinforces the provincial goals, while regulating the development and land use through a planning policy foundation (Province of Ontario, 2005b). Growth in Ontario is focused within settlement areas, through the PPS, and away from areas that pose risks or contain significant or sensitive resources (Province of Ontario, 2005b).

The Greater Golden Horseshoe (GGH), located in Southern Ontario, was prepared under the Places to Grow Act, 2005 (Province of Ontario, 2006). This framework helps to manage growth and demonstrates leadership in these regions while building stronger and prosperous communities (Province of Ontario, 2006). While this Plan functions within existing planning framework and provides direction for growth management policy, it does not act to replace upper tier and lower tier municipal official plans (Province of Ontario, 2006). Municipalities in the Greater Golden Horseshoe are required to conform to and incorporate the Places to Grow Act into regional and local planning policies. Within the Greater Golden Horseshoe, the Greenbelt Plan provides clarity surrounding the overarching GGH strategy. To protect the agricultural land database and ecological features, "the Greenbelt Plan identifies where urbanization should not occur" (Province of Ontario, 2005a, p. 3). Within the Greenbelt Plan, the Niagara Escarpment Plan and Oak Ridges Moraine Conservation Plan, support specified ecological lands building upon the Greenbelt protection (Province of Ontario, 2005a). In the Greater Golden Horseshoe, not all lands are protected by the Greenbelt Plan. The lands protected by the Greenbelt Plan are subject to different – and stricter – planning policies than lands located outside of the Greenbelt.

For instance, the prime agricultural area policies outlined in the Greenbelt Plan, permit uses including, agricultural, agriculture-related, normal farm practices and secondary uses (Province of Ontario, 2005a). The Plan does not permit municipal official plans to redesignate lands for non-agricultural uses, except for the expansion of a settlement area or the refinement to rural area and prime agricultural designations (Province of Ontario, 2005a, 3.1.3.2). Finally, any new land use, expansion of livestock facilities, and lot creations must comply with the minimum distance separation formulae (MDSF) (Province of Ontario, 2005a, 3.1.3.4). According to the Places to Grow, Greater Golden Horseshoe Plan, prime agricultural areas, "municipalities are encouraged to maintain, improve and provide opportunities for farm-related infrastructure" (Province of Ontario, 2005b, 4.2.2.3, emphasis added).

Further to these policies, the Greenbelt Plan provides regulations for rural areas. These areas support tourism, recreation, institutional and commercial/industrial uses. These existing uses are permitted to expand at their location; however newer developments generally take place in settlement areas (Province of Ontario, 2005a, 3.1.4).

In the Greenbelt Plan there are two areas that are defined as prime agricultural areas, the Niagara Peninsula Tender Fruit and Grape Area and the Holland Marsh. Both of these areas are regulated by a 'specialty crop area' policy. The largest difference between agricultural area

policies and the specialty crop area policies, outside of the Niagara Escarpment Plan, is that the expansion of towns, hamlets, and villages are not permitted in specialty crop areas (Province of Ontario, 2005a).

Lands located in the Greater Golden Horseshoe and outside of the Greenbelt Plan area, do not lack importance (Province of Ontario, 2005a). These significant agricultural areas and land resources continue to be governed by the Ontario Planning Act, Provincial Policy Statement, and Places to Grow Act. The preceding policies manage land use in these areas, and have the potential to be managed by future planning frameworks.

A lack of conformity in provincial, regional, and municipal policies, results in a variety of outcomes at the land use planning level. In the case of agricultural uses the PPS is broad, allowing for interpretation at regional and municipal levels, and all encompassing whereas the regional and municipal official plans and policies are often restrictive, preventing farmers from taking part in innovative practices. That said, provincial policies are broad and extremely open, allowing much room for interpretation whereas municipal policies are more restrictive as to what is permitted or not. Although these municipal policies must conform to provincial legislation, a vague perception can often lead to a variety of outcomes and interpretations of the land use planning policies.



Policy

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Findings

Findings

Emerging themes and land use planning issues evolved through the four regional investigations. These five land use planning issues focused upon are, secondary uses or mixed use, valueadding, severances, minimum farm parcel size, and minimum farm distance separation. These land use planning issues and their outcomes impact larger agricultural issues, especially those surrounding sustainability, food equity and the economic viability of agriculture in southern Ontario.

Issue 1: Secondary Uses

The first of five land use planning issues is secondary uses, also referred to as mixed uses. Secondary uses may include agriculture-related, agri-tourism, and value-adding industries, such as, specialty cropping, market gardening, bed and breakfast/farm operations, and what some regions define as "commercial and industrial" activities that are related to agriculture. The criteria for possible secondary and mixed uses are outlined in municipal planning documents. On prime agricultural lands, permitted uses include: defined agricultural uses, secondary uses – any use that is secondary to the primary use of the property, such as, home operations, home industries and value-added agricultural products – and agriculture-related uses.

As defined by the Provincial Policy Statement, agriculture-related uses: "means those farmrelated commercial and farm-related industrial uses that are small scale and directly related to the farm operation and are required in close proximity to the farm operation" (Province of Ontario, 2005b, s. 6.0). The Greenbelt Plan supports and permits secondary uses in specialty crop areas, prime agricultural areas, and rural areas of the greenbelt (Province of Ontario, 2005a). As per provincial policy, when changing the use of agricultural lands, the new use must not encumber surrounding agricultural operations; this is regulated by the minimum distance separation formulae, which will be discussed in detail below.

The way in which regions and municipalities interpret the Provincial Policy Statement, Greater Golden Horseshoe, and Greenbelt Plan can hinder flexibility and innovation in agriculture. The ability to interpret provincial legislation allows for a narrowly defined permissive use to secondary uses in land use planning. The broad provincial definition and land use policies allows the Official Plans for the Region of Halton, Region of Niagara, Region of Waterloo, and the County of Simcoe to distinguish what they deem as acceptable for a secondary use, to the primary use of the property, in agricultural areas.

The Region of Halton's Official Plan outlines details of the permitted secondary uses. The policy

allows for home industries and agriculture-related tourism, provided that the gross floor areas do not exceed was it permitted in the Official Plan, and these uses are only permitted "if located on a commercial farm and secondary to the farming operation" (Region of Halton, 2006, s. 100.100(21)).

Region of Niagara permits those uses that are small in scale and directly related to the agricultural area, but these uses must be secondary to the principal property use. Where the Niagara Escarpment Plan area exists, conflicting secondary uses are not permitted (Region of Niagara, 2007). Within the region, local official plans and zoning by-laws regulate retail space for seasonal farmers markets (Region of Niagara, 2007). The Region of Niagara's Official Plan strictly limits the establishment of non-agricultural uses in agricultural areas, although applicants may be considered on individual basis (Region of Niagara, 2007).

As briefly outlined in the Region of Waterloo's Official Plan, the policy regulation for secondary uses is determined by municipal official plans (Region of Waterloo, 2009). Secondary uses in prime agricultural areas and rural areas must adhere to the strategies outlined in the Region of Waterloo's Official Plan. This policy indicates that the secondary use is accessory to the property's principal use, compatible with surrounding operations and small in scale, and that new secondary operations be integrated in the main farm building (except for road side stands) (Region of Waterloo, 2009).

The County of Simcoe protects the prime agricultural areas while permitting, amongst other uses, "agriculture-related uses ... secondary uses ... processing of agricultural products, and agricultural produce sales outlets generally marketing production of the local area" (County

of Simcoe, 2008, 3.6.4). The Official Plan does not permit lot creation for any secondary use, agricultural product processing operations and/or agricultural produce sales (County of Simcoe, 2008).

In discussion with Ontario farmers and key stakeholders, OMAFRA's Agricultural Advisory Committee determined that for farmers to be economically viable, they require the ability to operate secondary uses/business on their farms, which is presently not the case (Province of Ontario, 2008). OMAFRA advised the Ontario Government to permit secondary uses to the primary use of the farm, and value-



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adding operations provided that they meet specific criteria (Province of Ontario, 2008).

Secondary and agri-tourism uses, including farm-gate markets, pick-your-own operations, and corn mazes not only bring the consumer and community together as they begin to share a future around food security, they also generate economic benefits for local farmers and farm families (Carter-Whitney, 2008; Feagan, et al., 2004; Petrie, et al., 2008; Urban Food Distribution Systems, n.d.). According to a municipal perspective, Caldwell's study indicates that the Region of Halton, Region of Niagara, and the County of Simcoe, all incorporate policies surrounding agri-tourism, on-farm secondary uses, and direct farm marketing, in agricultural areas (Caldwell, 2006). Caldwell states that it is "unusual to find policies in official plans that allowed more substantive commercial accommodations in an agricultural designation" compared to the use of farm-stays and bed and breakfasts (Caldwell, 2006), although addressing the possibility of value-added commodities may require such designations. He argues that the key challenge for municipalities is to decide what secondary uses on farms are appropriate - this aspect of planning has direct implications for the degree to which farmers can innovate. Caldwell suggests that secondary uses can be more effectively evaluated using the question of compatibility rather than limiting secondary uses explicitly (Caldwell, 2006), and this would bring a degree of flexibility and judgment to land use planning for agriculture. Betsy Donald echoes this need for land use planning policies in Ontario to allow for more uses so that farmers can diversify their farming operations (Donald, 2009).

Issue 2: Value-Adding

A second land use planning issue, closely related to secondary use, is a value-added agricultural product. A value-added product is a raw agricultural product that has undergone additional stages of processing. A value-added process may occur as a secondary use to the primary use in agricultural areas.

Presently, value-adding methods such as, distribution, packaging, and processing, are hindered by several provincial and municipal policies, including the Provincial Policy Statement, Places to Grow, Greenbelt Plan, upper and lower tier municipal official plans, and zoning by-laws. As discussed in the Region of Niagara Official Plan, value-adding activities are only permitted if "all of the property remains designated and zoned agricultural" (Region of Niagara, 2007, p. 50). This restriction may not allow processing on-farm if lands require a redesignation to 'industrial' uses. Although the Provincial Policy Statement does not specifically address value-added agricultural products, these activities are permitted under secondary uses. The lack of definition could be a hindrance to land use planning as the regional interpretations may be restrictive. Issues arise when agricultural lands may require redesignation to accommodate the production

of the value-added commodity.

The Official Plans for the Region of Halton and Region of Niagara are notable as they mention value-added commodities, although they do not specify what type and how production can take place in agricultural areas. The general understanding of value-adding as outlined in these Official Plan's offers an example for other regional Official Plans to follow, as presented below. Contrary to this are the Region of Waterloo and the County of Simcoe's Official Plans concentration on secondary uses, which as discussed above, does not elaborate upon value-adding processes.

Presently the Region of Halton's Official Plan addresses value-added products, stating that retail uses are permitted provided that majority of the value of commodities for sale are manufactured and/or produced on farm and that the operation continues to be secondary to the primary farming operation (Region of Halton, 2006).

In the Region of Niagara the production and marketing of value-added products are permitted provided they are secondary to the primary use of the agricultural property. Any value-added product produced and marketed must originate from the on farm operations (Region of Niagara, 2007). This secondary use must not require a zoning redesignation changing the agricultural



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land use to any other, and the use is compatible with surrounding agricultural uses (Region of Niagara, 2007).

By allowing on-farm value-adding activities, such as the production of goat cheese, one can connect urban and rural non-farm residents with farmers, while offering the consumer with a unique or creative commodity. This niche product can increase consumerism and encourage direct farm sales, for instance farm-gate sales. At the same time these practices will diversify the company and provide additional income to the farm family. To encourage value-added commodities, land use planning should be made more flexible to allow innovation and creativity on farms.

Practicing place-based planning and adding value to a place provides the opportunity for: "empowering community members to build community ... build relationships and trust ... engage in mutual learning ... raise awareness of and mitigate conflict ... plan holistically ... and incorporate a broader range of meaning into planning" (Kruger & Williams, n.d.). As discussed in Kneen's From Land to Mouth, he discovers that after two years of cattle farming how he was able to benefit from value-added beef products (Kneen, 1995). It is reasonable to generate as much income with a raw product as possible, prior to it being consumed, at this point it becomes reasonable to transform, processes, and/or package the commodity to maximize economic profits (Kneen, 1995). For instance, farmers' markets and farm-gate sales allow the consumer to interact with the farmer, and understand where their food is coming from, while the farmer is able to capture more of their commodities value (Caldwell, 2006; Feagan, et al., 2004).

After conducting meetings with Ontario famers, OMAFRA's Agricultural Advisory Committee acknowledged the importance of allowing for value adding on farm, as long as this was secondary to farming operations. Betsy Donald too stresses the importance of allowing for value adding on farms so that farmers can offer a wider range of agricultural products (Donald, 2009).

Issue 3: Severances

Land severance, or consent to convey, is the authorized separation of a piece of land to form a new lot or a new parcel of land. The Provincial Government provides thorough guidelines for regions and municipalities to use in creating official plans and policies which reflect the use of severances and the subsequent lot creation.

Agricultural land is a limited resource that, once taken out of production, is very unlikely to be replaced (Caldwell, 2007). There is a strong intent at the provincial and municipal levels to discourage taking productive agricultural lands out of production and permitting other non-

agricultural uses on them. The current Provincial Policy Statement has encouraged retaining prime agricultural lands for long-term farming use since the policy came into effect in 2005. As a provincial land use policy document with which all regional and municipal official plans must comply, the PPS discourages the creation of lots in these areas, permitting them only if they are consistent with the rest of the PPS goals and meet the intentions of regional and local plans. Since severances are often viewed as tools that precipitate the fragmentation of agricultural lands their application has been progressively curtailed by government policy both at the provincial and regional levels.

The development of non-farm uses on agricultural lands as a result of severances has been made visible throughout the rural Ontario landscape over time (Caldwell, 2007). Historically, severances have commonly been used by farmers, particularly in the many rapidly urbanizing areas throughout the Greater Golden Horseshoe, as a means to sever and sell off parcels of their land that could be put into other more lucrative uses, the most prevalent of which being lot creation for residential developments. According to the Ontario Ministry of Agriculture Food & Rural Affairs, between 1990 and 2000, agricultural land severances, for residential use, in Ontario attributed to almost 80 percent of the total lot severances (Province of Ontario, 2008b). Although these severances and property sales provide immediate income to the farm, severing lands may lead to community conflict while restricting possible future expansions of the farm (Province of Ontario, 2008). These non-farm severances can lead to smaller size farmlands and irregular shaped fragmented landscapes making it difficult to grow and harvest crop on the existing farmlands (Hoffman, 1982). To address severances for the purpose of residential purposes, OMAFRA recommends that provincial policies prohibit severances for this purpose, except for where there are surplus farm dwellings (Province of Ontario, 2008b).

In addition, at the regional and local levels agricultural land uses provide lower tax revenues than do residential developments and thus many municipalities often feel pressure to permit more severances in order to increase the municipal tax base. This explains why the preconditions for agricultural land severance have been strengthened in the 2005 Provincial Policy Statement update which does not allow severed agricultural lands to enter into nonagricultural use.

Lots may be severed for specific authorized uses: Agricultural Use; Agriculture-Related Use; Residence Surplus to a Farming Operation; Infrastructure; and for Lot Adjustments. The first two in this list, Agricultural Use and Agriculture-related Uses, are most important in this context. New residential lots will not be permitted except under policy 2.3.4.1(c) of the PPS.

As all regional plans must comply with the PPS, the situations that authorize severances are tightly controlled in each of our case study regions. But each regional plan has slightly different conditions for determining when they are permitted. The Region of Halton prohibits the creation

of new lots by rural estate residential development or infill throughout areas of rural designation except in Hamlets or Rural Clusters (Halton Regional Official Plan, Policy 92(2)). This is done so as to concentrate population growth in already established centres and to reduce the continued fragmentation of lands suitable for agriculture as well as to encourage their consolidation. The Official Plan for the County of Simcoe states that for lands within the rural designation, the creation of more than three lots from one parcel is not permitted and such severances will be directed toward settlement areas (Policy 3.7.7(c)) for similar reasons as Halton.

In the case of the Region of Waterloo, economic considerations are given to the notion of agricultural land severance stating that such an action will not be permitted if it will result in an undersized farm that may not be economically viable (Waterloo Regional Official Plan, 2009, Policy 6.E.3(ii)). This links closely with PPS statement that farms must remain of an adequate size to allow room for future flexibility of crop production (PPS, 2005).

Niagara does not permit severances in prime agricultural areas in order to create new residential lots but severances will be considered for greenhouses of ample size (Niagara Regional Official Plan, Policy 6.A.9.1(b)) in a nod to their large greenhouse industry. In going further than other regions, Niagara also explicitly states that economic support be provided to farmers in order to eliminate the need to sever land to sell (Policy 6.A.3.).

None of the four cast study regions permit the severance of an approved secondary use (eg: a B&B or on-farm market). This is to ensure that municipalities can have a greater certainty that



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these uses will remain with the farm and the local land use authorities can therefore be more comfortable with their initial establishment (Caldwell, 2006).

Those who support strict limitations on the application of severances on agricultural lands feel these practices offer an element of stability and permanence to the agricultural farmland and enable farmers to feel more secure while remaining on their farms and investing in them. However, while restricting severances is often an important tool for farmland preservation, it can also serve as a barrier to on-farm innovation. Wayne Caldwell (2006) writes that often municipalities associate secondary uses, direct marketing and agri-tourism with the potential for future severances, which they want to avoid at all costs in the interest of agricultural land preservation. That said, while land preservation is an important consideration, for some innovative farm initiatives severances are appropriate – cooperatively owned markets or facilities, for instance – and severing would still allow the land to remain agriculturally productive.

Issue 4: Minimum Farm Parcel Size

Closely related to severances and lot creation is the subject of minimum farm size. For Agricultural Use lot creation, severances may be granted if the new lot is large enough to maintain a common agricultural use with the surrounding area and to give farmers future flexibility, with larger lots often viewed as providing greater flexibility. The Province posits that the larger the lots are, the more efficient and economical are the options that farmers have. Creating agricultural parcels that are too small is seen as limiting the possibilities of future farming opportunities and could limit ongoing farming.

Regions and municipalities determine their minimum farm sizes, and while 40 hectares is considered a minimum lot size by many planning authorities, there are also other factors to consider, including existing local agricultural fabric, the Census of Agriculture, Ontario Municipal Board decisions and surrounding agricultural support businesses.

The Greenbelt Plan (2005), section 4.6, makes mention that the minimum lot size for severed and agriculturally-retained lot is 40 hectares in prime agricultural areas, and 16 hectares in specialty crop areas, of which only the Niagara Peninsula Tender Fruit and Grape and Holland Marsh areas are applicable. The basis of these polices is to ensure that these lands remain in agricultural use. While 40 hectares is the most common minimum farm size throughout the GGH, this remains a sizable farming area that would require substantial investment in land, labour and capital to operate.

Severances are closely related to minimum farm size as the two must be examined in tandem

when considering the "splitting" of a farm. Even if both resulting parcels fulfill the necessity of remaining in agricultural production, each new parcel must retain a specific minimum lot size. In each of the regional case studies this minimum farm size was set 40 hectares. However, the Region of Simcoe allows a minimum farm size of 16 hectares on specialty crop lands, the majority of which are located in the Holland Marsh district (County of Simcoe Official Plan, 2008, Policy 3.6.5). The Region of Waterloo, while maintaining a stated minimum farm size of 40 hectares as well, does allow for the possibility of a smaller parcel under the condition that the farmer prove that the resulting parcel will be sufficiently large to maintain flexibility for future changes in the type or size of agricultural operations (Policy 6.E.4(ii)).

These restrictions are primarily aimed at keeping large tracts of agricultural land productive, assuming that smaller plots of land fragment the rural landscape, leaving it more vulnerable to development. However, this can potentially serve as a major barrier for new farmers who are just starting out, as well as for farmers wanting to test or experiment with new farming products or approaches without investing in a larger piece of land.

The argument that provincial and regional policies seem to be making is that farm size is not only related to keeping these lands in agricultural production but also that in order to remain economically viable, they must be large farms. The PPS explicitly states (and the official plans in the study regions closely follow suit) that operational flexibility on farms is directly related to how large they are:

New farm parcels must be large enough to give farmers flexibility in the future. This requirement makes sure that farmers can expand or change their type of operation as the economy and markets change. The larger the farm parcel, the more flexibility it provides (Province of Ontario, 2009b)

While the necessity of creating policies that will protect farmland and ensure its use as such into the future is known, it often seems to do so at the expense of allowing newer and innovative approaches to farming. It perhaps provides flexibility only for those farms today that operate on the largest scale and leave few options for those not willing or able to invest in such a large farm operation but still wishes to keep these lands in agricultural use.

Smaller farms can often be equally, if not more, flexible as they have fewer capital investments in structures and farming technologies which can translate into more nimble changes in crop production and diversification based on changing economic conditions. In a study of farming issues undertaken for the Agriculture Institute of Canada, Maynard and Nault (2005) found that among the farmers they interviewed, regulations around farm size are largely misguided. Further, there was a consensus that farm size is irrelevant to the success of farm. Rather, farmers' capacity to manage their farm effectively is the main determinant of farm success,

and policies should be focused on this rather than on simply regulating farm size (Maynard and Nault, 2005).

Issue 5: Minimum Distance Separation (MDS)

The Minimum Distance Separation Formulae (MDS) is a land use planning tool used to minimize conflicts arising between what are considered to be incompatible uses between residential areas and agricultural operations. The consequence of mixing on farm residents and non-farm residents, particularly those non-farm residents who have migrated to the countryside as a result of the residential developments, are the conflicts that arise surrounding issues "with respect to the question of smells and sounds of farm operations" (Hoffman, 1982). To mediate such conflicts, tools such as the minimum distance separation formulae exist to distinguish the acceptable distance between farm operations and non-farm residential properties. This formulae is used for existing farm operation expansions and in the conversion from one farming operation to another includes factors such as the size of the farming operation, the type of

livestock, and the proposed or present development (Caldwell, 1995; Caldwell, 2006; Hoffman, 1982; Province of Ontario, 2008b). These regulations are intended to reduce farm and non-farm residential conflicts.

MDS setback regulations for prime agricultural areas were included in the 2005 update of the Provincial Policy Statement. They are provincially developed policies and



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are mandated to be included in all regional and local plans. The policies are to be enforced by the local authorities through policy documents including official plans and zoning by-laws when reviewing land use planning applications for severances, lot creation and any building permits. They apply to both new farming operations as well as to any proposed expansion of existing farms.

The first incarnation of MDS-I aimed chiefly to protect farmers from encroaching pressures of non-farm uses, primarily residential developments, that may find their farming processes burdensome. However, MDS policy has been expanded since 1995 to include the opposing perspective of its application with the intent of MDS-II to protect homeowners from expanding livestock production facilities (Province of Ontario, 2009c):

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MDS-I: provides the minimum distance separation between proposed new development and existing livestock facilities and/or permanent manure storages located in areas where the keeping of livestock is permitted.

MDS-II: provides the minimum distance separation between proposed new, enlarged or remodelled livestock facilities and/or permanent manure storages and existing or approved development located in areas where the keeping of livestock is permitted.

While both MDS formulas act to restrict new and expanding land uses, MDS-I focuses on limiting farm expansion while MDS-II focuses on limiting residential expansion.

As both the number of farms and gross area of prime agricultural farmland are shrinking in Ontario (Caldwell, 2007), population growth and the parallel residential development continues to swell, usually with the former at the expense of the latter. As this trend persists, often most acutely at the urban fringes, the addition of residential uses in once agriculturally-dominant areas will place even greater restrictions on not only the future location of certain farming operations, but also limit the possibilities of expansion for those that are currently in operation.

While the MDS is intended to protect both existing livestock farms and residential lots from their mutual land use incompatibilities, the County of Simcoe (Policy 3.3.13) and the Region of Halton (Policies 101(2) and 139(5)) explicitly state that they are to apply the criteria in the Provincial documents on Minimum Distance Separation to protect farming from incompatible uses. The Region of Niagara states that exceptions may be made for farm buildings under the same ownership (Policy 6.A.16).

The OMAFRA Agricultural Advisory Committee, after carrying out meetings with farmers from around the province, acknowledges the barriers that minimum distance separation poses for farmers because of the uncertainty this regulation engenders: "farmers need long-term confidence that other surrounding land uses will not unduly hinder their present and future farm operation" (Province of Ontario, 2008b). The committee also learned that local mediation can help to reach compromises around this issue in rural communities, suggesting that some room for negotiation and less rigid restrictions could be advantageous.

The Big Picture: Fitting the Issues Together

For a shift in the agricultural sector to occur, these five key issues -- secondary uses, valueadding activities, severances, minimum farm size, and, minimum distance separation formulae -- must be addressed and accommodated for through provincial, regional, and local policies. Although these five issues are discussed as separate instances, the interplay of each of these issues is relevant in numerous examples.

Providing a secondary use in an agricultural area for the purpose of creating a value-added commodity may require a zoning by-law to permit the secondary use. Although not all secondary uses necessarily incorporate a value-added commodity, the interrelationship between the issues still exists as both of these farming initiatives are generally implemented to attract more consumers, diversify the farm company, and keep the farm economically viable.

Although these five issues are at a smaller local scale of agriculture in the Greater Golden Horseshoe, there is a need for these practices to encourage innovation and generate an economically viable agricultural region. Presently the economic status of agricultural does not encourage investment in farming. As the economic viability of farming becomes more difficult, fewer citizens and farm family members are interested in farming. Farmers have been seeking ways to diversify their farm operations to respond to the renewed interest in food and the own economic viability.

A renewed interest in local food has stemmed from issues surrounding food security and the viability of a sustainable agricultural sector in Ontario. Beyond food security, agricultural lands in the Greater Golden Horseshoe that are under development pressure, have begun to be addressed through provincial policies and plans such as the Greenbelt Plan, to ensure protected countryside, agricultural areas, and prime agricultural areas. The province and consumer demand have begun to encourage the development of a sustainable agricultural sector. Through land use policy surrounding these five key issues planners can begin to address the needs of farmers allowing the farms to self sustain and ideally encouraging future interest in farming.

Moving Forward

Aiming to reveal, examine, and explore the existing regulatory barriers to on-farm innovation, this project has identified the current obstacles through rationalizing and scoping a research question for the next phase. It is concluded that flexibility should be incorporated in the planning framework surrounding the identified five key issues and the overarching ways in which agricultural designations and land use planning practices are defined and implemented. In order to achieve flexibility, allowing for agriculture and farm innovation, this project will now focus on conducting a more grounded and focused research to propose options and consider implications for a more integrated and responsive land use planning and policy context where opportunities could be encouraged in approaching agriculture in progressive ways. This section offers a general layout of suggested methodologies that could be used in implementing further steps and developing relevant recommendations in the future.

Discussion

Moving forward, there are a number of considerations to keep in mind to qualify the conclusion that flexibility needs to be incorporated into the land-use planning that governs agriculture.

Thresholds/ Incompatible land-uses (minimize friction, ex. MDS)

One significant point to consider is the idea of thresholds. As the next studio group develops responses to land-use planning issues that have been identified as being inflexible with regard to agricultural or agriculturally-related issues, there needs to be a constant reflection on the appropriate balance between flexibility and restriction. Either extreme is unsuitable and impractical for contemporary policies in such fluid and diverse regions as the Greater Golden Horseshoe.

By and large, rural land use planning relating to agriculture aims to realize goals surrounding environmental protection, land preservation, and, through the way in which official plans are implemented—namely, through zoning by-laws—to separate incompatible land uses. The challenge will be to develop responses that are permissive enough to allow for innovative practices, but restrictive enough as to avoid beginning the quick slide down the slippery slope, whereby the agricultural nature and milieu remain at the fore in agricultural settings.

While rural land use planning will continue play an absolutely necessary role in fostering healthy, safe and sustainable communities and resource allocation, there often appears to be an underlying trepidation on the part of governing bodies to allow for some of this control

to be ceded in the name of determining a more modern and appropriate redefinition of what constitutes agricultural lands and practices. There is concern that permitting a greater flexibility in the interpretation of policies and goals would result in a slippery slope of eroding the principles on which much of traditional land use planning is based. This illustrates the paradox of current rural land use planning models, especially surrounding rapidly growing urban centres.

Interrelated with the threshold that exists between permissive and restrictive land use planning policies, there also needs to be a mindful understanding of the threshold that exists when deliberating between the land preservation protections that agricultural areas (especially land within those areas designated as prime agricultural) are given under provincial policies, and the risk of negatively altering that preservation movement with incompatible uses, thereby removing that farmland from active production forever.

Provincial-level policies aim to protect and preserve farmland from fragmentation (through severance and new lot creation) and increased development as well as to keep agricultural lands, and particularly prime agricultural lands, in perpetual agricultural production. That said, modern, on-farm innovation requires polices that move beyond simple land preservation and toward a more updated understanding of what is necessary in order to keep these lands in agricultural use.

Land preservation is a worthy goal but how can a balance be reached between its protection and allowing some room for increasingly necessary on-farm innovation? To promote policy and land-use flexibility that achieves this balance will encourage new generations of farmers to engage with the industry in new and sometimes unorthodox ways that do not fit with the typically traditional definitions of what constitutes agriculture in provincial policy and Official Plans today.

Differentiate Between Scales

Another consideration to keep in mind when developing planning responses is that of scale. Farms of different scales will have different needs, challenges, and impacts on surrounding land. Many of the policies concerning agricultural regulations exist, in part, to address issues of land, air, water or noise pollution that agricultural uses rarely differentiate on the basis of scale, but this is inappropriate and ignores the issues around thresholds discussed above. For example, when one tries to gain permission to raise a handful of a traditional cow breed, owners may end up having to deal with the same policies that were initially enacted to handle largescale hog operations. These two types of farm operation clearly have much different impacts and externalities, yet this is not reflected in policy. Arguably, this unfairly restricts the activities of smaller-scale farm operations. Policies that regulate agriculture ought to be context specific.

Performance-Based Zoning versus. Euclidian

The reason zoning regulations exist—to separate seemingly incompatible land uses—plays out in agricultural areas as well as in urban ones. Industrial land uses are kept away from prime agricultural land, which, in turn, are distanced from commercial and residential areas. For several intensive agricultural land uses, this makes perfect sense: large-scale animal operations, for example, can create unpleasant smells or noises, and large crop farms require sizable areas of unbroken agricultural land on in order to be viable.

However, in cities, there are areas like the King-Spadina and King-Parliament neighbourhoods in Toronto that have forgone traditional zoning by-laws in favour of much more relaxed regulations. These performance-based zoning regulations do not stipulate what had to occur in these neighbourhoods, instead allowing any use, insofar as they met a few mere criteria, such as maximum heights and being built to the sidewalk. This type of zoning approach minimizes variances, appeals and re-zoning on the account of a property's use. They can serve to intensify an area's uses by allowing practically any kind, and help to foster innovation in the urban form and function by intermixing uses.

In effect, by loosening zoning restrictions, an agricultural area can become one of innovative practice, especially surrounding secondary or mixed uses on the agricultural site. By simply saying what is not allowed—and limitations on uses must be made, as has been mentioned, to respect the need for farmland diversity—farmers may be able to more easily expand operations and experiment with new farm products or uses to capitalize on new market opportunities without having to go through the traditional and formal planning process. Perhaps this relaxation of zoning restrictions should happen on a site by site basis, for maintain some control over use and to verify that uses which aren't strictly agriculture are appropriate for the rural area.

Develop the concept of "ripeness"

A last suggestion for the group taking up this project next semester is that it may be useful to develop the concept of "ripeness." We have adopted a preliminary understanding of this idea which describes the degree of readiness to take part in the creative food economy and/or innovation. As this concept is developed further, it may be fruitful to ask:

"What regions are most ripe for seeing change toward a more innovative approach to agriculture?"

"What are the conditions at the local level that must be present before such a move occurs?"

At this point, we associate ripeness with areas that have strong existing basis for innovation at the agricultural level: areas with smaller farms, a diverse range of crops, growth of crops that have emerged as key to 'creative' food industries such as wine/grapes, cheese and organic agriculture, and finally, areas that demonstrate a renewed interest in rural and agricultural innovation at the policy level because it is already happening at the ground level. These areas likely already have a basis or foundation that is ripe for building on. Growth and adaptation in the agricultural economies of these places should then be encouraged, but managed in an appropriate way.

Methodology

The work of next semester's group will build on the conclusion reached this semester – namely, that some degree of flexibility in land use policies that govern agriculture is necessary to allow for and encourage farm innovation. With that in mind, the research question for next semester is:

How can flexibility be incorporated into municipal, regional and provincial planning policies in such a way that will allow for farm innovation?

The next group will engage in more grounded research at the municipal and regional level as a basis for developing answers to this question. This semester, due to time constraints, we were not able to delve in to municipal land use policies such as zoning by-laws, but we recognize the importance of understanding barriers presented at this level and encourage the next group to focus here.

By conducting more in depth research into land use planning and agriculture in our set of case study regions, the next group will develop policies and recommendations for incorporating flexibility and adaptability into land use policy. The result of the process will be the development of place-specific policy responses and recommendations that allow for farm innovation. It is hoped that these strategies may serve as a model for other regions or municipalities, where relevant.

The primary research for next semester will consist of interviews with farmers and planners. We recommend that the group first contact farmers' associations in our case study regions to assist in planning their primary research and identifying potential interviewees and to get a better idea of what specific land use issues are present for farming in the respective regions. In addition, we recommend that the group also contact municipal and regional planners to gain another perspective on these issues and the most prevalent challenges in each of the four regions. We strongly encourage the next group to conduct research into municipal agricultural policies

and policy development to inform their development of responses that incorporate flexibility into policy and recommendations. This more focused secondary research will play an important role in understanding the context of the primary research findings, as well as help with organizing information, synthesizing findings, generating conclusions and justifying policy responses and recommendations.

We also suggest that some attention is given to land use policies in Prince Edward County, a region that is currently experiencing a great deal of growth in its agricultural sector and is acknowledged as being a hub for farm innovation (Donald, 2009). We acknowledge that issues vary across regions and don't suggest that what works in Prince Edward County will necessary work in every region, however we do think it would be a fruitful exercise to look into what is happening there to allow for innovation.

As a preliminary timeline, we recommend the next group familiarize themselves with this report and begin contacting farmer's associations and municipal planners by mid-January. Once the group has determined who will be interviewed, the research ethics review application should be submitted immediately to allow adequate time for approval. In the interim between getting ethics approval and conducting primary research, the group should begin secondary research into agricultural policy, policy development and also do some research on farm innovation in Prince Edward County. After conducting their primary research, the group should then focus on analyzing the collected information and synthesizing this with the secondary research they will have conducted at that point to begin developing their responses to the research question.



APPENDICES

APPENDIX I: PROVINCIAL POLICY EXCERPTS

Ontario Planning Act, R.S.O 1990

Purposes

1.1The purposes of this Act are,

(a) to promote sustainable economic development in a healthy natural environment within the policy and by the means provided under this Act;

(b) to provide for a land use planning system led by provincial policy;

(c) to integrate matters of provincial interest in provincial and municipal planning decisions;

(d) to provide for planning processes that are fair by making them open, accessible, timely and efficient;

(e) to encourage co-operation and co-ordination among various interests;

(f) to recognize the decision-making authority and accountability of municipal councils in planning. 1994, c. 23, s. 4.

Provincial Policy Statement

2.3 Agriculture

2.3.1 Prime agricultural areas shall be protected for long-term use for agriculture.

Prime agricultural areas are areas where prime agricultural lands predominate. Specialty crop areas shall be given the highest priority for protection, followed by Classes 1, 2 and 3 soils, in this order of priority.

2.3.2 Planning authorities shall designate specialty crop areas in accordance with evaluation procedures established by the Province, as amended from time to time.

2.3.3 Permitted Uses

2.3.3.1 In prime agricultural areas, permitted uses and activities are: agricultural uses, secondary uses and agriculture-related uses.

Proposed new secondary uses and agriculture-related uses shall be compatible with, and shall not hinder, surrounding agricultural operations. These uses shall be limited in scale, and criteria for these uses shall be included in municipal planning documents as recommended by the Province, or based on municipal approaches which achieve the same objective.

2.3.3.2 In prime agricultural areas, all types, sizes and intensities of agricultural uses and normal farm practices shall be promoted and protected in accordance with provincial standards.

2.3.3.3 New land uses, including the creation of lots, and new or expanding livestock facilities

shall comply with the minimum distance separation formulae.

2.3.4 Lot Creation and Lot Adjustments

2.3.4.1 Lot creation in prime agricultural areas is discouraged and may only be permitted for:

a) agricultural uses, provided that the lots are of a size appropriate for the type of agricultural use(s) common in the area and are sufficiently large to maintain flexibility for future changes in the type or size of agricultural operations;

b) agriculture-related uses, provided that any new lot will be limited to a minimum size needed to accommodate the use and appropriate sewage and water services;

c) a residence surplus to a farming operation as a result of farm consolidation, provided that the planning authority ensures that new residential dwellings are prohibited on any vacant remnant parcel of farmland created by the severance. The approach used to ensure that no new residential dwellings are permitted on the remnant parcel may be recommended by the Province, or based on municipal approaches which achieve the same objective; and

d) infrastructure, where the facility or corridor cannot be accommodated through the use of easements or rights-of-way.

2.3.4.2 Lot adjustments in prime agricultural areas may be permitted for legal or technical reasons.

2.3.4.3 The creation of new residential lots in prime agricultural areas shall not be permitted, except in accordance with policy 2.3.4.1(c).

2.3.5 Removal of Land from Prime Agricultural Areas2.3.5.1 Planning authorities may only exclude land from prime agricultural areas for:

a) expansions of or identification of settlement areas in accordance with policy 1.1.3.9;

b) extraction of minerals, petroleum resources and mineral aggregate resources, in accordance with policies 2.4 and 2.5; and

c) limited non-residential uses, provided that:

1. the land does not comprise a specialty crop area;

2. there is a demonstrated need within the planning horizon provided for in policy 1.1.2 for additional land to be designated to accommodate the proposed use;

there are no reasonable alternative locations which avoid prime agricultural areas; and
there are no reasonable alternative locations in prime agricultural areas with lower priority agricultural lands.

2.3.5.2 Impacts from any new or expanding non-agricultural uses on surrounding agricultural operations and lands should be mitigated to the extent feasible.

6.0 Definitions

Agricultural uses: means the growing of crops, including nursery and horticultural crops; raising of livestock; raising of other animals for food, fur or fibre, including poultry and fish; aquaculture; apiaries; agro-forestry; maple syrup production; and associated on-farm buildings and structures, including accommodation for full-time farm labour when the size and nature of the operation requires additional employment.

Agriculture-related uses: means those farm-related commercial and farm-related industrial uses that are small scale and directly related to the farm operation and are required in close proximity to the farm operation.

Minimum distance separation formulae: means formulae developed by the Province to separate uses so as to reduce incompatibility concerns about odour from livestock facilities.

Normal farm practices: means a practice, as defined in the Farming and Food Production Protection Act, 1998, that is conducted in a manner consistent with proper and acceptable customs and standards as established and followed by similar agricultural operations under similar circumstances; or makes use of innovative technology in a manner consistent with proper advanced farm management practices. Normal farm practices shall be consistent with the Nutrient Management Act, 2002 and regulations made under that Act.

Prime agricultural area: means areas where prime agricultural lands predominate. This includes: areas of prime agricultural lands and associated Canada Land Inventory Class 4-7 soils; and additional areas where there is a local concentration of farms which exhibit characteristics of ongoing agriculture. Prime agricultural areas may be identified by the Ontario Ministry of Agriculture and Food using evaluation procedures established by the Province as amended from time to time, or may also be identified through an alternative agricultural land evaluation system approved by the Province.

Prime agricultural land: means land that includes specialty crop areas and/or Canada Land Inventory Classes 1, 2, and 3 soils, in this order of priority for protection.

Rural areas: means lands in the rural area which are located outside settlement areas and which are outside prime agricultural areas.

Secondary uses: means uses secondary to the principal use of the property, including but not limited to, home occupations, home industries, and uses that produce value-added agricultural products from the farm operation on the property.

Specialty crop area: means areas designated using evaluation procedures established by the province, as amended from time to time, where specialty crops such as tender fruits (peaches, cherries, plums), grapes, other fruit crops, vegetable crops, greenhouse crops, and crops from agriculturally developed organic soil lands are predominantly grown, usually resulting from: a) soils that have suitability to produce specialty crops, or lands that are subject to special climatic conditions, or a combination of both; and/or

b) a combination of farmers skilled in the production of specialty crops, and of capital investment in related facilities and services to produce, store, or process specialty crops.

Places to Grow Act

4.2 Policies for Protecting What is Valuable

4.2.2 Prime Agricultural Areas

1. Through sub-area assessment, the Minister of Public Infrastructure Renewal and other Ministers of the Crown, in consultation with municipalities and other stakeholders, will identify prime agricultural areas, including specialty crop areas, in the GGH, and where appropriate, develop additional policies for their protection.

2. For lands within the Greenbelt Area, all policies regarding agricultural areas set out in provincial plans, applicable to lands within the Greenbelt Area, continue to apply.

3. Municipalities are encouraged to maintain, improve and provide opportunities for farmrelated infrastructure such as drainage and irrigation.

4. Municipalities are encouraged to establish and work with agricultural advisory committees and consult with them on decision-making related to agriculture and growth management.

Greenbelt Plan

3.1.3 Prime Agricultural Area Policies

For lands falling within the prime agricultural area of the Protected Countryside the following policies shall apply:

1. Within prime agricultural areas, as identified in municipal official plans, normal farm practices and a full range of agricultural, agriculture-related and secondary uses are supported and permitted.

2. Prime agricultural areas shall not be redesignated in municipal official plans for nonagricultural uses except for:

a) Refinements to the prime agricultural and rural area designations, subject to the criteria identified in the municipal implementation policies of section 5.2; or

- b) Settlement area expansions subject to the settlement area policies of section 3.4.
- 3. Other uses may be permitted subject to the general policies of sections 4.2 to 4.6.

4. New land uses and the creation of lots, as permitted by the policies of this Plan, and new or expanding livestock facilities shall comply with the minimum distance separation formulae.
APPENDIX II: REGIONAL OFFICIAL PLAN EXCERPTS

Secondary Uses

Region of Niagara

Agricultural Rural Area

100. Subject to other policies of this Plan and applicable Local Official Plan policies and Zoning By-laws, the following uses may be permitted:

100(21) following uses only if located on a commercial farm and secondary to the farming operation:

a) home industries with a gross floor area not exceeding 200 sq m,

b) retail uses with a gross floor area not exceeding 500 sq m and the majority of the commodities for sale, measured by monetary value, produced or manufactured on the farm,

c) agriculture-related tourism uses with a gross floor area not exceeding 250 sq m, and

d) businesses that may not be related to agriculture provided that:

(i) such uses are permitted by specific Niagara Escarpment Plan policies if applicable, Local Official Plan policies and Local Zoning By-laws;

(ii) their scale is minor and does not change the appearance of the farming operation;

(iii) their impact such as noise, odour and traffic on surrounding land uses is minimal and will not hinder surrounding agricultural uses; and

(iv) they meet all Regional criteria as stated in the On-Farm Business Guidelines adopted by Council;

Region of Niagara

Policy 6.A.7

Small scale agriculturally related uses directly related to, serving, and requiring close proximity to the surrounding agricultural areas may be permitted except where there is a conflict with the Niagara Escarpment Plan as amended from time to time and if it is not possible for such uses to locate in designated Hamlets, Villages, Rural Areas, or Urban Areas. These uses should be located so the effect on surrounding unique and good general agricultural lands as well as viable farm operations is minimized. Farm markets in agricultural areas should be seasonal in nature with the majority of retail floor space devoted to the sale of domestic produce. Local municipal official plans and zoning by-laws should establish maximum retail floor space area provisions and other site design criteria.

Policy 6.A.18

Home industries such as welding shops, small engine repair, carpentry, electrical; home occupations within residences such as bed and breakfast facilities with up to six guestrooms and personal services; and uses that produce and market value-added agricultural products are permitted as secondary uses to the principal use of a property in an agricultural area provided that:

- (i) the use is small in scale and remains ancillary to the principal use of the property, and
- (ii) any value-added agricultural products are from the farm operation on the property, and
- (iii) all of the property remains designated and zoned agricultural, and
- (iv) new secondary uses are compatible with and do not hinder surrounding agricultural uses, and
- (v) home industries are permitted by zoning by-law amendment, and
- (vi) the use complies with other policies in the Regional Policy Plan, and

No future severance of these secondary uses is permitted.

The local municipalities are expected to incorporate more detailed policies in their Official Plans and Zoning By-laws to regulate secondary uses (i.e., lot size, lot coverage, setbacks, and the need for site plan control) so that any negative effects on agriculture are minimized.

County of Simcoe

3.6 Agricultural

3.6.4

Prime agricultural areas identified by the Agricultural Designation on Schedule 5.1 will be protected for agriculture and compatible uses. Permitted uses are agricultural uses, agriculture-related uses, secondary uses, natural heritage conservation and forestry, mineral aggregate operations subject to Section 4.4, processing of agricultural products, and agricultural produce sales outlets generally marketing production of the local area. All types, sizes and intensities of agricultural uses and normal farm practices will be permitted, supported, and protected in accordance with provincial standards. Lot creation shall not be allowed for secondary uses, natural heritage conservation and forestry, aggregate developments, processing of agricultural products, and agricultural produces sales outlets.

Region of Waterloo

3.F Access to Locally Grown and Other Healthy Foods

The regional food system consists of the chain of activities related to the production, processing, distribution, consumption and eventual disposal of food. A strong and diverse regional food system provides many benefits to the community. It facilitates peoples' access to locally grown and other healthy foods, which contributes to healthier eating choices and the achievement of broader public health objectives. It also encourages a range of food destinations within easy walking distance of where people live and work. Such a system helps shorten the distance that food travels and that people travel to buy food, thereby reducing the demand on transportation infrastructure and the growth in vehicle emissions. As well, a strong regional food system supports local farmers and contributes to the vitality and economic strength of rural communities and Waterloo Region as a whole. For these reasons, this Plan seeks to strengthen and diversify the regional food system.

3.F.1 The Region will support the development of a strong regional food system through the policies in this Plan that:

(a) establish a Countryside Line to protect the countryside for long-term agricultural use;

(b) permit a full range of agricultural uses, farm-related uses and secondary uses to support the economic viability of local farms;

(c) provide for a mix of land uses, including food destinations, within close proximity of each other to facilitate residents' access to locally grown and other healthy food products; and

6.A.4 The primary land uses permitted in the Prime Agricultural Area and Rural Areas designations will include agricultural uses, agriculture-related uses and secondary uses as set out in the policies in this Chapter.

Secondary Uses

6.C.8 Area Municipalities will establish policies in their official plans to permit secondary uses within the Prime Agricultural Area and Rural Areas designations, subject to the following:

(a) the secondary use will be clearly accessory to the principal use of the property;

(b) the secondary use will be small in scale and compatible with surrounding agricultural operations;

(c) for secondary uses located on a farm, any buildings, structures or facilities associated with the secondary use, except roadside produce stands, will be integrated with the main farm buildings and be constructed in a manner that will allow for ease of conversion to an agricultural use should the secondary use cease to exist. Minor retailing of products will be permitted directly from the farm provided that sales are limited to those goods produced or manufactured primarily on the farm; and

(d) the severance of a lot for a secondary use created in accordance with this policy will not be permitted.

Value-Adding

Region of Halton See Policy 100(21) Secondary Uses

Region of Niagara See Policy 6.A.18 Secondary Uses

County of Simcoe There is no mention of value-adding in the County of Simcoe Official Plan

Region of Waterloo There is no mention of value-adding in the Region of Waterloo Official Plan.

Severances

Region of Halton

92. It is the policy of the Region to:

(2)Prohibit the creation of new lots by rural estate residential development or infilling throughout the Rural System except in Hamlets or Rural Clusters.

Region of Niagara

6.A.9.1(b)

Smaller lot severances for greenhouses can be permitted subject to the condition that any new dwellings on the property are allowed only after the greenhouse and other farm buildings have been constructed or substantially completed. It is important that small lot severances for greenhouse operations be of a sufficient size so that these uses have ample room for future expansion

County of Simcoe

6.7.7. In the Rural Designation, residential lots may be created by consent provided they satisfy all of the following:

(c)The creation of more than three residential lots from a larger parcel is not permitted and is directed to settlements, except that residential developments of more than three lots may be permitted in accordance with Section 3.7.8.

Region of Waterloo

6.E.3

Development applications to create a new farm parcel, or reconfigure existing farm parcels where lands are severed from one farm parcel and conveyed as a lot addition to an adjoining farm and held in one ownership, will comply with the following:

(ii)be sufficiently large enough to sustain an economically viable farm operation and to maintain flexibility for future changes in the type or size of agricultural operations.

Minimum Farm Parcel Size

Region of Halton

There is no mention of minimum farm size in the Region of Halton Official Plan.

Region of Niagara

6.A.9

In the Unique Agricultural Areas, consents to convey may be permitted only in accordance with the following provisions. Within the Niagara Escarpment Plan Area, the policies of the Niagara Escarpment Plan as amended from time to time shall prevail unless the following policies are more restrictive, then the more restrictive policies shall prevail. Policies for lot creation in local Official Plans can be more restrictive than the following policies and still conform to this Plan. (a) The consent to convey is for an agricultural use where the severed and retained lots are

intended for agricultural uses and provided the minimum lot size is 40-acres (16.2 hectares).

6.A.9.1

In Good General Agricultural Areas consents to convey may be permitted only in those circumstances set out in the following provisions. Policies for lot creation in local Official Plans can be more restrictive and still conform to this Plan.

b) The consent to convey is for a farm parcel provided that resulting parcels are both for agricultural use and the size of the resulting parcels is a minimum size of 40 hectares (100 acres):

Smaller lot severances for greenhouses can be permitted subject to the condition that any new dwellings on the property are allowed only after the greenhouse and other farm buildings have been constructed or substantially completed. It is important that small lot severances for greenhouse operations be of a sufficient size so that these uses have ample room for future expansion.

County of Simcoe

3.6.5

Subject to Section 4.10.1, lots may be created for an agricultural use and for a residence surplus to a farming operation as a result of farm consolidation and in compliance with Section 3.7.7. New lots for agricultural uses should not be less than 40 hectares or the original survey lot size, whichever is lesser, or 16 hectares on specialty crop lands. Where a residential lot for a residence surplus to an agricultural operation is created, the remaining agricultural lot shall be zoned to prohibit the development of a dwelling unit(s).

Region of Waterloo

6.E.4

Development applications to sever lands from an existing farm parcel for an agriculture-related use, recreational and tourism use, rural institutional use, or for the purposes of conserving environmental features or elements of the Greenlands Network as provided for in this Plan, will be in conformity with all applicable policies in this Plan and the following:

(a) the minimum lot area for the retained farm parcel will be 40 hectares; or

(b) where the retained farm parcel would have a lot area less than 40 hectares, the owner/ applicant will be required to provide information satisfactory to the Region, which demonstrates that the resulting farm parcel will:

i) be of a size appropriate for the type of agricultural uses common in the area; and

ii) be sufficiently large enough to sustain an economically viable farm operation, and to maintain flexibility for future changes in the type or size of agricultural operations.

Minimum Distance Separation Formulae

Region of Halton

101(2)

Recognize, encourage and protect agriculture as an important industry in Halton and as the primary long-term activity and land use throughout the Agricultural Rural Area, and to this end: d) Require Local Municipalities to apply provincially developed Minimum Distance Separation formulae in their Zoning By-laws in accordance with Council-adopted Livestock Facility Guidelines.

139(5)

Apply the criteria in the Provincial documents Minimum Distance Separation I and Minimum Distance Separation II to protect farming from incompatible uses. In applying these Provincial criteria, those areas identified as "Eligible for Urban Services" on Map 1 will be treated as urban areas.

Region of Niagara

Policy 6.A.16

New dwellings on existing lots and proposed new lots must be separated from existing livestock operations on adjacent properties. Similarly, new or expanded livestock operations must be separated from existing dwellings on adjacent properties. It is required that local official plans and zoning by-laws use the Minimum Distance Separation Formula of the Agricultural Code of Practice as their standard for livestock operations. Exceptions may be made for farm buildings under the same ownership. Also, as set out in the Agricultural Code of Practice, other non-farm uses shall comply with the Minimum Distance Separation Formula.

County of Simcoe

3.3.13.

All new land uses, including the creation of lots and new or expanding livestock facilities, shall comply with the appropriate Minimum Distance Separation Formulae (i.e. depending on if it is within a settlement area or outside of a settlement area), as prepared by the Province. Decisions on the location and form of subdivision and development should be made with an

objective of protecting prime agricultural areas based on agricultural designation for agriculture and minimizing land use conflicts between agriculture and other uses. Local municipalities shall determine the appropriate application of the Formulae to existing lots, consent applications for surplus farm dwellings, within settlement areas, and following destruction of all or part of a dwelling by catastrophe.

Region of Waterloo

6.C.1

New land uses, including the creation of separate lots, expansions of existing lots and the development of new or expanding livestock facilities, will comply with the minimum distance separation formulae.

6.F.2

Any Area Municipal official plan amendment to designate a Rural Mixed- Use/Agricultural Cluster will

(i)be in conformity with the minimum distance separation formulae between Rural Mixed-Use/ Agricultural Clusters and adjacent agricultural uses.

APPENDIX III: FARMLAND TAXATION ISSUES

Issues around taxation have been identified as one of the key regulatory challenges to agriculture industries in general. For instance, after the provincial government eliminated the land transfer tax on within-family farm sales in 2003, it has been frequently recommended that the Land Transfer Tax on farms that are sold to new farm owners be exempted for the purpose of providing an incentive and lower price for new farmers entering the industry (Ontario Federation of Agriculture, 2007). Another relevant agricultural taxation issue is the Retail Sales Tax exemption, due to the currently limited list of eligible farm-related goods (Ontario Federation of Agriculture, 2005).

Amongst the taxation policies that have been discussed in the hope of ameliorating existing on-farm innovation, farmland property tax policies in terms of property assessment and taxation are recognized as the most important taxation aspects in strengthening the long-term viability of farming operations and fostering value-adding agricultural activities in Ontario.

In Ontario, the property assessment process is undertaken at the provincial level which refers to both the valuation of the real property and the classification of the property's value into one or more of the seven property tax classes: residential, multi-residential, commercial, industrial, pipeline, farm, and managed forests.

With regard to farm property valuation, there are three issues being discussed as regulatory barriers for valuing farmlands in a fair manner.

1) Transparency

The methodology used by Municipal Property Assessment Corporation (MPAC) to value farm properties is more complicated than the methodology used to arrive at the value of a residential house. The Ontario Federation of Agriculture (2008) observes that farmers are insufficiently provided with detailed calculation on their own property assessed value besides a rough explanation of how components of farm properties are valued, and it remains unclear on what MPAC is based on to determine farmland's true characteristics (such as soil types and drainage) when assessing the property.

2) Productive Value

According to Ontario Assessment Act, The farmland assessment values are based on the selling prices of neighbouring farm properties in a farmer-to-farmer sales approach rather than the farm's productive value. Under such circumstances, it is questionable whether this farmer-to-farmer sales data is reliable and accurate enough for assessment purposes. (eg. In 2004, there were only 1,500 farmer-to-famer sales in Ontario [Ontario Federation of Agriculture].)

3) Consideration of non-farmer occupied farm residences

Under the Farm Property Taxation policy, the farm residence (farmhouse) and one acre of land beneath it are classified as residential class – which means it is taxed at the municipal residential tax rate instead of at 25 percent of it (The Farm Property Class Tax Rate Program Questions and Answers, 2000-2009). Considering the fact that this one acre is not severed from the rest of the farm property, Ontario Federation of Agriculture (2008) recommended that the whole land parcel should be taken into consideration when determining the value of one acre – rather than leaving the farmers to experience unrealistic assessment values.

As important as property valuation, farmland classification is critical for farmers when being evaluated for the qualification of the Farm Property Class Tax Rate Program. This provincial tax rebate program promises eligible farmlands to enjoy favourable assessment values and property taxation that is at 25 percent of the residential tax rate established by the local municipality (Ontario Ministry of Agriculture, Food, and Rural Affairs, 1998-present). However, concerns and debates were raised regarding the criteria around how "farmland" is defined and assessed.

The Municipal Property Assessment Corporation (MPAC) is responsible for the classification of farm-related properties through assessing farmland, residence, residence site, farm outbuildings, and other buildings (Assessment Procedures for Farmland Properties in Ontario, MPAC website). Nonetheless, unclear and inconsistent interpretations of farmland in the existing legal framework greatly reduce the transparency of the assessment process conducted by MPAC. According to Assessment Review Board (2006), "farmland" was interpreted as the land area on the ground however excluding buildings. This implies that operational agricultural facilities such as standalone greenhouses, mushroom operations, and livestock buildings, could be disadvantaged while they are being taxed at a regular residential rate disregarding their contribution to value-adding farm operations. Moreover, it is brought forth in the Assessment Act, that property characterized as "farm land or buildings used only for farm purposes" are assessed at farm rates – leaving the definition of "farm purposes" unclear and left to the discretion of the assessor to decide whether a particular activity is for farm purposes or if it goes beyond the farm purpose to the point of "producing or processing" within the meaning of industrial property class (Property Assessment and Classification Review, 2000: 24).

As a result, not only is property tax treatment of the on-farm value-retention activities being unrecognized, on-farm value-adding activities are inevitably being discouraged through a significant shift in the property tax burden to the farmers (Petrie et al., 2008).

To best summarize the above issue of concern, the Ontario Federation of Agriculture noted in a Pre-budget Submission to The Honourable Dwight Dun-can, Minister of Finance, 2008:

The current property tax assessment classification system penalizes farmers that are compelled by the market to "convert" their products into a marketable state (value retention) or who manage risk by diversifying their operations into value adding ventures with industrial and/or commercial property assessment classifications.

While the MPAC property assessment process is a provocative issue being discussed in the current regulatory framework, it is critiqued that other criteria for a property to be finally placed in the Farm Property Tax Class by the Ontario Ministry of Agriculture, Food and Rural Affairs also

lead to questions of equity. For instance, one requirement states that "the assessed property much be used as part of a farming operation generating Gross Farm Income of at least \$7,000 as reported to Canada Revenue Agency for income tax purposes" (Assessment Procedures for Farmland Properties in Ontario, MPAC website). The criteria as such becomes an obstacle for small-scale farms to be qualified for the rebate program.

Compared with the provincial authorities, municipalities have lighter responsibilities and more limited powers over property taxation. The municipalities, with the discretion of the local council, simply set property tax rates for each property classification established by municipal bylaws. Nevertheless, although municipalities are only entitled to collect taxes based on their set rates and assessments provided by MPAC rather than placing farm property into Farm Property Class Tax Rate Program – according to the Ontario Federation of Agriculture – they are authorized to exempt farm lands from taxation for certain expenditures and pass bylaws (Farm Property Class Tax Rate Program – The Process, Ontario Federation of Agriculture):

1) To relieve taxes considered unduly burdensome. (eg. Municipalities are permitted to set the rate below 25 percent of the residential tax rate)

2) To declare farm lands exempt or partly exempt from taxation for municipal expenditures incurred for services that farmers rarely use – such as waterworks, fire protection, sidewalks, etc.

3) To cancel, reduce or refund taxes levied by the council for municipal and school purposes.

In conclusion, property tax assessment regarding farmlands is generally identified as a significant barrier based on the lack of clarification and transparency in the existing regulatory framework – especially in the Farm Property Class Tax Rate Program, which fails to recognize the benefits of on-farm value-adding activities and grant certain incentives accordingly. Given that this issue of property assessment is more often addressed on a provincial level, a statement made by the Christian Farmers Federation of Ontario (2008) is rather representative in advocating that the Ministry of Finance, MPAC and agricultural groups should work together to "develop strong definitions and criteria for establishing which activities fall into agriculture, agricultural value-retention and value-added activities, and which activities belong in another taxation class" (On-farm Value-Added Property Taxation – A CFFO Posi–tion Statement date).

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