

## Local Development and Sustainable Periurban Agriculture: New Models and Approaches for Agricultural Land Conservation

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### Introduction

Periurban agricultural territories have had to confront many pressures over the last 70 years, ranging from land development pressures emanating from nearby large cities and metropolises to substantial technological change, increased international competition, the draw of the urban labour market on farmers' families and to the consequences of climate change and variability (e.g. Bryant, 1970; Bryant and Johnston, 1992; Bryant et al, 1982; Bryant et al, 2010). More recently, they are also increasingly expected to provide stable supplies of foodstuffs to the nearby urban markets as well as having the potential to respond to many other urban demands for other functions that these agricultural areas can support (Bryant, 2007; Smith and MacKinnon, 2007)

In this paper, we first outline the principal approaches to research on periurban agriculture that characterised much of the research up until the 1970s and show the links to current approaches and themes that have focussed more on the challenges of conserving periurban farmland resources. We then outline the bases for the preoccupations in many Western countries mainly since the 1960s for the conservation or the protection of farmland resources around cities, by focussing on the strategic importance of these territories by calling upon their multi-functionality in the service of urban and metropolitan populations. We then focus on approaches to strengthening agriculture in periurban territories and provide an example from the Montreal region (Quebec, Canada) before drawing our conclusions.

## **Earlier Approaches to Research on Periurban Agriculture and Links to Current Research Themes and Approaches**

From the 1940s onwards, a great deal of research has been undertaken on periurban agriculture in different countries, e.g. the UK (Best, 1978; Munton, 1974, 1987; Wibberley, 1954, 1959), Canada (Bryant, 1976; Bryant and Marois, 2010; Bryant et al, 2008; Bryant et al, 2003; Bunce, 2008; Krueger, 1959; Marois, 2010; Manning and McCuaig, 1977), the U.S.A. (e.g. Bogue, 1956; Berry et al, 1976), France (e.g. Bryant, 1970; 1973a, 1973b; Fleury, 2000; Fleury et al, 2004; Laisney, 2011). See Bryant and Johnston (1992) for an extensive synthesis of this literature up until the early 1990s..

Early on, one major approach was dominated by *statistical analyses based on official data* (such as Census data) on farms, their structures and transformations at a variety of geographic scales (e.g. municipalities, broader administrative units such as Census Divisions in Canada (which are Counties and Metropolitan Regions in Ontario; and Regional Municipal Counties (from 1978 onwards) in Quebec) and even Census Metropolitan Areas). The geographic scale of the units of statistical analyses, as well as of the total study areas, had a significant effect on our ability to investigate certain types of relationships and even to investigate certain issues (such as the degree of variation in conditions from one geographic unit to another). Even at the 'local' level, the patterns that emerge from using, for instance, canton level data in France (e.g. Bryant, 1974) yields very different patterns compared to using township and county data in Ontario, Canada (e.g. for investigating the 'loss' of farmland, such as Gertler and Hind-Smith (1962)). As statistical analyses focussed more on smaller geographic units, it became clear that periurban territories were indeed much more heterogeneous than much of the earlier research had led us to believe, and that even the assessments of the 'loss' of farmland in urban-centred regions was certainly not related only to urban development pressures!

Some of the research was also based on *farm-level interviews* (e.g. Bryant, 1970, 1981; Fielding, 1978), which focussed on the role of farmers and their families (and other local actors) in decision-making and on the nature of the decision-making process itself with its multiple stressors and different motivations of farmers and their families. This approach began to give rise to different conceptualisations of farm change at the local level, particularly the focus on proactive adaptation in relation to what would initially appear to be difficult environments for farming (Bryant, 1970, 1973a, 1981, 1984, 1989; Marsden et al, 1993).

*A more reflective approach focussed on the collective function of food production* and the apparent need to conserve or protect the farmland resource base, particularly because of the good quality of the farmland resource base around many cities (e.g. Manning and McCuaig, 1977; Williams et al, 1978). This was linked to broader preoccupations expressed by senior governments and by the

setting up of farmland protection strategies in several jurisdictions in North America in the 1960s and 1970s (see Bryant and Russurm (1982) for a review of these early programs), including Quebec (CPTAQ, 1978, 1997). Thus, not surprisingly, much has been written of this planning theme (e.g. for Canada, see Russwurm (1977), Bryant and Russwurm (1979, 1982 (Canada and the U.S.A.)), Deslauriers (1973), Marois (2010), Montminy (2010) and Thibodeau et al (1986) and for France see for instance Fleury (2005a)). Some of this research tended to focus on the negative side of the equation linking farmland loss and farm vulnerability in periurban territories to urban development and land speculation; this focus thus tended to side-step the positives of a near-urban location for some types of farming and the fact that some farmers have been able to adapt very successfully (see below), as Bryant and Russurm (1979) pointed out.

### **Periurban Agricultural Territories and their Strategic Significance in the Context of their Multi-functionality**

Periurban agricultural territories have been considered to be strategic components of urban and metropolitan regions (Bryant and Mitchell, 2006; Charvet and Bryant, 2003). They have much more to offer to their regional economies and societies than simply food production because they also support multiple functions, both market-based and non market functions. Market-based functions include the production of foodstuffs for the urban market as well as functions related to both tourism and leisure activity. Non-market based functions include the conservation of landscape heritage, and water and biodiversity conservation; some of these can also be transformed into functions that generate supplementary income for the farming families concerned. Some functions serve to strengthen the linkages between farming, farm families and nearby urban areas (Bryant, 2007, 2009; Granjon, 2005; Granjon and Bryant, 2004; Fleury, 2000, 2001a, b, 2005b, c). Russwurm (1977) and subsequently Bryant et al (1982) and Bryant (2007) referred to this whole range of functions as the '4 p's': the functions of *place* (e.g. activities such as certain agricultural activities attracted to periurban territories because of their proximity to urban areas); *production* functions (e.g. agricultural production functions developed because of the good quality of the farmland resource); *play* functions (e.g. use of farmland and rural areas in periurban territories because of their attractiveness to some segments of the urban population for leisure and tourism-related activities) and *protection* functions (e.g. the protection of farmland to maintain potential for food production for future generations, the protection of water resources and the conservation of cultural and historic resources embedded in agricultural landscapes). The multi-functionality of rural territories, including periurban territories, has been endorsed in Quebec by Solidarité Rurale du Québec (SRQ, 2008, 2011) as a major tool for rural development in all types of 'rural' territories.

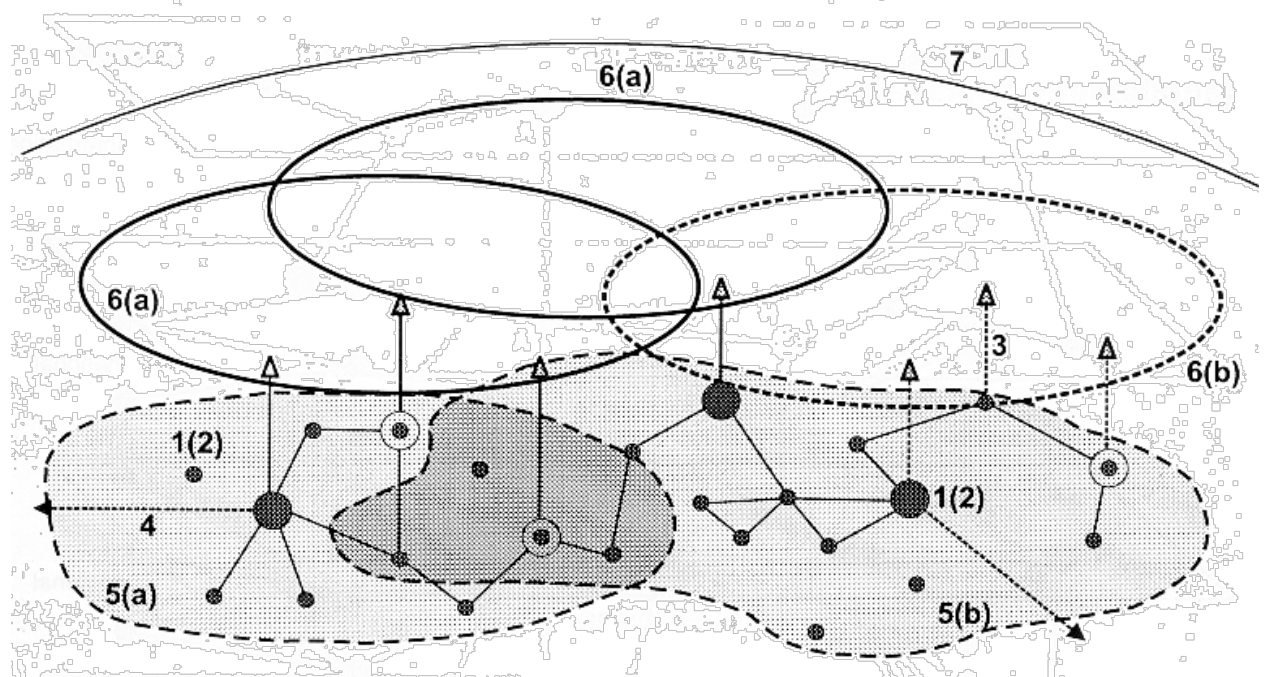
Of course, periurban food production has a particular significance for major urban and metropolitan regions. Not only has this been reflected in the various farmland protection programs put in place in North America, but it is also reflected in the

development of several relatively 'new' forms of agricultural production. Although they are not exclusive to periurban territories, the nature of their relationship with the urban consumer tends to encourage their development in periurban territories (and for some observers, in 'urban' environments as well). Thus, a number of farming types have emerged since the early 1990s which reflect the increasing importance of buying foodstuffs locally (e.g. Lainsley, 2011; Smith and MacKinnon, 2007), including through Community Supported Agriculture (CSA) (e.g. Philibert, 2007a, 2007b), and organic farming (e.g. Beauchesne, 1999; Beauchesne and Bryant, 1999; Bryant and Beauchesne, 1999). This is not just the traditional market gardening and fruit and vegetable production activities which have been important in some periurban agricultural territories for a long period of time (e.g. near Paris and London), but also relatively new production systems (Bryant, Doyon et al, 2007), partly reflecting increasing concerns for 'quality' agricultural production (Bryant, 2011), all giving rise to new conceptualisations and practices for the development of periurban agricultural territories (e.g. Donadieu and Fleury, 2003).

### **Responses to Strengthening Periurban Agriculture**

For periurban agricultural production to develop and survive, it is certainly the case that farmland protection programs provide a very useful framing environment (e.g. Thibodeau et al, 1986). However, farming is much more than the land resource ... it is also based on people (farmers and their families, and their ability to mobilize the necessary resources for their farming activities, including capital). For this to occur, it has been argued that it appears essential that: a) farmers and their families become involved in the development of their own multi-functional agriculture-based projects and thereby become better integrated into urban and metropolitan society; and b) the non-agricultural functions associated with the periurban agricultural territory must also be appropriated by non-agricultural actors, such as local government, nearby city governments, and community and consumer organisations ... not to mention the urban consumer or at least some segments of the urban market. Thus, it has been argued forcefully many times that farmland conservation or protection requires intelligent municipal and regional scale planning (Caldwell et al, 2007); however, creating agricultural land reserves alone is not adequate, and ensuring ongoing agricultural production also requires the initiation of local initiatives undertaken and maintained by local farmers and other actors (Bryant and Granjon, 2007). Thus, in the next section, the nature of local development processes is briefly considered, focussing on individuals working within their networks of informal relationships (social and other forms of networks), followed by a discussion of how action-research approaches can strengthen local initiatives in the context of local periurban agricultural development.

**Figure1 The Dynamics of Actors in the Construction of Territory**



**Note:** (1) Actors; (2) Interests and objectives; (3) Actions; (4) Networks; (5a) Informal organisation; (5b) Formal organisation; (6a) Observed orientations; (6b) Latent orientations; (7) Context

Source: Based on Bryant (1995a), Frej et al (2003), and other publications of Bryant.

### *Local Development Processes*

Since the 1980s, more and more attention has been focussed generally on local development processes and local (and community) development is now considered in many jurisdictions in the Western World to be an essential component of development generally (e.g. Bryant and Cofsky, 2004; Bryant, 1995b, c; Dale and Pierce, 1999; Halseth et al, 2009; Douglas, 2009). Greater attention has been paid to the interaction of actors in local development ( Frej et al, 2003), more importantly for our present discussion to local dynamics in periurban territories (e.g. Bryant, 1995a; Fleury et al, 2004). Bryant's framework is reproduced in Figure 1. In this schematic representation, the various components can be used in the collection of data and the analysis of the dynamics in any political and cultural context. Essentially, the actors, responding to their objectives and interests (including personal interests), initiate or support different actions; they can mobilize resources (these resources may be financial, political support, human resources (e.g. volunteers), information) by using their networks of relationships which are embedded in the informal (e.g. personal) and formal (e.g. professional, governmental) organisation of society (local, regional,

national, international). Their cumulative actions create observable orientations or profiles of development; there are also latent orientations which could be developed, depending upon the dynamics of the interplay between the actors. All of this takes place within the broader regional, national and international contexts, in which we find resources, legislation, rules and programs, which may influence the actions of local players, including in our case farmers and their families.

Building on the role of individuals working in their networks, the notion of adaptation was developed to understand the heterogeneity of the transformation processes that unfold in periurban agricultural territories (Bryant, 1984). In relation to this, Bryant (1984) suggested a threefold categorisation of the trajectories of periurban farm landscapes (farm territories): a) landscapes of farm decline and de-structuring in which a variety of stressors combined to create very unfavourable conditions for farming leading to the decline of farming; b) landscapes of farm adaptation, where despite the existence of forces with potentially negative impacts on farming and farm structure, farmers have been able to adapt proactively and even create their own opportunities, leading to a relatively dynamic farming structure and community (at least certain segments of the farm community); and c) landscapes of 'normal' farm development, where farms are continuing to evolve along the general lines of farm development found in areas beyond the immediate periurban territories. Clearly, what is of most interest is how do landscapes of farm adaptation develop in periurban territories. The answer lies in the role of individuals, their motivations and capacities to plan strategically for their own farm operations as well as to develop collective projects.

Local development projects initiated or appropriated by some members of the local farming community can be developed and modified in order to deal with periurban agricultural areas in any political and cultural context (e.g. Fleury and Boudjenouia, 2003; Fleury, 2004). Characteristically, these processes involve the development of new models of agricultural development and relatively new approaches to local and community development. These processes can reinforce regional and national programs of agricultural land 'protection' which in any case, it is argued, need such supportive local and community development processes in order to be effective.

### *Action-Research and Local Periurban Agricultural Development*

What can the research community do to strengthen farm adaptation? One major approach that has appeared is that of action-research. What does this mean for the researcher? It means essentially assuming a different set of roles to those commonly associated with the researcher. In particular, it implies the researcher and research team when there are several researchers, adopt the roles of accompanying projects, counselling the actors involved when asked for advice, informing the actors about resources and similar projects elsewhere (and so on)

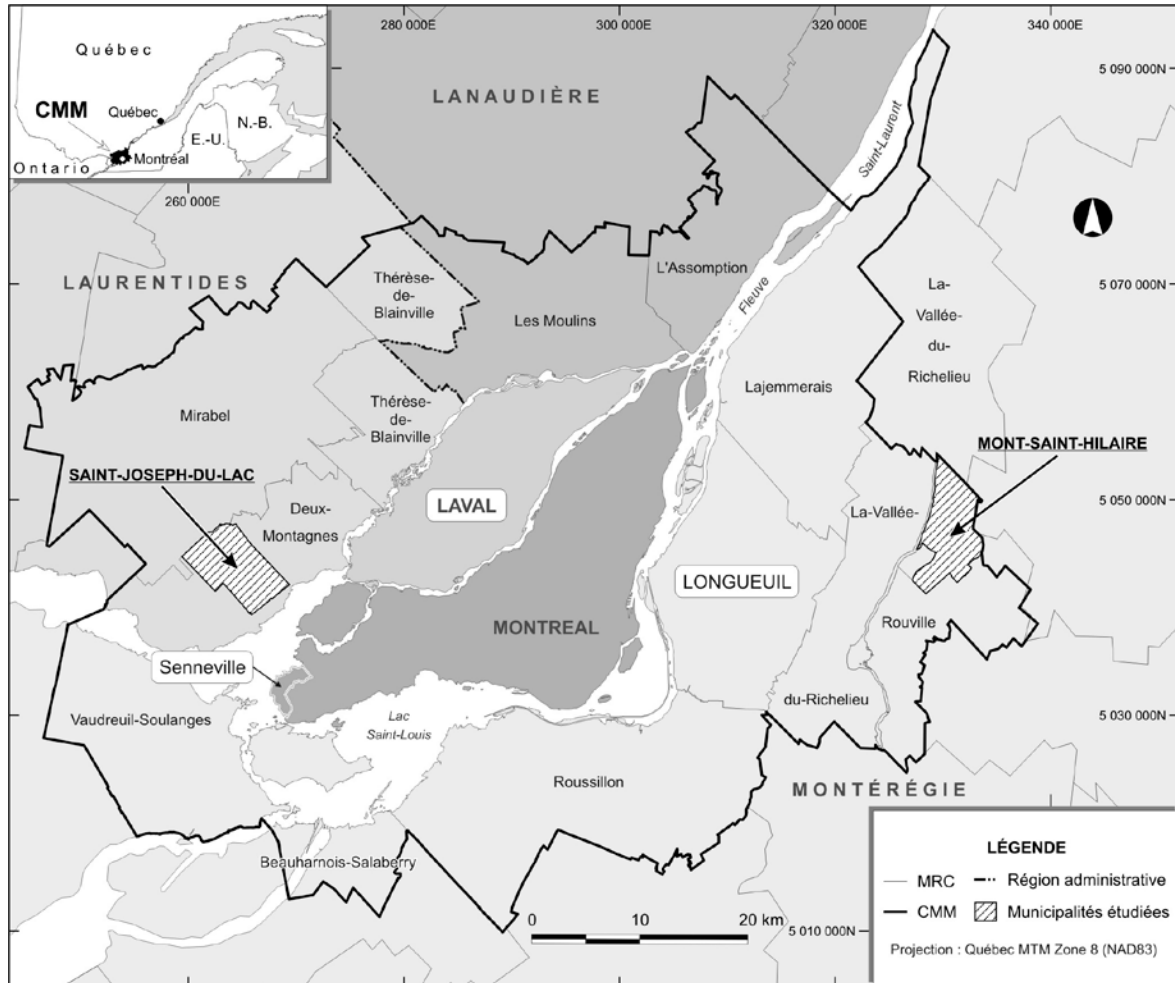
and facilitating (for instance, chairing meetings and helping mobilize resources including other players). What is important is to emphasize that these roles are undertaken at the request of the local players involved in the project and not by imposing particular projects. In some cases, a research team may initiate preliminary discussions to help farmers undertake a diagnostic of the territory and the constraints and opportunities that they are faced with or that (for opportunities) they might create for themselves.

In the Montreal region, in 2008 a Social Sciences and Research Council of Canada research grant was awarded to Christopher Bryant to undertake an action-research program aimed at reducing the vulnerability of periurban agricultural territories, and by using the tool of multi-functionality to gain the support of actors other than the farmers directly involved.

### **The Example of Senneville, West Island of the Island of Montreal**

Many examples of periurban agricultural territories near many different cities can be identified that demonstrate how groups of farmers have been able to adapt to what would appear to be difficult circumstances and create dynamic farm projects (e.g. near Paris, Toronto and Montreal). The locations of a few projects in the Montreal region are identified on Figure 2. All have different origins. Some were initiated by various individual farmers for their own farms, developments which were subsequently integrated into local and regional plans); this was the case for Mont-St-Hilaire and its orchard areas (Granjon, 2005; Granjon and Bryant, 2004). St-Joseph-du-Lac, also an orchard area, has been primarily developed by the apple-producing farmers, and there is an important direct sales component associated with urban residents visiting the area for its apple production and other tourist-type attractions (Granjon, 2005). Laval, a major city in Quebec, has also maintained a major area of agricultural land in which market-gardening and horticultural production has existed for many years; however, various projects have been developed both by part of the farming community as well as with the support of the city and other actors to take advantage of the other functions supported by the farming areas (Darly, 2001; TCAAL, 2011). Longueuil (Planchenault, 2008; Charbonneau, 2010) has been the location of a 'city-countryside' project since the turn of the new century, involving local farmers, the city as well as the agricultural and municipal affairs ministries of the province; it also involves bringing back into cultivation several abandoned parcels of formerly farmed land. While this last aspect has been put on hold for some 2 years because it conflicts with some environmental regulations, work is currently underway to construct a project that is satisfactory to all involved. All these examples involve projects with a strong dose of multi-functionality of the farmland.

**Figure 2 Location of Senneville in the Montreal and Other Examples of Periurban Agriculture Involving Farmer and Other Local Actor Initiatives**



Source: Produced by Marc Girard, cartographer for the Département de Géographie, Université de Montréal (based partly on Bryant and Granjon, 2007)

The project based in the municipality of Senneville is of particular interest from the perspective of action-research (Bryant and Chahine, 2010). The project was initiated by the small group of farmers, essentially small-scale organic producers, who wished to develop a project to ensure the long term viability of their agricultural activities. They approached Christopher Bryant in May, 2009, to see what help they could be provided with, having learned of the type of research being undertaken at the Université de Montréal (e.g. Bryant and Granjon, 2007). Their project took off when they began to explore the possibilities of involving other actors to gain their support for the farmers' project. This led very quickly to a one day colloquium in July, 2009, involving the participation of close to 100 participants representing not just the farmers, but also one of the major



landowners, the local municipality, other nearby municipalities, the Quebec Farmers Union, the Ministry of Agriculture, the Agglomeration of Montreal, and various community organisations. The various actors were mobilised by an internee with the Laboratory of Sustainable Development and Territorial Dynamics (University of Montreal), Ève Saymard, from INRA, Montpellier, as well as an internee, Taber Ward, from the U.S.A. who was working directly with the group of farmers. A vision statement for the territory was established by the end of that day, and it involved explicitly the integration of multiple functions, including the conservation of nature and the farmland resource, and opening up the area to leisure activities compatible with the farming activities. As well, of course, the functions included the maintenance and development of the organic farming activities and the marketing of the farm products to local markets and as well by using CSA principles. Following this, a series of meetings were held, facilitated by Ghalia Chahine and involving other actors. Currently, the group based in Senneville has made presentations to the municipal council about the need to conserve the farmland resource in the municipality.

It is worth mentioning that in the Montreal region, a *Coalition pour l'avancement de l'agriculture urbaine et périurbaine de Montréal* (Coalition for the Advancement of Urban and Periurban Agriculture) was set up in 2008, initiated through the Laboratory of Sustainable Development and Territorial Dynamics at the University of Montreal; this was the first Canadian group that became part of MetroAg (2010), a North American network of metropolitan networks focusing on urban and periurban agriculture. It involves a small number of researchers, but principally it involves representatives of different municipal and provincial governments and community and environmental organizations.

## **Concluding Comments**

Periurban agriculture research and action has come a long way since the 1940s. As we have argued, the focus has been placed increasingly on understanding the role of individual actors such as farmers and other collective local actors in creating dynamic and viable periurban agricultural territories. There is still a long way to go however, as the conditions for local initiatives and a dynamic, locally-based process of support does not exist everywhere, even in those jurisdictions where the broader farmland protection programs exist or where, as in other places, a relatively sophisticated regional planning framework has been put in place. We will entertain questions concerning how to encourage the development of dynamic and viable periurban agricultural projects in order to ensure truly multi-functional and dynamic periurban agricultural territories on a sustainable basis that can also contribute fully to the quality of life in urban and metropolitan regions.

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