

**SHORT SUPPLY CHAINS IN PERIURBAN ZONES: A WAY TO  
MAINTAIN RURALITY NEAR THE CITY?  
SOME EXAMPLES TAKEN IN THE ÎLE-DE-FRANCE REGION**

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**ABSTRACT**

According to Parker (2005), a supply chain is short when the number of intermediaries between the consumer and the producer is low, and/or when the geographical distance between both is small. Ideally, a short supply chain (SSC) should gather both characteristics.

SSC's are often presented in the international literature as a sustainable way of territorial development. Most of the case studies however are located in rural zones, even in lagging rural zones (Ilbery and Maye, 2005) and concern generally traditional farms (Battershill and Gilg, 1998). What about SSC's in urbanised zones? Can it be ensured that SSC developed by agriculture near the city (that means where the "AND" is active in the SSC definition) could be an interesting way to maintain an agricultural form of rurality near the city? Are SSC's a well-adapted tool for landscape management?

To enable the answering of these questions, an interdisciplinary research work about SSC was initiated in 2006, in the Île-de-France Region located in the surroundings of Paris. The first results and questions of this research program will be presented here, after a preceding explanation of the analytic framework and operational objectives. For two examples, it will be demonstrated how SSC and territorial development near the city can be linked. By doing so, first guidelines and thinking elements for policy makers will be given. New questions that turned up and the perspectives of this work will be stated in the conclusions.

**KEYWORDS:** short supply chains; periurban agriculture; Île-de-France;  
geographical distance

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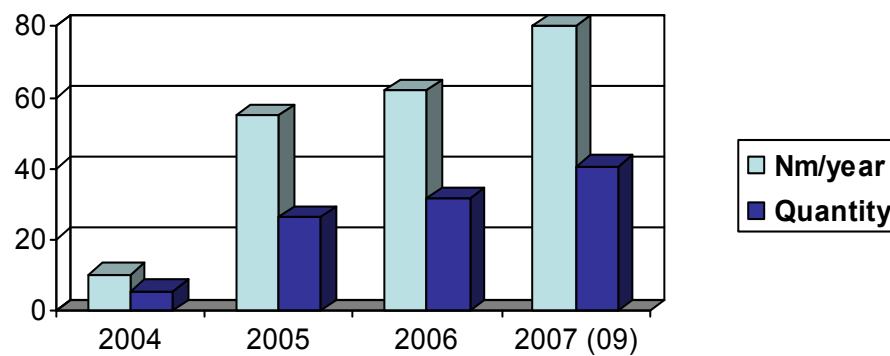
## 1. CONTEXTUAL ELEMENTS

This research focuses on the Île-de-France Region. SSC's are a strong element of regional agriculture and one of the main axes of the agricultural policy of the Regional Council. In the Île-de-France Region with 11 millions of inhabitants, agriculture constitutes 50% of the land use, mainly in arable crops (wheat, rape seed and so on) but also with crescent mixed systems.

- According to a recent survey, about 1400 farms in the Region apply at least one form of SSC (essentially for vegetable crops and fruits but also for some animal products - eggs, honey, cheese and chickens). More than 1/5 of the 6500 farms in the Region are characterized by SSC.
- The Ministry of agriculture considers direct selling as the “pillar of agriculture in the Region” (Agreste, 2005). The two chambers of agriculture<sup>1</sup> have a specific service dealing with the problems and promotion of short supply chains.
- The Regional Council has a policy that promotes SSC, especially for organic farming. One of the main axis of this policy is the promotion of local organic products in scholars canteens. A specific label for organic bread has been created in 2004 and sustained by the Regional Council (Pain Bio d'Ile de France®). In 18 pilot secondary schools, the number of meals including this bread has been multiplied by more than five in two years (Figure 1).

So the SSC phenomenon is strongly supported, both by professional and public policies.

**Number of annual Meals and total quantity of Organic Bread in the 18 pilot scholar canteens**



*Number of meals (\*10.000); Quantity in tons/year of « Pain Bio d'Ile de France ® »<sup>2</sup>*

**Figure 1 – The organic wheat program for canteens**

<sup>1</sup> In France, each department has a chamber of agriculture constituted between the state services (ministry of agriculture) and the farmers with representation of the farmers' trade unions. One of their objectives is to provide technical assistance for farmers through extension services, partially paid by farmers. Other extension services (entirely private) come from cooperatives of farmers. In the Ile de France region, there are 2 chambers of agriculture (one for the East of Paris, one for the West and North)

<sup>2</sup> In « Programme Régional en faveur de l'agriculture Biologique 2007-2013 - Rapport pour le Conseil Régional d'Ile de France Septembre 2007 »

## 2. AN INTERDISCIPLINARY GRID TO ANALYSE SSC

The research objective is to analyze the opportunities and constraints generated by the development of SSC's and their role in the maintenance of agricultural land use and in the sustainable development of agriculture in the Region. Three disciplines - agronomy of farming systems, regional economy and sociology – are joined. The analytical framework for this study is built up as a tripod (Figure 2).

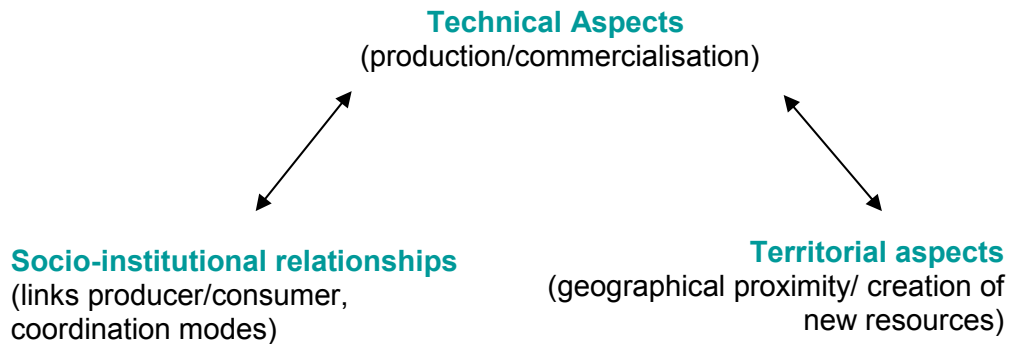


Figure 2 – A tripod analysis framework

The analysis of technical aspects concerns the repercussions and exigencies of SSC development for the management of farms. For example, the choice and technical management of crops and/or the management of productive resources by farmers will be influenced. The technical aspects of commercialisation (legal aspects for example) that can affect the development of such SSC are of interest.

The analysis of socio-institutional relationships between regional actors mainly deals with the nature and intensity of links between farmers and producers in the different forms of SSC and the types of coordination existing between them.

The analysis of territorial aspects concerns the role of geographical proximity in the SSC: what are the repercussions of the development of such supply chains on the creation or use of territorial resources such as specific know-how, local specialized labor force, technical knowledge, land, use of local tenure, etc. ?

Two examples below will illustrate the use of this framework and the type of emerging questions which can be of interest for the policy makers. One of the examples is the development of “AMAP” (see below) in the Region: this new form of SSC based on renewed links between farmers and consumers is now questioning the territorial dimension and even the land tenure policy of some municipalities. The second example comes from a territorial agri-urban project in which SSC development forms a strong policy axis: the diagnosis made here orientates the actions that can be led and ends up in the emergence of new non-food SSC.

### **3. THE AMAP DEVELOPMENT: FROM A NEW FORM OF FOOD RELATIONSHIP TO A TOOL FOR TERRITORIAL MANAGEMENT?**

The Association pour le Maintien d'une Agriculture Paysanne (AMAP)<sup>3</sup> is the French version of the Japanese Tekkei (Parker, 2005) or the US Community supporting Agriculture (CSA). It consists a direct and constant relationship between a farmer (mainly producing vegetables) and a group of consumers. The latter commit themselves to finance in advance the farmer's production. By doing so, they share the risks (including the climatic risks of no or low production) and participate in the farm life (for example through practical working workshops). The farmer commits himself to deliver weekly a box of products (according to the season) to the group of consumers (the "amapians"). The technical management of his farm has to be made transparent and the amap impose to move towards an organic way of production.

Some AMAP farms in the South of France, where the movement was born at the beginning of the 21th century, and in the Île-de-France Region (Pasquier, 2007), where it began in 2003, have been studied. In this latter Region, the AMAP number is growing fast. At the beginning of 2006, there were less than 40 AMAP (with 40 to 60 consumers families each). At the end of 2007, 80 AMAP have been counted. Nowadays, there is a waiting list of 4000 potential "amapians", what means that there are between 80 to 100 new farms potentially concerned.

The main problem for "amapians" now is to find a farmer in the Region. The rapid decline of specialized farms in the Île-de-France (for example, there were 187 arboriculture farms in 1987, 110 in 2000 and less than 60 in 2007) and the scarcity of organic farms (less than 80 certified in 2007, and all the organic market gardeners in the Region are now in AMAP) puts the "amapians" up to look for "their" farmer outside the region. This is the case for more than half of the AMAPS in 2007. In these cases, the supply chain is short in commercial nodes terms, but not always in terms of distance. This is considered as a shame by a lot of "amapians", for whom the food kilometers issue becomes important. As a consequence, the amapians put pressure on the Regional Council and on farmers to encourage the conversion of conventional farms to organic ones.

To balance the declining trend of specialized farms and to act positively for the installation of farms near the city, amapians recently used a new form of action. This action has a territorial nature and a direct implication on the installation of young farmers and on the farm land tenure. Some amapians for example have created a "land company" which allows them to buy the land that "their" farmer is cultivating. This action is made in order to avoid speculative selling by traditional owners. At least one example (about 20 ha collectively bought) has yet succeeded in the Saclay Plateau in the South West of Paris, around one of the oldest AMAP (Les Jardins de Cérès). Another form of action initiated by "amapians" or potential "amapians" is to lobby so that municipalities buy fields for the installation of a young farmer. Today, at least three communes or districts

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<sup>3</sup> <http://amap-idf.org/>

around Paris are involved such an initiative, under pressure of the local potential “amapians”.

Born as an urban wish for alternative food consumption and a renewal of the producer-consumer relationship, the AMAP phenomenon is probably now emerging as a new way to manage agriculture near the city, in its technical way of producing but also in its spatial localization. Questions now concern the future extent of AMAP and the duration of the amapians groups.

#### **4. SSC IN THE AGRI-URBAN PROJECT OF THE PLAINE DE VERSAILLES**

Around the Versailles Palace lies the Plaine de Versailles, a territory of 122 km<sup>2</sup> of which 66% (8200 ha) is agricultural land. In this high valued heritage territory live about 140.000 inhabitants with an economic situation upper than the regional mean.

To protect the landscape from urbanisation and to recognise the role of agriculture in this, an association<sup>4</sup> gathering farmers, inhabitants and policy makers was created in 2004. At the beginning, the main goal of this association was to encourage the development of SSC's in order “to create links between inhabitants and farmers”. The situation of agriculture in the Plaine de Versailles is worrying: in the last 20 years, 40% of the farms have disappeared and among them 60 % of the market gardeners. A diagnosis of the farms engaged in SSC in this territory is made (Vassor, 2007; Mejia Hernandez, 2007). The main objective is to identify the forms of SSC as well as their specific problems and opportunities and to set a hierarchy of possible actions for this association.

Among the 68 farmers on the Plaine de Versailles in 2006, 28 are involved in SSC. 25 of them are specialized (market gardeners and fruits). The famous “Potager du Roy” should be mentioned. Settled in a part of the Versailles Palace, he is still producing fruits largely sold on the spot. The SSC in this territory is are highly diverse. 7 different forms have been identified, from direct selling in the farm to internet sales, passing through pick-yourself farms and delivery of boxes (with or without an Amap system).

Some comments about this diversity:

- The “definition” of SSC varies. According to Parker’s definition, some of these SSC consist in a reduction of nodes and in a geographical proximity. This is the case with direct sellings at the farm, where the main consumers are local inhabitants as showed by our investigation. Some SSC forms realize only a reduction of nodes, as this is the case for Internet sales. One of the main specialists being “Potager du Roy”, a farmer who sells some products (such as jams) to Japanese consumers by means of the internet. Some SSC are variable. For example, the customers of pick-yourself farms are mainly local but not exclusive, because of the relative scarcity of this type of farms in the Île-de-France Region and the reputation of some of these farms in the Plaine de Versailles. The direction of the relationship between farmers and consumers

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<sup>4</sup> APPVPA : Association Patrimoniale de la Plaine de Versailles et du Plateau des Alluets, leaded by M Colin, mayor of Noisy le Roi

can vary. The farmer meets the consumer (market place) or the consumer comes to the farm (pick-yourself, on-farm selling). A meeting place between these two situations, like a scholar canteen, an association like AMAP, a restaurant or a supermarket with local supply, is an intermediary between both.

- Another observation is the complementary between different SSC forms inside a farm. There are generally at least two different forms of this kind of SSC's. For example, some farmers are involved in two or three market places weekly and also have a farm boutique where they sell directly to the consumer. The main motive for this diversification is economic, but it frequently leads to a high level of work charge. Moreover, another form of commercial diversification is the general complementary between these forms of SSC and the "long" or classical supply chains. The majority of these SSC farms have commercial relations with cooperatives or with the Wholesales Market of Rungis, at least during summer when vegetable or fruit production is high and a part of the local inhabitants is away for holidays. Other SSC farmers have these connections throughout the year. They buy products that they do not cultivate or they miss a sufficient quality or quantity to meet the demands of their customers. The AMAP have the same problem of overproduction in summer and generally turn to cooperatives or other long supply chains for a part of their production.

All this proves that the problems of SSC are varied and cannot be totally separated from the current market.

Without analysing the specific problems (in technical, socio-institutional and economical points of view) of each of these SSC, some common problems have been underlined. This leads to possible actions at a territorial level:

- One of the first demands of SSC farmers is to be helped in "being known" and identified by local consumers. This research shows that the majority of inhabitants is not aware of having fresh agriculture products on the doorstep. Some actions have already been taken by the association APPVPA and the extension services. These actions consist the creation of a specific brand name, the adoption of common rules to indicate the local farms where consumers may go, the incitation for communes to give information about these forms of SSC in their monthly reports etc.
- A sustainability diagnosis on farms showed that at least half of the SSC farms, even if they are economically viable, will not have a successor. The main problem for the young generation of farmers is, above all, the volume and intensity of the work not matched by the income rate. So one of the main required actions in a region where labour is expensive and the specialized labour-force nearly absent is to organise, groups of trained employees to create the necessary human resource. It is also necessary to facilitate the housing of these workers, whose salary does not correspond to the local house-rent costs.

The local authorities inside the region, but also the Regional Council, have been solicited to finance these actions. For the moment, the signalisation of farms has finished.

Reflection is in progress to facilitate the transformation of unoccupied farm buildings in employees' flats.

## **5. WHEN (FOOD) SSC CREATE NON-FOOD SSC ON TERRITORIAL DIMENSION**

One of the main axes of the Regional Council is to increase the area and role of organic agriculture in the Île-de-France Region. Some actions have been taken, like among others the donation of subsidies to help the conversion of conventional farms into organic ones.

One of the technical problems that have been identified, mainly in AMAP farms, is the difficulty to supply the farms with organic fertilizers in a Region where cattle has nearly disappeared. This is an obstacle of technical origin put forward as a limiting factor for the conversion rate of conventional agriculture. This rate lies largely below the wish of the Regional Council. Nowadays, most of the organic farms switch over to exogenous organic fertilizers, some of them imported from foreign countries (Netherlands, Denmark). The problem is particularly complex for the AMAP farms, where consumers in a direct relationship with the farmer may not be very happy to see that "their farmer" is not as self-sufficient as they would like.

One of the solutions is to identify local and alternative organic sources. Here the experience of the Plaine de Versailles association is interesting. One of the work axes of the association is to develop horse paths and horse activities in the Plaine, and this in relation with the Royal image of the place. The aim of this action is to influence the landscape management by adding life quality and touristic value to the agricultural landscape. Horse activities are traditional in the Plaine, where there are counted more than a thousand horses (that means much more than all the bovine livestock), more than 2500 horse-riders and more than 10 horse centers (500 boxes).

During the first studies, one of the results showed that all the horse centers in the Plaine de Versailles had the same problem with removing their horse manure. There are a few organic farms in the Île-de-France Region that already use horse manure in their fields, but this is not organized for the moment.

A first evaluation of the "horse manure" resource in the Plaine showed that it could be, in a quantitative point of view (around 7000 t/year), a valuable resource to be used at least for vegetable gardeners. By using this manure, local farmers would not have to buy expensive exogenous organic fertilizers and horse centers would not have to spend too much money to eliminate the horses "waste".

More studies have to be undertaken on the agronomical and organizational point of view of the use of horse manure in organic farms. What are the agronomic qualities of these horse manures in relationship with the type of litter used and with the type of crops? What are the interests of composting the horse manure? What form of organization like collective composting could be built for that? Moreover, the objective of the "Plaine de Versailles association APPVPA" (see note3) is now to see if it could be possible to

organize a circuit between arable crop farms producing quality straw for the horse centers (and even oat or other fodder), horse centers and specialized farms, mainly when the latter aim to reduce chemical inputs and/or to converse into organic farming systems. But moreover, a virtuous territorial circular organization based on food SSC and non-food (inputs, fodder) SSC could then be initiated with complementarities between arable crop farms and vegetable crops farms with the aim to legitimate more the role of agriculture in this territory (Figure 3).

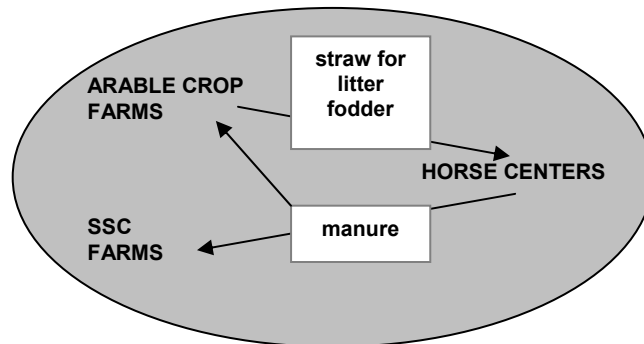


Figure 3 – An organization at the Regional level?

A series of studies are foreseen for 2008 by APPVPA to prepare the associative and regional actions on this problematic. Over this specific territory, the aim of developing SSC's in the Île-de-France based on more ecological and organic agriculture leads to treat these questions at the scale of the whole region: horse riding is a typical peri-urban activity in rapid increase and horse manure is largely the first organic source in the Region, except for domestic wastes.

## 6. CONCLUSION

This first interdisciplinary work does not claim to definitively answer the central question: “Are SSC's a valuable tool to maintain rurality near the city?”. Many questions on the tripod analytic framework still remain without a correct answer. For example, how may AMAP farmers technically manage the crop and crop succession choices to face the demand of regularity of their “amapians”? What are the mechanisms of box prices decision, and is this price enough to ensure the economic sustainability of this system? What are, from a sociological point of view, the effects of the different SSC's on the co-learning relationship between farmers and consumers? Is the certification “Organic Farm” a necessary step to help the development of SSC with more “ecological” products? These are the real questions for the Regional Council, that confirm the need for this investigation program.

But, for the moment, it is possible to analyse the type of problems that the different SSC's are facing. Some mechanisms are understood and hypothesises are made for some



other. First guidelines exist to help the public decision on how to help SSC's development at the territorial level.

Today, the hypothesis is that the development of SSC near the city represents a reactivation of a very old function of urban and periurban agriculture: to feed the city. It stands for, at least partially, a renewal of the food paradigm of the urban inhabitants who want to escape the "dictatorship of the Supermarkets". They want to renew the knowledge about what they eat. through the proximity supply. If this is true, it could mean that the maintenance or development of agriculture near the city could be made, at least partial, by supporting these SSC, food or no food ones.

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