

CALLAU, Sonia

COST Action Urban Agriculture Europe:

Food systems and urban-rural
interaction

The Nordic perspective

Short Term Scientific Mission



Food systems and urban-rural interaction

The Nordic perspective

Uppsala 15/09/2014-26/10/2014

Author:

Ing. CALLAU BERENGUER, Sonia
Barcelona's Provincial Council
Universitat Politècnica de Catalunya in Barcelona

Supervisor:

Madeleine Granvik, Ph.D.
Researcher in Planning for sustainable development
and management of urban-rural interactions
Swedish University of Agricultural Sciences
Department of Urban and Rural Development

COST Action Urban Agriculture Europe is chaired by:

Prof. Dr. -Ing. Frank Lohrberg
Chair of Landscape Architecture
Faculty of Architecture
RWTH Aachen University

e-mail: science.cost@la.rwth-aachen.de

Professor Lionella Scazzosi
PaRID Ricerca e documentazione internazionale per il paesaggio
Politecnico di Milano

e-mail: parid@polimi.it

This publication is supported by COST



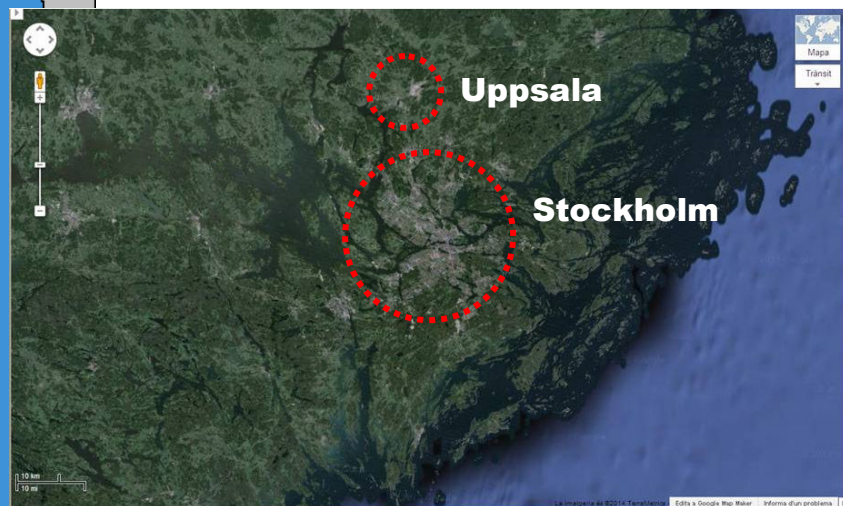
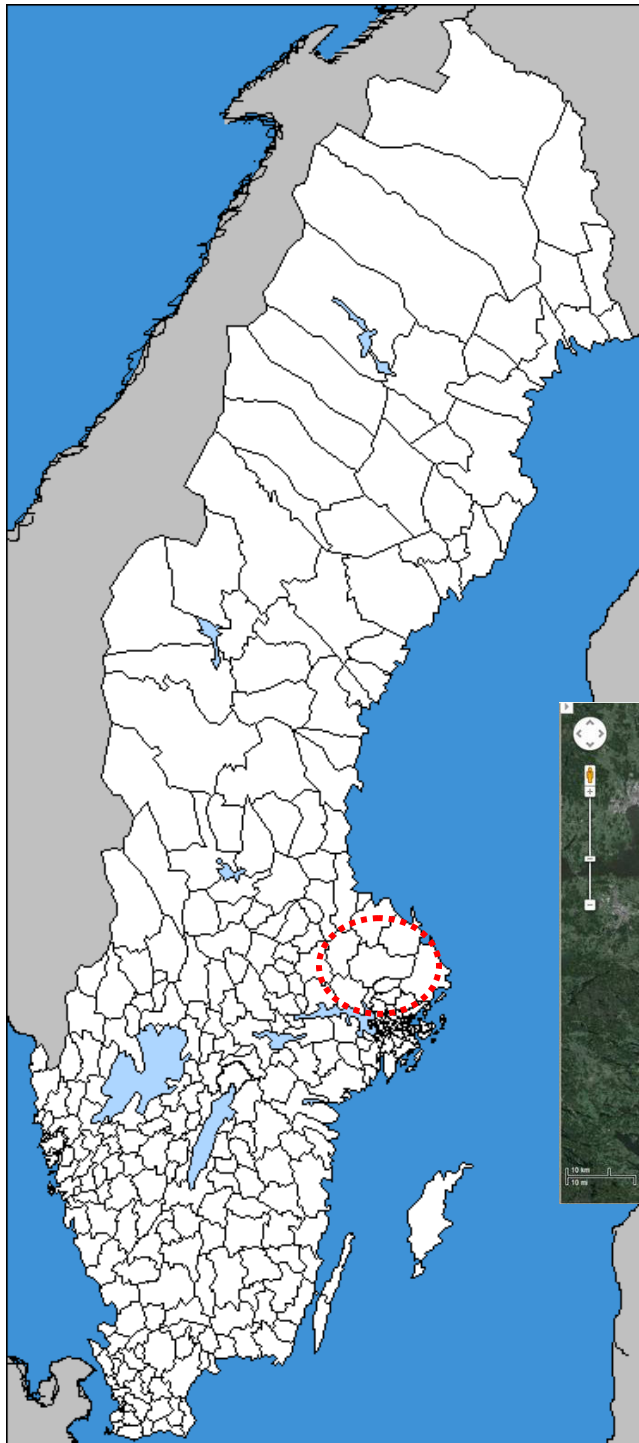
ESF provides the COST Office through an EC contract



COST is supported by the EU RTD Framework programme

Index

Foreword	5
Introduction	7
Purpose of the STSM	9
Methodology	11
Main results	14
1. Urban agriculture and it's spatial dimension	17
2. Urban agriculture and it's contribution to the local food system	22
3. What's an urban farmer?	27
Discussion and new perspectives	30
Appendix A. Interview to farmers	37
Future collaboration with the Host institution	65
Foreseen publications/articles resulting from the STSM	67
Bibliography and resources	68
Agreement of the Host Institution for the STSM	70
Confirmation by the host institution of the successful execution of the STSM	71
Research Team	73



*Uppsala municipality in relation
to Stockholm*

Uppsala municipality in relation to Sweden

Foreword

The early 21st century will very likely bring with it a further change in the urban model, one in which economic and environmental vectors will be the main factors in town planning and management. Making the best use of resources and delivering good services to citizens will be fundamental goals, and food systems will form part of an intense debate about the future of cities. In this respect, it will be hard to apply the adjective "smart" and "slow" to a city, town or metropolitan area without what is known as *food planning* or *food system planning*.

However, until now European food planning policies have been largely unexplored. Although there are some European initiatives to preserve agricultural spaces and to reinforce urban-rural linkages within metropolitan areas, these are limited to isolated projects, without a common approach. Hence, it is important to consider what (food supply) needs such cities/metropolitan areas may have in the future and how the agricultural spaces around them can contribute to this function in the most effective, efficient possible way. Furthermore, it might be taken into account that the town and the countryside have lost contact with one another, and farmers and consumers have no relationship and are even unknown to one another.

Although food systems have been fairly absent in European Agricultural Policies, there is a growing concern about food quality, food safety and proximity. Hence, last European rural development policy (Council Regulation 1305/2013 on support for rural development) stresses the need for primary producers to be integrated into the agri-food chain through the promotion in local markets and short supply chains. EESC opinion on agriculture in peri-urban areas also highlights that peri-urban agriculture presents unique characteristics that must be exploited, e.g. the opportunities provides by its proximity to consumers.

All this means that the city of the 21st century cannot be planned without taking into account its agricultural space, the 'city-countryside' relationship and one of its main functions: to produce food for the city. While it is true that there is a disconnection between consumers and farmers, it is also true that consumers and public stakeholders have a growing interest in the "reconnection" between towns and their nearest food-producing regions.



Introduction

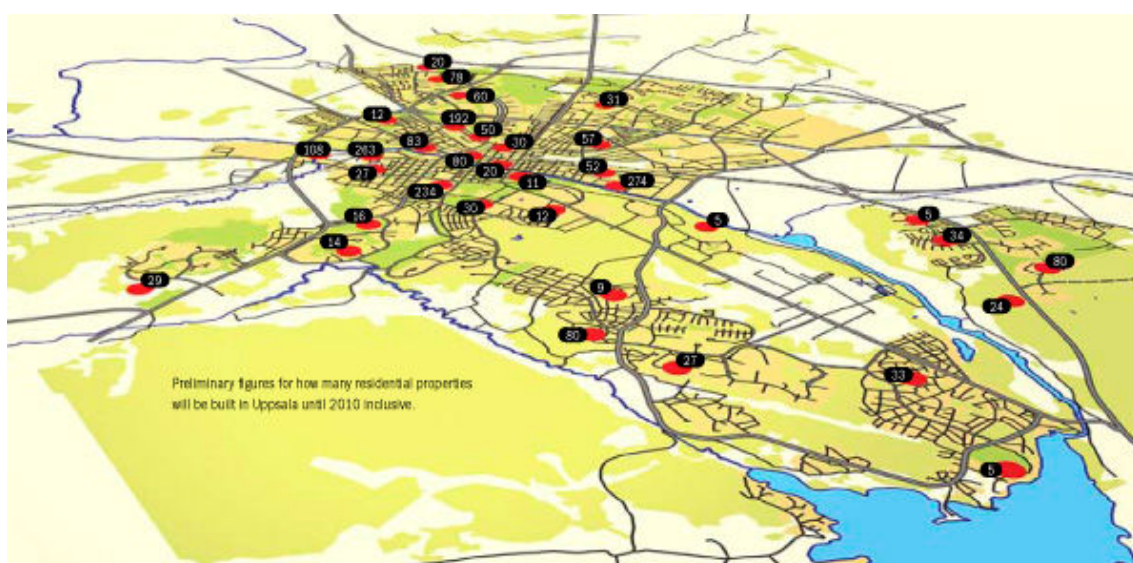
This short scientific report is elaborated on the Short Term Scientific Mission (STSM) conducted from September the 15th until October the 24th at the Department of Rural and Urban Development of the Swedish University of Agricultural Sciences in Uppsala, Sweden. The topic of this research is Urban and Peri-Urban Agriculture and local food systems by the example of Uppsala municipality.

The report includes descriptions of the purpose, the methodology applied, the main results obtained and some discussion and new perspectives as result of the information obtained. We explain also the possibilities for future cooperation with the host institution and the foreseen publication resulting from the STSM and the research that we would like to further develop. The report includes also the agreement and the confirmation by the host institution about the successful execution of the STSM.

I wish to thank all the people I interviewed for their time and the effort to conduct a long interview in a foreign language. I've been very privileged to have face to face meetings to almost all the farmers dealing with local food systems. Although they represent less than 3% of the total number of farmers in Uppsala, they will probably be key actors in a more food self-sufficient society. It has been also a great pleasure to share experiences and points of view with all the people working by the public sector and farmers' union organizations. I would have enjoyed a lot discussing more with all of you.

A warm thank you goes to Madeleine Granvick, my host researcher at SLU. Thanks for your help when I asked you to invite me as guest researcher, thanks for providing me with some of the most interesting papers about local food systems in northern Europe, for all the key contacts who finally participated in the project and for the stimulating discussions during the design of the interview. Thanks for the warm welcome I got since I first arrived at SLU. I want to thank also Daniel Bergquist and Martin Mihaylov, who also contributed to the discussion on the final draft of the interview. Thanks also to all WG1-COST UA members who sent me their comments on the interview proposal. I also want to acknowledge the interest and contribution to peri-urban agriculture made by Barcelona's Provincial Council, since the creation of the Baix Llobregat Agricultural Park until now.

And last but not least, I would like to thank the COST Office for funding this research.



Purpose of the STSM

The research addresses one of the European and worldwide contemporary biggest challenges: how to ensure the access to (local) food in a growing urbanizing world population in times of increasing resource scarcity and climate change.

The overall objective of this research is to examine UA within Uppsala municipality, with a special focus on Alternative Food Networks (AFN), Food system and the Rural-urban Interaction. By ‘urban-rural interaction’ we mean farming or food production models taking advantage of the proximity to the city, as it has been proposed by WG1 researchers (COST Action Urban Agriculture Europe).

The specific objectives of this research are:

- To examine UA dimensions, by using WG1 typologies:
- To examine existing food supply chains (distribution), with special attention to those initiatives towards local and organic food chains and cooperation.
- To explore UA typologies in an overall perspective, using WG1 typologies
- To explore how the CAP meets or could meet the needs of local food systems
- To analyse urban-rural interaction, focusing on:
 - Urban agriculture and it's spatial dimension
 - Urban agriculture and it's contribution to the local food system
 - What's an Urban Farmer?

We have selected one medium size city located in Northern Europe (Uppsala). The aim is to compare this medium size city to a second one in Southern Europe to provide a better understanding of peri-urban agriculture in different farming and socio-economic conditions. The comparative study will be carried out within 1st semester 2015. Both study areas will be comparable in terms of size (total area), population and main agricultural production types.



Methodology

The area of study is Uppsala municipality (*Uppsala Kommun*). The municipal level was chosen because a small scale allows a more in depth analysis. The main reasons to choose Uppsala as study area were population and proximity to Stockholm. As mentioned above, the aim of this research is to analyze UA within a medium size city. In terms of population, Uppsala fits with this definition. In addition, its proximity to a big city like Stockholm ensured the ‘urban’ character of the agricultural area.

Uppsala has a total area of 2.234,47 km². The city is located 71 kilometers North from Stockholm, in the county of Uppland (*Uppsala län*). Uppsala city is the capital of Uppsala County. The resident population is 205.199 inhabitants (December, 2013). Uppsala has been the ecclesiastical centre of Sweden, being the seat of the Archbishop of the Church of Sweden. Founded in 1477, Uppsala University is the oldest centre of higher education in Scandinavia. This historic background explains why both, the church and the University, are some of the biggest land owners in Uppsala County. The total agricultural area comprises 49.249 ha, of which only 29 are devoted to vegetables production. Although *food gardening* plays an important role in vegetables production within Uppsala’s municipality, this research has focused on the spatial dimension (territorial scale) of UA and professional farming (a detailed research on *food gardening* in Uppsala municipality has been carried out by Lönnerud, 2012).

The field study was undertaken during September-October 2014 at the municipality of Uppsala. The results are based on documentary analysis and formal interviews. Documentary analysis comprised the examination of research studies and papers about local food systems in the study area and Sweden.

Formal interviews were conducted with farmers (13), farmers’ union representatives (1), researchers (5), policy-makers (2), public servants (4) and other civil society stakeholders (2). The aim of the interview was to collect emerging views on the key issues concerning urban agriculture. The interview was adapted to each of the two groups interviewed (see appendix A and B):

- Group 1: farmers;
- Group 2: public stakeholders and farmers’ union representatives

Some observations to different selling points, such as farmers' markets, big supermarkets (ICA, Willy's, COOP) and delicatessen stores in Uppsala were also carried out.

Semi-structured interviews were used in order to achieve a deeper understanding of interviewer perceptions and opinions. They also provided the opportunity for the interviewer to gain clarification where necessary. A first version of the interviews was drafted before starting the STSM. This first draft version was discussed with host researcher Madeleine Granvik, and later on with two other researchers, Daniel Berguist and Martin Mihayloc. Between the first draft and the final one, there were some changes in the length and structure of the interview.

The 27 interviews ranged from one and a half to two and a half hours in length, and with permission, were recorded. The interviews were analyzed thematically through iterative reading of the interview material, categorization of the material by themes, and quantification of statements enabling a critical perspective of descriptions given by farmers and public stakeholders. The results are an abstraction of the key themes raised by the interviewees.

Sampling

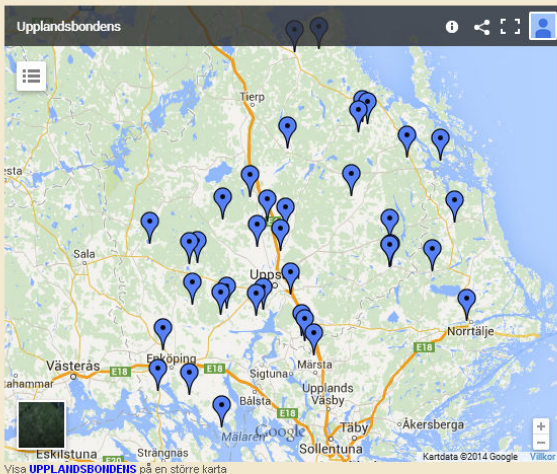
Sample farmers selling directly were selected by convenience through contact with advisors, public officers and researchers dealing with local food and short supply chains. To get the information about 'Urban farmers', we asked the municipality, the Provincial Council and the main farmers' union (LRF). The County Council provided us with a list of all the farms registered in Uppsala municipality. This database didn't have detailed information about farmers' selling systems. That's why we couldn't use this information. The municipality didn't have any farmers' census within Uppsala municipality. LRF provided us with some contacts. It took more than one week to prepare a list of 13 urban farmers using direct selling within Uppsala municipality. The resources used to find these contacts were:

- ✓ 1.- LEADER project Bondens Mat i Uppland
- ✓ 2.- Association Upplands Bondens
- ✓ 3.- LRF members



Alla vi är Upplandsbondens.

Vi är många som samverkar för att kunna leverera högkvalitativt kött. Här är en lista på en del av alla de bönder som är anslutna till Upplandsbondens.



Beställ kött



Kartan visar gårdarnas placering och ett klick på markeringen visar kort information samt länk för att lägga till gården i din egen resrutt. Din resrutt kan du sedan använda för att för att besöka gårdarna. Du hittar den överst på sidan.

Sök gårdar och/eller produkter (fritext)

Sök

Main results

The main results of the STSM are structured according to the main points identified as critically important for Urban Agriculture. This research sets out to discuss interviewees' perceptions regarding:

- Urban agriculture and its spatial dimension
- Urban agriculture and its contribution to the local food system
- What's an urban farmer?

The results include also an abstraction of the key themes raised by the interviewees when they were asked about their vision for UA within next 10 to 20 years. These perceptions haven't been structured, allowing us to identify the main worries and wishes of respondents.

Urban Agriculture: Uppsala Case Study

The dominant characteristic of Uppsala's food system is large scale farms, conventional production systems and large scale models of food distribution and consumption. This industrialized agricultural model came during the second and third quarter of the 20th century, when local farming inputs were abandoned in favor of non local. This enabled farms to specialize on either crop or animal production, and to increase their productivity. Higher production and low population increase were the main factors of the food surpluses, which were sold to the global market. The overall outcome was a decoupling of the local food and resource flow. As Lönnerud (2012) stated, 'the traditional closed loop agricultural system was replaced by a system of liner flows'. As a result of this process, the main food selling system is being concentrated in big shopping malls located in the outskirts of the city. ICA, Willy's and Coop are the most important companies.



This large scale production model has been translated into an intensive landscape, which a lack of territorial identity. Agricultural areas covers 49.240 ha of land, where the highest shares are covered by grain production areas (50%), grazing and fodder production areas (28,2%) and fallow land (12,04%) [Board of Agriculture, 2013]. Only 1% of the area is devoted to legumes production. Vegetables production is almost inexistent (7 to 29 ha, depending on the statistics source). Regarding meat production, the most important in terms of number of heads are chicken, sheep and beef. Pig production has been shrinking during the last 5 to 10 years. Although we won't consider food production within Urban gardens, it is important to highlight that for vegetables productions more than half is produced by leisure producers. The most common type of urban gardens is family gardens and allotment gardens. The total area for food production within *Urban gardens* is around 340 ha. Community gardens are very rare in Uppsala and also in Sweden.

The most common type of UA according to WG1 classification is 'Not Urban linked Agriculture'. The average age of farmers is 58 years old. However, this average decreases for farmers selling directly (54 years old). Statistics shows there are around 832 farms in the area. In land-use terms, 57% is forest land while only 25% is dedicated to agriculture, shaping a forest-rural-dominant landscape. Grain and cattle production are dominant. Dairy and pig production have diminished in favor of sheep and cattle, and there is still some milk production in the area. Most of the farms get subsidies from the EU direct aids and farmers assumed that it would be very difficult to continue without this funding. Some of the typical 'peri-urban land uses' are equestrian centers, hobby-farming, logistic centers, big malls and golf courses.

Farms are medium to big size. The trend is that farms size is increasing and is mostly export market oriented. Uppsala citizens don't seem to identify this agricultural area with the food they buy (mainly in big supermarkets). Although Uppsala could be almost self-sufficient for grain production, and 40% for meat production, local production don't contribute to the food supply of Uppsala municipality.

We carried out an analysis of the 14 (Table 4). Almost all the farmers (76,9%) get EU funding through direct payments. This money represents around 30% of their total business income. This public funding enable farmers to compete with the low prices they get for their products. Most of the farmers presumed that without this support, it would be almost impossible to continue their activity.

1. Urban Agriculture and it's spatial dimension

In order to clarify the question about the meaning of 'Urban Agriculture' (from now on UA), we first asked the interviewees if they had heard about this concept and how would they define it. They mainly mentioned that UA agriculture is that one located around cities and/or having relation with the city:

"I would define Urban Agriculture as urban and peri-urban agricultural spaces, food production in the proximity of the city and direct relation between consumers and producers" [14 R]... "I would define Urban Agriculture as that one having any kind of symbiosis with the city [13 F]."

Generally, UA was defined according to spatial, time and urban context patterns. Urban agriculture is:

- ✓ that one located within metropolitan areas,
- ✓ that one affected by urban settings,
- ✓ less than 1 hour driving,

Only 1 interviewee (1P) believed that UA is that one located inside the city. Meanwhile, almost 40% of the interviewees agreed that *food gardening* can be considered agriculture, since it can be also considered 'food production' and contribute to food self-sufficiency. At the same time, almost all the respondents within both groups agreed that Sweden should be self-sufficient, or as self-sufficient as possible.

"We should eat the food is produced here, but we should be able to get coffee from other countries" [14 R]... "It's no sense that we import the food we can produce here [13 F]"

They were asked about vegetables self-sufficiency (in Uppsala municipality is only 6%), and about the possibility of building greenhouses to grow them, instead of importation from other countries. In many cases, interviewees stated that it could be a good idea if the energy balance were positive:

“We need to do a ‘Energy calculation’. If it’s more efficient to produce veggies here than importing from other EU countries, than we could grow them here. If not, no” [14 R]

This is why *vertical farming* was generally regarded as an interesting idea for countries like Sweden, with very cold and poor light winters. Some of the farmers complained about the low prices they got when selling veggies, and stated that it was one of the reasons why farmers don’t produce veggies anymore. In addition, people working in the city have better salaries, and it’s difficult for farmers to be able to pay fair salaries to workers. As one farmer stated:

“It’s difficult to pay a fair salary to my workers. People in the city earns more money than working by a farm” [17 F]

One of the solutions proposed was to get some funding support to grow veggies, instead of funding *food gardens*. Hence, more than 60% of the interviewees considered that *food gardening* cannot be supported by the CAP. They quoted three principal reasons for this: firstly, because it is not a professional activity. Secondly, because it is the responsibility of the municipality, and thirdly, because *food gardening* is a a hobby, and not a professional business. In addition, one farmer stated that it’s better to encourage activities in the countryside, like growing vegetables, rather than in the city: “We don’t need to do all in the city. If not, what will happen in the countryside?”.

Uppsala is not food self-sufficient

Uppsala needs four times as much grain as produced now

Uppsala milk production covers only half of the need of dairy products. In addition, there are surpluses of some dairy products, while there are deficiencies of others

The meat supply in Uppsala is equivalent to 1 / 5 of the local need

Eggs production covers 2 / 3 of the local demand

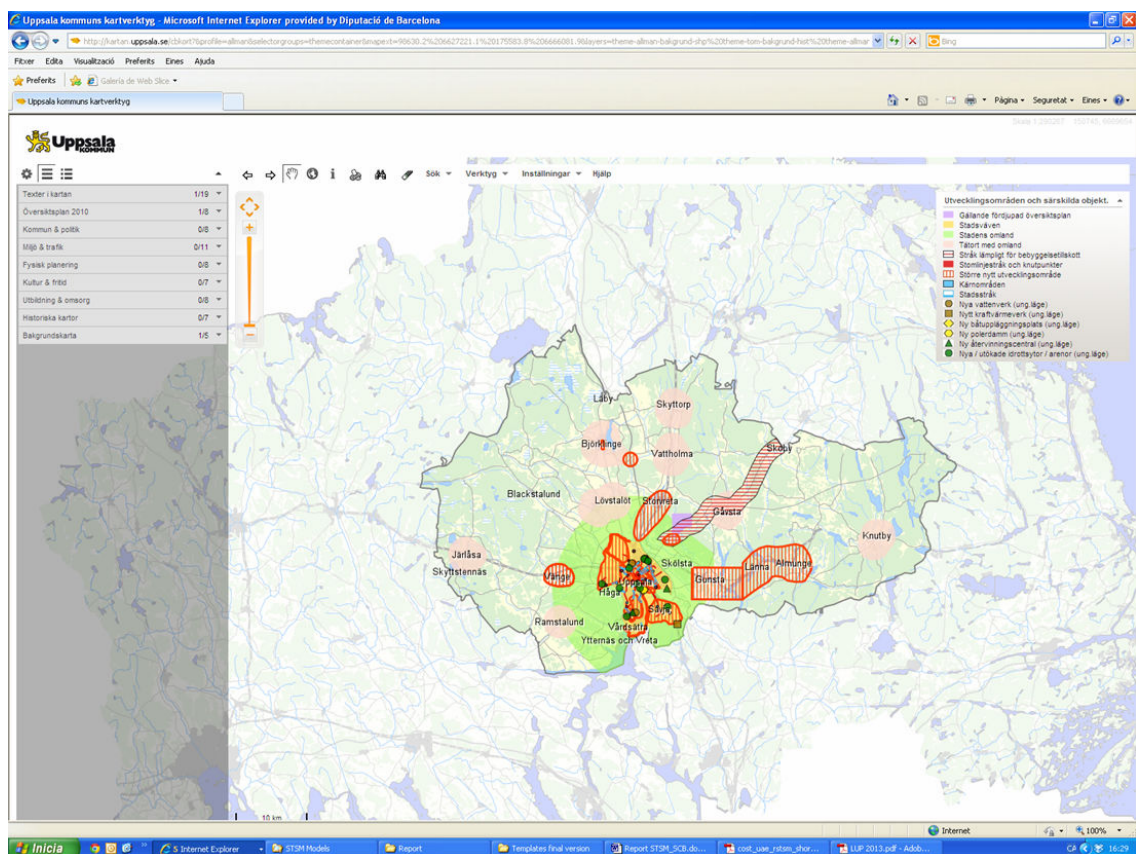
Uppsala is 10% self-sufficient for veggies and 46% for fruits and berries

Turning back to the definition, we asked R-respondents to define UA using a geographical distance from the city to the production areas. The half set a radius of 0-200 km, while only 16,7% of the respondents set a shorter distance (0-50 km). We asked farmers about the distance to their main business area. According to the farmers surveyed, half are selling their products to customers located within a radius of 0-50 km, while 50% are selling within a radius of 0-100 km. Most of the farmers stated that they want to sell as close as possible, because they reduce transport and time costs. As one farmer said:

This demonstrates that UA is seen as an opportunity for farmers selling directly to consumers, and short distances a strength for their businesses. As some stated, being close to the city attracts customers to their farms, and makes it easier to have a direct relation producer-consumer:

However, interviewees commonly reported (53,3% of the farmers and 88,9% of the public sector) access to land as a danger, especially for small and medium size farms, because they cannot increase the size of their farms, and it makes it very difficult for young people to become farmers. In addition, this research detects a common interviewee perception of people living in the city and buying farms. This phenomenon is especially important within a 20 km radius from the city centre, where people working in Uppsala buy houses as main residence. In addition, some farms are being bought by investors coming from the city. It is not seen as a major problem, as far as they rent out the land to other professional farmers.

Most of the interviewees (87,5%) within group 2 claimed that farmland protection for agricultural land might be more restrictive. All they agreed that there is a high pressure on farmland for other uses (horsification, golf courses, low density residential uses, leisure parks...), and there is any kind of protection for agricultural land. Although most of the interviewees stated that there is no idle land, we could observe some very close to the city. However, farmers believe that farmland protection shouldn't be more restrictive because there is no urban pressure on the farmland.



Uppsala is growing

A new comprehensive plan for Uppsala is being drawn up. The municipality estimates that the population will continue to increase at the same rate than the last 50 years, where population has practically doubled. This means that by 2030 Uppsala's population will be about 230.000 to 240.000 inhabitants. They predict that about 80% of the new residents will settle within the city, and that 1.000 new homes will be needed annually until 2030.

The comprehensive plan for Uppsala municipality does not give a specific protection to agricultural spaces. However, the plan will try to protect agricultural land close to the city. It is important to consider that according to the environmental law, it is mandatory for the municipalities to protect those resources which are very important for the environment, such as agricultural land. It might be used for urban growth or facilities only if necessary. As stated by farmers, only a few agricultural areas are protected. The protection responds to water protection or cultural heritage criteria, but not to 'agricultural value'.

Land competition with big farms and public authorities were identified as major difficulties for farmers' to access the land. They stated that it is almost impossible for young people to become farmers if they don't get a family farm. Farmers claimed easier access to the land and were concerned about farmland purchase by public bodies and big farms. Most of the farmers who claimed about this were located in the northern-northeastern part of Uppsala:

"We have hard pressure from SLU. They buy lot of farmland. In this area we are 3 private farms, and the rest is owned by SLU" [4 F]

Before concluding this chapter, we asked respondents about cultural heritage and whether agricultural areas have a special meaning attributed by people or are a recognizable landscape to people living in the city. We couldn't identify any tangible cultural heritage elements related to agriculture, like land parcelling, use of traditional materials, old agricultural practices or special meanings attributed by people. Some farmers told about agricultural events during the harvest season, but generally they didn't participate. This probably leads to a low identity feeling of people living in the city, in relation to their countryside.

2. Urban Agriculture and it's contribution to food self-sufficiency

It is evident from interviewees that over the last decade there is an increasing number of consumers interested in buying local. Interviewees attributed the increase to a raising awareness among consumers on local food and direct relation to producers.

At the same time, direct selling among producers is gaining momentum, particularly the development of new marketing and selling systems. One interviewee argued this by answering:

“there are more farmers engaged in short food supply chains because it's more financially interesting and because it's easy to work close to consumers. Many of the newcomers come not from farming families, they come from the city” [14 R]

In order to explore the question of whether direct selling systems can be an opportunity for ‘urban farmers’, we invited interviewees to score (0=bad system, 1=not bad system, 2=best system) different selling systems (table 1). Those most valued by farmers were the baskets’ system (1,89), on the farm selling (1,60), restaurants (1,56) and owning a store in the city with other farmers (1,56). The worst options according to farmers opinion were selling to wholesalers (0,33), retail chains (0,50) and supermarket chains (0,75). All the best scored options are direct selling systems, while the worst are middle hand selling systems. However, those more valued by group 2 interviewees were farmers’ markets (2,00), city markets (1,91), restaurants (1,82) and CSA system (1,78). The worst were also wholesalers (0,50), pick your own systems (0,82), and retail chains (1,0). It is evident from interviewees that farmers prefer direct selling. As noted by farmers, they try to avoid intermediaries and sell directly. That way they can set the price for their products and have better returns than using intermediaries, although it takes more time and energy. However, some respondents within group 2 considered that intermediaries are also necessary to guarantee food trade.

Table 1. Average value attributed by interviewees to different selling systems (0=bad, 1=good, 2=very good)

Selling system		By farmers	By public stakeholders
Private selling			
	On the farm	1,60	1,45
	Stall in a local market	1,20	1,91
	Basket's system	1,89	1,55
	Consumers' cooperative	1,44	1,36
	Pick your own	1,00	0,82
	Farmers' market	1,50	2,00
	CSA	1,43	1,78
	Agro-shop owned by farmers	1,56	1,73
Stores	Store (not owned)	1,22	1,40
	Retail chain	0,50	1,00
	Local Wholesaler	0,33	1,00
	Non local wholesaler	0,33	0,50
	Supermarket chain	0,75	1,27
	Ecommerce	1,25	1,17
Restaurants and groups	Restaurant	1,60	1,82
	Restaurant's wholesalers	0,83	1,56
	Kitchen (public sector)	0,83	1,64

It is evident from farmers' perspective that they have to change their selling systems to adapt their business to consumer's demand. Although most of them (63%) have thought about developing new alternatives to avoid intermediaries and sell directly to consumers, they stated that there are many constraints on changing their business strategy. These constraints included the lack of time, the need of more logistics and administration work. Meanwhile, public stakeholders were more pessimistic about farmers' capacity to change their selling systems. Hence, 85% perceived that farmers don't change easily their selling systems and felt that they have too many constraints:

Farmers and public stakeholders shared agreement about the benefits of labelling their products, although only 50% of the farmers' are currently using this marketing strategy. In addition, same proportion of farmers and public stakeholders (71%) claimed that the creation of a 'local product label' could be useful to promote local food consumption. Cooperation seems to be a key issue when marketing products. As one farmer stated:

"We should cooperate more with other farmers, so that we save marketing costs. Without Upplands Bondens, maybe I couldn't be a farmer. With them the prices for my meat has gone up and up. We are several farmers and we can negotiate better prices" [17 F]

Even though 'local' seems to be a positive value among respondents, there was some disagreement when discussing about 'consumers' behaviour'. Public stakeholders were more pessimistic than farmers. While, 80% of respondents within group 2 stated that consumers don't know about the existence of local agricultural areas and local food, 70% of the farmers interviewed thought the opposite. In addition, 80% of public stakeholders complained about the difficulties for consumers to access to local food channels. From farmers' point of view, half agreed and half disagreed. Generally, interviewees agreed on the other statements about consumers' behaviour (Table 2). Respondents noted that although there is a changing perception among consumers about mass-produced food, most of the consumers still prefer food on the global market than on the local one and prefer price than origin. Generally it appears to be a widespread agreement about the lack of policies to support local farmers and food locally produced. Interviewees emphasized their dissatisfaction with the Public Procurement Act.

Table 2. Respondents' perception on consumers' behaviour

Statement	Farmers stating this (%)	Public stakeholders stating this (%)
Consumers prefer food on the global market than on the local one. It takes less shopping time and it's more convenient	75	80
Consumers have bad food habits and they prefer fast food and convenience food	43	75
Consumers prefer price than origin	80	90
Consumers buying organic food are aware about the origin of food	75	63
Consumers want to know who is producing the food they eat	22	50
Consumers don't know about the existence of local agricultural areas and local food	33	80
Consumers don't have access to local food channels	50	80
It is difficult for consumers to get information about 'local farmers' and 'local food production'	86	87,5
There is a lack of public policies to support local farmers and local food consumption	89	100
EU could support municipalities and regional authorities at improving local agriculture awareness	80	100

The municipal procurement system is seen as an opportunity to support and stimulate local food. However it is perceived as something controversial when regarding to the Swedish Public Procurement Act (LOU). The law, which develops a EU rule, states that public authorities can't use 'locally produced food' as an argument in the public procurement process. The consequence is that procurement processes don't enable to small scale producers to take part in the competition. Some municipalities have change the procurement conditions to enable procurement of local food. Uppsala municipality is now trying to develop some strategy to solve this problem

According to this regulation, public authorities cannot set requirements for locally produced food during the contracting process. Although it is a common EU rule, some other countries and even some Swedish municipalities have made it possible for small producers to procure food to public authorities. The lack of clarity with respect to the application of this regulation is creating some kind of conflict between farmers and public institutions. As one farmer stated:

“The municipality wants 100% of organic food, but the question is ‘how?’ we cannot compete with the low prices of very big supermarkets... some time ago we sold to schools, but suddenly they said we had to sell first to middle hand” [17 F]

Interviewees complained that the procurement act has been more restrictive in Sweden than on other EU countries. They also complained that the municipality decided that 100% of the food for public procurement must be organic certified. However, this food is imported at the lowest price and great distances, and therefore local food lacked public support.

What's an Urban farmer?

In this research, we looked for qualitative and quantitative aspects of the urban farmers' profile, in order to determine whether *Urban Farmers* and *Urban Farms* have differences compared to what we could call *Rural Farmers*. As discussed within WG1, we have taken functional approach to define *Urban Farms* typologies. As mentioned before, this research has focused on professional urban farmers. However, a brief description on the importance of *food gardeners* is found below.

We conclude this chapter by asking respondents about citizens' perception about farmers.

Leisure gardening and food gardeners are not included in this research. However, it's important to point out that hobby farmers owning small farms are not quite common. Instead, food gardeners are very important in size and food gardening a very popular and leisure activity, in Uppsala and in the whole country. Family gardens are the main type of Urban Gardens followed by allotment gardens (known as Colony plots). According to the data provided by the municipality, there are 2.400 plots, distributed among 23 allotment gardens, which comprise a total area of 39ha.

In order to have a qualitative description of an 'Urban farmer', we asked farmers to explain us their business and which was their connection with the city (a quantitative description is found below). We found out that the main relation producer-consumer is through food production. However, 63% of the farmers stated that they should offer other services to diversify their activity. The farmers didn't mention the traditional 'urban' services such as tourism, leisure, education or social activities. In particular, they mentioned that the easy way to have some extra income were providing services to the city, such as cleaning roads during winter time, energy production or renting cottages. This kind of services does not need big investments and are a good complement for their businesses. Only one farmer was thinking about offering therapeutic services, and a second one social farming. This means in practical terms that farms in Uppsala using direct selling systems are mainly oriented to food production. It is evident from interviewees that over the last years local food demand is increasing. As noted by farmers, it is an opportunity for them to increase the profit of their business by using direct selling systems. Although it takes lot of

time and energy, short supply chains are viewed as something attractive for new farmers, and thus assumed by some initially pessimistic farmers as an opportunity for urban and peri-urban agriculture, and for young farmers. Thus, 71% of the farmers stated that young people who want to become a farmer have an opportunity in Uppsala municipality. This statement differs from that one of group 2. Only half of the respondents within group 2 agreed with this statement. Generally we can say that public stakeholders have a more pessimistic view on society's perception about farmers, than the farmers themselves. While 62% of group 2 respondents stated that farmers love their work, 80% answered the same within group 1. There was also 20% difference when asking whether farmers are qualified people or not (only 62% within group 2 agreed with this statement). Generally, all the respondents agreed on these statements about society's perception about farmers:

Table 3. Society's perception about urban farmers

Statement	% of respondents stating this
Farmers are persons who work the land	100%
Farmers love their work	90%
Farmers produce the food we eat	89%
Farmers want to be rich	16%
Farmers want to take profit of EU subventions	78%
Farmers speculate with the land	0%
Farmers are traditional people	100%
Farmers take care of the landscape	100%
Farmers are business people	47%
Farmers have a nice life style	80%
Farmers work a lot to earn some money	86%
Farmers never take holidays	93%

*How is the **Urban Farmer** in Uppsala? A quantitative approach*

The urban farmer is 54 years old, full-time farmer. Although the main activity is on the farm, some other works are carried out, mainly during the winter season (roads cleaning, building, cottages' renting...). The farm is located 10 to 40 km from Uppsala city. EU subsidies represent 30% of the total income (for those who apply). 2/5 own all the land, 1/6 rents all the land, 1/2 owns and rent the land. The farm has its own brand. The farmer invests in marketing strategies. Almost 100% have a website and use cell phone.

Table 4. Individual descriptions of the farmers interviewed in the study

	21F	1F	20 F	7F	2F	12F	17F	4F	5F	9F	24F	13F	3F
Age	51	49	65	63	68	37	41	40	55	44	>65	≈55	>65
Gender	M	M	M	M	M	M	M	M	F	M	M	M	M
Family farm	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Full-time/part-time	Full-time	Full-time	Full-time	Full-time	Full-time	Full-time	Full-time	Full-time	Full-time	Full-time	Part-time	Full-time	Full-time
Farm size (ha)	285	350	150	174	50	100	145	220	500	0,7	3,2	1	200
Distance to Uppsala (km)	30	15	10	21	20	25	40	15	14	15	8	10	25
Main products	Grain oil, milk, beef	Grain, fodder, beef	Grain, beef	Grain, forage, pigs, sheep, lamb, chicken, cattle	Grain, veggies	Grain, veggies, Forage, lamb	Cattle, grain	Sheep	Canola, fodder, grain, sheep, wool	Potatoes Veggies	Veggies	Veggies	Beef, milk, sheep
Direct selling	No*	Yes	Mixed	No	Mixed	Yes*	Yes*	Yes	Mixed	Yes	Yes	Yes	Yes*
Other activities addressed to consumers	-	No	Yes	No	No	No	No	No	No	Yes		No	
Services to the city	-	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes	Yes	No
Marketing strategies	-	Yes	Yes	-	Yes	-	No	Yes	Yes	Yes	Yes	Yes	Yes
Do you have a label?		Yes	No		Yes			Yes	Yes	Yes	Yes	Yes	Yes
Generational shift	Don't know	Yes	Don't know	NA	Yes	Don't know	Don't know	Yes	Yes	NA	Don't know	Don't know	Yes

Discussion and new perspectives

As noted earlier, this research aims to analyze the ‘state of the art’ of UA within Uppsala municipality, and highlight the differences between this typology of agriculture compared to that one developed far away from big or medium size cities. By analyzing farmers’ and farm profile, we were able to describe the main characteristics of UA. Uppsala is characterized by a very professional farming sector. Most of the UA farmers use environmentally friendly production practices, are small or medium size, younger than ‘conventional’ farmers, they are entrepreneurs and try to adapt their businesses to consumers’ demand, and they find proximity to the city to be one of their main business opportunities. In addition, they develop marketing strategies (90% own a brand and think it’s interesting to have it) to attract new costumers and are able to develop farming and selling activities. Although time, energy and logistics are seen as the major constraints to develop direct selling, they prefer this option rather than selling through intermediaries. Prior to the development of direct selling systems, most of those farmers were using ‘conventional production systems’. A common conversation on selling through intermediaries was of the kind: “They take all the benefit, and we are very bad paid”. This is why they scored with the highest values all direct selling systems, and with the lowest, all selling systems using intermediaries. Although they think that it’s very difficult for young people to become a farmer, almost half (45,5%) stated that they have generational shift for their farms.

Diversification is not seen as a solution for their problems, as it has often been suggested. Alternative food networks in Uppsala are not based on ‘diversification’ or ‘services providing’, but rather on new initiatives to increase their business profit, the value of which is direct relation with final consumers. Externalities which have been described as being ‘urban’, such as educational activities, therapeutic, social or leisure services are not seen as a goal. Instead, urban farming is seen as a contribution to food self-sufficiency and city’s sustainability. As one farmer stated, there is a difference between producing goods and selling food. It can summarize the idea that Urban Farmers in Uppsala are becoming food providers rather than just goods producers. According to the definition of food self-sufficiency, the main function of these farms is ‘feeding’ local consumers. However, according to the results of Lönnerud’s research (2012) there is an unbalanced relation food

supply and demand among different foodstuffs in Uppsala municipality. While Uppsala is producing four times the grain needed, there is a negative balance for dairy production (only half of the needs are covered), meat (only 20% self-sufficient), eggs (66% self-sufficient), vegetables (only 10% self-sufficient), fruits and berries (46% self-sufficient). Regarding vegetables production, it must be pointed out that almost 100% of the total production in Uppsala comes from *urban gardening*. It seems to be obvious that more agricultural land or urban gardens will be needed to meet local demand of vegetables.

Overall, stimulating local food and increasing food self-sufficiency seem to be a positive policy. Although it seems to be a common agreement on that, there are different views on how Uppsala could achieve this goal. While some public stakeholders defend free market rules and big distribution chains, most of the respondents advocate for 'local food systems support'. Nevertheless, it seems to be a common agreement on the importance of encouraging 'local food systems'. This research has not noticed conflicts on this point. Probably the reason is because they are still in the first steps of a future 'food policy' for Uppsala. More time will be needed to analyze whether Urban farming and local food supply become a key issue on the Uppsala's political agenda.

Although short supply chains in Uppsala municipality seem to be an important achievement by the farmers who decided to change their selling systems, it represents less than 5% of the farms in this area. With fair prices for their products, they would be able to compete with large scale farming. However, from the respondents' perspective, small scale farming is not working because market prices are too low despite its apparent EU and local policies support. The continuous increase on farm size has been identified as a consequence of the lowering of the prices. Farms must be bigger to be able to compete with the low market prices. One of the achievements to fight against this has been the development of collaborative projects, such as Bondens Mat i Uppland (Farmers' food) and Upplands Bondens (Uppland farmers). They not only bring consumers a best access to information on local food and local farmers, but also help farmers to sell their products. Furthermore, they are a platform to cooperate with local authorities and work together to set common goals. Some of the main results have been the creation of a farmers' market, and the publication of a map and a website with information of local food production. These initiatives appear to be a good starting point for more 'local' food systems and reinforce the value of pursuing direct selling and local consumption networks. This project

has been promoted by a Leader project, which also funded the first steps of *Bondens Mat I Uppland*. It is also important to point out that apart from these farmers' initiatives, big supermarket chains have started to promote 'local food' as a quality brand. One example can be found at ICA supermarket, which identifies 'local foodstuff' with a specific sign.

Besides the opportunities provided by its proximity to consumer markets and the growing consumer awareness of issues such food safety, food security, climate change and animal welfare, UA is facing serious problems related to access to the land. With no access to the land, it is almost impossible for young people to enter farming and for farmers to increase their farm size. Although interviewees stated that land speculation is not a problem, many public and private landowners are concentrating most of the farmland. In the future it could be a problem in terms of instability of the farming system. In addition, the new comprehensive plan, which is currently being drawn, foresees a population increase of 15% of the current population within the next 15 years. That means that the municipality will claw back some farmland for urban development. Although the municipality stated that one of the goals is to preserve as farmland as possible, in order to be able to ensure food self-sufficiency in the future, the plan does not include calculations about food production and foreseen food demand for the next years. In addition, there is no information about the amount of food produced in the municipality and not consumed locally. From the municipality's point of view, the comprehensive plan will try to ensure enough farmland to achieve food self-sufficiency goals, but there are no strategies to guarantee that the food produced locally is consumed in the nearby area. It seems to be evident that there is a lack of municipal strategies to connect physical planning and local food systems. In addition to this situation, there is a growing phenomenon that could affect the farmland market in the future. Some interviewees reported that there is an emerging wave of urban people buying farms. In some cases, they keep the house (as residence) and sell the land to other farmers. In other cases, they rent the full farm to other farmers but keep the land ownership. As one farmer stated, currently it is not a problem in terms of price rising, but it could be in the future.

Based on the evidence from this case-study, it can be suggested that urban and peri-urban agriculture is not only a question of primary food production, but also about farmland protection, physical and food systems planning. Further, the stability of urban and peri-urban agricultural areas does not only depend on EU Agricultural policies, but

also on active local and regional policy-making strategies. If there are no channels to connect food production and food consumption, producers and consumers, rural areas and urban areas, there are very few opportunities for small-medium size farmers to compete with the mainstream food market. 'Local food' seems to be on the top and there is an emerging wave of alternative food networks aiming to reconnect the city and its countryside. This research has analyzed the difficulties, but also the opportunities and the proposals stemming from the stakeholders perspective. As one responsible for planning issues within the municipality of Uppsala said 'now the University should start working on it'.



"I would like to see 100% organic food and more local, big and small farms... I think global food will go down because transport costs in the future will be very high" [1 R]

"I would like to see farmers' being better paid for their work, more local food in ICA and other big supermarkets and easy ways to find local food than we have now " [4 R]

"We have a great potential in trying to localize the primary products... I imagine food (production and processing) more localized and fair prices for farmers, with more brands and identification. We could have one slaughter house in each municipality. We should be able to produce food wherever we have people" [7 R]

"Agricultural policies have been the same since the 60's. We now need a new way of thinking... In the future I would like to see more farmers than today and more organic, diversity of logistical and market food systems, consumers more aware about where food comes from, farming being more attractive for young people, more food production inside the city, less Energy used for food production and more active food policies" [13 R]

"On my ideal world, I would like to see diverse farms, both big and small. It's good for resilience. There should be more channels for buying local food in the city and in the countryside; more consumers should be involved in the food systems; more diversity in local food selling systems (boxes schemes, food hubs, consumers' cooperatives...), more diversity on what people produce; A local

food distribution platform would be a nice project to support local food channels, maybe managed by someone not being a farmer...” [14 R]

“Local agriculture will be a driver for local economy in the future... municipalities might play an important role by supporting local agriculture and helping farmers to have access to food channels... food should be more integrated within the society... planning has lots of things to do regarding food systems ” [16 R]

“I would like to see more exchange between farmers and citizens, there is a kind of ‘farmers stigmatization; food is not only an agricultural product, we need a broader interpretation of what ‘food’ means... we should change the system to reinforce local systems and avoid the global ones.. the responsibility for food systems does not belong to individual consumers, it’s a social issue.. I would like to see urban and rural areas as a ‘system’, that means, food production inside and outside the city, more use of recycled urban waste, food selling spaces where you can leave the waste generated, bioenergy production and use” [18 R]

“My wish would be to expand direct selling to private customers and earning more money with the boxes, instead of selling to intermediaries... I would like to see more farmers using direct selling systems... this will push each other to do things better... I hope consumers will buy more and more local food” [4 F]

“Farms might be more integrated, animals grazing forests and grassland.. it should be possible to use urban waste as compost... Energy will be a key factor on the relation city-countryside... the main threat is the lack of profit for small farms” [3 F]

“I would like to self produce the food we need. Local production being more and more important and farm shops and farmers selling in the city” [4 F]

“Small farms and more integrated, with animals and fodder to feed them and products diversification. The problem is that not all the farmers know how to grow all the crops. For veggies we don’t have good soil. But yes, we should be more food self-sufficient. My proposal is totally from

my husband's one... he would like to see very big farms, very specialized and exchanging products
” [5 F]

“I would like to see more self-sufficient farms” [7 F]

“I would like see smaller farms, combining crops production with animals. I wish SLU stops buying every farmland, if not the countryside won't be a living one anymore. I would like to run my own business, selling to local markets, schools and hospitals, producing good and healthy food” [9 F]

“More food produced here, more local food consumed close by, more local food consumed within the public sector. A good start point could be schools... Uppsala municipality could encourage people to work in the green sector, for example unemployed people” [13 F]

“The wish is to have a more local based market. To get everything more local and organic, getting closer to costumers. Farmers are very anonymous, children don't have any contact to farmers. People loose the connection to farmers... We cannot continue this way. We won't be able to afford lots of things without fuel oil. We have to hang out!” [17 F]

“I hope farms won't become bigger and bigger. I would like to produce for Uppsala municipality and to be more food self-sufficient... I hope transport costs become higher. That would enable us to sell to the closer consumer” [21 F]

“My wish would be that we would produce more food, instead of importing it. I would like to have better and closer relation to customers, to know each other” [24 F]

Appendix A. INTERVIEW TO FARMERS

A.- GENERALITIES

REF. NUMBER	
DATE	
MUNICIPALITY	
AGE	
GENDER	MALE
	FEMALE
PROFESSIONAL BACKGROUND	

A.1.- GENERAL DATA	
1.- Size and distance	How large is your farm? _____ ha
	Is there idle land? Yes <input type="checkbox"/> No <input type="checkbox"/>
	If yes, how many hectares? _____ ha
	Why?
Distance to the main city	_____ km City: _____
Distance to your main business area	_____ km City: _____ _____
2.- What kind of legal entity are you?	
3.- Is this an old farm? Yes <input type="checkbox"/> No <input type="checkbox"/>	
If yes, how old is it? _____ years	
Did this farm belong to your family? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Tell us a little bit the story of your farm and this agricultural area...	

4.- In your opinion, how could we define 'urban agriculture', in terms of distance and market orientation?

- Where does it take place?

In the city ☐; In the fringe (0-50 km) ☐; In the fringe (0-200 km) ☐; NA ☐

- Where are the products from urban agriculture mostly consumed (market orientation)?

In the closest city/ local residents ☐; Wherever/ global market ☐; NA ☐

- Who performs or might perform urban agriculture?

Consumers ☐; Farmers ☐; Hobby farmers ☐; Food gardeners ☐; NA ☐

Which categories of Urban Agriculture do you recognize in your municipality?

☐ Urban food gardening:

- family gardens
 - Allotment gardens
 - Educational gardens
 - Therapeutic gardens
 - Community gardens
 - Squatter gardens
 - others:
-

☐ Urban linked agriculture:

- local food farms
 - educational farms
 - social farms
 - experimental farms
 - leisure farms
 - therapeutic farms
 - cultural heritage farms
 - agri-environmental farms,
 - others:
-

☐ Not urban linked agriculture

** Ask for contacts if they have any*

A.2.- Main products			
	Produce	Destination	Surface
Fruits			
Total surface:		Harvest season: from ____ until ____	
1			Ha
2			Ha
3			Ha
Vegetables, root vegetables, potatoes (open air)			
Total surface:		Harvest season: from ____ until ____	
1			Ha
2			Ha
3			Ha
Greenhouse grown vegetables			
Total surface:		Harvest season: from ____ until ____	
1			Ha
2			Ha
3			Ha
Dried legumes			
Total surface:		Harvest season: from ____ until ____	
1			Ha
2			Ha
3			Ha
Cereals			
Total surface:		Harvest season: from ____ until ____	
1			Ha
2			Ha
3			Ha
Forage			
Total surface (own cons.):		Harvest season: from ____ until ____	
Total surface:		Harvest season: from ____ until ____	
1			Ha
2			Ha
3			Ha
Milk products (specify the final product, like cheese, milk,...)			
Nr. of heads:		Production season: from ____ until ____	
1			Heads
2			Heads
3			Heads
Meat			
Nr. of heads (total):		Production season: from ____ until ____	
Nr. of heads (intensive production):			
Nr. of heads (extensive/open range cattle):			
1			Heads
2			Heads
3			Heads
Eggs			
Nr. of heads (total):		Production season: from ____ until ____	
Nr. of heads (intensive production):			
Nr. of heads (extensive/open range cattle):			
1			Heads
2			Heads

Flowers, nursery (specify open air and glasshouse)			
Total surface:		Harvest season: from ____ until ____	
1			Ha
2			Ha
3			Ha
Processed products			
Total Tn/Kg:		Production season: from ____ until ____	
1			Kg
2			Kg
3			Kg

A.3.- Where does the processing and packaging take place?
<input type="checkbox"/> No processing or packing of all goods
<input type="checkbox"/> On the farm, specify the goods:: _____
<input type="checkbox"/> Outside the farm in the municipality, specify the goods: _____
<input type="checkbox"/> Outside the farm, in the county, state which goods:: _____
<input type="checkbox"/> Outside the farm, in neighboring counties, specify the goods: _____
<input type="checkbox"/> Outside neighboring counties, in the rest of Sweden, specify the goods: _____
<input type="checkbox"/> Outside the farm, in another country, specify the goods: _____
Space for comments:

A.4.- Farm activity	
1.- Are you part-time or full-time farmer	Full-time <input type="checkbox"/> Part-time <input type="checkbox"/> % <input type="checkbox"/>
2.- Do you have another activity aside agriculture?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If yes, which one?	_____
3.- To what extent are you financially dependent on the agricultural activities?*	a) Fully b) Partly c) Not at all d) Cannot say
4.- Which commodities/goods includes your business?	- Food production oriented to local markets (Local food farm) - Tourism activities (Leisure farm) - Education (educational farm) - Social inclusion (social farm) - Research (Experimental farm) - Health services (Therapeutic farm) - Tourism activities (Cultural heritage farm) - Environment protection (Agri-environmental farm) - Business as usual (not locally based farm) - Food garden - Others
5.- Do you have generational shift for your business?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If yes, who is going to take the business?	_____
6.- How many workers do you have?	
Full-time <input type="checkbox"/>	Part-time <input type="checkbox"/>
Does your family work at the farm?	<input type="checkbox"/> Yes <input type="checkbox"/> No

If yes, how many people?	
7.- Is this farm activity?*	(a) Public (b) Private (entrepreneurial –private land) (c) Not officially supported/sanctioned (public land) (d) Other

A.4.- Subsidies	YES	NO
1.- Does your farm benefit from subsidies?		
<p>If yes, which kind of subsidies (local, regional or CAP) and wich amount last year?</p> <ul style="list-style-type: none"> - Direct aids _____ (SEK/ha) and total amount _____ (SEK) - Direct aids _____ (SEK/head) and total amount _____ (SEK) - Modernization/ technification _____ (SEK/project) - Greening/environmental benefits _____ (SEK/ha) and total amount _____ (SEK) - Cooperation with other farmers _____ (SEK/project) - Procurement strategies _____ (SEK/project) - Food hub _____ (SEK/project) - Support to local food systems _____ (SEK/project) - Farmers' markets - Marketing strategies - Research - Other _____ (SEK/??) <p>If not, why don't you apply?</p>		
2.- Do subsidies respond to your needs?		
<p>If not, why not?</p>		

B. AXIS

B.1. SPACE

B.1.1.- Farmland				
1.-Land ownership/land renting	Land ownership	Ha	%	SEK/ha
	Land owner			
	Leasing/renting			
	Other			
	TOTAL		100%	
<p>2.- Is it easy to find new farmland in your area? YES <input type="checkbox"/> NO <input type="checkbox"/></p> <p>Have you planned to increase the size of your farm? YES <input type="checkbox"/> NO <input type="checkbox"/></p> <p>Why or what for?</p>				
<p>3.- Do people living in cities buy cottages as summer houses in Uppsala municipality?</p> <p>YES <input type="checkbox"/> NO <input type="checkbox"/></p> <p>If yes, is this a problem in terms of price rising? YES <input type="checkbox"/> NO <input type="checkbox"/></p>				
<p>4.- Do you live in a cottage on your farm? <input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>If not, why not?</p>				
5.- Is there any policy in place to make provision of sites to provide food for 'local food systems'?			YES	NO
<p>If not, do you think it could be interesting to calculate how many hectares of land (for each raw produce) are needed to feed Uppsala Kommun citizens?</p>				
B.1.2. Farmland and spatial/food planning			YES	NO
1.- Is your farmland classified as 'non urban land'?				
2.- Is this farmland protected against urban development?				
If yes, what kind of protection?				

Which are the restrictions for your farm?			
3.- If not, do you think farmland protection need to be more restrictive?			
Why?			
If not, which could be the criteria for restrictions (mark the 3 most interesting):			
<input type="checkbox"/> Soil quality (prime land)	<input type="checkbox"/> Cultural heritage values		
<input type="checkbox"/> Landscape	<input type="checkbox"/> Farmers' claim for farmland protection		
<input type="checkbox"/> Dynamic agricultural sector	<input type="checkbox"/> Citizens' claim for farmland protection		
<input type="checkbox"/> Food self-sufficiency	<input type="checkbox"/> People employed in the agri business		
4.- Is there idle land in Uppsala municipality?			
If yes, do you know how many hectares?			
If yes, do you know why?			
5.- Is your farm split into several plots?			
If yes, why?			
6.- Do you think you have good conditions for farming?			
Quality of the water			
Quality of the soil			
Others			
7.- Is there a pressure on farmland for other uses?			
If yes, which uses?			

Why?			
	YES	NO	NA
9.- Do you have constraints to ease coexistence with other uses (in terms of noise, unpleasant smell and another annoyance)?			
If yes, can you describe some of them? - _____ - _____ - _____ - _____			
If yes, are there any specific actions to avoid these 'coexistence' problems? 			
10.- Farming and gardening			
10.1- Do you think 'food gardening' can be considered agriculture?			
If not, why not? 			
If not, how would you define gardening? <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> An urban public space </div> <div style="width: 45%;"> <input type="checkbox"/> Healthy food production </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> <input type="checkbox"/> A hobby or leisure activity </div> <div style="width: 45%;"> <input type="checkbox"/> Something to do </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> <input type="checkbox"/> A (social) community-building activity </div> <div style="width: 45%;"> <input type="checkbox"/> Other </div> </div>			

10.2.- Do you think the CAP should fund 'food gardening' as an agricultural activity?				
If yes, why?				
11.- Food self-sufficiency				
11.1.- What is 'food self-sufficiency' to you?				
11.2.- Do you think 'food gardening' can contribute to food self-sufficiency?				
Why?				
	YES	NO	NA	
11.2.- Do you think Sweden should be food self-sufficient?				
11.3.- Do you know to which degree Sweden is food self-sufficient today?				
If yes, give a value for these four categories:				
	0-25%	25-50%	50-75%	75-100%
Grain/cereals				
Dairy/milk products				
Meat				
Eggs				
Vegetables, fruits and berries				
Dried legumes				
Forage				
12.- In your opinion, in which degree might 'local agriculture' contribute to food self-sufficiency in 2020? (give a %)				
Could Uppsala grow veggies in glasshouses to be more self-sufficient?				

B.1.3.- Cultural values of the agricultural area*				
		YES	NO	NA
1.-	Are there any tangible cultural heritage elements in Uppsala län, related to agriculture (morphological feature, land parceling, settlement, localization, road tracks, water and channel work, old terraces, traditional materials, old trees, ancient wooded area,...)			
	And in your area?			
If yes, describe the most important cultural heritage elements:				
2.-	Do you use traditional agricultural techniques that can guarantee a high level of authenticity/integrity during time?			
If yes, describe these old practices and how traditional values have been preserved:				
3.-	Are there 'intangible heritage' values, like: old agricultural practices or cultivation techniques, old varieties, traditions and customs related to agricultural practices, special meanings or words attributed by people, local historical events related to agriculture, farming other farmers,...?			
If yes, describe these intangible heritage elements:				
4.-	Do you think this agricultural area has a special meaning attributed by people? Is it like a 'recognizable landscape'?			
If yes, which are the main elements recognizable by citizens?				

B.2. THE FOOD PROCESS: PRODUCTION-DISTRIBUTION-SELLING-CONSUMPTION

B.2.1. Generalities	YES	NO	NA
1.- Do you have business accounting?			
2.- Do you have a managing plan?			
3.- Do you have technical assistance or an advisory service to help you with production or commercialization?			
<p>If not, why not?</p> <p>If yes, which one?</p>			
4.- Do you use cell phone to sell your products?			
5.- Do you have a website for selling your products?			
<p>If yes, which one?</p>			
B.2.2.- PRODUCTION AND ENVIRONMENT*	YES	NO	NA
1.- Does your farming have a negative impact on the environment?			
<p>* If yes, are you worried about this?</p> <p>* If yes, are there solutions to avoid the negative impact of farming activities?</p> <p>* If yes, which solutions?</p>			
2.- What is your agriculture production system? (choose one option):			
	YES	NO	NA
- Conventional Agriculture			
- Farming using crop rotation practices and some aspects of integrated production and/ or organic farming, but not properly registered			
- Integrated Production or Integrated Crop Management System (properly registered)			

- Organic Farming (properly registered)			
- Bio-dynamic agriculture and permaculture			
3.- Does your farm have side benefits for the environment?*			
- Do you minimize packaging , goods are distributed without an outer packaging or, in case this package is needed (eggs, honey...) it is returnable and reused → Reduced pollution and resources depletion			
- Do your farm contribute to mitigate climate change impact			
- Does your farm include areas to preserve biodiversity			
- Is your farm located inside a protected or high natural value area?			
- Is your farm engaged in the preservation of land races (local varieties), e.g. through seed banks			
	YES	NO	NA
- Do you diversify your products to improve environmental quality?			
- Does your farm integrate a water management system (use of re-cycled pan or waste water, ...)?			
- What irrigation system are you using?			
- Do you manage the farm waste?			
- Does your farm make use of urban organic waste			
- Have you noticed any effects due to climate change?			
If yes, which one?			
4.- Are there clima limitations for farming?			
5.- Do you have a private insurance to secure your productions?			

B.2.3.- YIELD						
1. Have you calculated the productivity of each product? YES <input type="checkbox"/> NO <input type="checkbox"/>						
2. Which are the 3 most productive crops/cattle?						
Crop/cattle, 1:	Tn/ha or Kg/head					
Crop/cattle, 2:	Tn/ha or Kg/head					
Crop/cattle, 3:	Tn/ha or Kg/head					
3.- Have you calculated the production costs of these crops? If yes, please indicate the production costs of these products:						
SEK/kg	Labor cost	Machinery (own, rent, service)	Fertilizers	Pesticides/Health care	Fodder	Total (SEK/Kg.)
Crop/cattle, 1:						
Crop/cattle, 2:						
Crop/cattle, 3:						
4.- Have you calculated the packaging, processing and transport costs of these crops? If yes, indicate these costs and the commercialization channel:						
	Container (Packaging)	Labor cost (Processing)	Transport	Other	Total (Kr./Kg)	
*Crop/cattle, 1: *Selling system:						
* Crop/cattle, 2: * Selling system:						
* Crop/cattle, 3: * Selling system:						

5.- What's the selling price (average) for these 3 products?		
1.- _____ SEK/Kg	2.- _____ SEK/Kg.	3.- _____ SEK/Kg
How do you set the price of your products?		

B.2.4.- COMMERCIALIZATION/SELLING				
1.- Do you think there is an increasing proportion of farmers engaged in ecological production and short supply chains, since the last 10 years?				
YES <input type="checkbox"/> NO <input type="checkbox"/> NA <input type="checkbox"/>				
If yes, why?				
2.- Which is your selling system?		% over the whole production	% over total income (SEK)	How long have you been using this system? (years)
Direct selling				
Private selling	1.1. On my farm			
	1.2. In a special store (other farms, small store)			
	1.3. Local market			
	1.4. Baskets system			
	1.5. Consumers' cooperative			
	1.6. Pick your own			
	1.7. Ecommerce			
	1.8. Farmers' market			
	1.9. CSA			
	1.10. Agro-shop owned by farmers			

Stores	2.1. Store (individual)			
	2.2. Retail chain			
	2.3. Local Wholesaler			
	2.4. Non local wholesaler			
	2.5. Supermarkets chain			
	2.6 Ecommerce			
Restaurants and groups	3.1. Restaurants			
	3.2. Restaurants wholesalers			
	3.3. Kitchen (public sector)			
	3.4. Wholesale			
	3.5. E-commerce			
Others				
TOTAL		100 %	100 %	
2.- In your opinion, which could be the best selling system for local farmers to get the best profit? * Give a score: 0=no interest; 1=I don't know; 2=can be interesting * choose the 3 most interesting options for you				

3.- Are you using the best scored options?	YES	NO
If yes, in which degree? Planned <input type="checkbox"/> ; Partially dev. (25%) <input type="checkbox"/> ; (50%) <input type="checkbox"/> ; (75%) <input type="checkbox"/> ; (≥75%) <input type="checkbox"/>		
4.- Have you thought about changing your selling system?	YES	NO
If no, why not? 		
5.- Have you ever changed the way you were selling your products?	YES	NO
If yes, why? 		
6.- What mechanisms are steering where you are selling your products? Because of economical reasons, values, ideology, tradition, culture, networks, social factors, contacts with anyone on the chain, membership or organisation? (choose 3) - Is there anyone of these more important than the others? Rank them (1,2,3)		

7.- Have you diversified your economic activity? If yes, tell us the category/categories and what's the rate over the total profit of your business			
	% over the whole time devoted to the business	% over total income (SEK)	How long have you been using this system?
Rural Tourism (accommodation)			
Agro-tourism (on the farm: accommodation+tourism activities)			
Handicraft/artisanal production			
Renewed energy production			
Public service oriented agriculture (environmental or tourism services)			
Environmental training/education			
Farm Guided tours			
Social farming (social inclusion of disable people)			
Experimental farming for research proposal)			
Private Service Oriented Tourism/leisure activities			
Therapeutic services			
Nature conservation farming			
Training for gardeners			
Other			

8.- Have you thought about offering other services?		<input type="checkbox"/> YES <input type="checkbox"/> NO
<p>If yes, to which one:</p> <p>Why?</p>		
<p>If not, why not?</p>		

9.- What kind of marketing strategy do you use?					
Your own website	Social networks	Brochures (where do you distribute the brochures?)	Other websites	Mobile App	Other

10.- Marketing
<p>10.1.- Do you identify your product with any kind of label?</p> <p>If yes, which is your label?</p> <p>Which are the values you want to explain with your label?</p>
<p>10.2.- Have you seen the benefits of using and having these labels?</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO</p>
<p>10.3.- Is there any kind of PGI (protected geographical indication) or PDO (protected denomination of origin) in your area?</p> <p>YES <input type="checkbox"/> NO <input type="checkbox"/> NA <input type="checkbox"/></p> <p>If yes, which one; if not, why not?</p> <p>If yes, do you use this label?</p>
<p>10.4.- Have you invested in marketing strategies for your farm during the last 10 years?</p> <p>If yes, which kind of investments?</p> <p>Did you get public funding? Where from?</p>

10.5.- How could you increase the added value of your products in your marketing strategies?

B.2.5.- LOCAL FOOD CONSUMPTION PATTERNS		
1. In your opinion are consumers today more interested in buying local or organic products than 5 years ago?	YES	NO
2. In your opinion, are consumers today more interested in buying organic products than 5 years ago?		
3.- In your opinion, are consumers today more interested in buying local products that are organic produced than 5 years ago?		
4.- What does 'local food' mean to you?		
<p>In terms of geographical distance, what does 'local' mean?</p> <p>0 km <input type="checkbox"/> ; 0-50 km <input type="checkbox"/> ; 50-100 km <input type="checkbox"/> ; 100-200 km <input type="checkbox"/> ; Not important <input type="checkbox"/></p>		
<p>And in terms of 'intermediaries'?</p> <p>0 <input type="checkbox"/> ; Max. 1 <input type="checkbox"/> ; Max. 2 <input type="checkbox"/> ; Less than 4 <input type="checkbox"/> ; Not important <input type="checkbox"/></p>		
5.- Do you think your farm is connected to the city?	YES	NO
If yes, what way?		
6.- Do you think it could be useful to create a 'local label' for all the 'local producers' in Uppsala with the aim to promote local food consumption?	YES	NO
If not, why not?		

7.- Are you taking part in any collectivity dealing with 'local food' promotion?*

If yes:

- Which one:

- How many and who are the actors/stakeholders involved in the project?

- Who takes part in the decision-making process?

- How are issues brought up/who initiates debates?

- Are there sub-groups within the larger group?

- How does it work with food supply? Is there any kind of commitment?

8.- If not, what role would you see yourself playing in a local food movement?

9.- What are some of the challenges in trying to market or sell your products/produce/goods locally?

10.- What are some of the constraints in trying to market or sell your products/produce/goods locally?		
11.- Do you know the meaning of 'food planning'?	YES	NO
12.- Do you think 'food policies' are needed?	YES	NO
If yes, do you think 'food policies' should take into account the consumption and distribution of 'local food'?		

12- FARMERS' PERCEPTIONS ABOUT CONSUMERS' BEHAVIOUR				
		YES	NO	NA
12.1	Consumers prefer food on global market than on local market. It takes less time and it's more convenient			
12.2	Do consumers prefer origin than price?			
12.3	Consumers are worried about the impact of agriculture on the environment			
12.4	Consumers buying organic food are aware about the origin of food			
12.5	Consumers want to know who is producing the food they eat			
12.6	Consumers know about PGI and PDO			
12.7	Consumers know about the existence of local agricultural areas and local food production			
12.8	Consumers have bad food habits and they prefer fast food and convenience food			
12.9	Consumers have access to local food channels			
12.10	It is difficult for consumers to get information about 'local farmers' and 'local food production'			
12.11.-	There is a lack of public policies to support local farmers and local food consumption			
12.12.-	EU could support municipalities and regional governments at improving local agriculture awareness			

13.- FARMERS' PERCEPTIONS ABOUT CONSUMERS' PROFILE						
13.1.- How old are your costumers?						
0 – 20	21-30	31-40	41-50	51-60	61 - ...	NA
13.2.- What do your customers appreciate of your products?						
		Customers typologie				
		Consumer	Consumer's cooperative	Intermediary	Seller (small grocery)	Supermarket
a.	Packaging					
b.	Origin					
c.	Taste					
d.	Price					
e.	Label					
f.	PGI/PDO					
g.	Organic					
h.	Local product					
i.	Service					
j.	Other					

B.2.6.- Last questions				
1.- What challenges and opportunities do you see for your business in the future?				
		Done	Planned	Not interested
1.1.	To have a website			
1.2.	To own a 'quality label'			
1.3.	To cooperate with other farmers under a common label			
1.4.	To make the conversion into integrated pest management			
1.5.	To make the conversion into organic production			
1.6.	To increase the size of my farm			
1.7.	To reduce the diversity of products and become more specialized			
1.8.	To change the commercialization channels			
1.9.	To become a distributor, more than a producer			
1.10.	To quit farming			
1.11.	To increase mechanization to increase the efficiency			
1.12.	To reduce the size of my farm			

1.13.	To work with consumers' cooperatives			
1.14.	To create a farmers' cooperative to increase the products supply/diversity of products			
1.15.	To provide organic food to schools			
1.16.	To provide more services (tourism, leisure, ...)			
1.17.	To grow veggies in glasshouses			
1.18.	Others			
2.- Do you have a business plan for the future?			YES	NO

B.3. PROFESSION

B.3.1- Cooperation				
		YES	NO	NA
1.-	Do you cooperate with other farmers?			
If yes, are they local farmers?				
If not, do you think it is a weakness for your business?				
2.-	Are you member of any association?			
If yes, which one?				
3.-	Do you cooperate with private associations or public administrations?			
Are they 'local'?				
What's the name of this association?				
What kind of cooperation do you have?				

B.3.2- Innovation				
		YES	NO	NA
1.-	Have you introduced any innovation in your farm (new technologies, cooperation methods...) not used before in this area?			
Where did you learn about this innovation?				
2.-	Would you need more scientific and knowledge support to improve you business?			
3.-	If yes, which kind of and what for?			

B.3.3.- in your opinion, what's the society's perception about farmers? (mark 5 options)				
		YES	NO	NA
1	A person who works the land			
2	Someone who loves his/her work			
3	A qualified person			
4	A food producer			
5	A person who wants to be rich			
6	A person who wants to take profit of EU subvention			
7	Someone poluting the environment			
8	Someone who wants to speculate with the land			
9	A traditional person			
10	Someone who wants to take care of the landscape			
11	A business person			
12	Someone who has a nice life style			
13	Someone who works very hard to earn some money			
14	Someone who never takes holidays			
15	Other			

C.- FINAL QUESTIONS				
1.-	<p>How would you define a 'periurban' farmer? (free options)</p> <p><input type="checkbox"/> A professional producing food and taking advantage of its proximity to the city</p> <p><input type="checkbox"/> A professional offering services depending on 'citizens' demand</p> <p><input type="checkbox"/> A non-professional or hobby farmer</p> <p><input type="checkbox"/> Same as a 'rural' farmer</p> <p><input type="checkbox"/> Others:</p>			
2.-	<p>In your opinion, are there opportunities for young farmers in peri-urban areas?</p> <p>YES NO</p> <p>Why?</p>			
3.-	<p>What could official institutions do to support local farming?</p>			
4.-	Do you think EU should devote more resources to 'local agriculture'?	YES	NO	NA
5.-	Do you think the 'CAP' is helping local farming?			
	<p>If yes, in what ways?</p>			

	What might EU policies (CAP) support local food production?
7.-	<p>The Swedish government decided that by 2020, 20% of all Swedish farmland must be eco certified, and that 25% of food procured might be eco-produced. In your opinion, could Sweden do the same for local food?</p> <p>Do you consider Swedish procurement act a problem in realizing this?</p>
8.-	Do you think 'local agriculture' is important for food supply? If not, why not?
9.-	What do you think about sky or vertical farming?
10.-	How do you imagine agriculture in 20 years? more 'global' or more 'local' based?
11.-	Do you have any questions for me or would you like to rephrase questions that I have asked?



Sign for 'local product'. ICA supermarket



Different ways of selling 'local products'
(ICA supermarket, farmers' market, local store)

Future collaboration with the Host institution

The collaboration with the host institution will continue after the STSM. We would like to continue this research by comparing two EU medium size cities. Uppsala has been the case study for Northern Europe and Girona will be the case study for Southern Europe. Furthermore we would like to develop an in depth analysis on Urban Agriculture in both cities, focusing on:

- The analysis on existing food systems. We would like to analyze how food is produced, processed, distributed and consumed;
- The study of UA typologies in an overall perspective, using WG1 typologies:
 - o Urban food gardening: Family gardens, Allotment gardens, Educational gardens, Therapeutic gardens, Community gardens, Squatter gardens
 - o Urban linked agriculture: Educational farms, Social farms, Local food farms, Experimental farms, Leisure farms, Therapeutic farms, Nature conservation farms
 - o Not Urban linked agriculture
- Consumption patterns: how do consumers buy food, where do they buy, which are the main values consumers attribute to food? And to local food?
- The role of public authorities on supporting and developing local food systems

There is a mutual interest to publish the results of this research and to cooperate with other research projects on same issues at EU and international level.



Local products labeling

Foreseen publications/articles resulting from the STSM

The foreseen publication resulting from this STSM and further research that is foreseen to be developed during the first semester 2015 will be in the form of a scientific paper and/or published within the White book on Urban Agriculture of COST Action UA.

The STSM results are planned to be presented at the next Working Group Meeting in Sofia (April 2015). An article in the Documentation of the 6th WG Meeting is foreseen.

According to the mutual research interests, further publications could possibly result from the STSM. Hence, this STSM has been a starting point for future collaboration and publications.

Bibliography and resources

- Gebresendet, G. (2011): Potential for optimized food deliveries in and around Uppsala city, Sweden. *Journal of Transport Geography* Vol. 19, Issue 6: 1456-1464.
- Granvick, M. (2012): The Localization of Food Systems- An Emerging Issue for Swedish Municipal Authorities. *International Planning Studies* 17(2): 113-124.
- Jacobsson, T. (2012): Att stimulera närodlade livsmedel I svenska kommuner (To stimulate local food in Swedish municipalities). Master Thesis Project, SLU Uppsala. Available at <<http://epsilon.slu.se>> [Accessed 25th September 2014]
- Lönnerud, A. (2012): Facing Peak Oil and Climate Change: A Pragmatic Approach to a Re-localized Food Production System in Uppsala, Sweden. Master Thesis, SLU Uppsala.
- Milestad, R. (2010): Enhancing Adaptive Capacity in Food SystemsL Learning at Farmers' Markets in Sweden. *Ecology and Society* 15(3): 29. Available at <<http://www.ecologyandsociety.org/voll5/iss3/art29/>> [Accessed 2nd October 2014]
- Risku-Norja, H. et al. (2008): Localisation of primary food production in Finland: production potential and environmental impacts of food consumption patterns. *Agricultural and food science*, 17: 127-145.
- Sundkvist, Å. (2005): On the importance of tightening feedback loops for sustainable development of food systems. *Food policy* 30(2005): 224-239.

Electronic sources and databases

- StatistiksUppsala. Available at <http://www.statistikdatabasen.scb.se/>
- Översiktsplan för Uppsala kommun (Comprehensive plan for Uppsala's municipality). Available at <http://www.uppsala.se/oversiktsplan>
- Kulturmiljöprogram (Uppsala): <http://www.uppsala.se/kulturmiljo>
- Inspirationsguide, för dig som vill odla I Uppsala:
<http://www.uppsala.se/stadsodling>
- Farmers' Associations:
<http://www.bondensmatiuppland.se>
<http://www.upplandsbondens.se/sv.html/gardarna>

Agreement of the Host Institution for the STSM

Agreement of the Host Institution for the Short Term Scientific Mission

Swedish University Agricultural Sciences

Date: 2014-05-16

To whom it may concern,

Re: Agreement for Short Term Scientific Mission (RSTSM)

On behalf of the Swedish University Agricultural Sciences, Sweden, I would like to invite Mrs. Sonia Callau Berenguer to undertake a STSM in Sweden. Sonia is a Master Thesis Student at the Polytechnical University of Catalonia-School of Architecture in Barcelona, she is working at the Barcelona's Provincial Council and Early Stage Researcher involved in the COST Action Urban Agriculture Europe. The STSM is proposed to have duration of one month and a half –from September 15th to October 31th 2014, in order to enhance the impact of global networking and foster knowledge creation and exchange between the COST Action Urban Agriculture Europe and the Swedish University Agricultural Sciences.

The task of the STSM in Sweden is to study and compare food systems and diverse types of urban and peri-urban agriculture within Stockholm's and Barcelona's Metropolitan Region, with a particular focus on Uppland Region (Sweden) and Maresme Region (Spain). This STSM aims at a global approach in urban and peri-urban research and a methodological and case-study contribution to the COST Action Urban Agriculture Europe.

Kind regards,

Host signature



Lars Johansson
Head of Division Landscape Architecture
The Department of Urban and Rural Development

 **Institutionen för stad och land**
Box 7012
SE-750 07 UPPSALA

Confirmation by the host institution of the successful execution of the STSM



Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

Institutionen för stad och land, avd. för
landskapsarkitektur

Uppsala 21/11 2014

Dear COST UAE Chair:

Sonia Callau undertook a STSM in Uppsala for 6 weeks from September the 15th to October the 26th. We worked towards analyzing urban and peri-urban agriculture and local food systems within Uppsala municipality. We are aiming to further develop this research by comparing Uppsala and a catalan municipality and to complete a paper as a result of the full research. Working with Sonia is very fruitful and I am impressed of her ambitious approach and her very effective way of working. I look forward to further develop research together with her. Since she left in October I have received grant to conduct some more empirical studies in Uppsala and Sonia and I plan to develop applications further on to scale up the project. We work for include several researchers within the COST action UA with the aim to conduct comparative empirical studies in several countries. In this work we will further develop the case-study methodology we now have started to use, as we see that as an important contribution to the COST Action Urban Agriculture Europe.

Best regards

Madeleine Granvik

A handwritten signature in dark ink, appearing to read 'Madeleine Granvik', with a large, sweeping flourish at the end.

Madeleine Granvik, Ph.D.
Researcher in Planning for sustainable development
and management of urban-rural interactions
Swedish University of Agricultural Sciences
Department of Urban and Rural Development
Postal address: P.O. Box 7012
SE-750 07 Uppsala, SWEDEN
Phone: +46 18 67 19 50
Fax: +46 18 67 35 12
Madeleine.Granvik@slu.se
www.slu.se/sol
Co-project manager and theme leader for FUSE, SLU
Editor-in-chief Nordic Journal of Architectural Research
<http://www.arkitekturforskning.net>



Interview with farmers' family

Research team



Lars Johansson

Head of division Landscape Architecture
Swedish University of Agricultural Sciences
Department of Urban and Rural Development
Contact: lars.jo.johansson@slu.se



Madeleine Granvik, Ph.D.

Researcher in Planning for sustainable development
and management of urban-rural interactions
Swedish University of Agricultural Sciences
Department of Urban and Rural Development
Contact: Madeleine.granvik@slu.se



**Diputació
Barcelona**

Sonia Callau, Ing.

Head of Agricultural Spaces Unit at Barcelona's Provincial Council,
Master student at the Politechnical University of Catalonia
Contact: callaubs@diba.cat



COST- the acronym for European COoperation in the field of Scientific and Technical Research- is the oldest and widest European intergovernmental network for cooperation in research. Established by the Ministerial Conference in November 1971, COST is presently used by the scientific communities of 35 European countries to cooperate in common research projects supported by national funds.

The funds provided by COST - less than 1% of the total value of the projects - support the COST cooperation networks (COST Actions) through which, with EUR 30 million per year, more than 30.000 European scientists are involved in research having a total value which exceeds EUR 2 billion per year. This is the financial worth of the European added value which COST achieves.

A “bottom up approach” (the initiative of launching a COST Action comes from the European scientists themselves), “à la carte participation” (only countries interested in the Action participate), “equality of access” (participation is open also to the scientific communities of countries not belonging to the European Union) and “flexible structure” (easy implementation and light management of the research initiatives) are the main characteristics of COST.

As precursor of advanced multidisciplinary research COST has a very important role for the realisation of the European Research Area (ERA) anticipating and complementing the activities of the Framework Programmes, constituting a “bridge” towards the scientific communities of emerging countries, increasing the mobility of researchers across Europe and fostering the establishment of “Networks of Excellence” in many key scientific domains such as: Biomedicine and Molecular Biosciences; Food and Agriculture; Forests, their Products and Services; Materials, Physical and Nanosciences; Chemistry and Molecular Sciences and Technologies; Earth System Science and Environmental Management; Information and Communication Technologies; Transport and Urban Development; Individuals, Societies, Cultures and Health. It covers basic and more applied research and also addresses issues of pre-normative nature or of societal importance.