

# **Food and beyond. Multifunctional farms in the metropolitan context of Rome<sup>276</sup>**

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**Abstract:** Urban and peri-urban farms can play a key role in the development of sustainable urban food systems. Although they are not able to feed the whole population of a city, both in terms of quantity and variety of the food required, their activity can be the base for the provision of a broad range of products and services that enhance the ecological, social, and even economic sustainability of metropolitan areas.

Building on the emerging stream of literature on the topic, the study looks at multifunctional role of peri-urban farms through an analysis of farms settled in the countryside immediately surrounding the urban area of Rome. The main objective is to identify the share and the characters of farms that have reacted positively to the process of urbanisation deeply modifying their production structure and their territorial relationships.

To achieve this objective, the first part of the paper aims at identifying market-oriented farms in the municipality of Rome and at classifying them according to three categories: traditional, adaptive and reactive peri-urban farms. The second part of the paper focuses on two cases of reactive farms, in order to explore more in depth the factors that have influenced their successful trajectories and the main drivers that led these farms into their renewed and multifunctional role in the Roman peri-urban agriculture.

**Keywords:** peri-urban agriculture, multifunctionality, reactive farms, food production, public goods

## **Introduction**

Urban and peri-urban farms can play a key role in the development of sustainable urban food systems. Although it cannot be possible for them to feed the whole population of a city, in terms of both food quantity and variety, their activity can be the base for the provision of a range of products and services that enhance the ecological, social, and even economic sustainability of cities.

Recent literature has investigated the process of slow replacement of the traditional agricultural functions in peri-urban areas with non-productive ones, mainly driven by a consumption-oriented component enhancing the demand of new goods and services of the society (Zasada, 2011).

In this perspective, the role of urban farming goes much beyond the mere food production, by involving the provision of public and private goods and services variously related with, or complementary to, food production. (Van der Ploeg and Roep, 2003).

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<sup>276</sup> The case studies presented on this paper build on the work carried out in the on-going EU funded research programme SUPURBFOOD "Towards sustainable modes of urban and peri-urban food provisioning"

In the last few years urban and peri-urban agriculture has been deeply investigated from an economic perspective and also for its important impact on environmental and social dynamics<sup>277</sup>. An interesting stream of literature has focused on the changes that farms undergo in the urbanisation process. According to it, farms can be simply “swallowed” by the metropolitan development, or adapt to the changes of the surrounding territory, or, finally, react and assume new function meeting a more or less latent expressed by urban dwellers.

Building on this literature, the paper looks at the multifunctional role of peri-urban farms through an analysis of farms settled in the countryside immediately surrounding the urban area of Rome. The main objective is to identify the share of farms that have reacted positively to the process of urbanisation deeply modifying their production structure and their territorial relationships. To anchor the theoretical analysis to concrete experiences, two reactive farms will be analyzed in more depth. Attention will be given to their specific characters, to their development trajectories, and to the extent to which these reaction processes are contributing to enhance the social and ecological sustainability of the urban food system in Rome.

To this end, we built up, moving from the micro-data collected through the forms of the latest agricultural census, a process of progressive selection aimed at identifying three typologies of peri-urban farms (traditional, adaptive and reactive) that groups together the market-oriented farms in the municipality of Rome. Our aim is, in fact, to analyse the reaction to the condition of peri-urbanisation of vital farms that have proper and continuative market relations, both at the local and the long-range level. Other typologies of farms are very important in the economic, social and environmental tissue of peri-urban areas, such as small subsistence or hobby farms; however, investigating their role, which is driven by other forces, is beyond the scope of this paper.

The paper is organized in four steps, as follows. After a brief literature review on the multifunctional role of peri-urban agriculture (section 2), the features of Roman agriculture are described, with an emphasis on its market relationships (section 3). In section 4 the classification of farms according to our methodology is presented, while in section 5 two cases of successful reactive farms are investigated, in order to investigate the drives of their changes: the Cooperative *Agricoltura Nuova* and the farm *Casale Vecchio s.r.l.*. Finally, in section 6 some conclusions are drawn.

### **Multifunctionality of peri-urban agriculture**

In many contexts farmers have to deal with ongoing urbanization of the countryside (Cavailhès et al., 2004). Many areas are becoming more and more densely populated and even former rural areas are now characterized by an urban lifestyle and have not rarely been absorbed into metropolitan areas (Cabus and Vanhaverbeke, 2003; Léon, 2005). Using a regional perspective, the metropolitan area can be defined by the existence of rural-urban linkages and strong networks between rural villages, secondary cities and large cities (Owusu, 2005).

While in the past peri-urban agriculture was considered as a temporary conditions of farms that were doomed to disappear, with their areas destined to be integrated into the urban space, in more recent years farming is increasingly viewed as an important component of the productive, environmental, social and landscape features of peri-urban contexts. This is especially due to the slowing down of the urbanisation and gentrification processes of rural areas and also to the growing of a “green” awareness. In this view, some authors argue that the traditional dichotomy between cities and countryside has been overtaken by a new mode of territory organisation that can

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<sup>277</sup> For an extended and thorough review of the recent literature on the multifunctional role of peri-urban agriculture, see Zasada (2011).

be defined as a sole “bio-region” or as a continuous rural-urban agro-system characterized by a new and more complex “geography of functions” (Basile and Cecchi, 1997; Libby and Sharp, 2003; Iacoponi, 2004).

Urbanized areas are located between rural and urban regions and can be described as a network of multi-sector, interrelated and complementary activities (Allen, 2003). In these areas, where complex relationships between farmers, urban and rural dwellers occur, multifunctional agriculture can meet a wide range of needs expressed by large parts of the population. Hence, multifunctional farming strategies have more opportunities to develop.

With regard to food production, as city dwellers experience alienation of space, peri-urban farming creates a joining belt between congested urban territories and rural areas where agriculture is still the main activity, although facing an increasing urbanisation pressure. This feature of peri-urban agriculture gets together high-income and quality oriented consumers and environmentally-aware citizens with local farmers who can take advantage of their role and become the main producers of high-quality products and high standard services. In other words, peri-urban agriculture can meet urban dwellers' needs, hence finding a new *raison d'être* that helps to release the pressure of the hunger of soils for urbanisation.

In the unravelling story of the urbanisation process, relationships between cities and countryside have been historically influenced by different variables: economic cycles, population density, competition for soil use, residential use of rural areas. From the Eighties onward, agriculture and rural areas have lost their identification with backwardness: rural areas have become sites of consumption and non-agricultural business, whereas farms have moved towards multifunctionality.

Multifunctionality has been, for more than a decade (Ploeg et al., 2000) one of the key-words for identifying the new paradigm of agricultural development which had been previously defined as “post-productivism” (Ward, 1993). According to it, the process of modernisation of the primary sector has led to a sort of “industrialisation” of agriculture characterised by intensification of production and standardisation of output whose main downsides have been the increase of the environmental impact of farming, the progressive decline of small-scale agriculture, the unsustainable use of natural resources, the worsening of agricultural terms of trade, to name some. The post-productivist paradigm does not imply a dominant model, but rather the co-existence of different agricultural models: small and large scale farms, food and non-food products, non-marketable services, local markets and international trade flows, all fulfilling different and specific societal requirements.

Given the decline of polarisation between urban sites and rural areas, peri-urban agriculture can be read under a new light, as a specific component of the primary sector that fills in the gaps left empty by the urbanisation process, redefining the relationships between production and consumption and among different actors playing within the borders of a limited territory.

### **The features of Roman agriculture**

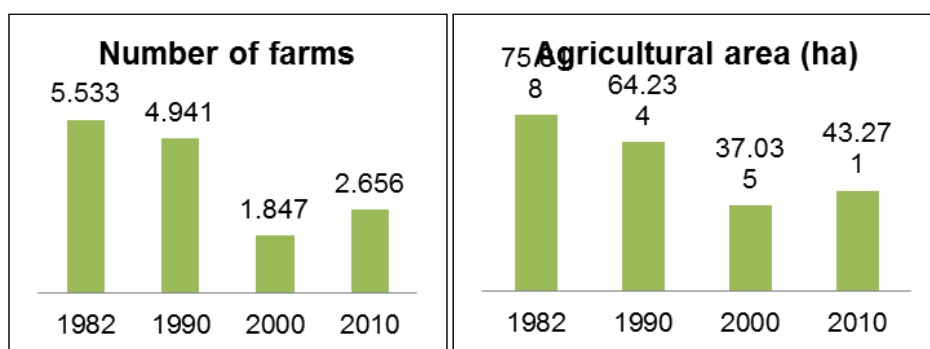
Rome is a very interesting case of peri-urban agriculture, since, according to the statistics, it is the largest “agricultural municipality” in Italy, with the highest agricultural area and a relevant number of farms. Agriculture in and around Rome assumes specific features which are the results of intense and multidirectional interactions between the city and the countryside. A number of farms provide services and new non-agricultural products to the urban population, while food supply reaches the urban population through alternative distribution models: direct sales, farmers markets, open gates, public procurement and so on.

Relationships between Rome and surrounding countryside have always been influenced by the competition for soil use, in particular by the residential use of rural areas, with the related inter-

ests of the influential building sector. In the last decades, the presence of a new ecological awareness and the changes in the social needs and demands are paving the way for the emergence of new roles for rural areas and agriculture, the former becoming competing production and consumption sites and the latter delivering a range of new agricultural and non-agricultural goods and services which are commonly identified with the multifunctional role of the primary sector.

The last Italian agricultural census (2010) reveals interesting and maybe surprising signs of vitality of Roman agriculture, as the total and utilized agricultural area have been increasing in the last decade, as well as the number of farms (figure 1). It is then worth studying the interesting case of farms settled in a rural environment, although very close to a highly populated area and within the borders of a metropolitan municipality, with important implications in terms of their social, institutional and political patterns of relation.

Figure 1: Evolution of farms and agricultural area in Rome (1982 - 2010)



Source: elaborations on ISTAT (2010), 6<sup>th</sup> Agricultural Census

Various factors account for the relevance of the agricultural sector in Rome: not only the size of the municipality, and the just mentioned presence of large green areas around and inside the city, but also a long-term tradition of deep interactions between urban population and local farmers. The urbanization process of Rome is the result of its extraordinary long and complex history, with green areas scattered throughout the urban area in a continuous alternation with the “built city”.

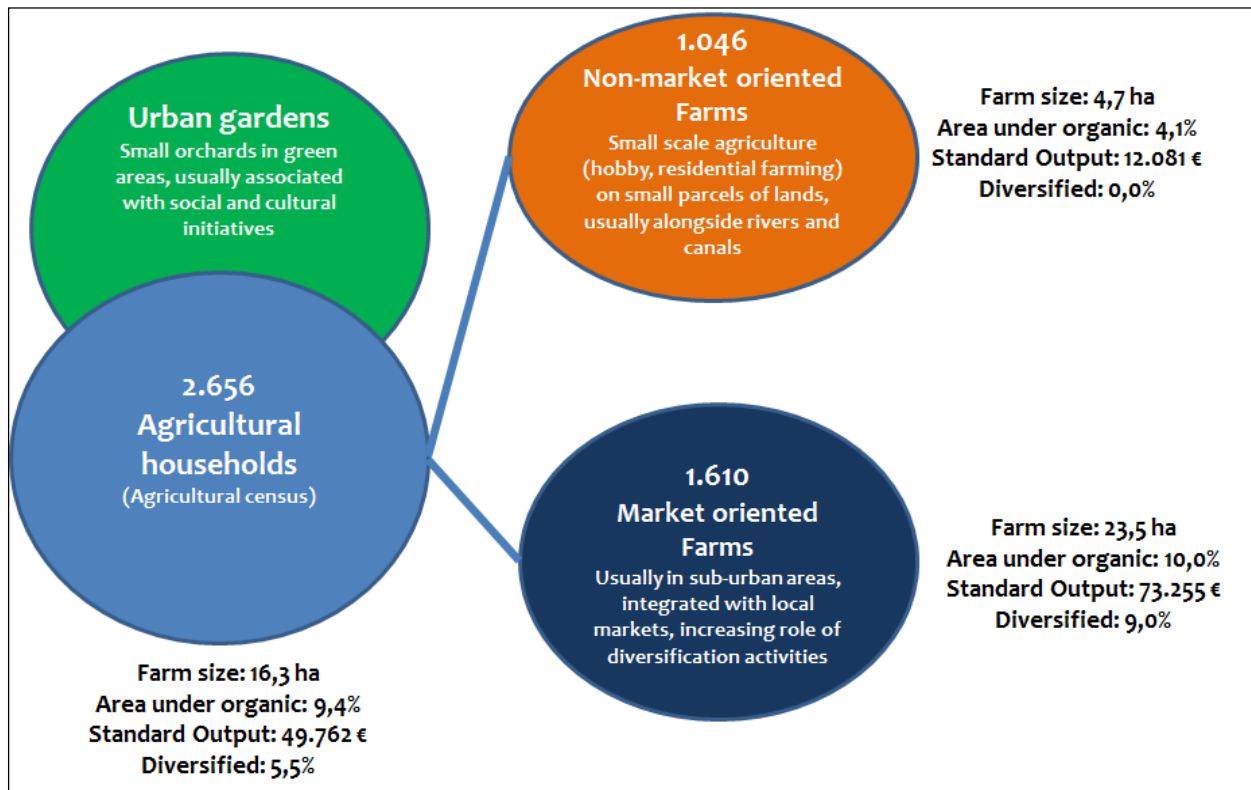
As a result, Roman agriculture assumes specific features, which are the results of intense and multidirectional interactions between the urban structure of the metropolitan area and the countryside. The first aspect to be noted is that urban agriculture in Rome is not, as in many other European cities, only an innovative practice of urban gardening related to social and cultural initiatives of local communities for the use of common green areas, but it also involves a significant number of professional and market-oriented agricultural holdings.

The focus of this analysis is the agricultural farming system as registered by the latest national statistical census (ISTAT, 2010), that in 2010 accounted 2656 units (excluding urban gardens). Amongst these farms the 62% (1636 units) are market-oriented farms, namely farms that commercialise their agricultural products, while the remaining 1020 farms (38%) do not sell their products. Market-oriented farms are usually located in sub-urban areas and integrated in local markets with an increasing role of diversification activities, while the non-market oriented farms regard the small scale agriculture (hobby, residential farming) on small parcels of lands, often visible alongside rivers and canals.

The following sections provide a detailed analysis of the market-oriented farming in terms of diversification and multifunctionality, looking at their structure but also at the different roles that

these farms may have in providing services and new non-agricultural products to the urban population.

Figure 1: The farming system in Rome



Source: elaborations on ISTAT (2010), 6<sup>th</sup> Agricultural Census

### Typologies of peri-urban farms

In this section we will refer to the behavioural typologies of peri-urban farms identified by Heimlich and Brooks (1989). According to them, farms that get in contact with the urban context, due to the expansion of metropolitan areas at the expenses of the rural space, can behave in three archetypical ways.

*Traditional farms* assume a passive behaviour in the sense that they basically do not change anything of their past organisation and product specialisation. These farms are swallowed by the urban forwarding and they become enclaves in the urban territories. As a consequence, labour is kept all in the agricultural activity, while diversification processes are set at a minimum, if not null level. These farms are quite dependent on public support, especially on that coming from the CAP first pillar since it is somehow connected to their product specialisation.

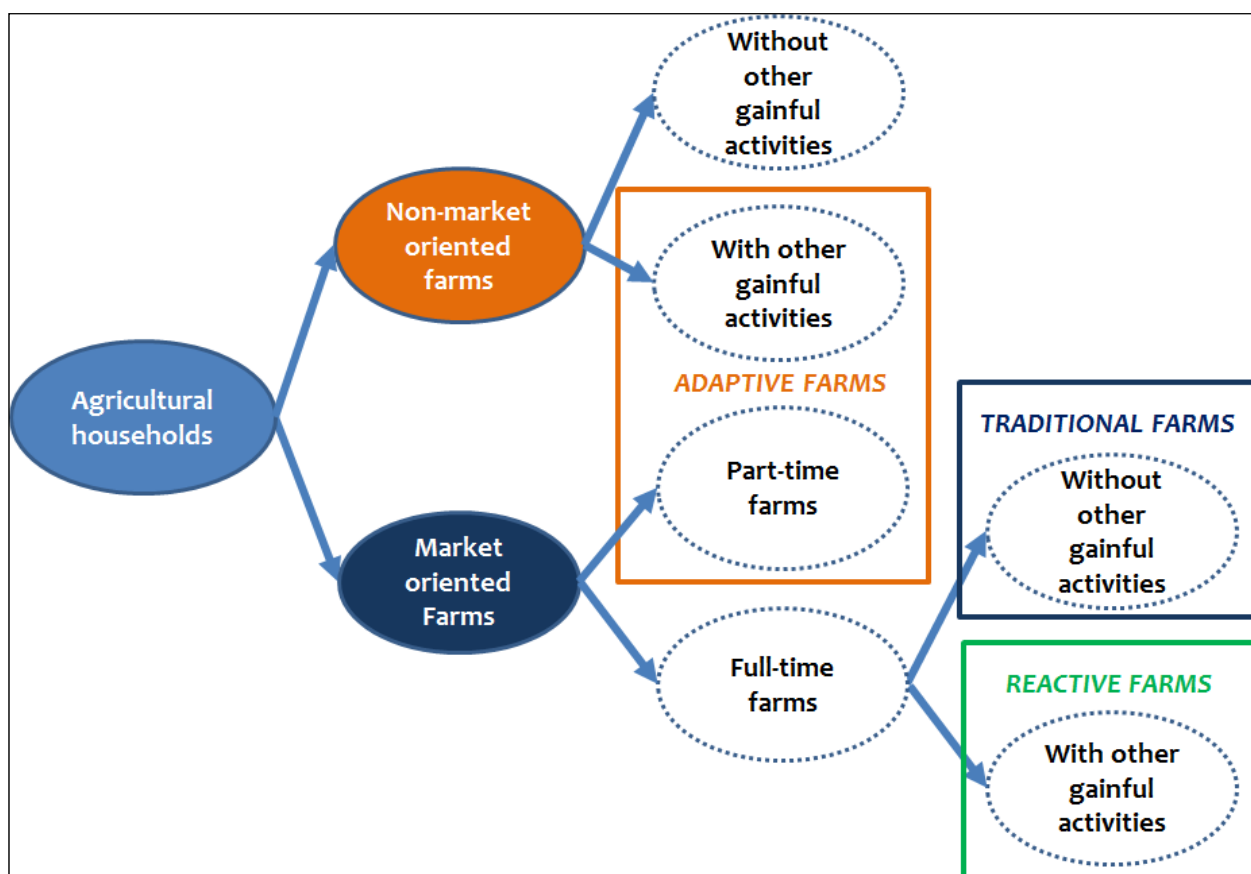
*Adaptive farms* endure the urbanisation process adapting to it, mostly through de-activation and labour force transfer outside the farm gates. This process can affect both the farmer (part-time farmers) and the farmer's family members (pluriactivity). This process is mainly driven by the conditions of the non-agricultural labour market, so it is highly dependent from exogenous variables. Diversification processes in this case can be significant, especially as a result of the adaptation behaviour, so that they will be influenced by the urban market demand, such as quality and typical products. As for public support, their dependence is to be related to the product specialisation.

tion and also to the diversification process, however being in peri-urban contexts they have been often excluded by the EU funds secured by the second pillar of the CAP<sup>278</sup>.

Finally, *reactive farms* are particularly sensitive to the relationships with the urban context, modifying their specialisation and functions activated on-farm. For these farms, the diversification processes become prevalent and, in some cases, can be quite independent from the main agricultural activity. These farms would in theory be quite “policy sensitive”, since public support would favour income diversification and product differentiation; however, as above mentioned, they have been non eligible for access to the second pillar funds for their peri-urban nature.

In figure 2 the main characterising features used to identify each typology are highlighted. Through a progressively selective process, the three typologies were set up according to the following conditions: presence of other gainful activities (diversification) for reactive farms, presence of part-time or pluriactivity for adaptive farms, while we considered as traditional all the remaining farms that have agricultural-market relationships. In this classification we considered as adaptive farms also non-market oriented holdings with diversification of activities.

Figure 2: Classification of Roman farms according the three typologies



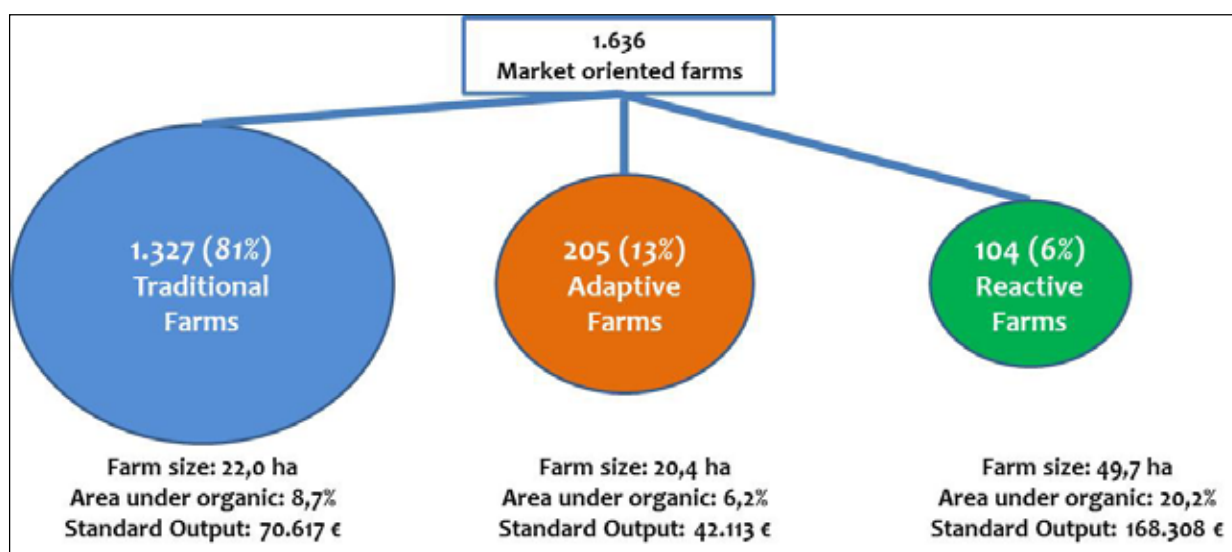
Moving from the farms described previously in figure 1, we can now allocate our sample of 1636 Roman farms<sup>279</sup> in the three typologies highlighted above. Data are summarized in figure 3 and show that the 82% of the total market-oriented farms can be considered “traditional farms”, while 13% are “adaptive farms” and only 6% can be considered “reactive farms”. In spite of the limited

<sup>278</sup> Among the many innovations of the latest CAP reform about the second pillar there is the inclusion of peri-urban farms among the eligible targets for support.

<sup>279</sup> As described in figure 2, the sample used here (1636 farms) does not coincide exactly with the number of market-oriented farms (1610 farms), since we considered also non-market oriented farms with other gainful activities (26 farms).

number of farms in this latter category, their average size is larger (around 50 hectares), as well as the area devoted to organic farming (20%); more interestingly, the standard output<sup>280</sup> is much higher than in the other categories (around 168000 euro).

Figure 3: Traditional, adaptive and reactive farms in Rome



Source: elaborations on ISTAT (2010), 6th Agricultural Census

Keeping in mind that the farms selected are all market-oriented units, in order to discriminate among them we consider two relevant aspects: 1) the main source of revenues and 2) the forms of product sales. With regards to the main source of revenues, traditional farms depend as obvious, on the agricultural activities (92%) while public support<sup>281</sup> has a relatively low importance. On the contrary, adaptive farms rely more than the other typologies on public support (14%), while for them a significant share of the revenues derives from forms of gainful activities other than farming. In the case of reactive farms the source of revenues from other activities increases significantly (around 40%), while public support accounts only for 5%.

Thus, the data show how the public support is currently playing a marginal role for reactive farms, while it seems more relevant for the survival of adaptive farms.

Table 1: Sources of revenues for the three typologies of market-oriented farms

Sources of revenues	Traditional farms	Adaptive farms	Reactive farms
Agricultural activities	91.9%	71.9%	54.9%
Other gainful activities	-	14.1%	39.9%
Public support	8.1%	14.0%	5.2%

Source: elaborations on ISTAT (2010), 6th Agricultural Census

Concerning market channels, table 2 shows the importance of direct selling in the three typologies, as the most relevant form of non-traditional sale for urban and peri-urban agriculture. As expected, direct selling is particularly relevant for reactive farms (68.6%), while there are not

<sup>280</sup> The standard output is a “theoretical” level of gross margin that depends on the farm specialisation, the level of costs, the farm location and other parameters. Being “standard” it can be used for comparisons among different types of farms.

<sup>281</sup> Public support includes all direct payments. On average, EU public support covers a share of 25% of total revenues for Italian farms.

relevant differences amongst the other market channels (including the most innovative ones such as e-commerce).

Table 2: Main market channels of the three farms typologies (% of farms)

	<b>Traditional farms</b>	<b>Adaptive farms</b>	<b>Reactive farms</b>
Direct selling	47.2%	22.4%	68.6%
E-commerce	12.5%	2.9%	9.6%
Commercial companies	31.9%	26.3%	40.4%
Cooperatives	21.6%	22.0%	15.4%
Agri-food industry	14.8%	10.7%	21.2%

Source: elaborations on ISTAT (2010), 6th Agricultural Census

The final aspect characterising farm typologies is crop specialization. In all three typologies the mixed farms prevail, which is quite an expected feature in an urban context due to a more developed environmental sensitiveness (which claims for a diversification of production) but also to the specific market relationships of a peri-urban context. However, traditional and adaptive farms are often specialized in quality wine and in cereals, while in the case of reactive farms specialization in sheep is important, as well as the activity of plant nursery. The specialisation of reactive farms appears significantly different from the other typologies since these farms are probably more oriented to activities that are compatible with the presence of other gainful activities, especially agri-tourism and food processing.

Table 3: Farms' specialisation (%)

<b>Traditional farms</b>	<b>Adaptive farms</b>	<b>Reactive farms</b>
Various field crops combined (19.6%)	Various field crops combined (22.9%)	Various field crops combined (17.3%)
Cereals (12.4%)	Quality wine (22.4%)	Sheep (16.3%)
Quality wine (12.3%)	Cereals (14.1%)	Plant nurseries (7.7%)
Olives (7.5%)	Field vegetables (5.9%)	Field vegetables (6.7%)
Field vegetables (5.8%)	Olives (4.9%)	Dairying (4.8%)

Source: elaborations on ISTAT (2010), 6th Agricultural Census

As can be observed in table 3, amongst the diversification strategies adopted by adaptive and reactive farms, agri-tourism represents the most common activity, carried out by the 6.8% of adaptive farms and by the 23.1% of reactive farms<sup>282</sup>. The data witness the higher differentiation of the reactive farms, which in particular specialise in out-farm services compared to the adaptive farms: more than 30% of the reactive farms offer "contractors services" and "green services" such as parks and green areas maintenance, whereas these activities are present in less than 5% of adaptive farms.

Table 4: Farms with other gainful activities (%)

<b>Adaptive farms</b>	<b>Reactive farms</b>
<b>Other gainful activities (21.0%)</b>	<b>Other gainful activities (100.0%)</b>
Agri-tourism (6.8%)	Agri-tourism (23.1%)
Contractors services (4.9%)	Food processing (livestock) (22.1%)
Other activities (3.4%)	Contractors services (18.3%)

<sup>282</sup> This feature is in line with diversification at the national level in Italy (see Henke, Povellato and Vanni, in press).



Social farming (2.4%)	Green services (13.5%)
Food processing (crops) (1.0%)	Other activities (12.5%)

Source: elaborations on ISTAT (2010), 6th Agricultural Census

### The case studies

In the last 10 years a demand for new forms of quality food (local, typical, organic, etc.) has emerged in Rome. A significant number of citizens, starting from the experience of some reactive farms, but also from social and cultural initiatives, have developed an active attitude to food consumption (Dell'Orco, 2010). The expansion of the culture of quality food consumption becomes an important opportunity for peri-urban farmers to consider a "reactive" strategy. Farmers' markets, consumers groups and other small distribution initiatives have represented an important opportunity to increase the number of consumer of local organic products (Fonte *et al.*, 2011). The presence of an organized offer of local organic products had a positive effect on the growth of organic market in the city region both at private and public level.

Multifunctional land use is probably the theme that at the moment attracts more interest in the area of Rome and it is potentially able to match many of the needs that the urban community reveals in terms of social and environmental services. The potential large availability of green areas and historical sites, together with agricultural land represent a unique opportunity for a metropolitan area such as Rome. Youth unemployment is leading to an increasing attention of young people towards this type of agriculture, even when they are graduated and with an urban background. In particular, there is growing activism for the access of young farmers to the large amount of farming land potentially available in Rome (Grando and Gallico, 2013).

Thus, the increasing interest towards multifunctional agriculture and multifunctional land use in Rome involves both the institutional and the private actors and a broad range of initiatives are emerging aimed at further enhancing the social and environmental role of peri-urban farming. The next section looks at these challenges from a farm perspective, looking at two farms that were able to cope successfully with the main challenges posed by the urbanisation process and the need of increasing the multifunctional role of farming in an urban context.

The case studies presented are in fact two successful stories of reactive farms in Rome that generate from rather distant paths and develop in different way. They are, in our opinion, representative of two significant determinants of reaction in a context like the peri-urban one. One case is based on the organisation of professional farmers who join together in order to face the changes undergoing in the territory (i.e. from rural to peri-urban context). The other case focuses on a process of "neo-ruralism" (Mercier and Simona, 1983, Antrop, 2004), i.e. new farmers who gain access to peri-urban non utilised land and start a new farm business. Both cases witness an innovative form of agricultural entrepreneurship in the peri-urban context generated by a new demand coming from urban population and also by the search for new sources of labour. Both case studies are a good example of a new way to conceive the farm business in the peri-urban context, driven by a multifunctional vision of agriculture.

The first case, *Agricoltura Nuova* is a more typical reactive farm, since farmers were able to develop their trajectory according to the external changes and in a clear multifunctional perspective aimed at meeting urban needs. In the second case, *Casale Vecchio* a fundamental role was played by urban dwellers in its establishment and even if multifunctionality is less apparent, social farming is an important side-activity, and leisure activities for visitors are planned for the future.

### Agricoltura Nuova

The cooperative *Agricoltura Nuova* was founded in the late Seventies by a group of young unemployed and activists, and nowadays it represents a successful example of reactive farm able to cope with institutional changes, increasing population and evolving market conditions.

The cooperative is firstly and mainly engaged in primary production, but it is also delivering new and diversified services to the city. Some of their services are delivered “on-farm” to customers (direct selling, locations for picnics and parties, gardening courses and didactical farming, etc.), whereas others are delivered throughout the city (biomass collection and composting, gardens care). The farm is also experimenting new development trajectories in the perspective of a more sustainable use of resources (solar energy, organic waste), as well as for the adoption of more environmentally friendly production methods (biodynamic gardens).

The farm was established with two main aims: hampering the edification of a large green area with ecological and environmental values, that was attracting interest by the building sector and creating employment and a way of making a living through agricultural activity and to create job opportunities in a healthy environment). An important step in the development of the farm was the conversion to organic farming that started in 1990 to be certified in 1996, with the official renting contract of the land involving also livestock breeding. After more than three decades both the results have been achieved as witnessed by the following evidences.

- The area around the farms is now a regional natural park of about 6000 hectares, the “Parco Regionale di Decima-Malafede”.
- In 1996 the cooperative finally had an official renting contract of the public land after two decades of illegal occupation, and with the time increased the total surface, up to an area of 340 hectares.
- There are about 40 persons working in the cooperative, plus others involved just in some moments of the year, according to seasonal needs.

As already underlined, the core business of the farm is still food production and selling. The farm production is sold through a range of short-chain channels. First of all there are two selling points in the two sites of the farm. In the main selling point, in the same premises of the farm headquarters, products from other local farms are also sold, in order to give customers a wide range of products to buy and while ensuring a retail point for other producers. The farm is a few kilometres out of the city, although the green landscape does not give the idea to be close to a densely populated urban area. As a consequence, moving to the farm to buy food also represents a way to spend time in a nice environment. The main products sold are: milk and dairy, bakery (bread, cakes, biscuits), meat (lamb, veal, pork), fresh fruits and vegetables, fruit juices and jams, honey and related, aromatic herbs. The farm also holds two markets stalls in two farmers' markets in the city.

*Agricoltura Nuova* hosted the first “offer group” of organic farmers in 2003, a specific consortium of around 10 organic farmers with a short chain box scheme (“Officinae bio”, with a base on Cooperative *Agricoltura Nuova*), mainly directed to aggregated consumers. The possibility to deliver for free to a group of at least 5 customers facilitated in the last 10 years the creation of several types of consumers groups in different areas of the city. More recently delivery strategies have been improved: half of the boxes are currently collected directly on-farm. Considering the high demand, transport has been externalised and an agreement has been found with a transport company that delivers products throughout Rome. Costs and time for delivery can be hence reduced with mutual advantages for both the farm and customers.

Although still centred on primary productions, the cooperative has developed a range of multi-functional activities. All these activities are favoured by the aggregative capacity of the cooperative members, by proximity to the city, and by the pleasant green environment in which the farm is settled. Their success has inspired the activation of new ideas and initiative every year.

Among the activities it is worth mentioning: the restaurant, which occupies a rural building within the farm, with 150 covers; the educational farm activity, open to school visits every working day; the dog centre and the horse-riding school with programmes of horse therapy for children, teenagers and for disabled people; a family recreation centre; a farm shop for organic food; the organisation of an experience of more than 100 plots for urban gardens (the "*Orti urbani di Castel di Leva*"); a composting site<sup>283</sup>.

The relevance for the farm business of the proximity of *Agricoltura Nuova* to the city centre is evident, as urban population expresses a demand for a wide range of products and services, so that a vast array of multifunctional activities was the logical response. The cooperative is also involved in social and civic initiatives and movements that are more frequently developed in an urban context for the critical mass of engaged people that can gather around various issues. This gives even more visibility to the farms and its activities.

The fact that the cooperative is still anchored to food production as one of its core business is particularly relevant perspective, as it demonstrates that a multifunctional urban agriculture can be successfully based on the production of food that is actually bought and eaten by urban consumers, without having farms transformed in mere providers of green services. Farmers of the cooperative emphasize the centrality of food production in their activity and in their approach to the farm.

Finally, it is interesting to note that *Agricoltura Nuova* experience is not isolated in the Roman context. At least two other similar initiatives were established at the end of the 1970s, again in a cooperative form with a strong political and ecological commitment of the promoters, and they are still active and successful. All of them are settled in protected areas, with ecological and historical value, and at a close distance from densely populated neighbourhoods.

### **Casale Vecchio**

*Casale Vecchio* farm was founded in 2006 in the Veio Regional Park (north of Roma) by a group of 15 families who had moved from the city to an 18<sup>th</sup> century farmhouse. Their choice of communal living, their values and interests, led to the establishment of an environmentally friendly farm inclusive of socially disadvantaged and disabled people.

The founder families, due to their life experiences (they were all involved in the Scout movement), used to have more interest in social issues than in proper agricultural business. In a first phase the families owned about 5 hectares of land, and then others were bought. The original idea was to create a green garden for the leisure time, but the project was soon transformed in the establishment of a farm. An experienced farmer was hired to manage the farm together with his wife and in agreement with the funders. The involvement of disabled people was present since the beginning, and it has been almost continuous.

From the foundation onwards *Casale Vecchio* has evolved and increased in a gradual while constant way. In the first phase only the families who founded (and funded) the farm were involved as buyers of the products (through a purchase group), then other families, starting from founders friends and personal relations, joined the initiative, and currently there are about 150 households that buy the produce through an association, which manages a collective purchase group. There are also some contacts and secondary forms of cooperation with intermediaries specialized in local quality food. Nowadays *Casale Vecchio* covers about 27 hectares of land (20 directly owned plus 7 rented), of which 15 ha of woods and meadows and 10 ha used for growing organic

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<sup>283</sup>The composting system was established in 2002 together with a specialized company endowed with the technical expertise. A part of the land rented by the farm is given to a specialized society to manage a composting site that gathers biomass derived from the urban green pruning from different parts of the city, through an agreement with the Municipality of Rome. The compost is both used to enrich the farms' soil and sold to private customers, within the city and beyond, or used to produce biogas.

and biodynamic fruits and vegetables. The principal activity is organic horticulture with more than 30 different varieties of fruit and vegetables, followed by grazing and wood production. Other activities include bees keeping, fruit trees and olive trees, about 250 egg laying chickens and some horses.

Three main market channels are used for the farm products: on-farm selling point, delivery through box schemes (to be organized by customer themselves), delivery of products for kindergartens-school refectories or for high quality restaurants.

The farm has a double-faced relation with the natural park administration. Being inside a regional park hampers the urbanization of the area, safeguarding the natural environment in which the farm is inserted. At the same time it creates problems with regard to the possibility to build premises and structures which would be useful to enlarge the activities of *Casale Vecchio*, and to transform it into a real multifunctional farm. In 2007 the farm presented some projects in that sense, but they were rejected. The suggested changes regard structures like solar panels on the roof of the buildings, a small construction where a selling point could be created and where guests and customers could take a rest, drink something, and repair from bad weather. According to the farmer, this problem limits seriously their capacity to attract people, as witnessed by the lack of indications along the way that leads to the farm.

Advantages of peri-urban location are relevant for this initiative, especially for the position of the farm, close to middle-high class neighbourhoods. This has two interesting consequences for the farm. The first has to do with the presence of families with a specific cultural and social background (who are interested in high quality organic products, and capable/willing to pay a price premium for this). The second is the possibility of finding, among the associates, various typologies of professional skills and competences that help the farmer to solve bureaucratic and/or technical problems that would be other way difficult or costly to be solved.

### **Final remarks**

Rome is quite unique in the context of peri-urban agriculture in Italy and in Europe given its specific features and the high number of farms operating on its land. Such features offered a very interesting observatory of how farms change due to the pressure of non-agricultural business and residential needs of urban population.

At the same time the issue of peri-urban agriculture is deeply rooted in the rural-urban dynamics and highly influenced by the social and economic contexts of both the systems. For this reason, Rome does not have to be considered as a paradigmatic case. With regards to this, and given the complex and multifaceted structure of the urban systems in Italy, it would be very interesting to carry out a more exhaustive and comprehensive analysis, in order to analyse the different drivers of reactivity to the urbanisation process in other metropolitan contexts.

With regard to the methodology used in this paper, we focussed on three main inter-chained issues: the first step was identifying the “professional” farms among the whole farms recorded by the latest census, that is those making a business through stable and fruitful market relationship. However, it is worth remembering that hobby and residential units are still recorded in the Census as “farms”. The second step was that of classifying market farms in three typologies according to their capacity to react to the urban pressure: traditional, adaptive and reactive. Finally, we analysed through two case studies the features and the determinants of reaction of reactive farms.

Our study shows how even in highly urbanized environments a pro-active and innovative peri-urban agriculture can be a pillar of a sustainable farming system that gives a contribution to feed cities in a healthy way, while supplying an increasing variety of services to urban population.

Peri-urban agriculture contributes also to set a new environmental awareness, being a catalyst of initiatives aiming at moving towards sustainable urban and peri-urban models.

It is important to remark that our “traditional” typology is by no means synonymous of marginal or declining agriculture: on the contrary, some of the traditional farms are well-established businesses providing food for the local population, but also exporting in other regions and abroad. Our main concern was just that of identifying successful reactions to the urban pressure that works as an exogenous stimulus for farm diversification. In the same way, adaptive farms are also interested to some extent by forms of farm diversification and by the supply of new products and services, but their main feature is the tendency to shift part of the work force off-farm. This strategy fits particularly well in a peri-urban context, since there are other job opportunities in the cities; however, the main constraint is that this opportunity is always strictly dependent on the off-farm and off-agriculture job market. In other words, the success of the pluriactivity and of part-time farmers is entirely dependent on external drives.

In the case of reactive farms, the search of diversification makes farms more flexible in adjusting to the demand of new products and services. However, also in this case one could spot in a double-faced powerful constraint: the size of the markets for product diversification, which often has the feature of a niche market, and the structural dimension of farms, that sometimes do not let the new activity expand the their theoretical optimum. The first case-study witnesses the possibility to enlarge the market niche even relying upon alternative channels like direct selling and box schemes.

Public support in another issue emerged. Data show that while it is currently quite relevant for adaptive farms, it plays a more marginal role for traditional and reactive farms, as also confirmed by the two case studies. This may be due to different reasons but especially to the lower revenues of adaptive farms compared to the other two typologies. At the same time it would be desirable to increase the role of public support to the full time and the more market-oriented farms, by focusing more on the specific needs and of peri-urban areas.

Finally, we would underline the key role of multifunctionality for the evaluation of the drive of changes in the peri-urban farm business. The case-studies suggest different paths to multifunctionality and some of the potentials and obstacles for the development of a diversified farming business. The first case, in particular, witnesses the possibility to enlarge the range of green services that a farm can deliver if context and capabilities are adequate. To conclude, it may be argued that peri-urban agriculture had no room in a productivist approach based on a clear distinction between the role of urban and rural areas, whereas in a post-productivist view, peri-urban agriculture can have a promising future through multifunctionality and diversification.

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