

# SMALL FARMING ROLE TO FOOD AND NUTRITION SECURITY IN FOOD SYSTEMS: A CASE STUDY IN TUSCANY

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## 1. Introduction

The debate on structural change in farming and the implications for the competitiveness and sustainability of the agri-food sector and the rural areas has revived in recent years (DG Agri, 2015). Notably, the “International Year of Family and Smallholder Farming” was aimed at “focusing attention on family and smallholder farming worldwide, and their significant role in eradicating hunger and poverty, providing food security and nutrition, improving livelihoods, managing natural resources, protecting the environment, and achieving sustainable development, especially in rural areas” (FAO, 2014).

Despite European agriculture being characterized by a declining number of agricultural holdings and an increase in farm size, the agricultural sector is largely composed by farms with less than 5 ha of agricultural land and a standard output below 4 000 euro per year (Eurostat, 2015). A commonly agreed definition of small farms does not exist (EC, 2011), as different criteria can be referred to, including economic size, value of production, labor units and family involvement (Hubbard, 2009). Smaller farms are often operated as family-run businesses, passed through generations, and most labor input in agriculture derives from members of the family. Often, small family farms turn to off-farm employment, and many more receive social welfare transfers (i.e. pensions). There is recognition that small farms make up an important share of total agricultural employment and play an important role in many rural economies particularly in more fragile and disadvantaged regions (EC, 2014).

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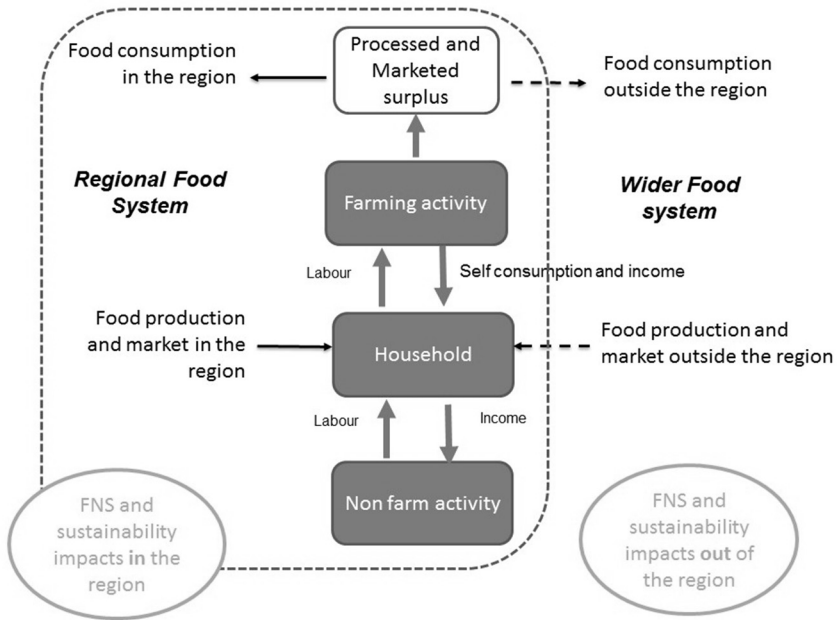
There is a call for research aimed at improving the understanding on the role of small farms and food businesses in food and nutrition security and their resilience to shocks in an increasingly complex and uncertain world (HLPE, 2013; FAO, 2006). The connections between family farming, small farms and food and nutrition security – in the dimensions of availability, access, utilization and stability – fairly documented in developing countries (Riesgo et al. 2016), and in new member states (Davidova, 2012), are recognized also by the European Commission (EC, 2014). This contribution develops within the H2020 research project SALSA, “Small farms, small food businesses and sustainable food and nutrition security”, which addresses the question: what is the distinctive role of small(er) farms in relation to food and nutrition security in different regions? This paper presents the conceptual framework adopted in the project and an illustration in one of the regions covered by the research.

## **2. Materials and methods**

The project adopts a systemic conceptual framework and approach to explore the contribution of small farms and small food businesses to food system outcomes in a range of 30 reference areas, at NUTS 3 level, both in Europe and Africa, as synthetized in Fig. 1 (see Grando et al. 2016).

The methodology comprises two main steps: an exploratory phase, in which 30 selected territorial food systems (NUTS 3 level) are characterized in terms of self-sufficiency or dependency, by developing a “balance sheet” on production and consumption sides. Within a situation of surplus/deficit, the relevance of small farming is assessed (drawing upon secondary statistics). This is complemented by in-depth interviews with key informants on food system dynamics at regional level (NUT 3). In a second step, a participatory mapping is developed to represent structures, relations and processes of territorial food systems (for selected food products). This exercise is followed by in-depth interviews with small farmers and focus groups with stakeholders to get in-depth insights at product level. A final workshop is organized at regional level to discuss and validate the findings. Following, we illustrate a preliminary study within one of the 30 reference regions selected in the project (Lucca province in Tuscany region, Italy).

Fig. 1 – A territorial food system view



### 3. Results

The balance sheet shows that across all farming sectors, local production is insufficient to satisfy the estimated consumption and secondly, that small farms contribute relatively more to producing some products than others (Figure 2). Based on this preliminary analysis, smaller farms contribution is very diversified across different types of production. For example, in the fresh vegetable supply, in the territory at stake, their contribution is prevalent, while for fruit or meat (for which there is a lack of supply) they play a much more limited role. The staple foods selected for Lucca are olive oil, fruits, wine and vegetables.

Fig. 2 – Synthesis of regional food balance sheet and role of small farms in food staples production

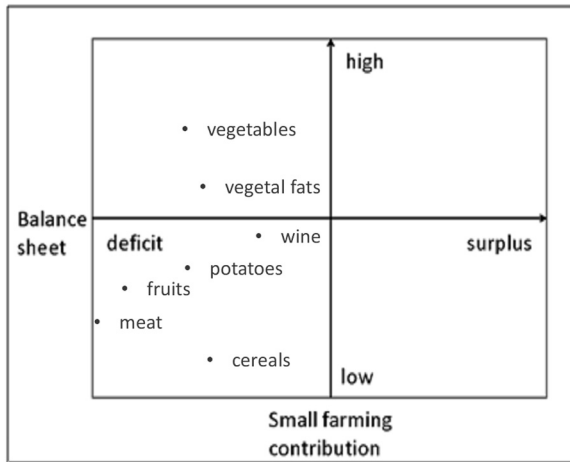
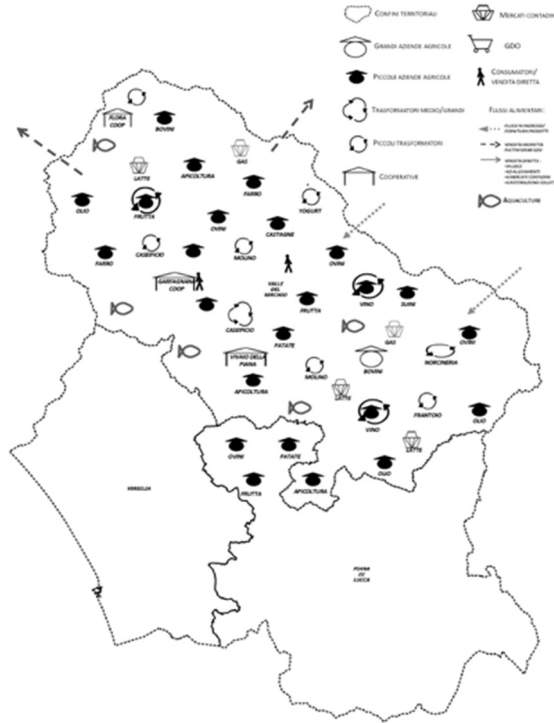


Figure 3 illustrates a mapping exercise output developed for a sub-area of Lucca province (i.e. in Garfagnana, remote and mountainous area). The mapping reveals some important gaps: for example, the networking relationships among local farmers, especially the ones located in more marginalized and mountainous areas are sometimes hindered by the closure of markets over time and the lack of collective situations that provide a chance of encounter. This is particularly relevant for young farmers that also have a strong need for training and support, when they do not have a professional background in agriculture, but often have a strong passion that has driven them back to the countryside. Other relevant gaps emerge between local farmers and restaurants: sometimes local products are not prioritized due to lack of quantity and convenience. In relation to beer made of spelt, for example, the territorial brand “Garfagnana” is exploited, but the raw material used to produce beer does not come from the territory.

Fig. 3 – Example of participatory food system mapping, Garfagnana area (Lucca).

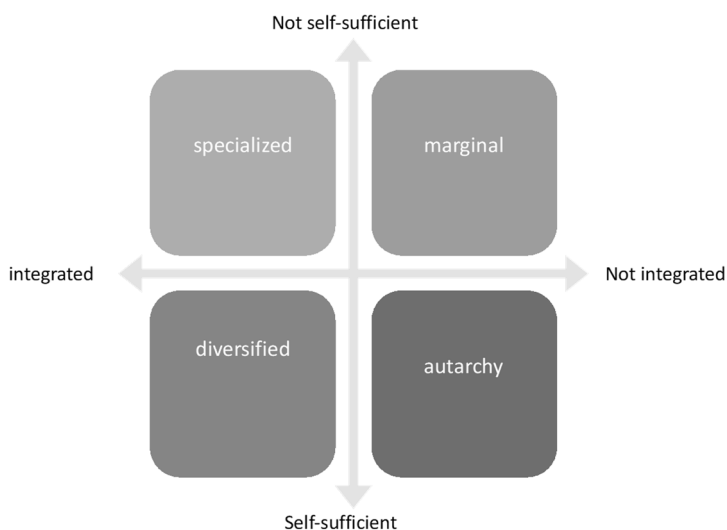


The in-depth interviews aimed to understand the way farmers perceive their contribution to food system outcomes. In-depth interviews with selected farmers, included the more “invisible” cases to account for the different strategies for subsistence and sustainability. Based on the 40 interviews (32 small farms, 8 small food businesses), we developed a typology of small farmers, along two key variables: self-provisioning (the degree to which farming satisfies farm household consumption needs) and market integration (the degree to which farming is oriented to the market), see Fig. 4.

For the “marginal” type, agriculture is a residual activity in the household, characterized by a low self-sufficiency and low market integration. These farmers usually do not process their products and depend on intermediaries for the product that they sell. Having a rather low productivity, usually they are quite specialized into one or a few products and their production is mostly self-consumed. The second type, “autarchic” farmers are self-sufficient but not much market integrated. One or more of the following features can be found: very diversified, oriented to satisfy the household consumption; horticulture usually sided by animal breeding (i.e. poultry, courtyard animals).

The third type is labeled “specialized”, with low self-sufficiency but strong market integrated: highly specialized and market oriented, they process products and are integrated in multiple marketing channels. The last type is “diversified”: these virtuous farmers are often oriented to quality production and they also self-consume their product but hold enough value-added quantities to succeed on the market.

*Fig. 4 – Small farmers typology in Lucca*



#### 4. Concluding remarks

This research seeks to explore how small farms bring a distinctive contribution to food systems, food and nutrition security and environmental and socio-economic outcomes. Drawing from the conceptual framework and methodology adopted in the project, this paper provides an illustration on a preliminary case study within one of the reference regions selected. We address Lucca province in Tuscany, combining quantitative and qualitative research. Preliminary results indicate that small farms contribute to food availability by producing food on marginalized land (e.g. in remote and mountainous areas). They can improve access to fresh and products through their involvement in local production and distribution and are a key component of household income generation and stabilization. By connecting directly with

food businesses, establishing local and niche markets they contribute to food utilization by ensuring stability of supply and establishing relationships to urban consumers. The comparative analysis across the 30 reference regions in the project will allow to advance available knowledge and obtain rich insights on cross cutting features, relevance and impacts of small farming across Europe.

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