

## Article

# Social Farming in the Virtuous System of the Circular Economy. An Exploratory Research

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**Abstract:** Multifunctionality and social farming represent forms of resilience and innovation within urban and rural systems, making use of agricultural, rural, natural, and cultural resources to produce multiple benefits and eco-systemic services. Social farming (SF) introduces innovative activities capable of representing a factor supporting the competitiveness of the production system and represents a tool for responding to the growing needs of urban and rural populations in social, economic, and environmental terms, in relation to the offer of social- health, social-work, recreative and educational services. SF is an innovative model of territorial, participatory, relational, and community service development that looks to an inclusive, sustainable, fair, and supportive society. Its success is linked to the ability to spread within the economic system and become a circular economy model highlighting good practices and as a virtuous example for other companies. The purpose of this work is to examine the role and social impact that Social Farming has in the environmental, social, and cultural changes of the territories where they are located. Case studies in an area of Southern Italy—the Calabria region—were examined with multicriteria methodologies (social network analysis; multiple correspondence analysis) to identify the type of social activity carried out and the propensity to introduce innovations based on services ecosystems on farms. The results show the potential and value of the companies that carry out these social innovation activities. The analysis carried out has drawn some indicative profiles of socially oriented multifunctional companies.

**Keywords:** resilience; circular economy; social model innovation; social network analysis; multiple correspondence analysis



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## 1. Introduction and Theoretical Framework

Over the years, the dynamics of the agricultural sector have increasingly been oriented towards multifunctionality to create income and employment opportunities for rural populations, to the diffusion of new ideas and practices in rural areas, as well as the discovery of the social value of local resources and developing and increasing social capital and networks of relationships within a given community. The European Green Deal maps a new, sustainable, and inclusive growth strategy to boost the economy, improve people's health and quality of life, care for nature, help the fragile categories, and, at the same time, promote social inclusion [1]. These are concepts that fit well into the virtuous model of a circular economy, a model that aims at decoupling economic growth and development from that of resource consumption. The circular economy model, even before being a mechanism of action, is a real ideology citation. For centuries, humans have used resources without asking him about the problem of future availability; the damage has been twofold, we have pushed ourselves towards their exhaustion and we have reached levels of pollution of ecosystems that are no longer tolerable because they are difficult to reverse. With a view toward circularity, all activities, starting from the extractive ones to the productive ones, must be reorganized so that someone's waste becomes a resource for someone else. It is a completely different way of thinking and acting, which requires planning and expertise [2].

According to this scheme, economic growth and development can proceed with respect for natural resources and focusing on regenerable and clean resources. The new approach to European food value sustainability is an opportunity to improve lifestyles, health, and the environment but also a chance to improve the activities and social services of farms. What the term social actually means should be explained in the context of services and of agriculture. Usually, social as a concept relates to human actors and is thus always included as a normative background when addressing sustainability [3]. Social Farming (SF) represents a response tool to the application of the European Green Deal as it satisfies the growing needs of the rural population, both from a social, economic, and environmental point of view and from the point of view of the supply of socio-health, socio-occupational, recreational, and educational services. Specifically, SF is defined as the activity characterized by the use of agricultural resources for the realization of socio-work integration paths, co-therapy, provision of services for children, for active aging, and for specific needs of determined local contexts [4–9]. In particular, we mean rather “the paths and practices that through the development of agricultural activities (or related to them) are explicitly proposed to generate benefits for vulnerable groups of the population” [10]. It appears as a set of activities that sometimes coincide with nature-based solutions (inspired by nature), of subjects (sometimes even fragile) on and with whom to intervene, including the participation of different public and/or private actors interested in operating in this sector. Especially, nature-based solutions (NBS) are a powerful tool for farms dealing with contemporary sustainability challenges including degradation of natural capital and ecosystem services, vulnerability to climate change and natural disasters, as well as corresponding health and wellbeing issues.

NBS, as defined by EU [11], are solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social, and economic benefits and help build resilience (that addresses the capacity of a system to absorb shocks and disturbances and undergo changes in order to maintain approximately the same identity). The concept of NBS is increasingly linked to social farming to understand the development of the care farming sector but also environmental benefits derived from the need to protect biodiversity. At the same time, all activities included in social farming appear as therapeutic activities, as such activities can become therapeutic not only for people but also for the environment and the cultural landscape [12]. As such, social farming is an example of multifunctional agriculture that has received little scientific attention so far. There are differences according to the peculiarities of the different territories, and consequently, the actors at the local level use the rules available in the social, health, and agricultural fields, giving rise to protocols, conventions, networks, and agreements that allow the development of projects, laboratories, and initiatives of various kinds [13]. Social farming is a good combination of agricultural production with health, ecosystem, and social services but also a good example of networks between subjects (farmers, social-health workers, disadvantaged people/beneficiaries, local communities, public administrators, etc.) and different fields (agriculture, tourism, health, etc.) [14]. This involves a system including business innovation and combined income, environmental care, education, well-being activities, nature therapies, etc. The potential to become an effective and innovative model of territorial, participatory, relational development and service to communities is relevant, as it aims to reunite needs, identities, and protections for citizens, regardless of their abilities or fragility, attributing value to work, not only as a source of individual income but also as a founding element of an inclusive, sustainable, fair and inclusive society. Joint experiences and feelings of solidarity and authenticity are important contributors to the shaping of a collective identity which contributes to the discussion on how to understand agricultural change, as well as connecting and bridging agriculture with other sectors such as school, tourism, etc. [15]. In Italy, Law no. 141 of 2015 regulates social farming, enhances the role of services of different types (tourism, social, ecosystems, landscape care, etc.) within the farm, and confirms that in advanced societies most of the income and competitive advantage arises from the offer of increasingly sustainable services. In

Europe, the regulatory reference is in the programming cycle of the European Structural Funds 2014–2020 in the positions at the European level of achieving the SDG goals and in the objective of social inclusion and the fight against poverty (strategic objectives of the Europe 2030 Strategy). Despite the presence of many different activities and experiences, SF initiatives in Italy mainly aimed at the social and work inclusion of disadvantaged people, according to an inclusive approach [4,5,16–20]. As argued by Moruzzo et al., 2020, while numerous benefits of social farming identified, the impact of social farming on the everyday lives of people with intellectual disabilities varies substantially [21]. Recently, Di Iacovo (2020) [22] constructed and highlighted emerging social farming models (depending on existing welfare systems where they are organized) to understand the processes of differentiation at the EU level. A good example explained from Guirado et al. (2017) [23], in the south of Europe is the case of Catalonia (Spain) where SF is a dynamic activity to meet the needs of social groups at risk of exclusion in an innovative way mainly in the areas of health, empowerment, and social inclusion. However, it is necessary to differentiate the Italian experience from that mainly developed in northern European countries, more oriented towards care, solidarity, and assistance [24–28].

Multidisciplinary and collaborative practices represent the concept of SF and are therefore aspects also recognized by EU policies. In the literature, the theme of networks, widely explored for some time, in rural development processes that facilitate the cooperative behaviors underlying the networks themselves, less developed with specific reference to SF, due to the recent development of the phenomenon [29]. Mapping multiple social and ecosystem services help to show the spatial distribution of service benefits to agricultural farms, determining where management can obtain value [30,31]. Assuming that the social and nature-based solutions concept offers a valuable study to assess planning alternatives and their impact on the constituents of human well-being in a generic, easily communicable, and transferable way, we intended to adopt this concept for social innovation of the agricultural sector. The direct link between innovative activity and the best performance of companies that invest or innovate represents one of the main factors supporting the competitiveness of a production system, but it is not the only one. In fact, the current multifunctional agriculture that belongs to the New Economy, that (social and solidarity economy, new systems, and organizational models) called today, more than ever, to perform functions of great interest in the provision of services for the entire community and to counteract the decline of rural areas. Based on this framework, our research aimed to investigate social farming in the south of Italy (Calabria region) and focus on testing integrated social activities and ecosystem services strategies. Our research assumptions are:

- **Hypothesis 1 (H1).** *Companies that carry out social agriculture in Calabria carry out eco-systemic services.*
- **Hypothesis 2 (H2).** *Does social farming provide circular economy services? Yes.*
  - H2a.** *In terms of good reuse practices, environmental education and food education laboratories, laboratories for fighting waste and recycling, reuse of waste products “from waste to resource”.*
  - H2b.** *In terms of good cultural practices: cultivation techniques such as rotation, absence of monocultures, organic production.*
- **Hypothesis 3 (H3).** *Social agriculture represents a form of resilience of Calabrian agricultural businesses (responses to new lifestyles, attention to green, use of confiscated land, and legal growth paths). They involve families, schools, institutions.*
- **Hypothesis 4 (H4).** *Social farming represents a connection between agricultural systems and urban systems.*

- **Hypothesis 5 (H5).** *Social farming provides educational and social inclusion community services.*
- **Hypothesis 6 (H6).** *Social farming provides community services of a therapeutic rehabilitation type (alternative/integration to families in support of disability).*
- **Hypothesis 7 (H7).** *Social farming provides support services to improve the quality of life and free time (well-being) for local and non-local subjects.*
- **Hypothesis 8 (H8).** *Social farming provides cultural and educational community services.*
- **Hypothesis 9 (H9).** *Social farming provides fresh and processed food production services.*
- **Hypothesis 10 (H10).** *Social farming adheres to SPG (Solidarity Purchase Groups) and Social Networks and unites and connects people, companies, and institutions.*

In this study, we chose a multi-method approach that uses qualitative and quantitative tools. The integration of different methods can help to provide a clearer picture of the investigated reality. At the basis of the study, there is the assumption on the innovative activity of companies or that there is no single profile of innovation; on the contrary, innovative strategies and methods are highly differentiated also in relation to the competitiveness of the production sectors as demonstrated and applied in the literature on the innovative activity of companies [32,33].

In the first phase, a direct survey carried out through semi-structured face-to-face interviews with entrepreneurs who carry out social farming activities in the Calabrian territory. The networks of relationships in terms of human resources and entrepreneurial skills involved in the agri-food, multifunctional and social activities of the Social Farms interviewed then examined. In a second phase, some data processed through multivariate analysis techniques in order to extrapolate the variables/factors capable of describing the peculiar characteristics of the reality under investigation. We used a network application that validated by the PCA (principal components analysis, factor analysis) and by the Multiple Correspondence Analysis (MCA). The elaborations carried out with the UCINET6 and SPSS 20 software.

The rest of the paper organized as follows. Section 2 describes the study area. In Section 3, we present Methods, while in Section 4, we discuss the results and Section 5 summarises the conclusions.

## 2. Study Area

### 2.1. Description of the Socio-Economic Context

The research arises from the joint observation of some elements that are nowadays particularly important for agricultural operators, institutional managers, and local communities. In fact, the COVID-19 shock hit a southern Italy already in recession in terms of production and employment (the collapse of the GDP of the South in 2020 stood at  $-8.2\%$ , while the average Italian variation was  $-9.3\%$ ; in Calabria  $-6.4\%$ ) [34]. Worrying are the social consequences and the loss of employment. In this context of southern Italy, Calabria appears particularly fragile due to repercussions on regional economic activity [35]. To the current problems added the profound changes in the economic development model dictated by the Green Deal as part of the strategies of the European Commission to implement the objectives of the United Nations Agenda 2030. Calabria classified as a convergence region by the EU, and this region can make use of resources for the achievement of objectives regarding some important fields such as the circular economy, agri-food, renewable energy, clean mobility, and social equity. All these topics fall within the objectives of those who practice social agriculture. In particular, promoting the transition to a circular economy is an important step to avoid depleting natural resources and permanently altering the

climate. According to the studies carried out by the Commission, embracing the model that contemplates the circular economy would allow obtaining economic benefits, creating new jobs, and reducing greenhouse gas emissions. The innovations carried within the scope of ecosystem services represent initiatives to be undertaken to put an end to waste and the excessive exploitation of natural resources and in this context, social agriculture in Calabria can do its part.

The Calabria Region covers a total area of 15,222 km<sup>2</sup> (including over 740 km of coastline). It has about two million inhabitants, with a population density of about 128 inhabitants per km<sup>2</sup>. The region is 96% classified as a rural area (rural and intermediate) and more than 93% of the utilized agricultural area (UAA) currently classified as a less favored area (half mountain area and half the area subject to natural constraints). The average size of the 138,000 Calabrian farms is 4 ha and 42% of them are less than 1 ha; only 5.5% of business owners are under the age of 35. The regional utilized agricultural area is approximately 550,000 hectares. The main cultivation is represented by tree crops (especially olive and citrus trees occupy almost 46% of the UAA), arable land (mainly cereals for the production of grain and vegetables), permanent meadows and pastures. The farms that practice organic farming in Calabria are about 6800 (5% of the total of regional farms). The area intended for organic production is 17.7% of the regional UAA. Calabria is 41% covered by forests and woods and is the third-largest timber-producing region in Italy. Of the energy produced by the region, 35% comes from renewable energy sources. Due to their environmental value, the woods of Calabria present a diversity of physiognomic and structural typologies that represent a biological, landscape, and cultural wealth, but also an important economic resource. Calabria has three national parks, one regional park, and six special protection zones (SPAs) within 179 sites of community importance, natural resources for the promotion and enhancement of sustainable tourism and simultaneously provide environmental, social, and economic benefits and help build resilience. In addition, the forest landscapes, typical of the Calabrian territory, help and characterized by forest immersion, understood as a practice that promotes well-being and recreation in parks and forests together with forest therapy. In particular forest therapy is known as a preventive medicine tool spread all over the world based on immersion in the forest (literally it translates to “plunge into the forest”). Through this experiential methodology that stimulates the conscious attention of the mind, leveraging on five senses and body sensations arising from the natural context of the forest with both direct and indirect effects on the physical and mental health of users of all age groups [36,37].

## 2.2. Social Farming in Calabria and the Reference Universe

According to the official list of the Calabria Region of 15 January 2018, there were 124 educational farms operating in the region [38]. This list updated on 1 September 2020 with a second list of 18 Social Farms. However, these numbers are underestimated. As in the rest of Italy, social agriculture has also gradually developed in Calabria. There are many entrepreneurs and entities that deal with SF and diversified agriculture, as the activities carried out are many. An extra boost to Social Farming gave thanks to the assignment of assets confiscated from the mafia (law 109/1996). This law has brought many advantages to the territory: activate socio-work integration projects, cooperatives, networks and systems of relations between civil society, institutions and businesses that allow abandoned agricultural structures to return to production, and involvement of individuals with various kinds of difficulties. The activities carried out by social cooperatives on confiscated land (productive, agritourism, educational, social, etc.), are able to create income and employment and to initiate a process of social growth on law respect [39–41]. In the paths of social reuse of confiscated assets, the construction of networks of substantial and constant relationships in the territory (which is a peculiar characteristic of social agriculture), becomes particularly important. In fact, those who do social farming do not work alone, but share problems and solutions with other subjects in the area (stakeholders) with whom it collaborates on a permanent basis, recognizing their skills and commitment:



Municipalities, associations, LHAs, companies in other sectors or social cooperatives, construction companies, etc.

In the Calabrian territory, the companies that deal with social agriculture have developed various paths. Some agricultural and agritourism companies have more or less recently approached the social field; that is, some associations that previously dealt with social and health assistance and who have decided to become involved in by farming and thus bringing their clients closer to nature and agriculture; others have enhanced nature-related services that were previously only marginal.

### 3. Materials and Methods

#### 3.1. Social Network Analysis (SNA)

This study constitutes an attempt to apply network analysis to explore the propensity for innovative activities in social agriculture and the ability of companies to introduce ecosystem services into the company that makes it possible to expand the business offers to civil society and local communities. A significant propensity to innovate, in fact, seems to represent an important driver capable of generating the “value portfolio” for the social farmer [42]. All this in a context in which the mechanisms through which innovative behaviors tend to feed and spread, becoming central to understanding the possibilities for development and the potential scope of initiatives that tend to encourage environmental, economic, and social sustainability. From this point of view, the network of relationships can be represented as a link for the transmission of innovative behaviors. An application of Social Network Analysis (SNA) makes it possible to grasp the characteristics of the network and the positioning of the companies interviewed by measuring relevant aspects such as the degree of density of inter-company relations and the degree of centrality of companies in the network. Network analysis increasingly applied to different disciplines of the social sciences. Networking has recognized as an important strategy for businesses to gain a competitive advantage [43]. It believed that networks could offer the possibility for a company to seek economies of scale and learning by generating spillover effects [44] in favor of the territory. Furthermore, they positively influence job opportunities in different activities in development paths [32,44,45] that allows in developing additional resources by relying on strengths and risk mitigation. Networks and network analysis are therefore frequent in business and regional development [46–49]. In this study, the network analysis applied to the ability of social agriculture companies to activate multifunctional ecosystem services (in the perspective of offering multiple services) was mainly based on theoretical studies and methodological applications found in the literature [46,50,51]. In particular, the graphic representations, as well as followed indicators obtained with the UCINET version 6.0 software 6631 [46] and for the graphic representations the NETDRAW version 2161.

#### 3.2. Factor Analysis (FA) and Multiple Correspondence Analysis (MCA)

The approach to multicriteria methods allows in analyzing complex problems by comparing the variables involved in order to identify the latent variables/factors capable of explaining the correlations.

Among the information collected through interviews with entrepreneurs who carry out Social Farming activities, the descriptive analysis provided information on multifunctional business choices and in particular on the level of adherence to the different types of social farming activities. Based on the answers provided by each interviewee, the multi-criteria analysis structured with the aim of highlighting:

- on the one hand, the factors capable of explaining any differences that arise in the choice of different business behaviors and the ways in which technical-managerial skills and paths are developed
- on the other hand, identify the profile of the Social Farms on the basis of the choices made in the application/implementation of the multifunctionality directed at ecosystem services of social agriculture

In the first case, we proceeded by applying the Factor Analysis which allowed us to reduce the complexity of a problem described by a consistent number of variables to a smaller number of latent variables/factors capable of capturing a significant percentage of the overall variability of the departure data. In this case, the most important contribution is to have introduced the structure of entrepreneurs' attitudes with multidimensionality.

In particular, in the context of multivariate statistics, the Principal Components Analysis (PCA) and the Factor Analysis (FA) are techniques used for data simplification. The reduction of complexity occurs by limiting the analysis to the main ones (by variance) among the new variables. For the choice of the number of components (sufficient to reproduce the starting data with a good approximation), we proceeded through the graph of the eigenvalues or "Screen Plot". Within the graph, the number of components corresponding to the "elbow" point of the line is chosen. Its use finds space in the Factor Analysis procedure that we used to identify and analyze the main explanatory variables and in particular to highlight the distinctive attributes that most condition the decision-making processes of entrepreneurs for multifunctional activities of social farming.

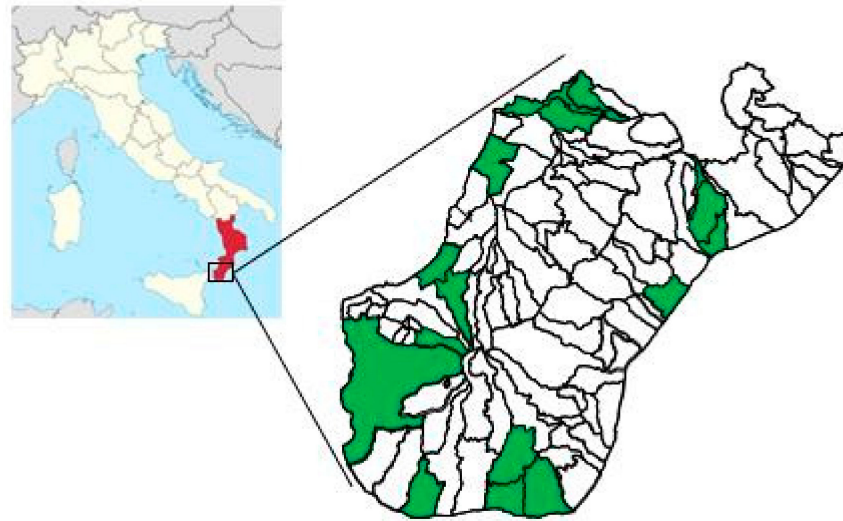
In the second case, to search for the profiles of entrepreneurs, the Multiple Correspondence Analysis (MCA) was used, which is more suitable for obtaining behavioral profiles relating to a specific aspect and when the variables have qualitative modalities and/or dichotomous values (in our case, the choices regarding the social activities on which to focus). The MCA allows for analyzing the relationships between certain qualitative variables (categorical or nominative), in a small space, that is, less than the number of starting variables [52]. By its nature, it can be considered a declination of the PCA suitable for dealing with problems with categorical starting variables. It is a methodology that lends itself well to examining the correlation between some categories, each expressed by several levels, which, as in our case, can be traced back to the same aspect [53].

### 3.3. Data Collection

The research work was carried out through specific investigations and direct investigations, at the companies and sector operators intercepted in the territory and also supported by direct investigations carried out at public entities, various institutions also using reports, documentation, sector publications, etc. The sample of the companies analyzed operates in the social sectors through agri-food production, offering cultural services, social inclusion of disadvantaged subjects; didactic—training, rehabilitation activities, which also aim at legality. To carry out the research we proceeded with a random sampling stratified by province (on 22 January 2019) from the lists of the Calabria Region. The province of Cosenza excluded due to logistical difficulties in interviewing companies face to face. In the province of Reggio Calabria, the lists showed a small number of companies. However, the authors' knowledge of the territory and the help of opinion leaders and sector operators have made it possible to identify other SF companies that carry out social activities in agriculture.

The interviews carried out in the period from February to November 2019. The map below (Figure 1 and Table 1) shows the area of the province of Reggio Calabria where the greatest number of interviews carried out.

In total, 32 companies operating in Calabria were taken into consideration: 24 in the province of Reggio Calabria (75%) and 8 (25%) in other provinces (15.6% in Catanzaro; 6.3% in Vibo Valentia; 3.1% in Crotone) (Table 1). As for the type of business, 54.1% are individual Social Farm, Social Cooperative (33.3%), Agricultural Cooperative (29.2%), Association (12.5%), and only 4% of Consortium of Cooperatives. In our sample, 12.5% are large companies (>100 hectares), approximately 9% are medium-large (between 50–100 hectares), 22% are medium-sized (between 20 and 49 hectares) and about 56% are small and very small enterprises (<20 hectares). The 84% (27 companies) started social agriculture in the years 2000–2015, in the remaining cases, the start was in the period 1990–2000 (16%).



**Figure 1.** Research areas in the territory of the cities of Reggio Calabria, Italy.

**Table 1.** Companies interviewed.

Province	Reggio Calabria	75.0%
	Vibo Valentia	6.3%
	Catanzaro	15.6%
	Crotone	3.1%
Type of company	Individual business	54.10%
	Social cooperatives	33.30%
	Agricultural cooperatives	29.20%
	Associations	12.50%
	Consortia of cooperatives	4%
Size	>di 100 ha	12.50%
	50–100 ha	9.40%
	20–49 ha	21.90%
	<20 ha	56.30%
Starting year of activity	1990–1999	16.00%
	2000–2015	84.00%

Source: the authors.

Individual businesses (54.1%), agricultural and social cooperatives (62.5%), and associations and consortia of cooperatives (16.5%) that carry out social farming activities combine agricultural production activities with the offer of eco-systemic services such as those aimed at recreational and well-being aspects, socio-health and educational aspects, ethics and work placement. The aim of these entities is to improve the living conditions of disadvantaged people and vulnerable groups of the population. At the same time, their usefulness is to create new forms of welfare and hospitality for the entire local community and for the entire territory. In our study, we identified a set of six services to assess when testing the social innovation of farm strategies. Specifically, the activities that carried out according to the indications of the Italian legislation (law no.141/2015), have been grouped into the following types:

- Social Work inclusion: aimed at people with disabilities and/or social disadvantages (handicapped, former alcoholics and/or former drug addicts, former prisoners, immigrants, long-term unemployed, women in difficulty, minors with various kinds of problems in working age, etc.) included in rehabilitation and social support projects (internships, work grants, training courses, care of public parks, social gardens, etc.). Social and work placement carried out on land confiscated from the organized crime ('ndrangheta).



- Green Care: benefits and services that flank and support medical, psychological, and rehabilitative therapies aimed at improving health conditions in mental health and wellbeing and social, emotional, and cognitive functions of people with physical and/or mental handicaps through therapeutic and rehabilitative paths with the landscape, crops, plants, and animals (pet Therapy, ortho-florotherapy, Forest therapy, etc.).
- Educational Activities: they promote services useful for daily life, welfare activities, and social support activities (day centers, recreational centers for the elderly, agri-nursery/agri-kindergarten). The didactic-educational activity is aimed at environmental and food education; safeguarding biodiversity; the dissemination of knowledge of the territory. Moreover workshops for education on legality and the common good; circular economy and food waste reduction workshops; workshops for the recovery of local crafts; cultural and recreational activities to help citizens rediscover peasant values and traditions; commitment and training camps, volunteering on land confiscated from organized crime ('ndrangheta). Last, but not least, schoolwork alternation, educational courses for children and/or teenagers in primary and secondary schools, cultural and recreational activities for adults, etc.
- Rural well-being: leisure services (e.g., agritourism, rural tourism, social tourism, agri-camping, hiking, nature trails, Yoga, wellness kits, guided tours, horseback riding, forest bathing, etc.);
- Agrifood and Marketing Innovation: production of raw materials or processed agricultural products; business; branding activities; promotion on social networks; e-commerce; catering;
- Community Network Collaboration to Local Action Groups, Alternative Food Networks, Purchasing Group, stakeholder network: adherence to SGP and Network. Collaborations with public entities.

Through the information and/or interviews with social agriculture operators, knowledge deepened regarding the relationships between human capital, characteristics of social, agricultural/agri-food activities, and the ways in which they relate to the outside world.

The information obtained through the administration of a questionnaire that included open and closed questions posed in order to define both the structural, organizational, and managerial characteristics of the companies, such as area, crops, livestock, market; and the types of social activities carried out in individual companies. Subsequently, direct contact made through telephone interviews with the owners or managers of the investigated realities, obtaining initial information and appointments for the face-to-face administration of a questionnaire prepared ad hoc. Direct contact used through telephone interviews with the owners or managers of the investigated realities but also via "face to face" interviews.

To proceed with the research activities, the information extracted from the websites of the various companies first consulted. The questions posed to identify the social agriculture activities carried out in the intercepted companies highlighted in Table 2. The entrepreneurial choices are aimed at diversifying company activities and the objective of achieving competitiveness, specific qualitative targets, and the farmer's "value portfolio".

The interviewees asked to indicate the diversification activities and the social activities carried out on the farm together with the agricultural ones. The answers vary on a Likert scale from 1–5 (with type 1 the activity is not carried out, with type 5 the activity is very important for the company, and the degree of innovation is considered high). The individual activities envisaged fall within the six groups previously identified in Table 1. The entrepreneurs interviewed also asked for permission to indicate the company name in the search, about 80% requested anonymity.

**Table 2.** Social and agricultural activities requests to the Social Farms interviewed.

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<b>1. Social Work Inclusion:</b>
Volunteer foster homes
Inclusion of migrants/disadvantaged
Inclusion of prisoners/former prisoners
Inclusion of people with disabilities/with addictions
Social worker inclusion in lands confiscated from the 'ndrangheta
Free social gardens and social gardens for rent
Other types of socio-working placement
<b>2. Green Care:</b>
Pet therapy
Therapeutic gardens
Others (aromatherapy, phytotherapy, forest therapy, chromotherapy, etc.)
<b>3. Educational Activities</b>
Welcoming families, schools, the elderly, groups (religious, sports, etc.)
Reception and volunteering for agricultural/agri-food activities
Educational lab on food education and the fight against waste
Educational lab on ethics and legal issues
Plants and sustainability educational lab
Local handicraft recovery lab
Other
<b>4. Rural Well-Being</b>
Agritourism with accommodation
Agritourism, hospitality and catering
Agricamping
Excursions, nature trails
Ethical-social tourism
Yoga, wellness kits, guided tours, horseback riding, forest bathing
Other
<b>5. Agrifood and Marketing Innovation</b>
Organic production
PDO—PGI quality marks
Ethical Trade Brands (Libera, SlowFood, fair trade, etc.)
Product and/or process certifications (ISO, etc.)
Reduced and easily differentiated packaging
Corporate social responsibility and ethics
Environmental sustainability certification, energy-saving certification
Innovations in agri-food production services
Innovations in agri-food marketing (e)
Short supply chain
E-commerce
Other
<b>6. Community Network</b>
Collaboration with Local Action Groups, Purchasing Groups, CSA, AFN
Collaboration—Agreements with universities and research centers
Collaboration with other companies in the territory
Collaboration with social and health services
Membership of Cooperatives, Non-Profit Associations, Associations
Other

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Consistent with the business organization analysis perspective adopted in this research, the interviews included questions that proved useful for subsequent processing regarding the origin of the initiatives, resources, decision-making processes, constraint on the development of SF:

- The starting year of the social agriculture activity
- General and structural characteristics of businesses (type of business, crop orientation, salaried employment and family employment, corporate income on total income, etc.)
- The reason for introducing new activities (activities suited to professionalism, new opportunities, and business innovation

- Propensity for diversification
- Propensity to introduce innovation (recent/consolidated introductions)
- Degree of satisfaction with their work.

Information also acquired on:

- acquisition of technical skills in terms of training (possible attendance of courses and/or if you believe you need training courses)
- economic support and contributions obtained
- problem and conditioning (theft; threats, extortion; imposition of furniture and/or personnel; usury) and related behaviors (fear, denunciation, trust in institutions).

The answers developed to verify and ascertain the level of breadth and depth of the social farming activities, the degree of innovation of the single activities carried out, and the entrepreneurial characteristics. This allowed us to examine the expressed variability of each factor and to encode and group them.

### 3.4. Approach Method

To determine the profiles of the entrepreneurs, the answers elaborated in relation to the multifunctionality adopted in the company and on the didactic, social, and wellness services provided. The main structural characteristics were also examined (year of business start, legal nature, crop orientation, type of users, etc.), marketing activities, and the ability to network. The variables implemented for the analysis approaches of the SNA and of the multicriteria methods (Factorial and MCA) represent the synthesis of the answers collected with the interviews. They identified by narrowing the dataset into activity groups. The data analysis took place in two phases. In the first place, the coding of the answers through the creation of a database for the coding of the 32 archived interviews conducted made it possible to identify the organizational elements that characterize each case. Total of 51 variables organized into six main categories were codified, and four particularly significant sub-categories were also included in the MCA processing. The coding work involved the continuous insertion of new variables, the comparison, the repeated arrangement of the data [54,55] and highlighted the need for the continuous reorganization of the analysis model. Moving on to the applied multivariate analysis techniques, we have developed a factor analysis to identify the latent dimensions—the simplifying factors summarize and explain the observed scores to interpret the solution obtained. Principal components extracted in such a way as to maximize the proportion of variance explained.

In a subsequent step, we applied Multiple Correspondence Analysis (MCA), to graphically view the emerging empirical differences between the selected cases in order to identify the profiles of Social farm operators based on their prevalent activities. Four variables added for the application of the MCA. This choice allowed the explained variance to be maximized.

In the MCA analysis the variables were transformed into dichotomous variables (the values 1–3 of the Likert scale are considered null or not very active and “not decisive for participation in social agriculture” and are indicated with a minus sign (–), while the values 4–5 are considered “relevant for social, educational, welfare activities, etc.” carried out by companies. They have been indicated with a plus sign (+).

Table 3 shows the variables used for the analysis, the relationship with the research hypotheses, and the coding used for the graphic representation methods of the MCA.

The indicators used reflect the relative positioning of each group of activities within company management and in relation to the introduction of social farming activities and the adaptation of skills.

**Table 3.** Variables used in the analysis models and link with the research hypotheses.

Variable	Relations with Research Hypotheses	Variable Name for MCA
Social Work inclusion	<b>H1:</b> Eco-systemic services <b>H4:</b> SF represents a connection between agricultural systems and urban systems <b>H5:</b> Community services of educational and social inclusion type	+ Social Work inclusion; – Social Work inclusion
Green Care	<b>H6:</b> Social farming provides community services of a therapeutic rehabilitation type	+ Green Care – Green Care
Educational Activities	<b>H1:</b> Eco-systemic services <b>H8:</b> Cultural and educational community services; welfare services <b>H2:</b> Educational labs and services of good practices of reuse and circular economy	+ Educational Activities – Educational Activities
Rural well-being	<b>H1:</b> Eco-systemic services <b>H7:</b> Social farming provides support services to the quality of life and free time	+ Rural well-being – Rural well-being
Agrifood and Marketing Innovation	<b>H9:</b> Social farming provides fresh and processed food production services <b>H10:</b> Social farming adheres to SPG (Solidarity Purchase Groups); AFN, etc <b>H2:</b> Good cultivation practices, organic production	+ Marketing Innovation – Marketing Innovation
Community Network	<b>H10:</b> Social Networks and unite and connect people, companies, institutions <b>H3:</b> SF represents a form of resilience of Calabrian agricultural enterprises	+ Community Network – Community Network
Use of confiscated land	<b>H1:</b> Eco-systemic services <b>H3:</b> SF represents a form of resilience of Calabrian agricultural enterprises <b>H4:</b> SF represents a connection between agricultural systems and urban systems <b>H5:</b> Community services of educational and social inclusion type	+ Use of confiscated land – Use of confiscated land
Social Gardens	<b>H5:</b> Community services of educational and social inclusion type <b>H4:</b> SF represent a connection between agricultural systems and urban systems <b>H9:</b> Social farming provides fresh and processed food production services	+ Social Gardens – Social Gardens
Workshop Food Waste	<b>H1:</b> Eco-systemic services <b>H8:</b> Cultural and educational community services; welfare services	+ Workshop Food Waste – Workshop Food Waste
Sustainable Tourism	<b>H7:</b> Social farming provides support services to the quality of life and free time <b>H4:</b> SF represent a connection between agricultural systems and urban systems <b>H3:</b> SF represents a form of resilience of Calabrian agricultural enterprises	+ Sustainable Tourism – Sustainable Tourism

Source: the authors.

## 4. Results

### 4.1. The Social Network Analysis

The interviewed companies diversified their activities over time by combining agricultural activity with one or more of those previously identified as social farming activities, and, in particular, those that best meet their structural and organizational needs. In fact, the

evolution of agricultural enterprises towards multifunctionality showed different degrees of diversification (weak/strong in relation to the number of activities carried out other than agricultural ones) and different degrees of level of importance of the activity introduced (low, medium-low, medium-high and high). This level was often connected to the degree of innovation introduced.

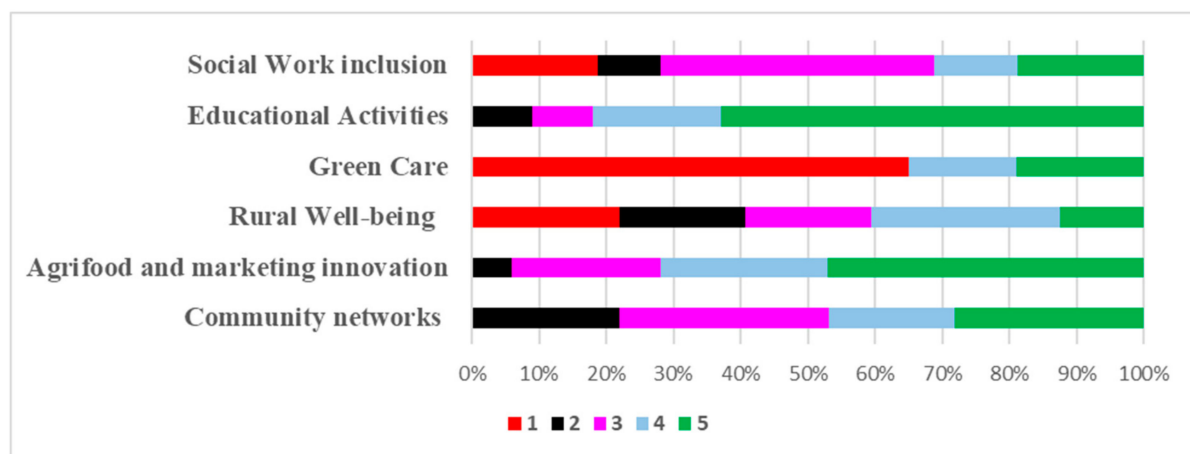
In fact, the companies interviewed showed a more or less articulated diversification; at the same time, they provided a range of eco-systemic services (themselves considered innovative) within the groups we identified and carried them out with different degrees of innovative intensity.

The companies interviewed were placed in a network analysis within the individual groups and the various opportunities of social agriculture were compared and analyzed in a multifunctional perspective. Table 4 and Figure 2 show the six distinct groups of social agriculture activities in relation to the level of importance of the activity introduced as perceived in the business context.

**Table 4.** Groups of social agriculture activities by degrees of importance declared by the companies interviewed. Likert scale from 1 to 5 (1 = the activity is not carried out, 5 the activity is very important for the company).

	Social Work Inclusion		Educational Activities		Green Care		Rural Well-Being		Agrifood and Marketing Innovation		Community Network	
	n.	%	n.	%	n.	%	n.	%	n.	%	n.	%
5.	6	19	20	63	6	19	4	13	15	47	9	28
4.	4	13	6	19	5	16	9	28	8	25	6	19
3.	13	41	3	9	0	0	6	19	7	22	10	31
2.	3	9	3	9	0	0	6	19	2	6	7	22
1.	6	19	0	0	21	65	7	22	0	0	0	0
Total	32	100	32	100	32	100	32	100	32	100	32	100

Source: the authors.



**Figure 2.** Degree of adherence to the types of social farming activities. Likert scale, min = 1, max = 5 (1 the activity is not carried out, 5 the activity is very important for the company) Source: the authors.

Appendix A contains a table with information on the activities performed on a case-by-case basis by the individual companies identified in the six groups of activities.

As can be seen in Table 4, the companies interviewed simultaneously carried out different activities within the six target groups identified.

The group exam showed that all companies carried out educational activities and welcome families, schools, groups, etc. The degree of intensity of this activity was considered high in 63% of cases thanks to the high number of educational workshops offered and to the many types of host families, voluntary activities, etc. Only 18% proposed low or medium-low levels of teaching activities.



Thirty-two percent of the companies interviewed regularly included weak groups of society (for example to immigrants, long-term unemployed, former prisoners, disabled, etc.). In 50%, there was an occasional and low or medium-low inclusion, in these cases, the company welcomed and offered work only occasionally and only to one type (for example to immigrants). In 19% of cases, the companies did not include socio-working groups of weak groups.

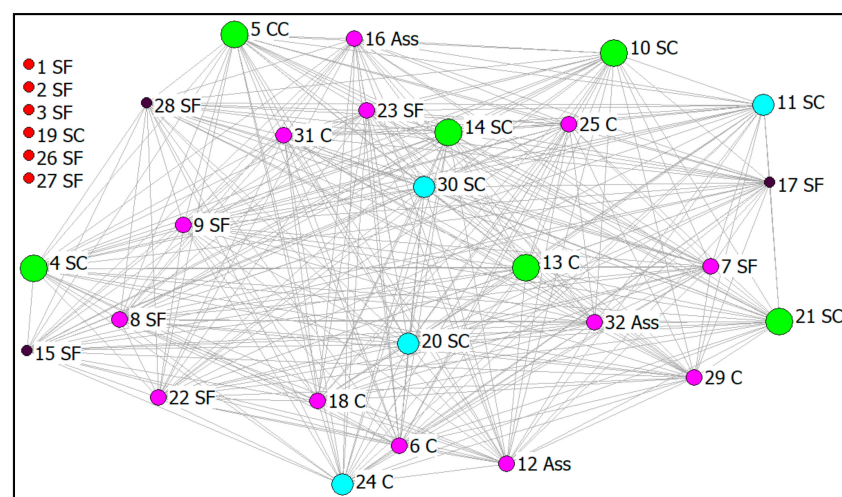
Green Care activities carried out by only 35% of the companies intercepted while 65% did not carry them out at all.

The companies with activities within the rural well-being group were mainly agritourism companies that in many cases have expanded the services offered, combining traditional ones with the new social agriculture activities. In 22% of cases, this activity was not carried out.

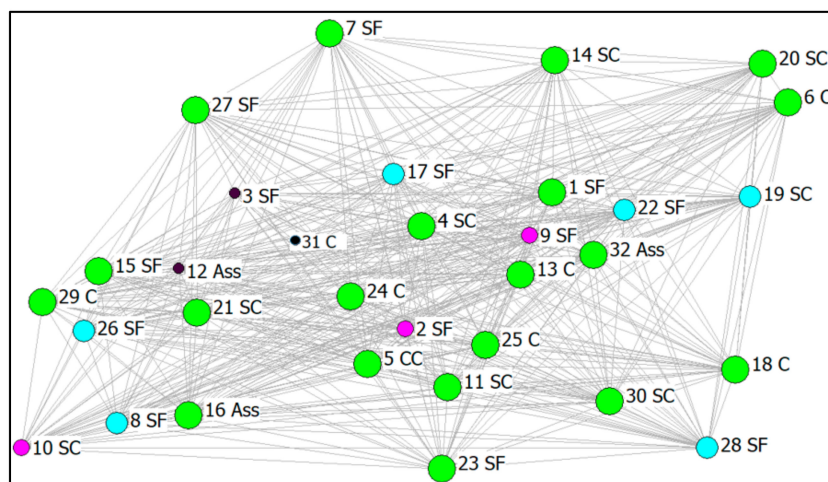
As for agricultural, product transformation, and marketing activities, in most cases, product or process innovations introduced to meet the demands of the market and the demands of the specific segment.

Finally, the ability to network also examined with particular attention to understand the level of participation in the social and economic network of the Community Network. As we can see, 53% of the companies interviewed should improve their ability to network.

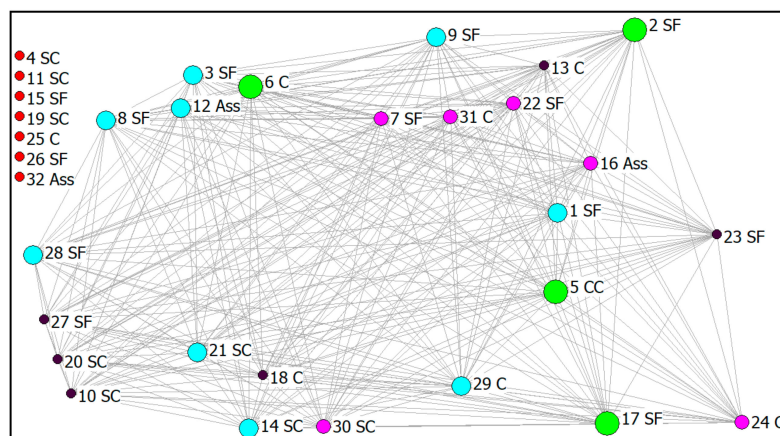
The application of the SNA, created with the UCINET software is illustrated in Table 5 and in Figures 3–6. The Affiliation matrix (constructed using the incidence and adjacency matrices) allowed for the grasping of the structural characteristics of the network, the positioning of the groups of activities within it [32,45], and the Degree. The latter was measured in terms of the attractiveness of businesses for the six groups of SF activities. Data organized in a dichotomous matrix, where the companies were the actors. The groups of activities (the SNA events) were considered in relation to the participation the importance attributed to them by the companies: 1 if the companies were very attracted to the activity (which is important to them), or the opposite (activity was not at all or not very important). Finally, the standardized matrix elaborated to examine the share of relations out of the total of Outdegree and Indegree values and their differences with respect to the overall average.



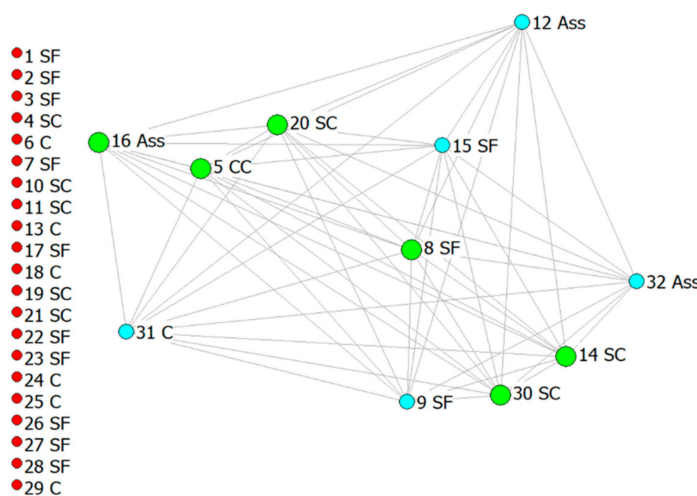
**Figure 3.** Sociometric graph “Socio-work inclusion” 1 = no activity (red color); 2 = low importance (black color); 3 = medium-low importance (pink color); 4 = medium-high importance (light blue color); 5 = high importance (green color). Source: the authors.



**Figure 4.** Sociometric graph “Educational Activities” 1 = no activity (red color); 2 = low importance (black color); 3 = medium-low importance (pink color); 4 = medium-high importance (light blue color); 5 = high importance (green color). Source: the authors.



**Figure 5.** Sociometric graph “Rural well-being” 1 = no activity (red color); 2 = low importance (black color); 3 = medium-low importance (pink color); 4 = medium-high importance (light blue color); 5 = high importance (green color). Source: the authors.



**Figure 6.** Sociometric graph “Green Care” 1 = no activity (red color); 2 = low importance (black color); 3 = medium-low importance (pink color); 4 = medium-high importance (light blue color); 5 = high importance (green color). Source: the authors.

**Table 5.** Main positioning indicators of the companies identified in the Network (Freeman's Degree Centrality Measures %).

Companies	Nrm Out Degree %		Nrm In Degree %	
	Share of Relations out of the Total	Difference from the Overall Average	Share of Relations out of the Total	Difference from the Overall Average
1 SF	41.9	−1.8	80.6	36.9
2 SF	32.3	−11.5	12.9	−30.8
3 SF	32.3	−11.5	12.9	−30.8
4 SC	48.4	4.6	35.5	−8.3
5 CC	25.8	−17.9	100.0	56.3
6 SC	67.7	24.0	51.6	7.9
7 SF	58.1	14.3	29.0	−14.7
8 SF	29.0	−14.7	83.9	40.1
9 SF	12.9	−30.8	3.2	−40.5
10 SC	29.0	−14.7	9.7	−34.1
11 SC	29.0	−14.7	9.7	−34.1
12 Ass	12.9	−30.8	3.2	−40.5
13 AC	38.7	−5.0	74.2	30.4
14 SC	25.8	−17.9	100.0	56.3
15 SF	22.6	−21.2	6.5	−37.3
16 Ass	22.6	−21.2	6.5	−37.3
17 SF	32.3	−11.5	12.9	−30.8
18 AC	71.0	27.2	61.3	17.5
19 SC	58.1	14.3	29.0	−14.7
20 SC	48.4	4.6	83.9	40.1
21 SC	48.4	4.6	87.1	43.3
22 SF	58.1	14.3	29.0	−14.7
23 SF	71.0	27.2	61.3	17.5
24 AC	48.4	4.6	35.5	−8.3
25 SC	71.0	27.2	61.3	17.5
26 SF	58.1	14.3	29.0	−14.7
27 SF	58.1	14.3	29.0	−14.7
28 SF	67.7	24.0	51.6	7.9
29 SC	41.9	−1.8	74.2	30.4
30 SC	48.4	4.6	83.9	40.1
31 AC	38.7	−5.0	19.4	−24.4
32 Ass	51.6	7.9	32.3	−11.5
Descriptive statistics	Nrm Out Degree	Nrm In Degree		
Mean	43.750	43.750		
Std Dev	16.877	30.867		
	Network Centralization (Out degree) = 28.096%			
	Network Centralization (In degree) = 58.065%			

Source: the authors.

Table 5 examines the positioning of companies within the social network. The out-degree (28.1%) and in-degree (58.1%) centrality indicators considered. Out-degree and in-degree indicators were calculated as the share of actual social activities out of the total of potential (average data for every single company and average data for all the companies examined). They measured the capacity of the individual companies examined in the context of the calculated average indicators. In processing, they were calculated as the share of actual connections out of the total of potential ones, thus measuring the importance of the company within the activities carried out [32,45]. In our case, the high values of out-degree also correspond to a greater ability to introduce social activities into the company.

The companies n. 18, 23, and 25 were those that register a good adhesion potential (Nrm Out Degree 71%), while companies no. 9 and 12 were the worst (12.9%), compared to an average degree of centrality equal to 43.7%. As for the normalized value of the Indegree, as can be seen, companies n. 5 and 14 recorded a value of 100% and were those that have joined all the SF activity groups, and for them, these activities were important.

The graphic representation of the networks of relations refers to the social activities of each company for each group. In Figures 3–6, the red nodes listed in the margin of each graph indicate the companies that did not carry out activities of that group examined from time to time. The size of the nodes together with the different colors that recall those used

in Figure 2 indicate the degree of innovation intensity implemented by companies with reference to individual groups of activities. The different colors of the nodes make it easier to read the graph.

The networks (Figures 3–5) highlighted the propensity for social innovation of the companies examined in relation to the potential for transmitting good practices within the territorial system.

With reference to social work inclusion, the graphic representation of the structure of the relationships of the companies interviewed operating in Social Farming showed many companies with a medium-low degree of membership. Essentially due to the use of forms of social inclusion limited only to some figures such as migrants, disadvantaged subjects, while the inclusion of prisoners or former prisoners, of persons with disabilities or addictions, various forms of voluntary work, was very low, also because the inclusion of these figures requires more complex forms to manage (Figure 3).

Figure 4 shows the group of educational activities and the reception of families and groups. As can be seen, the graph highlighted the vitality and the greater degree of intensity offered by most companies.

Even the companies that carry out activities that were part of the rural well-being group show a certain vitality which, however, appears to be more oriented towards a medium-high degree of innovation. In many cases, these were agritourism companies that have approached the social; companies that offer wellness packages, horse rides, etc. Furthermore, as can be seen from the sociographic network, about 22% of companies did not engage in these activities (Figure 5).

Figure 6, relating to the activities of Green Care therapeutic services, clearly shows the scarce presence of companies carrying out these specific activities, among those interviewed. Therapeutic services require socio-health assistance and high levels of professionalism. The companies that have declared that they provide these types of therapeutic services had high and medium-high degrees of innovative intensity.

#### 4.2. Factorial Analysis and MCA

Taking into account the results of the social network, it decided to deepen the survey through factor analysis and the analysis of multiple correspondences in order to identify the main components that characterize the companies interviewed and the profiles that characterize social farms.

As can be seen from Table 6, the factorial analysis applied to the six groups of educational and social activities in agriculture identified three main components which, when combined, account for 74.952% of the total variance. The verification of the adequacy of the sample examined with the KMO test, the value obtained is 0.681 (values >0.60 are considered acceptable).

**Table 6.** Results from Factorial analysis. Total Variance Explained.

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.539	36.276	36.276	2.539	36.276	36.276	2.533	36.190	36.190
2	1.550	22.136	58.412	1.550	22.136	58.412	1.554	22.200	58.390
3	1.158	16.540	74.952	1.158	16.540	74.952	1.159	16.562	74.952
4	0.581	8.297	83.249						
5	0.478	6.829	90.078						
6	0.408	5.826	95.904						
7	0.287	4.096	100.000						

Extraction Method: Principal Component Analysis. KMO and Bartlett's Test: Kaiser-Meyer-Olkin Measure of Sampling Adequacy 0.681. Bartlett's Test of Sphericity: Approx. Chi-Square 53,198; df 21; Sig. 0.000. Source: the authors.

Table 7 shows the Rotated Component Matrix. The first component, which we can define as "Enterprises with didactic/agricultural aptitude", explains 36.19% of the cumulative variance, that is, it identified the typical variables of educational farms: the reception of families, school groups, disabled elderly, and groups of adults (such as religious associ-

ations, sportsmen, etc.); educational activities, workshops, and cultural training on food education, legality, circular economy, reduction of food waste, workshops for the recovery of local crafts, etc.

**Table 7.** Results from Factorial analysis. Rotated Component Matrix <sup>a</sup>.

	Component		
	1	2	3
Social Work Inclusion	0.054	<b>0.846</b>	−0.015
Green Care	−0.037	<b>0.821</b>	0.060
Educational Activities	− <b>0.782</b>	−0.215	−0.121
Rural Well-being	−0.182	−0.116	− <b>0.911</b>
Marketing Innovation	− <b>0.618</b>	−0.240	−0.554
Community Network	− <b>0.876</b>	−0.085	−0.021
Type of company	−0.857	−0.201	− <b>0.055</b>

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 4 iterations. Source: the authors.

A variance of 22.2% concerned the second component, namely “Companies with a prevalent social vocation”: companies that carried out activities of social work inclusion and training of disadvantaged subjects and fragile employment fringes (unemployed, immigrants, prisoners, ex-prisoners; subjects with addictions). In some cases, they carried out voluntary work and welcome in family homes (women and minors who are victims of abuse; single mothers, etc.). In this component, we also found companies equipped to provide green care (pet therapy and ortho-flora therapy).

The third component represented the “Vocation to the supply of wellness services/rural well being” of companies, it explained 16.56% of the total variance and was linked to the variables relating to the agritourism vocation and to the services that revolve around this activity (agritourism with accommodation, agritourism with hospitality and catering, agri-camping, social tourism, excursions). In the third component, we also found the type of company (individual agricultural enterprises, social cooperatives, agricultural cooperatives, associations).

As for the MCA, the analysis conducted by proceeding through successive steps to ascertain and use the variables that showed a high percentage level of variance explained. For each dimension, the analysis calculated the inertia and the eigenvalue, expressing the amount of total variability of the data explained. Ten variables selected that provide the highest variance explained and allowed the interpretation of the data. Six variables were related to the groups of activities that summarize the multiple diversifications introduced in these particular companies that combine productive activities with social activities. We have also identified four characteristic variables that allow us to examine some peculiar aspects of the SF. Compatibility with the study carried out was entrusted to the two-dimensional solution, as it is more effective.

As can be seen from Table 8, the results obtained from the Multiple Correspondence Analysis are sufficiently explanatory. The procedure led to the determination of two factorial dimensions corresponding to the eigenvalues that reach the highest total explained variance value. The Alpha Cronbach was equal to 0.608 and was sufficient to exceed the reliability threshold that measures the reliability of the adaptation.

The two dimensions explained, in total, 44.158% of the variance: the first dimension explained 26.430% of the variance and the second dimension explained 17.728%.

Discrimination measures (Table 9) indicated the components that load the two dimensions the most. In this analysis, the first dimension concerned the following variables. Firstly, the relationship capacity of enterprises and the Community Network variable was the highest (0.530%), followed by didactic activities (0.520%); from the laboratories that look to education against food waste (Workshop Food Waste 0.432%); from the potential offered in the territories by the lands confiscated from organized crime (0.343%) and by the Social Gardens (0.267%). Lastly, in this first dimension, we found Marketing Innovation (0.104%).



**Table 8.** Results Multiple Correspondence Analysis (MCA): Model Summary.

Dimension	Cronbach's Alpha	Variance Accounted For		
		Total (Eigenvalue)	Inertia	% of Variance
1	0.691	2.643	0.264	26.430
2	0.484	1.773	0.177	17.728
Total		4.416	0.442	
Mean	0.608 <sup>a</sup>	2.208	0.221	22.079

<sup>a</sup> Mean Cronbach's Alpha is based on the mean Eigenvalue. Source: the authors.

**Table 9.** Discrimination measures.

	Discrimination Measures		
	Dimension		Mean
	1	2	
Rural Well-being	0.274	<b>0.283</b>	0.279
Community Network	<b>0.530</b>	0.001	0.265
Sustainable Tourism	0.139	<b>0.200</b>	0.169
Social Work Inclusion	0.034	<b>0.632</b>	0.333
Workshop Food Waste	<b>0.432</b>	0.078	0.255
Educational Activities	<b>0.520</b>	0.000	0.260
Social Gardens	<b>0.267</b>	0.161	0.214
Green Care	0.000	<b>0.220</b>	0.110
Use of confiscated land	<b>0.343</b>	0.195	0.269
Marketing Innovation	<b>0.104</b>	0.001	0.053
Active Total	2.643	1.773	2.208
% of Variance	26.430	17.728	22.079

Source: the authors.

In the second dimension, the variables that charge the most were: social inclusion activities (0.632%); agritourism and wellness services (rural well-being 0.283%); Rehabilitation, Mental, and Therapeutic Human Activities services (Green Care 0.220%); and sustainable tourism (0.200%).

Through the analysis of the distribution of the variables and of the modalities on a two-dimensional level, we were able to draw conclusions on the meaning of the axes and to identify the profiles of the entrepreneurs in relation to the degree of innovation and their involvement in social activities.

Figure 7 shows the Joint Plot of Category Points and identifies the positions of the original variables in the two-dimensional space identified by the MCA, in particular, the contribution of each variable to the dimension is highlighted.

Dimension one represented greater or lesser diversification and, therefore, the presence of greater (in the positive horizontal semi-axis) or smaller (in the negative horizontal semi-axis) SF activity.

Dimension two identified the importance of SF's business for the company, in this case, greater (in the positive vertical semi-axis) and lower (in the negative semi-axis).

In particular, examining the results in Figure 7 the results are:

- in the circle (positive dial for both dimensions) there are the companies that show to a greater extent a "social proper" profile (employment inclusion of fragile sections of the population, therapeutic services, and use of land confiscated from the 'ndrangheta). The inclusion of social activities pushes them towards a good degree of both diversification and innovation (identified by dimension two);
- in the triangle (positive dial for dimension 2 and negative dial for the other) we identify the profile of companies that look in particular at "well-being and quality of life" (agritourism and excursions);
- in the rectangle one finds the most common activities around the horizontal axis of the positive semi-axis with an "educational and social" profile and which have introduced

- interesting levels of marketing, product and/or process innovations, sales networks into the activities undertaken (online sales, SPG, Campagna Amica markets, etc.);
- in the negative dial for both dimensions, there are companies that, while diversifying and joining the SF, have shown a “lukewarm” attitude and profile for almost all variables in the application of the various activities relating to Social Farming.

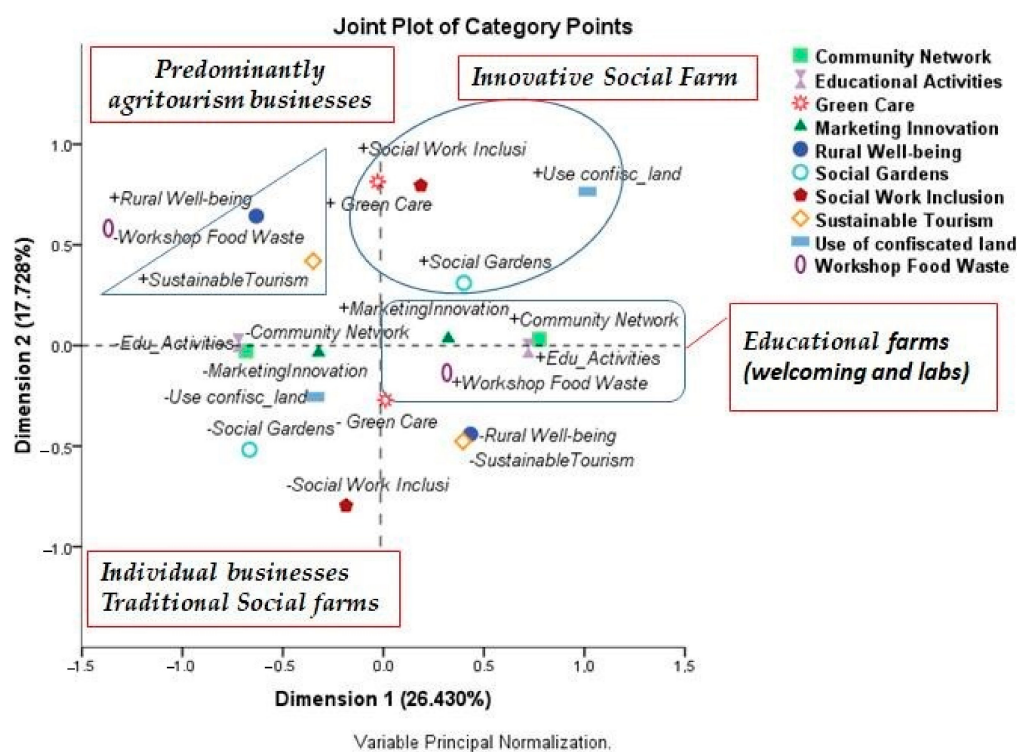


Figure 7. Representation of the results, resulting from the MCA. Source: the authors.

## 5. Discussion and Conclusions

The results of the empirical research indicated in Calabria there are interesting experiences of social farming that present moderate dynamism and innovative aspects, as they are focused on an agriculture model capable of producing income and also eco-systemic services. The reasons that led to the development of social farming evolved from strong ideals aimed at favoring the ethical value and economic, social, and environmental sustainability of agriculture. In this regard, it should be noted that for the agricultural, agri-food, and rural sectors the need for innovations has gradually widened compared to the past since it is linked to broad and articulated strategic development objectives. It's not only restricted to company competitiveness in terms of productivity and reduction of production costs but also to quality, market orientation, supply chain organization, territorial competitiveness, protection of the territory and the environment.

Furthermore, the combination of innovation and rural development has acquired more and more importance for supporting the identification of business models with diversified production activities oriented towards the needs of quality services for rural areas and connections with urban areas such as didactic services, social, rural well-being services, without neglecting the production and the ability to network.

In fact, many companies have improved the income obtained from agricultural activity thanks to the addition of social activities. In particular, this is especially true for small individual enterprises whose income comes mainly or entirely from these activities (Agricultural + social).

In relation to the entrepreneurial choices aimed at achieving specific qualitative targets and, more generally, competitiveness, in relation to the activities carried out, the prevalent profiles of the companies interviewed in Calabria can be highlighted. Among them, the

evolution towards multifunctionality and in particular towards SF activities, involves different degrees of innovation, both in relation to the number of social activities exercised and in relation to the degree of innovation introduced. Furthermore, the characteristic feature of social farming lies not only in the activities that are carried out but also in the way in which they take shape and are carried out in local contexts. All of this confirms the hypotheses (H1–H10) as can be seen also in descriptive Table 4 where the companies interviewed simultaneously carry out different activities within the six target groups identified (Social Work inclusion; Educational Activities; Green Care; Rural well-being; Agrifood and Marketing Innovation; Community Network).

Good practices arise from the skills present in the territory in response to specific needs determined in part by the local fabric (presence or absence of services available for experimenting with paths other than traditional) and in part by the strong motivation that drives entrepreneurs, cooperatives, and associations to include people living in difficult situations, through work placement, training, etc. Well, this approach to social farming, for local businesses and in particular for those who work in confiscated lands, represents a practice of social innovation, as alongside the offer of new services it also offers paths for the construction of services in the legality.

In fact, an original and interesting aspect of our work, in our opinion, concerns the processing and validation of the results through the two multi-criteria analysis approaches, which allowed us to identify the different “innovator” profiles of operators. Although this kind of logic and thinking maybe a growing part of the direction of rural development within the EU, SF could be seen as a positive, new, or ‘revolutionary’ approach elsewhere in the world to inject new energy and vision of agricultural sectors in a phase of economic stagnation and decline of the environmental, cultural and social fabric. In fact, this study has attempted to look at the various companies objectively trying to evaluate not only the activities carried out but also the “model” and the good practices implemented and applied.

At the same time, the realities examined have shown the intention to make changes in the future, both at a structural and marketing level and in regard to the inclusion of further projects within the activity of social farming.

This result confirms there is enough to exploit the SF and that its development could have positive effects on the agricultural sector. This is very relevant, bearing in mind that SF has a synergic character and combines a large number of economic and non-economic activities (e.g., culture, education) and in the longer term, it has a positive multiplier effect on the development of the local economy. From this analysis, it can be understood that social farming is an activity that is increasing within the investigated territory and despite the countless difficulties encountered by companies and associations, both in terms of legislation and in regard to possible obstacles on the part of criminal activity, to continue to make improvements that can benefit people and the environment. These are concepts that fit well into the virtuous model of a circular economy.

The next step in our opinion is to intercept the users, users of the SF service to grasp their perceptions and opinions. Therefore, this study fits into a very dynamic and highly relevant phenomenon for the development of the agricultural sector and the economic growth of farms.

From the results of the study, a national strategy to support growth is urgently needed, compatible with the objective of territorial rebalancing, in particular for Calabria, a region of southern Italy that is not particularly developed, in order to seize the unprecedented opportunities that are opening up with the new tools of European funding. The substantial support of public policies given due to the problems caused by the COVID 19 pandemic intervenes to mitigate the seriousness of the forecasting framework for 2021.

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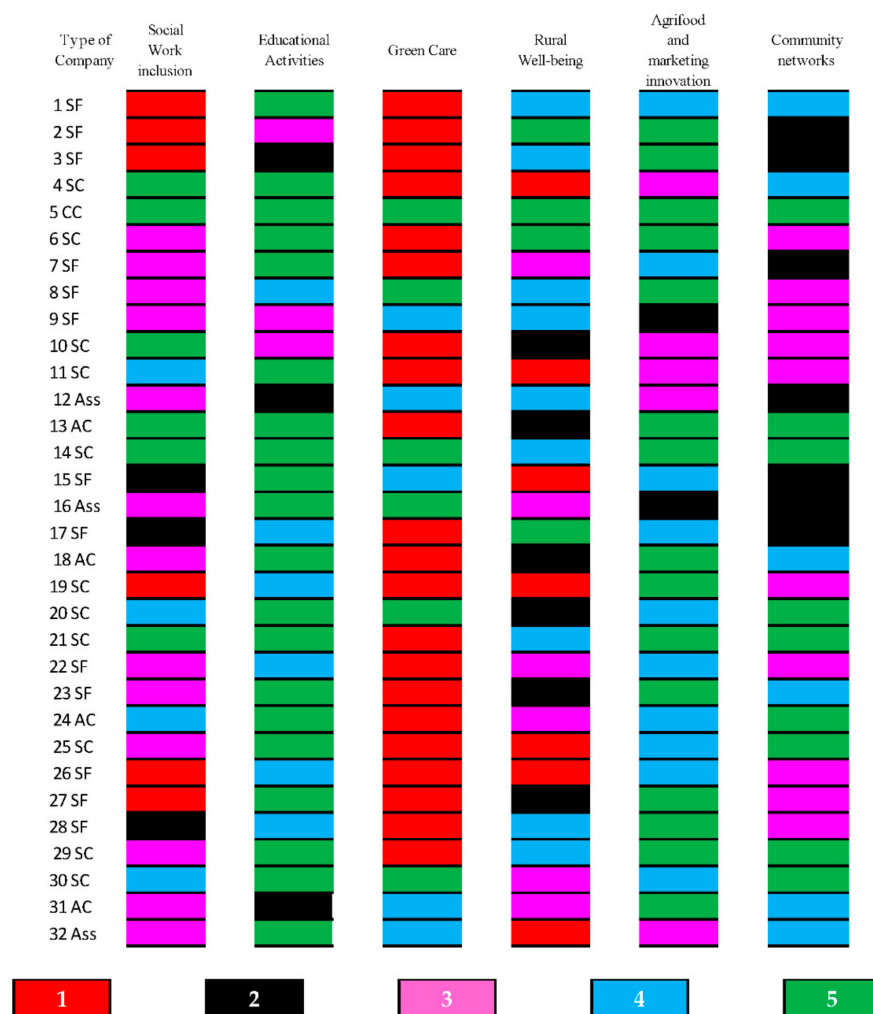
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**Abbreviations**

- SF Social Farming
- CSA Community supported agriculture
- AFN Alternative Food Networks
- SPG Solidarity purchasing group
- SNA Social Network Analysis
- FA Factor Analysis
- MCA Multiple Correspondence Analysis
- NBS Nature-based solutions

**Appendix A**



**Figure A1.** Likert scale from 1 to 5 (1 = the activity is not carried out, 5 the activity is very important for the company) Source: The authors.

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