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REPORT EVALUATING THE PILOT INITIATIVE ON FOOD FAIRS AND FARMERS' MARKETS

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EXECUTIVE SUMMARY

In the framework of the Strength2Food project, Coldiretti, with the support of the University of Parma, led a pilot action aimed at exploring how to stimulate farmers' markets in Italy using the mobile application "Campagna Amica".

Coldiretti is the main farmers' organization at the Italian and European levels. In 2008, it established a network of Short Food Supply Chains (SFSCs) named Campagna Amica, managed in all the Italian territory through the same rules dealing with the brand, farmers' behaviour, control system, and code of conduct on environmental issues. In order to support the uptake of SFSCs and raise awareness among consumers about the benefits associated with farmers' markets, Coldiretti developed a smartphone application targeting consumers, named Campagna Amica after the network itself. The application is an informative tool that complements the set of media channels used by Coldiretti and Campagna Amica, aimed at increasing consumers' knowledge of the network and encouraging them to attend farmers' markets to buy directly from farmers.

The pilot action took the form of a communication campaign promoting knowledge and use of the application among consumers from economically disadvantaged areas of Italy, identified in four regions of the South of the country. The communication campaign was conducted through a multi-faceted strategy, including the distribution of paper flyers, informative posts in the newsletter Campagna Amica, and a Facebook advertising campaign. The campaign started just before the outbreak of the Covid-19 pandemic, and it was heavily affected by the social distancing measures imposed in Italy from March 2020. This created the need to re-shape some aspects of the pilot, moving the promotional campaign from a blend of online/offline activities to a purely digital campaign. Despite these challenges, the pilot action produced interesting insights about the potential of smartphone applications and ITC to support farmers' markets and SFSCs, and generated new insights about the role of this type of tool in times of food insecurity and crises.

Findings from the pilot initiative showed that the application contributed to increasing consumers' knowledge about several themes linked to agriculture (nutrition, sustainability, SFSC, origin, food quality etc). In addition, the application enabled consumers' learning about local and traditional recipes, which fosters a sense of cultural identity and belonging to a territory. Findings also pointed out that the application was appreciated by consumers as a tool to feel closers to farmers and to enable trust for farmer's products. The application's ability to connect producers and consumers was particularly relevant to the case of urban consumers, who are less easily exposed to local and sustainable production.

Furthermore, the application revealed to be particularly useful in re-strengthening the bonds between consumers and producers during Covid-19, when social distancing rules prevented farmers' markets to be open to the public. In this context, the app was used as a pathway for expressing solidarity to local producers and support local consumption. In order to assess the use of the application during the lockdown, consumers were asked which functions of the app they used the most. Not surprisingly, the two most common uses were the identification of nearest FMs (61%), and search functions for local food and farmers (43%), in line with the common uses of the application prior to Covid restrictions. However, the interesting result is that 44% of respondents used the app also to contact farmers offering home deliveries. This function was not available before Covid restrictions and was implemented in the app as a way

to foster connections between producers and consumers despite the social distancing rules and the closure of FMs. This result showed the high potential of this type of application to reconnect consumers and producers, hence supporting SFSCs, in times of insecurity and crises.

Based on the results of the pilot action, several recommendations can be developed. They are articulated into two areas: recommendations for practitioners (on management and on marketing/communication) and recommendations for policy makers. Although these recommendations are specific to the Italian context, several of them could be adjusted and applied to several different contexts where networks of organised farmers' markets are present. A summary of key recommendations is reported below.

For practitioners (both organizations and farmers)

- Foster cooperation among farmers, creating a common/collective management system;
- Promote the establishment of indoor FMs to allow the organization of initiatives that allow consumers to learn about food;
- Invest in digital communication activities to reach new consumers;
- Promote the use of digital platforms and tools to inform/educate consumers and to allow them to buy food products through e-commerce channels;
- Promote the use of digital platforms to support responsible tourism in rural and economically disadvantaged areas;
- Invest in e-commerce to develop new sales channels;
- Improve professional marketing skills.

For policy makers and public authorities

- Increase the number of initiatives of FMs and food fairs within urban areas to boost consumers' knowledge of agricultural products and recipes linked to local traditions;
- Improve (or define) public food procurement procedures that reward those actors which use local and agricultural sourced products;
- Encourage the use of indoor public areas for new FMs;
- Promote education initiatives for citizens to raise awareness on SFSCs and encourage the choice of local and seasonal food products;
- Support SFSCs initiatives in the context of broader employment policies in rural areas;
- Offer financial support to agricultural producers and farmers' markets through national and EU funds.

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LIST OF ABBREVIATIONS AND ACRONYMS

BSE - Bovine Spongiform Encephalopathy EU - European Union FAO - Food and Agriculture Organization FAQ - Frequently Asked Questions FM(s) - Farmers' Market(s) Ho.Re.Ca. - Hotel Restaurant Catering ICT - Information and Communication Technologies S2F - Strength2Food SFSC(s) - Short Food Supply Chain(s) WP - Work package

1. INTRODUCTION

This report provides a description of the pilot action led by Coldiretti, in the context of the Strength2Food (S2F) project. The pilot action aimed at exploring how to stimulate Short Food Supply Chains (SFSC) in order to develop new quality markets and local food chains, contributing to the sustainable development of economically disadvantaged areas.

Coldiretti is the main farming organization at the Italian and European levels. In 2008, it established one of the largest initiatives of short food supply chain in Europe, under the name of Campagna Amica. Coldiretti's experience and knowledge of short food supply chains have been combined with research carried out in the context of S2F in the WP7, with the aim to improve the sustainability of a particular form of SFSC represented by Farmers' Markets (FMs).

The pilot action took the form of a communication campaign targeting consumers from economically disadvantaged areas of the country, identified in some regions of Southern Italy, to increase their awareness of the benefits associated with the use of FMs. In particular, the communication campaign encouraged consumers to use the application for smartphone "Campagna Amica", named after the broader and well-known network of Italian farmers' markets. The use of the app was encouraged as a tool available to consumers to reconnect with farmers participating in FMs, detect the location of the farms, and understand additional services provided by farmers.

The key assumption motivating this action was that making consumers aware of this form of SFSC and its advantages, leveraging feelings of trust among consumers and producers, is a key step towards the success of SFSC (Vittersø & et al, 2018). Ethnographic findings conducted in the context of S2F project produced similar insights (Amilien & al, 2018). Despite the difficulties of generalising qualitative findings, the study pointed out that consumers tend to trust local food more than Food Quality Schemes, mainly because its origin is better known, and appreciate the feeling of connectedness they experience in local shops and farmers' markets.

Coldiretti, in its recurrent analysis of the initiative of Campagna Amica, recognizes that trust among consumers and producers, built on direct knowledge and fair exchange of information, is one of the main components of the success of the initiative. This relationship of trust is crucial not only for consumers but also for producers, who consider the possibility of providing customers with practical knowledge about food quality a benefit of SFSCs (Vittersø & et al, 2018).

However, consumers' behaviours and perceptions are just one aspect of the success of a SFSC initiative, and the economic viability for producers is also a crucial aspect. The assessment carried out in the context of the Strength2Food project showed that farmers participating in FMs experience a better economic performance, with premium prices and higher added value compared to conventional chains (Malak-Rawlikowska & al, 2019). Moreover, SFSCs offer a better bargaining power to farmers compared to long chains, even if generally farmers opt for a mix of supply strategy to mitigate risks (ibid.)

With the aim to reach the overall objective of fostering the development of SFSCs and in particular of FMs, Coldiretti promoted the use of a smartphone application and collected data pertaining to the application use, as well as to the attitudes, motivation, and needs of consumers related to consumption in SFSCs.

The use of new tools like social media, ICT platforms, and applications for mobile devices is also relevant to facilitate the knowledge and the interaction between consumers and producers, contributing to boosting the development of SFSCs. As it will emerge in this report, the Covid-19 pandemic showed that this kind of solutions is increasingly important. ITC and digital tools have played a major role during Covid restrictions, both for consumers and producers, to allow sales and avoid produce going to waste. As FAO pointed out, the pandemic has put local food systems at risk of disruptions along the entire agri-food value chain, underscoring the need to ensure and strengthen urban–rural interlinkages in times of crises and, within that, the importance of shortening food supply chains (FAO, 2020). During the most critical weeks of the pandemic, when all farmers' markets were closed because of restrictions, the application of Campagna Amica was extensively used to connect consumers and producers. Particularly, consumers could use the app as a way to find the list of farmers providing delivery services, while farmers could use it as a tool to promote their services and enable sales of products that would have otherwise gone to waste.

1.1. The experience of Campagna Amica by Coldiretti

Coldiretti is the main farming organization at the Italian and European levels. Originally, the expression "Campagna Amica" (literally meaning Friendly Countryside) was linked to a broad project of Coldiretti, aimed at creating a sort of "agreement" among the producers' organization and consumers. In the years between 2000 and 2008, Campagna Amica was an educational campaign aiming at closing the gap between rural and urban areas, and between producers and consumers. It had the purpose of fostering knowledge of food origins, rural culture and traditions, and promote awareness of the environmental role of agriculture among new generations. The training activities were linked to the promotion of the direct sale of food produce, initially managed by the single local branches of Coldiretti. Although the initiatives were widespread in all the Italian territory, they lacked overall coordination and promotion within the territories. In this sense, it is noteworthy that at the early agricultural events organised by Coldiretti, very few farmers' markets were organized. The initial success of these initiatives led to the decision to organize farmers' markets as stand-alone events, not linked to other initiatives of Coldiretti.

In 2008, following the success of stand-alone farmers markets, Coldiretti decided to define the rules for common management of these initiatives, and to create a brand and a stricter system of control. The organization created the biggest Italian network of short food supply chains, named managed in all the Italian territory through the same rules. These include:

- The brand and the colours to be used;
- The Regulation about the use of the brand;
- The behavioural rules;
- The Code of Ethics on environmental issues;
- The Control System.

Through this increased coordination, the network experienced growth in numbers and participation. In 2009, the farmers' markets involved were 550; the following year, they became 701 and the network expanded, including points of sales within the farms (1.910). In the following years, restaurants, farmhouses, food grocery stores, and urban gardens joined the network. As of 2020, the numbers of initiatives involved with Campagna Amica are:

- 1.041 FMs
- 6.460 Farms
- 470 Food providers
- 2.350 Agritourisms (farmhouses)
- 159 Food Grocery shops (named Botteghe)
- 635 Restaurants
- 213 Urban Gardens

Following the implementation of these coordination rules, today all sellers within the Farmers' Market of Campagna Amica are:

- Associated to Coldiretti: this means that all retailers are farmers, and all food produce available in the farmers' markets is agricultural food, seasonal, local, and Italian. This is a key element of the farmers' markets of Campagna Amica. According to the Italian law dealing with SFSC², farmers can sell up to 49% of product coming from other actors, irrespective if these others are farmers or not. Conversely, in the farmers' markets of Campagna Amica, farmers can sell up to 49% of product coming from other actors but these must be farmers belonging to the network of Campagna Amica;

- Accredited at Campagna Amica: all farmers respect the rules (behaviour, hygienic, transparency, label, controls, etc.) and benefit by being members of the same network, in terms of promotion, visibility, communication, and networking. All the farms who participate in the FMs of Campagna Amica accept to be under a triple control practiced both on the documents that they provide and on the activities on the field, aimed to verify the origin of food produce, its belonging to the network of Campagna Amica, and the respect of the use of the brand.

- Linked, within each FMs, to a specific association named Agrimercato: farmers belonging to Campagna Amica accept the Statutes of the Association Agrimercato and subscribe to the Regulation of the Agrimercato and the Regulation of the use of the Brand. The latter defines several elements connected to the promotion of the brand (the types of stand to be used, the colours, the clothing, the font of the communications elements, the materials to be used for the bags, for the stands, for the furniture, etc.). Farmers are responsible for the purchase of the materials necessary for their sales, while Campagna Amica pays for all the costs of the design and their adaptation to the coordinated image of the FMs.

Coldiretti launched Campagna Amica to support Italian farmers, above all the smaller ones, that face difficulties in remaining in the markets and have very low bargaining power in the food chains. It also aimed at increasing transparency towards consumers, promoting sustainable and seasonal food purchases, reducing food waste (thanks to longer shelf life of fresh food produce), improving packaging (promoting the use of packaging made of natural material), and donating unsold food to charity institutions.

Educational and promotional activities targeting consumers are a further key element of Campagna Amica. Coldiretti invested in a multi-faceted communication strategy, composed of virtual spaces on the website of Campagna Amica, social media communication messages, and an application for smartphone and tablet, object of the pilot action.

² Law decree 228/01, "Legge di orientamento e modernizzazione del settore agricolo".

1.2. The application: from Farmers for you to Campagna Amica

In order to expand the multi-channel communication strategy of Coldiretti, a smartphone application was developed and launched. This was initially called "Farmers for you" and was introduced in 2015, at the Universal Exposition "Feeding the Planet, Energy for Life" held in Milan (Italy). It was created as a communication tool targeted to tourists and, more generally, people attending the stand of Coldiretti within the Exposition. It was an informative tool that completed the set of media used by Campagna Amica's communication strategy. The app was designed with the purpose of enabling consumers to search for all the markets, restaurants, farmhouses, shops and farms associated with the network Campagna Amica. Regardless of the consumer's position, it was possible to find the nearest sale point or traditional restaurant within the network of Coldiretti.

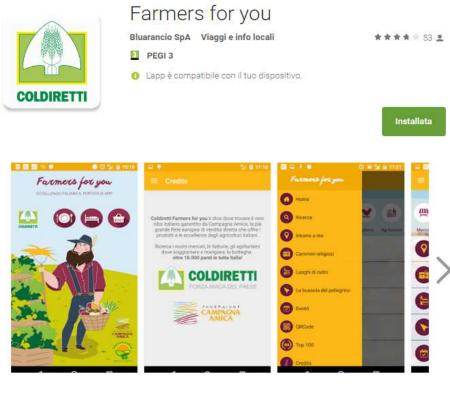
The application "Farmers for you" was easy to use, with a simple layout and appealing design. The main elements were:

- sale points: Markets, Restaurants, Shops, Farms, Farmhouses;
- itineraries (religious paths, worship's places, art cities);
- recipes, typical products;
- other: around me, events and compass & navigation.

"Farmers for you" was more than a simple tool to find the nearest "Campagna Amica" sale points. It gave also the possibility to know:

- all the events scheduled nearby;
- culinary tradition and specialty food from every region of Italy;
- recipes and cooking methods to enable consumers to be able to prepare the products bought.

In this way, the app constituted a tool to foster knowledge of local traditions and awareness of local events. It also gave the possibility to plan real "itineraries of taste", where consumers could select an area or region and build an itinerary based on local food and events. The app was available both in Italian and English; however, most of the content (descriptions of the itineraries, sale points, recipes, etc.) was provided only in Italian. An overview of the app design and different sections are provided in Figure 1.



Coldiretti Farmers for you ti dice dove trovare il vero cibo italiano garantito da Campagna Amica, la più grande Rete europea di vendita diretta che offre i prodotti e le eccellenze degli agricoltori italiani. Ricerca i nostri mercati, le fattorie, gli agriturismi dove soggiornare e mangiare, le botteghe: oltre 10.000 punti in tutta Italia!

Figure 1. The app "Farmers for you" (year 2017)

Following the end of the Exhibition in 2015, the app was redesigned as a marketing tool targeted mainly to Italian consumers sensitive to the themes of sustainability and short supply chains and was renamed Campagna Amica after the network of farmers' markets. Since digital communications and mobile devices have become an integral part of everyday life, it became crucial for Coldiretti to invest in this type of communication channel to reach Italian consumers and promote a sustainable vision of agriculture, with its values, methods, and traditions.

The new application Campagna Amica was launched in 2019 and aimed at increasing consumers' knowledge of the network of FMs of Campagna Amica and encouraging them to attend FMs to buy directly from farmers. It maintained most of the features already present in the "Farmers For You" version, both in terms of graphic design/layout and main functionalities, but the English version of the main menu and the "touristic itinerary" have been removed. The app still allows users to locate, starting from their position, the closest points of sales, FMs, and restaurants belonging to the network of Campagna Amica, while providing information with the aim to keep consumers close to producers.

Within the S2F project, a pilot action was designed to promote the uptake of this app, and to evaluate its potential in raising awareness about SFSCs in economically disadvantaged areas of Italy. The pilot action also aimed at encouraging consumers' choice for local food purchase, and, consequently, to stimulate the economic development of local and rural communities.

2. THEORETICAL BACKGROUND

2.1. Defining Short Food Supply Chains

Short Food Supply Chains (SFSCs) is a complex concept that takes different forms across different countries and contexts. At the EU level, the European Commission addresses SFSCs and local food within the II Pillar of the CAP dealing with the Rural Development, defining them as "a supply chain involving a limited number of economic operators, committed to cooperation, local economic development, and close geographical and social relations between producers, processors and consumers" (Reg. (EU) No 1305/2013). Despite the efforts to produce a cohesive definition, in practice, SFSCs include a diverse set of initiatives, such as farmers' markets, pick-your-own, on-farm selling, cooperatives, and internet sales, just to mention some.

A key aspect of SFSCs is the social and geographical proximity that characterises this type of chain. The social proximity is intended as "the ability (of the short supply chain) to engender some form of connection between food consumer and food producer" (Marsden, Banks, & Bristow, 2002, p. 425). This allows a stricter exchange of information between producers and consumers "which enables the consumer to confidently make connections and associations with the place/space of production, and, potentially, the values of the people involved and the production methods employed" (ibid). "Short" means direct interaction between producers and consumers, contributing to "mutual knowledge and respect of each other, trust, solidarity and compromise between producer and consumer, acknowledgment of the quality features of the food product and the conditions of production, ethics and values, (re)connection with traditions and identities, collective civic engagement in the local food system, intensity and directionality of information flows, and balance of power between the actors" (Galli & Brunori, 2013, p.5). All these factors determine consumers' willingness to buy directly from producers, recognizing the added value linked to tradition, quality, and naturalness of local products (Blasi & et al., 2015).

The physical distance refers to the geographical proximity between the places of production and consumption, between producers and consumers on a side and the territory where they both live on the other. Even if there is not a universal definition of the optimal physical distance distinguishing a SFSC, EU official definition of SFSCs explicitly mentions the geographical closeness as a key feature of it. Other studies highlighted that "geographical proximity and location matter, as "short" is first of all perceived as something that is comparatively close physically and/or located and grown in a certain region or a locality" (Galli & Brunori, 2013).

In this view, SFSCs are strictly linked to, and in some aspects overlap, with the concept of local food systems, defined "*as those where the production, processing, trade and consumption of food occur in a defined reduced geographical area*" (Kneafsey & et al, 2013). Despite the difficulties of formulating an exact, unique definition of SFSCs, given also the complexity of the concepts that the term implies, what seems relevant is that social and geographical proximity are strictly linked to shared values. Belonging to the same territory (as physical proximity suggests) facilitates the exchange of information, feelings of trust, solidarity, and connection with tradition (included in the social proximity concept) which are at the basis of many forms of SFSC.

2.2 Sustainability impacts of Short Food Supply Chains

SFSCs represent alternative (but not necessarily competitive) supply chains that differ from the dominating agro-industrial model of global value chains, characterised by unequal distribution of power between different actors, long distance trade and industrialised food (Galli & Brunori, 2013). They represent a strategy to improve the resilience of family farms with the support of concerned consumers, local communities and civil society organisations, as well as a driver of change towards sustainability both in the agro-food system and rural area (ibid). Although the extent to which SFSCs contribute to sustainability is still an open question (Vittersø & et al., 2019), some evidence exists of their positive impact on the three dimensions of sustainability (Jarzębowski & et al., 2020). This section will briefly explore the economic, social and environmental benefits connected to SFCSs.

From an economic perspective, the study conducted within Strength2Food (Malak-Rawlikowska & al., 2019) highlights that participation in short food supply chains is beneficial for producers. Short food supply chains provide a relatively high price premium, since they allow to capture a large proportion of margin, otherwise realized by different intermediaries (ibid.) In addition, as in most cases SFSCs involve small farms from rural or peri-urban areas, they also help re-circulate community income and create new jobs (Galli & Brunori, 2013). From this perspective, SFSCs are considered a key tool for the economic revalorisation of rural areas, as well as an engine of opportunities for peri-urban agriculture (Giampietri & et al., 2016).

Within the Italian context, Coldiretti assessed the economic benefits of SFSCs and FMs for the farmers members of Campagna Amica through a survey conducted in 2014. This research found that farmers considered their presence in FMs as economically beneficial mainly because it generates an increased turnover, gives more security to sell their products, and allows the immediate payment of their products (Coldiretti, 2014). Furthermore, through the same survey Coldiretti investigated consumers' perception of participation within FMs. The results showed that consumers' willingness to pay for FMs' products would persist even if the prices would go up by 5%, thus confirming that the FMs are an effective channel for farmers (ibid).

The economic benefits of SFSCs translate into a wide range of positive social impacts. These include better bargaining power of producers along the chain, the capacity of SFSCs to generate additional employment, and the promotion of gender balance due to greater employment of women in logistics activities (Malak-Rawlikowska & et al., 2019). Other social benefits associated with participation in SFSCs are the ethical recognition and appreciation of farmers' work, linked to farmers' socio-psychological wellbeing, and the improved direct relationship between producers and consumers (Jarzębowski & et. al, 2020). This contributes to consumers' attribution of added values and appealing symbols to food products sold in short chains which in turn contributes to consumers' willingness to pay for these products (Giampietri & et al., 2016).

Beyond social impacts at the food-chain level, SFSCs also can contribute to revitalise local communities, developing a sense of pride, social cohesion and belonging to a certain area and territory (Galli & Brunori, 2013). The impact of certain SFSCs in urban areas (such as regular farmers' markets) goes beyond the commercial relationship, producing a higher level of social cohesion, identity and trust, fostering education of consumers, and reconnecting urban and rural territories and communities (ibid.).

Turning to the environmental dimension of sustainability, it has been extensively documented that SFSCs enable environmental protection, through a reduction of food miles, improved agricultural practices, and reduction of chemical inputs (Mundler & Laughrea, 2016). However, the environmental picture is quite complex, and different conclusions can be drawn according to the different aspects analysed. For example, according to the S2F findings (Majewski & et al, 2020), which relate to the distribution phase of a limited number of products, the farm survey showed a relatively higher carbon footprint (and other emissions) for many of the categories of direct SFSCs compared to longer chains. However, these results are limited to products with the same origins; in the case of a long supply chain, conversely, consumers can choose among products whose origin can also be located in a foreign country, with totally different impacts on the environment.

Despite the caveats due to all the exceptions and specificities, there is consensus on the positive contribution of SFSCs to the sustainable development of territories. Nevertheless, improvements are required to boost SFSCs development as a food system strategy. A key element in this sense is the need to enhance trust and connections within SFSCs.

2.3 Enhancing trust in Short Food Supply Chains

Previous research on motivations, practices, and organizational development of SFSCs highlighted that trust and transparency are among the key factors of the success of SFSC initiatives. Consumers perceive SFSC initiatives as more transparent than conventional supply chains, hence the feelings of trust: "*trust relations based on social, geographical and cultural proximity between producers and consumers is central in several of the SFSCs studied*" (Vittersø & et al, 2018, p. 54). Short chain become an answer to the increasing consumer demand for information about the origin, safety, and wholesomeness of food, above all after the numerous food scandals of the past decades (Elghannam & et al., 2020). The reduced number of intermediaries in the supply chain facilitates food traceability (ibid.), and enables consumers to have more information about food and to make more informed consumption choices (EITFood, 2020).

Despite all the differences between countries and forms of SFSCs, SFSCs share a common characteristic, that is to be centred on personal relations. SFSCs initiatives are often conducted in a friendly and personal atmosphere, where producers and consumers can have a dialogue about food and build long-lasting relationships. From this perspective, a crucial aspect of SFSCs' success is linked to the possibility of building such relationships.

A key element in relationship building highlighted by previous literature is the use of Information and Communication Technologies (ICT) to foster connections between producers and consumers. Digital communications (internet, social media, mobile app., etc) have become an integral part of contemporary everyday life for billions of people across the world, a presence that will likely increase in the near future (Dwivedi & al., 2020). Organizations can benefit from the inclusion of social media in their marketing strategy to connect with customers, promote their brand, influence consumers' attitude, and receive feedback (ibid.). In particular, studies have pointed out the positive effect of social media marketing on building customer retention and increase consumers' attitudes towards online shopping (ibid.).

Within research on food systems, multiple studies have stressed the key role played by social media in communicating about food and raising awareness about food-related issues, given social media strengths such as speed, accessibility and interaction (Rutsaert et al., 2014). As

regards SFSCs, it has been noted that ICT technology and social media represent a useful source of support for connecting producers and consumers (Vittersø & et al, 2018). Although lack of technological skills often may hinder farmers' use of these types of tools, they constitute a great opportunity to foster the uptake of SFSCs initiatives. The pilot action started from this theoretical premise, to assess the potential of smartphone applications to foster connections between farmers in the Campagna Amica network and Italian consumers.

2.4 Knowledge background of Coldiretti

The design of the pilot action was also informed by previous research conducted by Coldiretti. In 2014, the organisation conducted a series of surveys administered through a consultancy company, gathering data on farmers and consumers attending the farmers' market of Campagna Amica.

This initial study explored consumers' and farmers' behaviour and opinions on the specific form of SFSC that are the farmers' market belonging to the network of Campagna Amica. A first insight deriving from the study related to the geographical scope of the Campagna Amica initiative. It was noted that the network of Campagna Amica was mainly developed in the North of Italy, with 48% point of sales in the North, 26% in the Centre, and 26% in the South. This is despite the South having a larger territorial surface and a higher number of inhabitants than the Centre. Figure 2 shows the number of Campagna Amica initiatives for each Italian region.

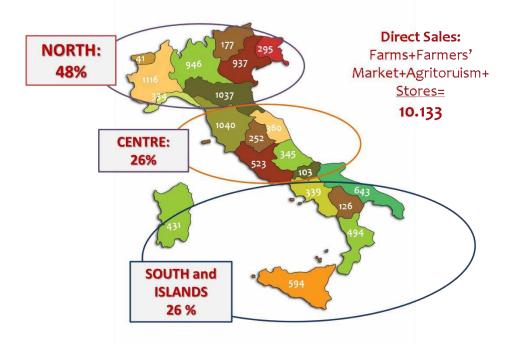


Figure 2. The network of Campagna Amica in 2014

Source: Campagna Amica

Secondly, the survey investigated consumers' motivation to shop at farmers markets of Campagna Amica, and was based on 500 responses collected in all the Italian territory. It

highlighted that consumers choose the FMs of Campagna Amica mainly because they can find seasonal, local and fresh products, with a good price/quality ratio. Another important result emerging from the survey was consumers' appreciation of the possibility to have direct contact with producers. Table 1 provides a summary of consumers' motivations.

When choosing a farmers' market, how important are the following aspects?	ng Average (Score 1-10)
Seasonal products	8,7
Product km0 and from regional area	8,6
Good price/quality ratio	8,6
Direct contact with producers	8,3
Affordable price	8,2
Wide range of products	7,5
Welcoming environment	7,5
Pleasant atmosphere	7,1
Original/unusual supply	7,1
Location and setting of the market	7,0
A good opportunity to spend time with family	6,1

Table 1. Consumers'	motivations to	o attend FMs of	Campagna	Amica in 2014
	mou varions u	<i>u</i> ttend 1 1015 01	Cumpugnu	milleu in 2011

Source: Campagna Amica

As regards farmers, the survey was based on 700 responses. It revealed that the main advantages for farmers participating in the FMs of Campagna Amica were the turnover increase (according to 64% of respondents) and the certainty of selling their products (60%), followed by the possibility to sell at a higher price (18%) and to promote their own farm and products (9%).



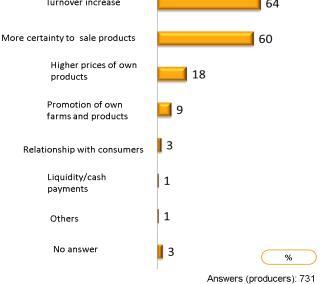


Figure 3. Farmers' advantages connected to participation in FMs of Campagna Amica in 2014 Source: Campagna Amica

Besides advantages for farmers, the survey also analysed the changes in farm management that farmers introduced in order to participate in Campagna Amica FMs. According to 40% of respondents, farmers had to increase the workforce of the farm, in particular to reinforce the production and sales phases, in order to cope with the increased food production and the expanded range of products. Another reason for intensifying the workforce was the need to personalize the products and to invest in food packaging and labelling.

Overall, the findings from these surveys aligned with existing insights in academic literature. Both sources stress the economic benefits for producers deriving from the participation in SFSCs, as well as the benefits for consumers related to the quality of products. In the context of the S2F project, Coldiretti's background experience aligned with the results produced through the qualitative and quantitative assessment of the impact of SFSCs (WP7).

3 Methodology

3.1 Data collection

The pilot action has been conducted with the aim to investigate whether and to what extent the use of digital tools could increase consumers' knowledge of FMs and SFSCs and, through this, contribute to their development in less disadvantaged areas. In particular, the pilot aimed to assess the extent to which the use of the smartphone application Campagna Amica could foster consumers' knowledge and participation in FMs in the South of Italy.

To this aim, the pilot action entailed three phases: a survey of consumers and producers attending the FMs of Campagna Amica; a promotional campaign of the application Campagna Amica through the distribution of flyer, social media posts and newsletter; and a second survey on consumers and producers to assess the impact of the promotional campaign. However, due to Covid restrictions, the second survey design had to be changed to reflect the changing circumstances and the inability to administer questionnaires at FMs due to social distancing measures. The changes in design are presented in detail below (section 3.1.3: Changes implemented following Covid restrictions). The full text of all the questionnaires, both the original Italian versions and the English translations, are provided in the Appendix section.

3.1.1 Phase 1: the survey

The first phase of the pilot action aimed to collect background data on producers' and consumers' behaviour and opinions about purchasing habits in SFSCs, and in particular in farmers' markets.

Based on the objective of the pilot to stimulate SFSCs in economically disadvantaged areas, the pilot action was implemented in four regions of South Italy. This choice was motivated by the need to foster the presence of SFSCs initiatives in areas where they are less common, despite significant demand registered by Coldiretti local branches³.

The following regions and towns have been selected:

³ Coldiretti is organized in a network of local branches widespread in all the Italian Territory, even small villages in rural areas. These register and report perceptions, requests, and needs expressed informally by producers and consumers within Campagna Amica network.

- Basilicata: Matera, Potenza
- Calabria: Catanzaro, Vibo Valentia, Lamezia Terme
- Puglia: Mesagne, Lecce, Foggia, Giovinazzo, Taranto
- Sardegna: Cagliari, Serlargius, Quartu San'Elena, Pirri, Sant'Antioco, Iglesias, Nuoro, Oristano, Olbia, Sassari



Figure 4. Targeted regions of the pilot action

Source: own elaboration

The questionnaires used in the survey were developed in coordination between Coldiretti and UniPR. More specifically, three different tools were developed: two for consumers and one for producers.

As regards the work targeting consumers, the two questionnaires differ for the number of questions included: a shorter version was used to allow the collection of data from consumers with less time to spend in this activity. Consumers in fact were asked to fill in the questionnaire while doing food purchases. This request, as Coldiretti verified on other occasions, limits the availability of people to fill in the questionnaire, thus a shorter version of the research instrument allowed to include a higher number of consumers.

The questionnaires were administered face to face in March 2017, with participants asked to fill in the answers by themselves. Interviewers gave them an explanation about the project and the tools and remained available, during the survey, for any questions or doubts. Interviewers were provided by Coldiretti with a short training on how to intercept consumers/producers and a guideline with some instructions on how to conduct the survey.

In particular, for consumers, interviewers were asked to collect at least 10 long questionnaires and 50 short questionnaires. The interviewers informed consumers about the privacy policy, explaining that no personal data was going to be collected, that the information collected was going to be analysed in an aggregate and anonymous way, making it impossible to correlate responses and individual questionnaires. Once the questionnaire was filled, the interviewers checked if all the questions had an answer and, if not, asked the consumers to fill the empty field/s.

Interviewers were also asked to involve different types of consumers:

- 8-10 young women (approximately under 40)
- 8-10 middle-aged women (40-60)
- 8-10 old women (over 60)
- 6-8 young men (approximately under 40)
- 8-10 middle-aged men (40-60)
- 8-10 old men (over 60)

With reference to farmers, the research included managers, owners, and personnel responsible for the farm, thus persons directly involved in the management of the farm. These respondents were properly selected thanks to the help of colleagues of the local branches of Coldiretti, which have direct knowledge of the farmers present in each FM. Also in this case, farmers filled in the questionnaire during the opening time of their selling activity: interviewers were trained to administer the questionnaires while farmers were less involved in selling activity, explaining that filling the questionnaire did not require more than 5-8 minutes. The producers filled in the questionnaire by themselves. A precise pick-up time was fixed. The interviewers informed producers about the privacy policy, explaining that data was analysed as aggregated and anonymously. In order to avoid producers being interviewed twice, interviewers involved in the activity had the list of producers with the indication of those who had already received the questionnaires and those who had delivered them.

At the end of this phase, Coldiretti collected 351 questionnaires compiled by consumers and 225 by producers.

3.1.2 Phase 2: promotion of the application

The second phase of the pilot action entailed the promotion of the smartphone application through flyers, social media channels (mainly Facebook and Twitter), and the newsletter of Campagna Amica targeting consumers. The promotion started in December 2019, with a first newsletter inviting consumers to download the application through a QRCode (available both in the iOS and Android versions)



Figure 5. Promotion of the application in the newsletter

The promotional campaign continued with the distribution of flyers from mid-January 2020 to the end of February 2020 in the towns of the four regions listed above. In line with the newsletter, the flyer invited consumers to download the application Campagna Amica through the QRcode. However, while the newsletter was targeted to consumers already aware of the initiative Campagna Amica, the flyer was addressed to a broader audience of consumers. For this, it made explicit mention of what Campagna Amica is, defining it as "the biggest network of short supply chain under the same brand" including "farmers' markets, farmhouses, farms and much more" (Flyer text). Moreover, the flyer included a screenshot of the application instead of a stylized graphic as in the newsletter, as shown in Figure 6.



Figure 6. Flyer used to promote the application

3.1.3 Changes implemented following Covid-19 restrictions

In the original design, the pilot action should have continued with a Facebook campaign to promote the application and invite consumers to participate in FMs; however, the Covid-19 pandemic strongly impacted the implementation of the action and the online promotion was interrupted. With the start of the lockdown measures in Italy in March 2020, FMs closed and people's movements were restricted to a minimum. For this, promoting participation to FMs in that period was thought to be ineffective.

Despite social restrictions, though, the short supply chain initiative of Coldiretti and Campagna Amica continued to work, showing the value of an organized network. During the months of the lockdown, the Campagna Amica network set-up an initiative, named "Spesa contadina a domicilio" ("Farm produce delivered to your door"), that consisted in: i) farmers involved in FMs, closed because of the Covid-19 pandemic, providing their products to Campagna Amica for direct delivery of food boxes to consumers' houses; ii) farmhouses belonging to Terranostra⁴ and Campagna Amica network delivering ready-made meals to consumers. In parallel, the

⁴ Terranostra is an association founded by Coldiretti, which promotes responsible tourism in rural areas, fostering the consumption and the direct sales of agricultural products of the season and promoting environmental awareness.

smartphone application was updated with information about those farmers who were available to provide home food delivery, in order to allow consumers to get in touch with them. Both these initiatives allowed producers to sell, and consumers to buy fresh products despite the real difficulties in accessing the markets from both sides.

Once the FMs re-opened in May 2020, however, the context of markets was so deeply changed that the pilot action had to be reshaped. Because of newly formed hygienic guidelines and the restrictions due to social distancing, it became unfeasible to ask consumers and producers to fill in the questionnaire while they were doing food purchases and selling food products. In addition, given the changes in consumers' food choices and food purchasing habits (for example, more frequent meals at home, the possibility to spend more time cooking and preparing complete meals, etc.), it was noted that a meaningful comparison of data in terms of participation to FMs before and after Covid restrictions was not possible.

For these reasons, the third phase of the methodology was reshaped, and the pilot action continued with the promotion of the application associated with an online questionnaire for consumers. This aimed at investigating the new uses of the application Campagna Amica, such as findings farmers belonging to the network and buying directly from them.

The revised strategy to promote the application included the following steps:

- 1. Each weekly issue of the newsletter, from the end of July 2020 until the end of October 2020, contained a banner with the QRcode to download the application and an invitation to consumers to fill in the questionnaire.
- 2. An advertising campaign via the Facebook profile of Campagna Amica ran from the 8th of August 2020 until the 13th of September 2020, containing the QRcode to download the application. This was targeted to users aged from 18 to 65, from the 4 selected regions of the pilot, with interests in food, farmer's market, agritourism, Km0, open air activities, and organic farming. No distinction of gender was made in targeting consumers.
- 3. In the months of August, September, and October 2020, on the Facebook profile of Campagna Amica, a not-paid post per month was published inviting to download the application and to fill in the questionnaire
- 4. At the end of October 2020, an advertising campaign via the Facebook profile of the Strenght2Food project targeted Italian consumers with an interest in sustainability, local foods, organic foods, farmers markets.

At the end of these promotion activities, analysis was performed on all data collected. The sections below present the results based on the analysis of the first questionnaire administered to producers and consumers, and of the metrics of social media, newsletter and Google analytics of the website, as well as of the second online survey.

4 **RESULTS AND ANALYSIS**

4.1 Results of the first survey

The first survey conducted in 2017 involved 351 consumers and 225 producers attending the Famers' Markets of Campagna Amica in the selected towns listed above; it provided an empirical overview of the sustainability of this particular form of SFSC.

The profile of the interviewees

Consumers

The majority (66,6%) of the consumers involved in the survey were women, 49,2% aged between 45 and 64, and 45,3% employed. In terms of education, 70% of the interviewees had a quite high level of education (45,1% secondary school diploma; 26% a higher education degree). In terms of the number of family members, 31,3% of the respondents had a family with 3 people and 29,1% with 4 people. In terms of economic level, 60% had a family income which allowed them to live serenely without particular economic problems.

Investigating consumers' opinions about different aspects of their relationship with food, the survey was instrumental in building a picture of consumers' interests and perceptions about food. From the analysis of the results, it emerged that most consumers participating in FM are interested and aware of what they eat, with 88% of consumers stating they proactively look for as much information as possible about products, origins and quality of food. Being attentive to quality and origins, 80% of consumers disagreed about choosing food just according to the cheapest price. Figure 7 shows in detail the responses to the statements included in the questionnaire.

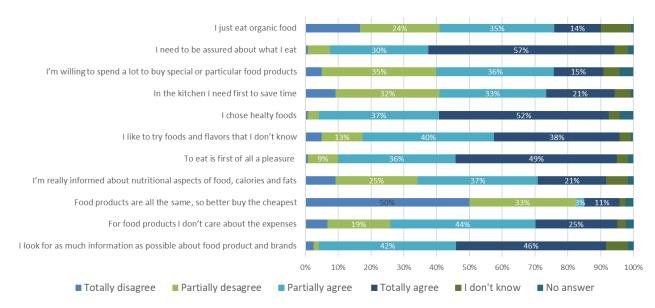
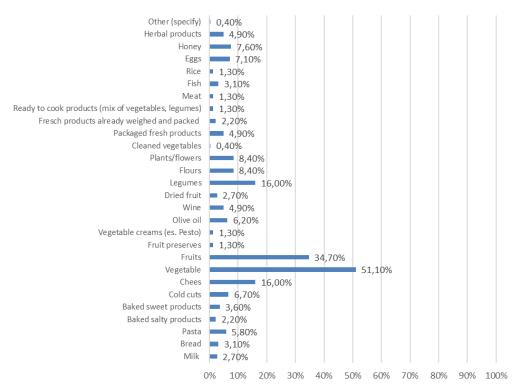


Figure 7. Consumers' opinions on food and food habits

Source: own elaboration

Producers

The producers interviewed were mainly male (74,20%), aged 35-54 (59,5%). Most of them (63,5%) stated to sell their products also in FMs different from the one in which they were interviewed. The most common products present on their shelves were vegetables (51%) and fruits (34%), followed by cheese and legumes (16%).



Which products are present on your shelves? (%)

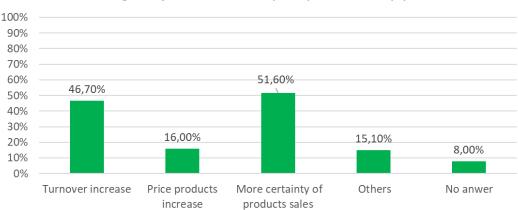
Figure 8. Basket of products sold by producers

Source: own elaboration

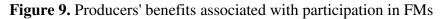
According to 42.2% of the respondents, their agricultural activity generated an income that allowed them to live serenely without particular economic problems. However, according to another 33,30 % of producers, the income generated by their activities was just sufficient to cover the expenses or not sufficient at all.

Results

Analysing producers' perspectives on the economic sustainability of FMs of Campagna Amica, data collected illustrate a positive economic performance. Participating in FMs reported two main benefits connected to participation in FMs: the certainty to sell their products (51.6% of responses) and the turnover increase (46.7% of responses), which is estimated by producers between 11% and 30%.

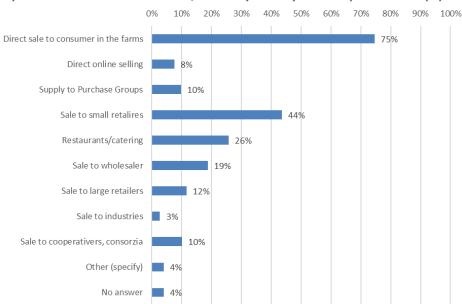


Which advantages do you obtain from the participation to FM? (%)



Source: own elaboration

As reported by existing literature and previous knowledge of Coldiretti, producers often combine different supply chains and distribution channels. This is true also for the network of Campagna Amica, where FMs are not the only marketing option for producers. Most producers usually sell their products also through other channels, for example, direct sales to consumers (75% of producers) and sales to small retailers (44%). Other common marketing channels include restaurants, caterers and wholesalers.



Apart from the direct sales in FM, who do you sell your food products to? (%)

Figure 10. Sales channels used by producers

Source: own elaboration

Participation in FMs is also associated with several changes in farm management. The most common change is the increase of the workforce employed within the farm (reported by 29.8%

of producers), needed to cope with the increased demands of production, marketing and sales management. Another 38.7 % of respondents reported they had to change the way workforce was organised, without employing more staff.

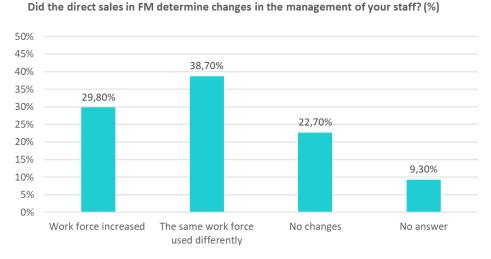


Figure 11. Changes in farms management due to participation in FMs

Source: own elaboration

In terms of evaluating the economic performance of producers, questions about purchasing habits of consumers were useful. Asked about the frequency of the shopping at FMs, 75% of consumers reported to be a weekly attendee thus a regular customer; 78.9% would recommend the FMs to relatives and friends; 80% affirmed to be sure to return in the FM. Significantly, when asked about their willingness to keep purchasing at the FMs if the prices went up, the majority of consumers (51,6%) affirmed they would continue to buy in the FM even if the price of the products increased by 5%.

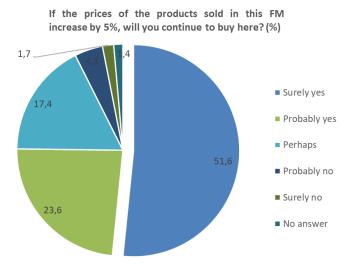


Figure 12- Consumers' reaction to price increase in FMs

Source: own elaboration

From an environmental perspective, the sustainability of FMs and SFSCs is linked to the attention to seasonality of products and respect for local environments and biodiversity. When asked about the main reasons for choosing consumption at FMs, consumers selected the availability of seasonal products as the most important reason, followed by the origins of products from the local area. Given that consumers at FMs buy mostly vegetables and fruits, as reported above, the aspects of seasonality and local origins are not surprisingly the most important ones. In this sense, consumers' perceptions of participation in FMs are connected to highly relevant dimensions of environmental sustainability.

	Average 2017	Average 2014*
Direct contact with producer	9,01	8,35
Product km0 and from regional area	9,21	8,75
Products of the season	9,24	8,90
Good price/quality ratio	8,84	8,70
To know that farmers in the FM are controlled	9,20	n/a

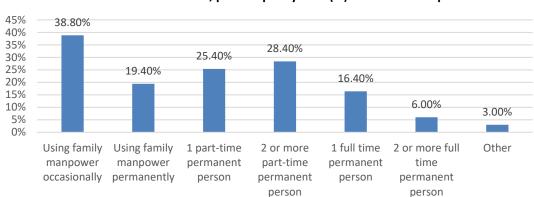
When choosing a farmers' market, how important are the following aspects?

Figure 13. Reasons for consumers to choose FMs

Source: own elaboration. Likert scale 1-10

Environmental sustainability is also linked to the producers' performance at the production end of the chain. Even if not directly emerging from the data, Coldiretti and Campagna Amica have first-hand evidence of producers' expansion of the range of products offered to meet consumers' demand. This implies that producers cultivate a wider range of products, and are involved in rediscovering niche productions, using old seeds or almost abandoned cultivation, with positive impacts on the biodiversity of the territory. This is particularly important considering the location of the FMs involved in the pilot action, which are in marginalized areas at higher risk of abandonment and environmental degradation.

Finally, from a social perspective, the main positive result is the increase of job opportunities in these marginalized areas, linked to the higher demand of workforce. While in some cases (38%) the higher demand for workforce is managed within the family, with more members of the family contributing to the management of the farm, most respondents (53,8%) employ 1 or 2 part-time permanent staff.



If the workforce increases, please specify how (%) More answers possible

Figure 14. Higher demands of workforce

4.2 Results of the promotional campaign and the second survey

4.2.1 Promotional campaign of the smartphone application

The first phase of the promotional campaign of the smartphone application Campagna Amica entailed the distribution of 200.000 flyers, operated by the farmers themselves. In this way, the farmers played a key and protagonist role as promoters of the application, making the most out of the direct link with consumers that is one of the strengths of SFSCs.

In the second phase, after the lockdown and social distancing restrictions imposed by the Covid-19 pandemic, the promotion of the application continued online, through Coldiretti's newsletter and a Facebook communication campaign. For these changes, it was not possible to evaluate the impact of the offline promotional campaign, as the means and modes of the promotion changed drastically throughout the pilot action. Therefore here, we focus on the findings related to the online promotional campaign. Tables 2 and 3 offer an insight into the statistics of the newsletter, both in 2019-2020 (Table 2) and in the months of the promotional campaign (Table 3).

Months	Sent	Delivered	Opened	Click on	Delivery rate	Open rate	Click Rate	Click-to- Open Rate
Jan-Dec	2.614.410	2.563.973	530.122	55.540	98%	23%	3%	10.84%
Jan-Nov	2.593.535	2.470.017	563.169	54.925	98%	23%	2%	9.60%
J	an-Dec an-Nov	Ian-Dec 2.614.410 an-Nov 2.593.535	an-Dec 2.614.410 2.563.973	Ian-Dec 2.614.410 2.563.973 530.122 an-Nov 2.593.535 2.470.017 563.169	Image: Constraint of the state of	Vionths Sent Delivered Opened Click on rate fan-Dec 2.614.410 2.563.973 530.122 55.540 98% fan-Nov 2.593.535 2.470.017 563.169 54.925 98%	Vionths Sent Delivered Opened Click on rate rate fan-Dec 2.614.410 2.563.973 530.122 55.540 98% 23% fan-Nov 2.593.535 2.470.017 563.169 54.925 98% 23%	Vionths Sent Delivered Opened Click on rate rate Rate (an-Dec 2.614.410 2.563.973 530.122 55.540 98% 23% 3% (an-Nov 2.593.535 2.470.017 563.169 54.925 98% 23% 2%

Table 2. Statistics of the newsletter in 2019-2020

Source: own elaboration

Table 3. Statistics of the newsletter in the promotion period

Year	Months	Sent	Delivered	Opened	Click on	Delivery rate	Open rate	Click Rate	Click-to- Open Rate
2019	Jul - Nov	886.456	862.236	177.320	18.100	97%	22%	3%	11%
2020	Jul - Nov	906.299	830.117	160.456	14.143	97%	20%	3%	9%

Source: own elaboration

In 2019, open rate for newsletter ranged from 19.3% to 45.8%, while click rate varied from 1.4% to 4.3%. In the following year, rates were similar, ranging from 18.4% to 31.8% for open rate and from 1.1% to 6.3% for click rate. These parameters correspond to the subject industry (agriculture and food services) average values (Mailchimp, n.d.), indicating correct positioning and content providing of the Campagna Amica newsletter.

Data related to the period of the promotional campaign reveals that the newsletters that captured the greatest level of interest were named "Home delivery: food and dishes", while the newsletters capturing the lower level of interest were focused on broader topics, such as biodiversity and specific food item (e.g. melon, tomato, etc.). This finding should be understood in terms of a new interest in home delivery and online shopping among consumers during the months of the Covid restrictions.

As regards the Facebook page, followers went from 74,500 in October 2019 to 90,733 in October 2020, thus gaining 16,233 followers. In terms of reach of the posts, it went from 5 million users in 2019 to 8 million in 2020. The advertising Facebook campaign reached 408,499 persons, received 1,921,957 impressions and counted for 10,343 clicks on the link to download the application. The typology of users reached was 73,3% female and 26,7% male, more than 20% aged between 55 and 64, with 80% of visualizations from mobile devices.

The effects of promotional activities of Campagna Amica are demonstrated in the increased traffic to the website in 2020. For instance, the highest number of users and sessions in 2019 was recorded on the 30th of August, counting 4846 users and 5044 sessions. Linked to the multi-channel promotional campaign, these numbers quadrupled on the 22nd of March, 2020 – the day with the heaviest traffic in the subject year. Furthermore, Google Analytics data showcase differences in website visits according to seasons, noting peaks in March and April and low season in autumn-winter months (starting from October and lasting until February).

In terms of the number of downloads of the Campagna Amica application in specific months, these went from 6,229 (February-October 2019) to 13,149 (February-October 2020), more than doubling the results. In terms of total numbers of downloads of the application, at the end of December 2019, downloads were 13,250, while at the end of October 2020 they were 26,401. Moreover, during the promotional campaign, 23,187 have been the updates from those who had already the application.

Period	Period Number of downloads 2019	
February-October	6,229	13,149
Total number of downloads	13,250	26,401
	(iOS 6,740; Android 6,510)	(iOS 10,680; Android: 15,719)

Table 4. Number of downloads of the application in 2019 and 2020

Source: own elaboration

4.2.2 Results of the online survey

During the online promotional campaign on Facebook and through the newsletter, a link with an online questionnaire was shared among consumers and supporters. The aim of the questionnaire was to assess consumers' uses and attitudes toward the application, as well as further promote its uptake. The questionnaire was completed by 157 users, 67 of which coming from the targeted regions.

Respondents' profile

The sample was composed of similar percentages of female and male consumers (53% and 46%, respectively) with the same number of males and females (49.3%).

 Table 5. Profile of respondents: gender

Gender	Total	Targeted Regions
F	53%	49.3%
М	46%	49.3%
N/A	1%	1.4%

Source: own elaboration

In terms of age, most respondents fall into an age range compatible with food purchase responsibilities (45-54 and 35-44). This is even more evident in the targeted regions, where the group of "over 64" is less represented. The age range of 18-24 is the least represented, with only below 2% of respondents.

Table 6. Profile of respondents: age range

Age	Total	Targeted regions
18 - 24	1,9%	1,5%
25 - 34	14,0%	14,9%
35 - 44	22,9%	28,4%
45 - 54	33,8%	37,3%
> 64	21,7%	14,9%
N/A	5,7%	3,0%

Source: own elaboration

Almost all respondents have a high level of education (96%) and more than half has a remarkably high level (52%). The results do no change when taking into account the overall answers or the specific targeted regions. These findings align with Coldiretti's previous and recurring analysis of consumers attending the FMs of Campagna Amica.

Education	Total	Targeted regions
Until middle school	3,8%	4,5%
Until high school	44,6%	43,3%
Bachelor degree or above	51,6%	52,2%

Table 7. Profile of respondents: level of education	Table 7. Profile	of respondents:	level of education
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Source: own elaboration

Food purchase habits

In terms of food purchase habits, the questionnaire assessed the frequency with which consumers shop at five different sites: on farm point of sales; farmers' markets'; solidarity purchase group/box schemes; supermarkets; online; and local markets. It does not surprise that the supermarket is the most frequently used channel by most respondents, on a daily and weekly basis. Conversely, some channels are less widespread: the purchase group/box scheme is the least common channel (more than 70% of respondent never used it) followed by online food purchase (more than 50% never used it) and the general local markets (the percentage moves from 44% to 52% when analysing the overall answers and the targeted regions).

With the exception of solidarity purchase groups, it is noteworthy to stress that other forms of SFSCs are quite common, especially in the targeted regions. The "On farm" channel is used weekly by 28% of respondents from the targeted regions. This percentage decreases to 20% when analysing the total answers. With reference to the Farmers' Markets, 46% of respondents from the targeted regions report shopping there on a weekly basis. It is important to notice though that FMs are generally opened once or twice a week, thus making the participation to FMs on a daily basis not realistic. It is also interesting to notice that the percentage of consumers attending FMs on a weekly basis is the same of consumers using supermarkets on a weekly basis (46% in the target regions).

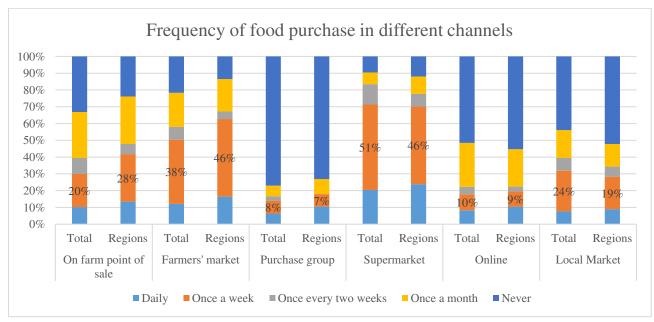


Figure 15. Food purchase frequency and channels

Source: own elaboration

With specific reference to food purchase habits during the lockdown, it appears quite clear that ordering by phone and email or using dedicated online tools and applications is not (yet) a common habit among respondents, as most of them reported they never used these means for their grocery shopping. An interesting result, however, emerges from the answers related to the option "Phone call/email to a farmer with home delivery". This purchase method appears to be frequently used, on a weekly basis, especially in the targeted regions (43% of respondents). The interesting aspect is that the "phone call/email" option is more used with farmers than with supermarkets, confirming the importance of direct contacts and personal relationships as a factor of sustainability and resilience of SFSCs.

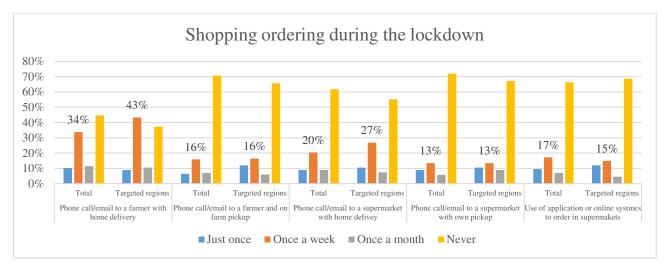


Figure 16. Shopping ordering during the lockdown

Source: own elaboration

These results align with what previously reported about the weekly shopping preferences, as FMs are generally opened just once a week and, according to Coldiretti's experience, consumers usually buy there their grocery shopping on a weekly basis. During the lockdown, with FMs closed, consumers did not totally change their habits, choosing to keep preferring foods bought directly from farmers. Therefore, Coldiretti's choice to make farmers' contacts available through the application was instrumental in consumers' ability to contact farmers and keep purchasing local food.

Knowledge of the application

Beyond food purchasing habits and preferences, the questionnaire also focused on the knowledge and uses of the Campagna Amica application. Most people interviewed reported knowing the application (56%), but only a few consumers reported using it often (16%). It is noteworthy to stress, however, that the percentage of consumers aware of the application in the targeted regions is higher compared to the general population (65,7% and 56%, respectively).

Table 8. Respondents' knowledge of the application

Knowledge and use of the application	Total	Targeted Regions
Yes and I usually use it	16%	16,4%
Yes, but I do not use it very much	40%	49,3%
No	44%	34,3%

Source: own elaboration

When asked "how did you hear about the application?" consumers could choose between five options: Coldiretti newsletter; social media; word of mouth; suggestion from farmers; and printed materials. The newsletter, social media, and word of mouth resulted to be the most common channels through which respondents learned about the application. The newsletter revealed to be particularly effective, selected as a key channel by 50% of the respondents (52% in the targeted regions). Conversely, social media revealed to be less impactful, even despite the promotional efforts of the targeted campaign on Facebook, as only 23% of respondents (16% in the targeted regions) selected this option.

Sources of knowledge	Total	Targeted Regions
Newsletter	50%	52,3%
Social media	23%	15,9%
Word of mouth	17%	18,2%
Suggestions from farmers	1%	2,3%
Printed materials	9%	11,4%

Table 9. Sources of knowledge of the application

Source: own elaboration

Use of the application

The questionnaire also asked consumers "when did you start using the application"? to assess the use of the tool in time. The answers to this question were limited to those consumers who reported to know the app (excluding negative responses to the question "did you already know and use the application?") and varied according to the general population and the targeted regions. Among the total number of respondents, the two most selected options were "a few days ago" (23%) and "last year" (22%). In the four targeted regions, most respondents reported having been using the application since last year (25%), showing a higher level of previous knowledge and use of the application. Interestingly, a portion of respondents (15% in the general population and 14% in the targeted regions) stated they started using the application since the lockdown.

Strength2Food

Starting time in the use of the application	Total	Targeted Regions
Few days	22,7%	13,6%
2/3 years	13,6%	13,6%
Since its launch, in 2015	9,1%	6,8%
When the lockdown started	14,8%	13,6%
Since last year	21,6%	25,0%
I do not know/not remember	18,2%	27,3%

Table 10. Starting time in the use of the application

Source: own elaboration

This result can also be read in relation to consumers' general uses of smartphones. When asked about the main uses of mobile devices, consumers could choose among several services, including the purchase of food. Not surprisingly, most consumers reported using mobile devices mostly as a search engine (93%) and as a chat and conversational tool (88%). Only 31% of respondents used them for the purchase of food items (decreasing to 28% in the targeted regions).

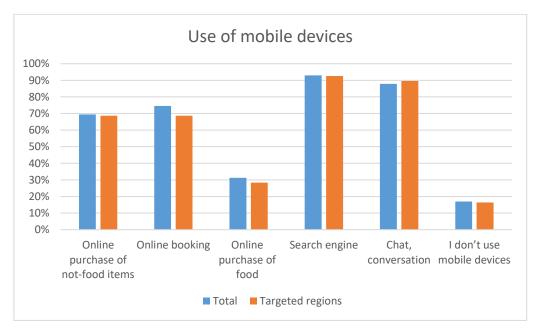


Figure 17. Main uses of mobile devices among respondents

Source: own elaboration

In order to assess the use of the application during the lockdown, consumers were asked which functions of the app they used the most. The key functions available were: contacting farmers for home deliveries; identifying farmhouses belonging to Campagna Amica; discover new foods and recipes; find information about local food and farmers. Not surprisingly, the two most common uses were the identification of nearest FMs (61%), and search functions for local food

and farmers (43%), in line with the common uses of the application prior to Covid restrictions. However, the interesting result is that 44% of respondents used the app also to contact farmers offering home deliveries. This function was not available before Covid restrictions and was implemented in the app as a way to foster connections between producers and consumers despite the social distancing rules and the closure of FMs. This result showed the high potential of this type of application to reconnect consumers and producers in times of insecurity and crises.

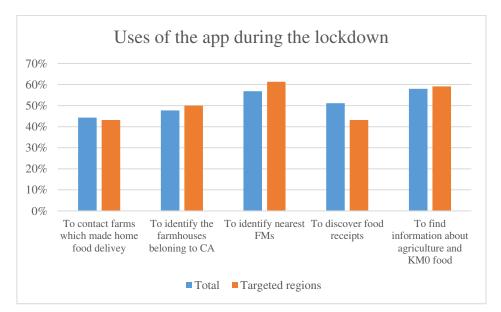


Figure 18. Uses of the application during the lockdown

Source: own elaboration

Consumers' satisfaction and usefulness of the application

Almost all of the respondents declared to be satisfied with the application, with the majority declaring to be very satisfied, particularly in the targeted regions (59% of the general population and 66% of the targeted regions).

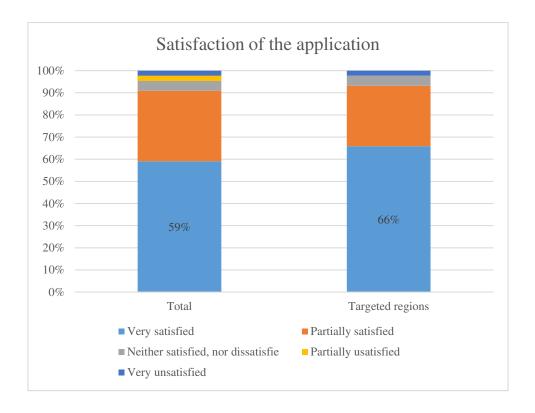


Figure 19. Respondents' satisfaction with the application Source: own elaboration

However, among those who declared this level of satisfaction, just 28% are habitual users. This might indicate a new level of curiosity about the app among new adopters.

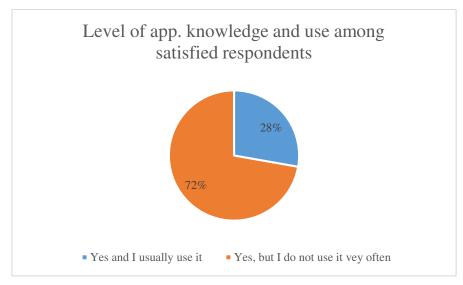


Figure 20. Level of knowledge among satisfied respondents Source: own elaboration

Similarly, overall, respondents also considered the application useful, with a great majority considering it very useful, especially in the targeted regions (75%).

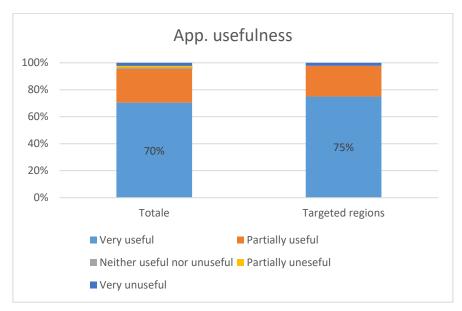


Figure 21. Usefulness of the application

Source: own elaboration

Respondents were asked to rank on a scale of 1 (lower) to 5 (higher) the services they would like to be implemented in the application, among a list of options provided. The most desired functionality was the "online booking of restaurants and farmhouses", especially in the targeted regions, with 45% of respondents ranking this option with the highest value. Secondly, the most desired functionalities were the "queue-cutter system in the FMs of Campagna Amica" and the e-commerce, with percentages that slightly differ when analysing the targeted regions or the total answers. The ranking does not change when analysing together the two highest-ranking levels: the most desired functionality remains the online booking, followed by the e-commerce, the queue-cutter system and a FAQ section.

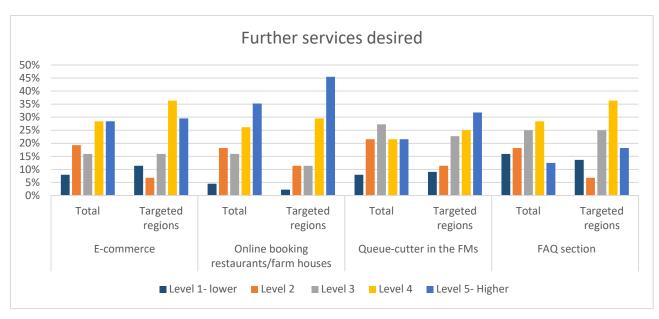


Figure 22. Further desired services of the application

Source: own elaboration

4.2.3 Future directions to improve the application

Through two open-ended questions, we gathered further insights into consumers' perception of the application's usefulness and satisfaction. These relate to three key themes: consumers-farmers connection; health and sustainability; and cultural identity.

The key reason behind the use of the application emerging from consumers' responses is the possibility to connect (or reconnect) with local farmers and local production. Through the range of information provided by the app, consumers gain knowledge of local farmers and products, and this knowledge drives a relationship of trust. Consumers stated that, through the app, they feel closer to farmers, and they feel they can trust products to be genuine, authentic, and safe, as "guaranteed by producers" (user's response). A second key theme emerging from the data related to the ability of the app to promote interest and knowledge for healthy and sustainable nutrition. Consumers stated that the app is a pathway to gather information about products that are local, seasonal, fresh, nutritious and sustainable. This is particularly relevant to the case of urban consumers, who are less easily exposed to local and sustainable production. Lastly, consumers appreciated the possibility of learning local and traditional recipes, which foster a sense of cultural identity and belonging to a territory.

Conversely, users who were not satisfied with the app stressed the lack of interactive functions (such as the possibility to use geolocation for farms and markets) and the preference for different channels to gather information about Campagna Amica, such as the Facebook page or the Campagna Amica website. Above all, the lack of an e-commerce function was stressed as the key reason for dissatisfaction. This connects to consumers' recommendations to improve the app discussed above. Through additional open-ended questions, we asked consumers which features they would like to see in the application. The majority of responses related to the possibility to purchase products through the app, and to access delivery and click-and-collect services. Additional themes are summarised in Table 11.

Г	
E-commerce	•Access to Campagna Amica online store
	• Possibility of buying online food products and collect them at the market
	• Possibility of buying online food products and book a home delivery
Information	• Expand practical information relating to the Campagna Amica network (details, dates and updated times of local farmers' markets; active promotions and sales; average prices of products; information on farms and businesses services and products)
	• Expand broader information on food and nutrition (traditional recipes; the history of local food traditions and production; events for professionals working in agro-food networks; practical tips for healthy nutrition and urban agriculture)
Interactive functions	• Add possibility to search local farmers markets through maps
	• Add possibility to search the closest farmer market through geolocation
	Add discussion forum for consumers

Table 11. Consumers' suggestions to expand the application's functionality

Building from these insights, we developed some future directions to improve the awareness and usage of the app through several different communications strategies.

- Further communication campaigns should be conducted through the distribution of printed material, as well as through social networking, newsletter and editorial information on magazines published online.
- Print materials should be distributed directly on food fairs and farmers' markets, but also through the network of shops, farmhouses and restaurants included in Campagna Amica. Content of the brochures, leaflets, posters, etc., should continue to direct consumers to web media which promote Campagna Amica and healthy nutrition.
- Electronic media may include a broader range of promotional tools: profiles on social networks, online magazines, newsletters and blogs. Coldiretti has already established its presence on many social media, both directly and indirectly, with the profiles of its singular departments, initiatives, and affiliated entities. Coldiretti counts more than 26,000 followers on Twitter and more than 23,000 on Instagram. Campagna Amica counts more than 107,000 followers on Facebook, over 10,000 on Twitter and 15,500 on Instagram. A possible use of these channels could be the creation of photography contests. The management of the campaign could ask participants to post on the official Facebook (or Instagram or Twitter) page of "Campagna Amica" a picture answering the question "What does Campagna Amica represent for you?" or "How did the Campagna Amica application help you in your food choices?".

- In particular, given that the campaign should attract also a younger population (and keeping in mind that new generations are highly visual), the use of Instagram would be significantly useful to promote the application. This could build on the growing interest in food preparation and presentation that has populated online media (a phenomenon known in popular culture and on the social networks as "food porn").
- A healthy lifestyle, and especially the healthy diet of children, has come to the top of European public agendas. In line with that, some promoters of a healthy lifestyle have become increasingly popular, with their appearances in media followed by great numbers of people. Campagna Amica could particularly benefit from collaboration with these celebrities, such as Jamie Oliver, Stephen Ritz, etc. Moreover, Campagna Amica can develop their own blog where nutritionists, school teachers, parents associations, food processors, etc. can share their experiences, initiatives and opinions on healthy local food and sustainable diets.
- Campagna Amica has also the clear intent to educate people to buy local and seasonal products, and therefore it should establish collaboration with schools. Bringing the project into schools could be considered as a long-term investment, since it can help to create more educated citizens who will probably become a future customer of FMs. This recommendation is complementary to task 10.5 of the S2F Project, and it should be especially encouraged in the southern part of Italy, where Campagna Amica needs to be further developed.
- An exploration of the promotion of Campagna Amica through TV format is also worthwhile. More precisely, another way to improve the customer base would be possible through specialized TV shows, given that during the last years we assisted to incredible growth in TV shows about cooking and food (some of them are quite famous, like "Hell's Kitchen" and "Masterchef"). In order to reach large and diverse consumer segments, it would be quite useful if Campagna Amica could be promoted in these TV shows. This would allow informing a great share of the audience interested in good ingredients for their recipes.
- Another way to advertise the campaign could be the presence of stands at various food fairs around the country (after Covid-19 restrictions are lifted) and the organization of cooking workshops and laboratories. In this way people will have the possibility to learn about the project and its mission and they will be also able to taste the quality of the products. Synergies with other Strength2Food work packages can be exercised also with regard to delivering cooking classes in economically disadvantaged areas (see Dev. 9.1 for similar activities in Serbia).

4.3 Lessons learnt from Covid-19 experience

Food habits. The Covid-19 pandemic and related restrictions have affected the food habits of consumers. The lockdown and the social distancing rules have stimulated online grocery shopping for all sectors of the economy, even for food products. Responding to these trends and new needs, the FMs of Campagna Amica, as well as many individual farmers members of the network, have organised home food delivery. Moreover, the farmhouses of Campagna Amica started to deliver ready meals at home. These initiatives originated from the request of

consumers to keep open direct channels with farmers, thus differing from similar services provided by supermarkets and other distributors. Despite the pandemic and all the restrictions imposed to cope with it, consumers still desired to eat genuine, agricultural, ethical, local and quality food. Not only to be sure of the freshness and healthiness of food, but also as a solidarity act towards their community. It can be assumed that even once the Covid-19 emergency will be over, producers will continue to invest in e-commerce, above all fastening delivery times, widening food array, and customising offers.

Food choices. During the lockdown, Italian consumers opted to purchase ingredients to prepare meals (eggs, flour, mozzarella cheese, olive oil, yeast, etc.), more than ready food (bread, pasta, pizza). If in the very first weeks of the lockdown consumers bought durable foods in big quantities, afraid of lack of supplies, in the following months of restriction they opted for ingredients to cook themselves family meals from scratch. If on one side, this choice determined an increase of purchases from farmers for consumption, on the other it could not compensate sales decline in the Ho.Re.Ca. sector (that includes both farmhouses and farmers sales to restaurants and Ho.Re.Ca. operators), bringing to a decrease of Italian food consumption of about 10% (ISMEA, Report Emergenza Covid19, 2020).

Food sociality. The closure of activities, the restrictions to movement, and the smart working forced Italian to consume meals at home, inevitably triggering a change in buying habits. In this context, consumers (re)discovered the value of sharing cooking moments within the family, which positively marked the long days spent at home, but also highlighted the emotional and cultural aspects of preparing food. In the first weeks of the restrictions, farmers belonging to the networks of Campagna Amica who are a chef (within their farmhouses) taught, via several media (social network, presence in national and local television, and the Campagna Amica application), traditional receipts based on local foods.

Food certification. In the last months of 2020, producers of Campagna Amica noticed an increase in demand for organic products, which follows the already established trend for this particular food. In Italy, organic food reached 3.3 billion euros since June 2020, with an increase of 4.4% since the previous year, boosted also by the "green" change fostered by the Covid-19 (ISMEA, Bio in cifre, 2020).

Food origin. Coldiretti and Campagna Amica noticed that the pandemic generated an increased need among consumers of knowing the origin of what they eat. An issue that Coldiretti and Campagna Amica have been following for many years and that brought in 2019 to the European Citizen's Initiative (which allows calling on the European Commission to propose new legislation on a specific issue if at least 1 million citizens sign the petition) to ask the EU to introduce the origin of primary ingredients as mandatory elements in food labelling. Coldiretti and Campagna Amica are truly convinced that consumers, Italian and European, have the right to be protected and to receive complete information about the food they buy. To make informed choices, consumers need to know where the primary ingredients are harvested and processed, the place of origin of the ingredients and more information on production and processing methods. The initiative collected 1.1 million signatures and this result boosted Coldiretti and Campagna Amica to follow even more their strategy to offer 100% authentic Italian, safe, more sustainable food to consumers. If this strategy was already established before the Covid-19 pandemic, it was even reinforced as consumers' expressed even more the need to be reassured about the origin of what they eat. This request found an answer in the direct contact with farmers, who were the first guarantee of the origin of the sold products.

Food waste. The pandemic encouraged Italian consumers to improve their habits to reduce food waste: according to an analysis conducted by Coldiretti, more than 1 Italian out of 2 (54%) has decreased food waste by adopting strategies like the use of leftover food for further meals, deeper attention to expiration dates, and the purchase directly from producers to have fresher and longer-lasting food products.

Food charity. During the lockdown, Coldiretti and Campagna Amica organized several initiatives to donate agricultural food products to vulnerable families, even more numerous because of the economic crisis linked to the pandemic. It was not the first time that Coldiretti and Campagna Amica organized this kind of initiative and Coldiretti was not the only organisation to help families in need. However, the specificity of this scheme is that the food basket delivered to vulnerable people included high quality food products: fresh fruits and vegetables, cheeses, sliced meats, and extra virgin olive oil, which are not generally included in charity initiatives. This type of initiative has been possible only thanks to the presence of an organized network of farmers, as the ones represented by Campagna Amica and Coldiretti, that can provide collective answers to complex problems.

5 CONCLUSION AND RECOMMENDATIONS

Research activity conducted in the framework of the S2F project, as well as previous academic literature, showed that a key feature of several forms of SFSCs is the presence of trust relations among the actors of these chains. The long-lasting initiative conducted by Coldiretti with its foundation Campagna Amica bases its success on this trusting relation among consumers and food systems, which places transparency at the heart of its policies. The formalized common management system of Campagna Amica, made of a set of rules and controls on the farms, and a unique communication strategy towards citizens, are part of the transparency policy of Coldiretti, which is appreciated by consumers themselves.

Transparency addresses consumers' demands for clarity about what they eat, and this has become even more important because of the food scandals that during the past 20 years affected the European food system (BSE-also known as mad cow disease, the avian flu, and the blue-mozzarella, just to mention some) and, more recently, because of the Covid-19. During the most critical weeks of the pandemic, producers of Coldiretti and Campagna Amica noticed an increased request for information about food origin among consumers. This request finds a direct answer when consumers can meet producers, talk with them, and visit their farms, as it happens in short food supply chains. It also finds an answer in all the information and communications activities implemented towards consumers: mistrust often finds its origin in the lack of knowledge. This has been the overall strategy followed by Coldiretti and Campagna Amica over the years, developed even further thanks to the opportunities offered by the most recent technologies, including the smartphone application object of the pilot action.

Findings from the pilot initiative put in evidence that this type of tool contributes to increasing consumers' knowledge about several themes linked to agriculture (nutrition, sustainability, SFSC, origin, food recipes). Consumers stated, through the questionnaire, that the app is a pathway to gather information about products that are local, seasonal, fresh, nutritious and sustainable. This is particularly relevant to the case of urban consumers, who are less easily exposed to local and sustainable production. Moreover, consumers appreciated the possibility of learning local and traditional recipes, which fosters a sense of cultural identity and belonging to a territory.

Moreover, the pilot action also pointed out that the application facilitates the relation between producers and consumers. In fact, beyond the research of information about food and agriculture, the most frequent uses of the application during the lockdown, above all in the targeted regions, have been the identification of the nearest FMs and farmhouses belonging to Campagna Amica. Moreover, even during the lockdown, the application contributed to a closer relationship between producers and consumers, making the contacts of farmers available to consumers to arrange home deliveries. The direct phone call/email order to a farmer has been for a high percentage of respondents the most frequent means of ordering food during the lockdown, above all in the targeted regions, with percentages even higher than direct calls to the supermarket. Consumers themselves, when asked to specify the reasons why they appreciate the application, stated that through the app, they felt closer to farmers, and they felt they can trust products to be genuine, authentic, and safe. This means that this type of smartphone application can be an efficient tool to develop short food supply chains, as it facilitates contacts among consumers and producers, the key feature of SFSCs.

Consumers' retention is another aspect of the relationships among consumers and producers. Any means which could foster this aspect is helpful to establish, develop, and entrench SFSCs and, in this sense, smartphone application can play a key role. Newsletter and social media campaigns also revealed to be useful in promoting the knowledge and use of the application, and appear to be a viable strategy to sensitise consumers to the themes of SFSCs.

However, some improvements to the application are still necessary. The lack of interactive functions is the most critical aspect of the tool, as most consumers pointed out the need to buy online through an e-commerce function. Even if mobile devices appear, from respondents' answers, not frequently used for food purchases, respondents indicated the e-commerce as a highly desired function of the application. Similarly, the possibility to book restaurants and farmhouses belonging to the network of Campagna Amica, and a system to reduce the queue within the markets are considered as missing functionalities.

5.1 Policy and practice recommendations

Based on the results of the pilot action, several recommendations can be developed. They are articulated into two areas: recommendations for practitioners (on management and on marketing/communication) and recommendations for policy makers. Although these recommendations are specific to the Italian context, several of them could be adjusted and applied to several different contexts where networks of organised famers' markets are present.

Recommendation for practitioners

Management

- Create joint/cooperative initiatives to exchange knowledge and share costs, competencies, and products (to increase the range of products sold in FMs), increasing the bargaining power of producers
- Create a common/collective management system of the initiatives which allows making them easily identifiable and recognizable by consumers and works as guarantor towards consumers
- Locate FMs and food fairs nearby other shops/supermarkets, to facilitate consumers' in buying different products in different channels

- Promote the establishment of indoor FMs, to facilitate consumer visits in the winter months, to more easily organize educational activities and gastronomic/cultural initiatives, but also to allow the storage of products and increase the offer of more perishable products (e.g. dairy products, fresh meat, flowers, etc.)
- Make FMs accessible, affordable and attractive for all sectors of the population, not only for the highly educated people
- Promote actions within FMs to reduce waste and increase charitable donations, also in line with the Farm to Fork strategy.
- Be aware of what changes are required to work in a FMs in terms of changes in the workforce, range of products sold, and marketing and communication strategies

Marketing and communication

- Contribute to consumers' education about food: make FMs places of socialization, where consumers can learn about food, healthy eating and sustainable diets
- Promote the use of digital platforms and tools to inform/educate consumers
- Promote the use of digital platforms as tools to connected producers and consumers in times of crises
- Facilitate the development of means of communication, digital ones included, which create consumers' retention and make FMs more economically attractive for producers
- Use communication to create a "feeling of community" within FMs, in order to establish, develop, and maintain a close and authentic relationship between citizens and farmers around positive values
- For those countries where food plays a key role as a cultural feature and which are highly visited by foreign visitors, consider the development of tools like the Application Campagna Amica as an instrument to support tourism in rural areas, allowing users to experience and understand the culinary and traditional feature of a region. In line with this, include also:
 - Events section, regularly updated
 - Local recipes and food itineraries
- As a consequence of the previous, when developing digital means of communication, take into account also potential users coming from other countries as tourists, thus provide contents not only in the national language, but also in English
- Moreover, considering that most international tourists do not have constant Internet access (due to the high costs of roaming services of telecommunications providers), enable the use of this app offline, so to navigate and find points of interest while they are not connected to the Internet.
- Improve professional marketing skills of farmers to understand consumer's needs, choose new opportunities and be able to tell the distinctive characteristics of their product (taste, territory, company history, etc.)
- Invest in engaging digital communication activities to reach new consumers (for example a well-made website, simple but rich in photographs and descriptions to present products, suggest recipes and tell the story of the farm and farmers)
- Invest in e-commerce to develop new sales channels
- Be proactive in organizing and participating in initiatives and events targeted to consumers, jointly with other farmers
- Cultivate resilience and the ability to react to new challenges (such as the Covid emergency), identifying new opportunities in challenging times

Recommendations for policy makers and public authorities

- Increase the number of initiatives of FMs and food fairs within urban areas to boost consumers' knowledge of agricultural products and recipes and promote urban-rural linkages
- Improve (or define) public food procurement procedures that reward those actors using locally sourced products
- Encourage the use of indoor public areas for new FMs
- Assign urban areas nearby other shops/supermarkets to the implementation of FMs, to facilitate consumers' buying different products in different channels
- Promote and/or participate in education initiatives towards citizens to raise awareness on SFSCs related themes (sustainability, biodiversity protection, etc.), encouraging the choice of local and seasonal food products
- Support the establishment of SFSCs initiatives in the broader employment policies in rural areas
- Offer financial support to agricultural producers and FMs, and promote existing initiatives with national and EU funds for the development of direct sales and for promotion and communication campaigns at the national level
- Create a specific permanent observatory on the "short chain" (filiera corta), to learn about all the regional and territorial SFSCs initiatives, to monitor local markets and collect data to develop FMs
- Give SFSCs greater visibility not only at a national level, but also at a community and international level, to include FMs among the tourist circuits in large and small urban centres.

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APPENDICES

Appendix 1:

<u>Consumers' questionnaire (extended) Italian version</u> <u>Consumers' questionnaire (extended) English version</u>

Appendix 2:

<u>Consumers' questionnaire (short) Italian version</u> <u>Consumers' questionnaire (short) English version</u>

Appendix 3:

Producers' questionnaire Italian version Producers' questionnaire English version

Appendix 4:

<u>Consumers' online questionnaire (Campagna Amica) Italian version</u> <u>Consumers' online questionnaire (Campagna Amica) English version</u>



The Strength2Food project in a nutshell

Strength2Food is a five-year, €6.9 million project to improve the effectiveness of EU food quality schemes (FQS), public sector food procurement (PSFP) and to stimulate Short Food Supply Chains (SFSC) through research, innovation and demonstration activities. The 30-partner consortium representing 11 EU and four non-EU countries combines academic, communication, SMEs and stakeholder organisations to ensure a multi-actor approach. It will undertake case study-based quantitative research to measure economic, environmental and social impacts of FQS, PSFP and SFSC. The impact of PSFP policies on nutrition in school meals will also be assessed. Primary research will be complemented by econometric analysis of existing datasets to determine impacts of FQS and SFSC participation on farm performance, as well as understand price transmission and trade patterns. Consumer knowledge, confidence in, valuation and use of FQS labels and products will be assessed via survey, ethnographic and virtual supermarket-based research. Lessons from the research will be applied and verified in 6 pilot initiatives which bring together academic and non-academic partners. Impact will be maximised through a knowledge exchange platform, hybrid forums, educational resources and a Massive Open Online Course.

www.strength2food.eu

