

## Article

# Towards Territorially Embedded, Equitable and Resilient Food Systems? Insights from Grassroots Responses to COVID-19 in Italy and the City Region of Rome

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**Abstract:** The negative impacts of the COVID-19 pandemic have further exposed and exacerbated the structural weaknesses and inequalities embedded in the global industrial agri-food system. While the mainstream narrative continues to emphasise the importance of ensuring the uninterrupted functioning of global supply chains to counter COVID-related disruptions, the pandemic has also highlighted the resilience of small-scale, sustainable family farming and of spatially and socially embedded food systems. Based on a quantitative and qualitative analysis of three surveys, this study examines organic and agroecological farmers' responses to the first COVID-related lockdown (March–May 2020) in Italy, as well as the responses of grassroots alternative food networks (AFN) in the city region of Rome. The results show how local grassroots action played a significant role in ensuring food access, provisioning, and distribution, often in the face of delayed or insufficient action of mainstream food system actors and institutions. These grassroots responses identify opportunities and barriers for agri-food system transformation away from neoliberal, market-based interventions and towards policies that support food sovereignty and democracy in the context of localised, agroecology-based and more resilient agri-food systems.

**Keywords:** local food systems; alternative food networks; COVID-19; food policy; city region food system; organic farming; small-scale farming; food security; resilience

## 1. Introduction

Over the last decades, the negative environmental impacts of conventional agri-food systems have become increasingly apparent, especially concerning biodiversity loss and ecosystem degradation [1,2]. The global food system is also one of the major drivers of climate change, being among the largest contributors to greenhouse-gas emissions [3–5]. At the same time, industrial agri-food systems are also characterised by limited resilience, making them vulnerable to growing climate unpredictability [4] and socio-economic shocks, such as the 2007–2008 global financial crisis and the current COVID-19 pandemic [6,7]. In addition to its environmental shortcomings, the current food system is also proving unable to address the persistence and increase in food insecurity and malnutrition. Healthy diets based on unprocessed and fresh produce, for example, are not accessible for almost three billion people in the world [8].

Many of these environmental and social issues can be traced back to the growing disconnection between food production and consumption caused by the globalisation and corporatisation of agri-food systems [9,10]. It is therefore urgent to redesign our systems of food production, distribution and consumption to ensure the provision of sufficient, accessible and healthy food to the global population while restoring biodiversity and soil health and drastically reducing environmental impacts and dependence on fossil fuels [2,11–14].

The current COVID-19 pandemic—with its unprecedented consequences on social and economic life in most regions of the world—has further exposed and exacerbated the structural weaknesses and inequalities embedded in a global agri-food system designed by neoliberal economics [6,7,15–19]. Efforts to limit the spread of the pandemic have disrupted global supply chains, unveiling the fragility of a supply system that relies heavily on long-distance transportation [7,20,21], while the closure of restaurants and hotels has revealed the dependency of many food producers on specialised supply chains [20]. Impacts on food and agricultural labour have been particularly illuminating; migrant farm workers—whose rights are systematically violated—have emerged as essential actors in food production, while industrial meatpacking plants have hit the headlines as centres of COVID-19 outbreaks due to their inhuman working conditions [7,22–24]. Moreover, similar to climate change, the negative health, economic and social impacts of COVID-19 are disproportionately affecting the most vulnerable segments of the population [25], as evidenced for example by the growth of food insecurity in both in the Global South and Global North [26–28].

Despite the ubiquity and severity of these impacts, however, the pandemic has given rise to clashing narratives between proponents and opponents of the globalised industrial food system. The mainstream narrative, voiced by economic actors and international agencies such as the WTO, the World Bank and parts of the FAO, emphasises the importance of ensuring that global supply chains and international exchange of food products are not interrupted by export limitations [29,30]. This narrative also demands a swift “return to normal”, supported by technological innovations such as digital platforms which have benefited from a significant increase in adoption due to social distancing [20,31].

The opposing narrative highlights the environmental sustainability and resilience of peasant agriculture and of territorially- and community-embedded food systems in both the Global North and the Global South [7]. From this perspective, the COVID-19 pandemic represents an opportunity for re-embedding food systems into territories and redesigning them following agroecological and food democracy principles [19,32]. Critical to this redesign of the food system will be the careful deployment of food policy to enable transition [6].

To discuss the opportunities and barriers for agri-food system transformation arising from the pandemic, this study examines three cases of COVID-related responses among grassroots and alternative agri-food system actors, and their interaction with mainstream actors and institutions. The paper combines three separate but complementary studies: the first two focus on the production side through an investigation of responses to the first COVID-related lockdown among organic and agroecological farmers in Italy. The third zooms in on the municipal level and looks at food distribution and consumption in the city region of Rome during the lockdown. Through the analysis we examine two questions: first, how did alternative and local food network actors in Italy respond to the challenges posed by the first COVID-19 lockdown? Second, what are the implications of such responses for establishing agri-food policies that can ensure resilient, sustainable and equitable agri-food systems by incorporating the agency of local actors and the sustainability of their practices?

The significance of this paper is two-fold: first, Italy was the first Western country to enter a COVID-related lockdown, thus becoming an important testing ground to observe agri-food system responses to the pandemic. Moreover, data for all three surveys were collected during the first (and strictest) lockdown or its immediate aftermath. To the best of our knowledge, no comparable studies have been conducted in this period.

Second, the three surveys illustrate COVID-19 responses among different sets of agri-food actors striving for sustainability (organic/agroecological producers and locally and socially embedded systems of production and consumption) and at two different levels (national and municipal).

The paper is structured as follows: Section 2 reviews previous work on the connection between COVID-19 and food system transformation. Section 3 describes the characteristics of alternative agri-food systems in Italy and the city region of Rome. Section 4 outlines the methodology employed in the three studies. Section 5 presents the results of the three case studies. We conclude with the discussion of how successful grassroots responses to COVID-19 can be scaled up, and which policy instruments could facilitate this process.

## 2. Food System Transformation through the COVID-19 Lens

Calls for food system transformation are increasing every year. Perhaps the most powerful assemblage of evidence supporting the need for a radical transformation of contemporary food systems is presented in the report “Voices from the Ground” [25] by the Civil Society and Indigenous Peoples Mechanism (CSM) that interfaces with the Committee on World Food Security (CFS). The report highlights underlying issues of inequality, market failure and erosion of public policies and also demonstrates how COVID-19 and government reactions have impacted most severely those sectors of the population already suffering from rights violations and marginalization. It also bears witness to the multiplicity of innovative solidarity responses that communities have put in place and proposes policy changes in the direction of more resilient, democratic and equitable food systems. These changes entail breaking away from neoliberal orientations, reaffirming the primacy of the public sphere, rooting policy responses in food democracy and sovereignty, and strengthening food governance.

The High Level Panel of Experts (HLPE) of the CFS makes an important conceptual contribution to food system transformations by adding two new dimensions—*sustainability* and *agency*—to the four existing pillars of food security (availability, access, utilisation and stability). “Sustainability” is defined as “food system practices that contribute to long-term regeneration of natural, social and economic systems, ensuring the food needs of the present generations are met without compromising the food needs of future generations” [13] (p. 10). “Agency”, on the other hand, is described as the capacity of individuals or groups to “act independently to make choices about what they eat, the foods they produce, how that food is produced, processed, and distributed, and to engage in policy processes that shape food systems” [13] (p. 10). These definitions of sustainability and agency resemble the call for sustainability, food sovereignty and democracy that underlies much of the responses discussed in this article.

In addition to these two concepts, *resilience* has emerged as another critical dimension to differentiate alternative food systems from the global industrial regime. Resilience is the ability or inherent quality of a system to deal with change, recover from shocks, and avoid undesirable tipping points [33,34]. A resilient system demonstrates a high degree of diversity, responsiveness to feedback, and capacity to self-organise and learn in response to change [34]. Systems, however, can also be characterised by feedback mechanisms that maintain them in undesirable states, causing the resilience of outcomes that are negative for the society as a whole [35]. For the global industrial food model, the COVID-19 pandemic has further exposed and exacerbated the socio-economic precariousness of overextended supply chains reliant on monoculture agriculture, producers and processors operating on razor-thin margins within volatile markets, and the vulnerability of being entrenched in financial arrangements that subject food systems to the whims of concentrated capital [36]. Despite this situation, feedback mechanisms directed at maintaining dominant economic and financial arrangements (for example, through supply chain consolidation or land-grabbing in the Global South) lock the global industrial regime into a form of “undesirable resilience”, “slowly eroding its own sustainability until a perturbation . . . cause[s] sudden non-linear systemic collapse . . . ” [35] (p. 3).

The global food system has displayed this undesirable resilience during the COVID-19 pandemic as well: the revenue of multinational enterprises in the food retail sector, for example, has increased by almost 9%—and its net operating margin by 26%—in 2020 compared to the previous year [37]. Nevertheless, the pandemic has also underscored the centrality of sustainability, food sovereignty and democracy, and territorial and social embeddedness. Small-scale peasant agriculture promotes resilience by prioritising the co-production of an autonomous resource base, highly diverse production and income streams, and minimising dependency on external inputs and financial arrangements [7,36]. Extending beyond the farm, city region food systems grow resilience by fostering diverse rural–urban linkages, keeping production regional to lessen reliance on distant resources, and supporting participatory governance to yield responsive, integrated policy responses to food system problems [38].

During the first lockdowns at the beginning of 2020, in particular, local level—and often grassroots—responses played a significant role in ensuring food access, provisioning and distribution [39–41]. An FAO survey on urban food systems and COVID-19 [40] demonstrated how food systems in small towns were more resilient to shocks compared to larger urban areas, due to proximity to production areas and shorter supply chains. From this perspective, support for agroecological food production and territorially embedded markets can constitute a response to both the short-term impacts of the pandemic and to long-term agri-food system issues. The COVID-19 crisis is, therefore, an opportunity to endorse a more radical food system transformation agenda, one that builds resilience at all levels by ensuring fairness, promoting environmental and climate change resilience through agroecological practices, rebalancing market power for the public good, and reforming local and international food systems governance [15,16,19,25,31,32,39].

### 3. Sustainable and Local Agri-Food Systems in Italy and the City Region of Rome

#### 3.1. *The Italian Context*

The Italian agricultural sector is characterised by a prevalence of small-scale family farms: 63% of all farms are smaller than 5 hectares, but they occupy only 12% of the total Utilised Agricultural Area (UAA) [42]. The persistence of small-scale and peasant farming, together with Italy's territorial and socio-cultural diversity, has facilitated the preservation of highly diversified farming systems and a variety of traditional cultivars, breeds and production methods [43,44]. Italy is also one of the European countries with the highest proportion of organically farmed areas: as of 2019, certified organic farmland was on the rise and covered 15.8% of the total farmed area [45] (p. 7), compared to 8.5% of total UAA in the EU-27 [46]. The increasing adoption of organic and agroecological approaches among farmers is significant for climate change mitigation and adaptation, as practices such as crop diversification, enhancement of genetic diversity, crop-livestock integration and the organic management of soil fertility can sequester carbon and reduce climate change vulnerability [47–49]. They are also proving vital to ensuring the economic sustainability of Italian small and micro farms, as shown by the growing number of small-scale producers and processors in the national organic statistics [45].

In addition to the growth of the organic sector, it is becoming common among producers to establish economic and relational networks with consumers through short food supply chains. Various forms of alternative food networks (AFNs) have emerged or expanded, from on-farm sales and local markets to Solidarity Purchasing Groups (GAS) and Community Supported Agriculture (CSA) [50]. The creation of these networks is facilitated by the dispersed structure of Italian urban areas, where residential and rural areas co-exist in an urban–rural continuum [51]. Awareness of the importance of preserving urban and peri-urban agricultural spaces for food production, environmental and biodiversity conservation, flood protection and other ecosystem services is now growing, following years of neglect or even dismantling of these rural–urban connections [52]. Such connections are also conducive to the development of AFNs, thus potentially bringing positive impacts both to the local economy and to citizens' involvement in shaping the

local food system [38,53,54]. This configuration can increase agri-food system resilience, food sovereignty and democracy [55] and resonates with the concept of the “city region food system” [38], intended as a regional landscape across which flows of people, goods and ecosystem services are managed within a geographical region that includes an urban centre and its surrounding (semi)rural hinterland.

The growth of sustainable agriculture and AFNs in Italy has been accompanied by a growing demand for progressive public policies that can address existing and emerging agri-food issues [56,57]. Nevertheless, cases of undesirable resilience not adequately addressed by agri-food policies are preventing the transformation of local systems of production and consumption towards more resilient, sustainable and equitable configurations [16]. For example, in Italy farms larger than 50 hectares represent only the 4% of the total but control 43% of the UAA [42], and the number of farm units (notably smaller scale ones) has been sharply decreasing, leading to growing farmland concentration in the hands of fewer and larger farms.

### 3.2. The City Region of Rome

The city region of Rome was chosen as a case study because, despite its 4.33 million inhabitants, it maintains a markedly agricultural character: agricultural areas occupy 45% of the municipal area, and the number of farms increased by 40% between 2000 and 2010 [58]. Rome’s traditional agricultural landscape, called “*Agro Romano*”—which has been preserved also thanks to land occupation movements in the 60 s—is also strongly connected to the city’s identity and history maintains strong linkages with urban areas. The *Agro Romano* is characterised mainly by small-scale, low-capital intensity productions: arable crops, pastures, and, to a lesser extent, permanent crops (vineyards and olive trees) and vegetables.

The city region is characterised by a variety of alternative agricultural initiatives [59] that have emerged over the past decades thanks to the coalescing of grassroots and institutional initiatives advocating for access to land, short value chains and agroecology, three key elements for environmental and food justice movements advocating for food sovereignty [60]. As a result, the *Agro Romano* has become fertile ground for the development of innovative cases of urban and periurban agriculture, often oriented towards agroecological practices. For example, in 2014 the Municipality of Rome promoted the program “Rome, city to be cultivated” for the allocation of public land, aimed at the protection and productive recovery of the *Agro Romano* through the development of multifunctional farms. Urban gardening has also spread, with positive impacts in social and environmental terms: to date, there are around 200 shared green spaces and many types of residential, institutional and informal gardens [61]. In contrast to the national trend, small scale farms have also been increasing in number [58].

Even though around 70% of the total food purchases within the metropolitan area occur through supermarket chains [62], much of the local production is oriented towards local markets; 90% of fresh milk produced in the *Agro Romano*, for example, is consumed within the city and covers more than 70% of demand [63]. Rome’s food system is also characterised by a widespread presence of traditional outdoor markets, an important food provisioning site for many citizens.

At the same time, a range of innovative models of short food chains have emerged [64,65]. Local food initiatives have been initiated by both producers and consumers, often through concerted efforts, leading to short food supply chains whose rationale is to create direct relationships between farmers—who often employ organic or agroecological practices—and citizens. The municipality of Rome counts 33 farmers’ markets (out of the 127 local markets) and 55 Solidarity Purchasing Groups, while 28% of farms within the metropolitan area employ direct selling methods [66]. In the Lazio region, as well as in Rome, the “*Rete di Economia Sociale e Solidale*” (Social and Solidarity Economy Network, RESS), which involves different local Solidarity Purchasing Groups, consumers, producers and suppliers,

as well as organisations and citizen groups, operates with the aim to create new economic networks inspired by reciprocity and solidarity ideals.

To strengthen these efforts, a food policy initiative for the city of Rome has also been recently proposed [59]; while similar initiatives are becoming more widespread internationally [67–69], in Italy this is one of the few food policy initiatives involving a major city. A variety of civil society actors, ranging from social movements to farmers, activists and researchers, came together to create the Rome Food Council, catalysing the many heterogeneous but converging mobilisations and campaigns around food and farming. The development of this initiative has strong grassroots connotations, and its development cannot be separated from the emergence of food-related social movements demanding the revitalisation of local food systems and more democratic models of urban and periurban governance [59].

#### 4. Materials and Methods

The paper builds on the analysis of three surveys that were carried out independently from each other but in close temporal succession. To assess the immediate impact of the first COVID-19 lockdown on the organic sector in Italy, the Italian Foundation for Research in Organic and Biodynamic Agriculture (FIRAB) launched a farmer survey on 25 March 2020, which was solicited and co-promoted by farmers and organisations involved in the organic sector. The survey was posted online and advertised through mailing lists, social media, newsletters and press releases. The questionnaire was designed to identify the scale and type of operational and economic impacts of COVID-19, highlight intended changes in farm management and marketing channels, and indicate priorities for policy response and support. The online survey was closed on April 30, the last working day before the “hard lockdown” was lifted on May 4. The survey received 412 responses from all over Italy.

The second questionnaire survey, promoted by the FEAST (Lifeworlds of Sustainable Food Consumption and Production: Agrifood Systems in Transition) project, was launched when the lockdown was about to be lifted. This survey aimed at capturing COVID-19 responses and adaptive initiatives of family farms using agroecological methods of production as part of an international comparative study. The questionnaire was designed by agri-food system researchers and administered through an online platform. The survey was disseminated through SNSs, particularly thanks to the support of farmers’ groups and associations (formal and informal) that represent peasant and family farming in Italy. It focused on farmers’ concerns about the impacts of the pandemic, as well as on the changes undertaken in terms of marketing channels, logistics, farm and labour management. Respondents’ opinions were also solicited on the future impacts of the pandemic on local agri-food systems. The survey remained open from 24 April to 1 June 2020, corresponding to the latter part of the lockdown and the first month after the restrictions were lifted, and was completed by 103 farmers from most of Italy’s regions. The FIRAB and FEAST surveys addressed similar topics and a similar audience in two consecutive periods. A downside of the online format used by both surveys was the impossibility to reach farmers who do not have an online presence, but considering the lockdown situation, this was largely unavoidable.

The third study used in this paper focused on the metropolitan area of Rome and aimed to explore the impacts of the COVID-19 lockdown on the city’s food system and its dynamics, with a focus on food security. Data were collected through a survey aimed at local experts involved in different aspects of the agri-food system. Experts were defined as individuals with knowledge and experience with the issues under investigation [70]. As such, they were selected among the participants of the Rome Food Council [59], on account of their demonstrated knowledge and continued involvement in agri-food initiatives and issues regarding the city’s agri-food policy. Forms of expert-based analysis have proven to be useful in forecasting situations characterised by incomplete knowledge about a problem or phenomena, such as the COVID-19 pandemic [71]. In line with similar research [70,72,73], respondents were selected purposively to include a diversity of backgrounds (academics,

food producers, agronomists, institutional representatives, and representatives of civil society organisations connected to agri-food issues). The survey was created through Google Forms and disseminated online, mainly through mail invitation. Invitations were sent between April and May 2020 to 200 local experts. By June 2020, 32 surveys had been submitted, a response rate of 16%.

The data collected with the three surveys was quantitatively analysed through descriptive statistics and thematic analysis (for the open-ended questions). The validity of the thematic analysis was checked by having a second independent researcher perform the analysis separately and then comparing the results. For the Rome case study, secondary sources such as internal documents by social organisations involved in the COVID-19 response, policy documents and media articles were also consulted to better frame the survey data and provide a richer picture of the immediate response of civil society and institutional actors.

Because of the time periods they cover, the three studies can be seen as a progression from the first “emotional” responses to the crisis, to coping strategies adopted as a response, up to programmatic grassroots initiatives for the future transformation of agri-food systems. The surveys also capture a multiscale perspective articulated at both local (city region) and national levels.

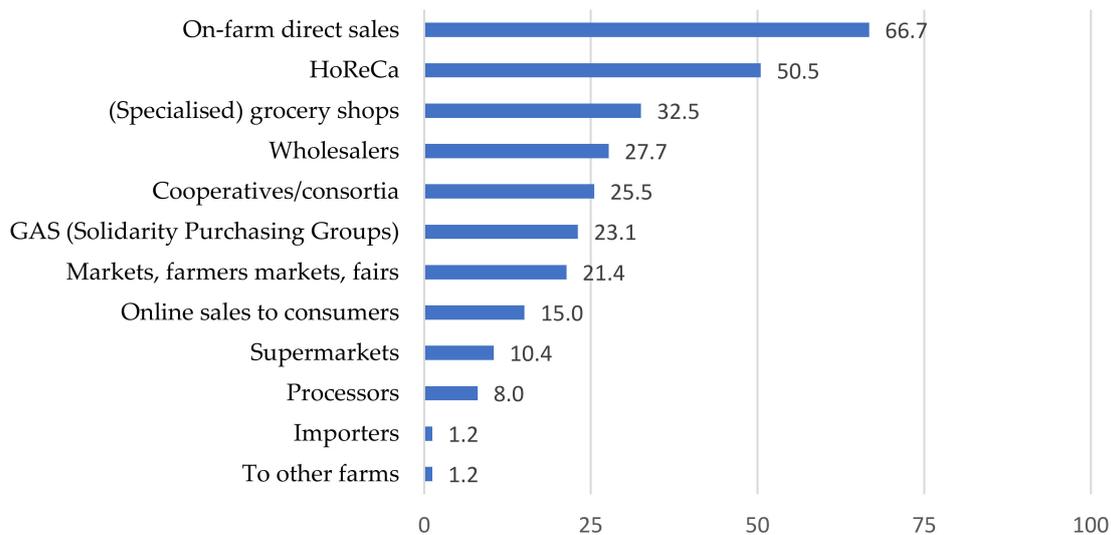
Although the three studies were conducted separately, and cannot therefore be completely combined, in all cases the aim was to collect timely first-hand evidence of grassroots responses based on agroecological farming, localisation and social engagement in response to the lockdown measures. A strength of the studies is that they were conducted during or immediately after the lockdown, which was characterised by the most evident disruptions in agri-food systems. Therefore, their combined analysis can suggest pathways for a possible transition towards more resilient, sustainable, and fair local food systems.

## 5. Results

### 5.1. Impacts and Responses of Organic and Agroecological Farms to COVID-19

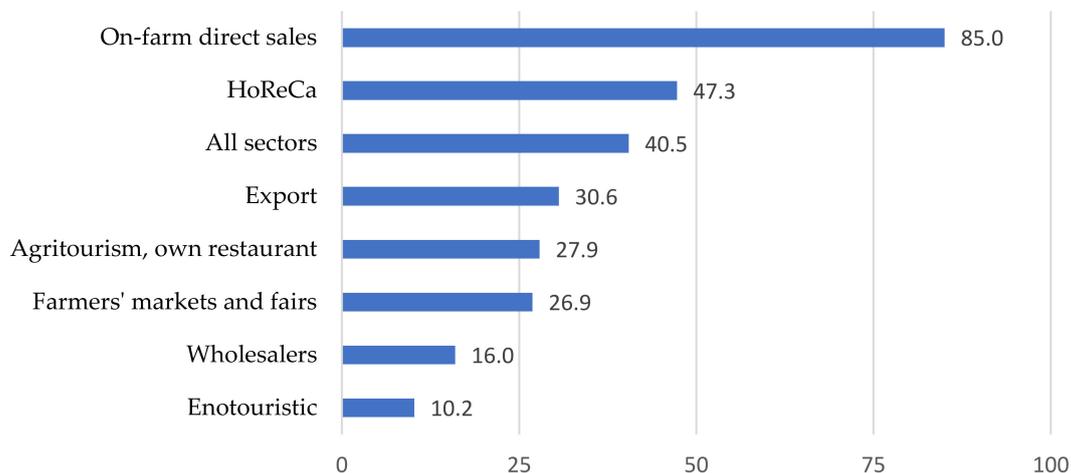
This section combines the results of the FIRAB and FEAST surveys, which offer insights into the first response of farmers to the crisis. For both surveys, most respondents were organic or biodynamic farms, both certified (97% FIRAB, 48.9% FEAST) and non-certified (3% and 42%, respectively, with an additional 9.2% composed of farms using low-input approaches in FEAST). In the FEAST survey, more than half of the farms (54.7%) were smaller than 5 hectares, and 36.3% had a yearly average income of less than 10,000 Euro. Respondents to the FIRAB survey were instead characterised in terms of farm income, with half (49%) of the farmers earning up to 50,000 Euro. Multiple production typologies characterised both samples: in the FIRAB survey, 64% of the farms operated mainly in the fruit (34%) and vegetable (30%) sector. The rest included wine (28%), olive oil (27%), dairy (15%), cereal preparations (13%), honey (12%), pasta (10%), eggs (10%), fresh and cured meats (8% and 7%, respectively). The farms represented in the FEAST questionnaire were also mainly growing vegetables (68.2%), followed by cereals (41.9%) and fruit (35.7%). Production within farms tended to be highly diversified as well: from the FEAST questionnaire, for example, 51.9% of the farms produced more than ten items, and one third more than 20.

The FIRAB survey respondents often operated in multiple marketing channels, as shown in Figure 1. Short supply chains were already highly relevant before the pandemic, with 67% of respondents operating through on-farm sales, 23% through Solidarity Purchasing Groups (GAS) and 21% through local farmers’ markets. Moreover, 15% were also already operating through e-commerce channels. More mainstream markets were also relevant, particularly for larger farms; for example, 32% operated through specialised organic shops, 25% through wholesalers and consortia, 10% through supermarket chains and 8% through processors. Finally, (Hotel, Restaurants and Catering (HoReCa) channels were also extremely relevant (50%).



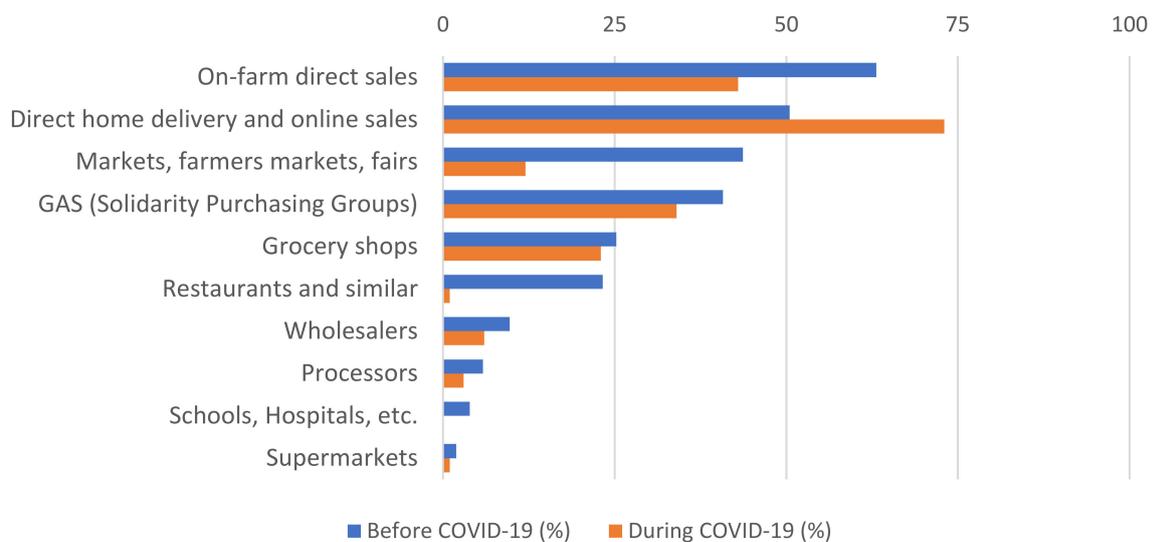
**Figure 1.** Pre-COVID marketing channels, in percentage of respondents (Italian Foundation for Research in Organic and Biodynamic Agriculture (FIRAB) questionnaire; number of respondents: 412). HoReCa refers to Hotel, Restaurants and Catering businesses.

The impact of the COVID-19 lockdown on market channels was evaluated through an open-ended question (Figure 2). Predictably, HoReCa establishments were indicated as one of the most negatively affected channels (47% of respondents). More importantly, however, is the emphasis on negative impacts on on-farm sales (85% of respondents), which shows the relevance of this kind of local and direct-to-consumer channel for most organic farmers. This also extended to multifunctional activities on-farm, such as agritourism (28%). Negative impacts on farmers' markets were also felt (27%).



**Figure 2.** Most negatively impacted marketing channels in percentage of respondents during the lockdown (FIRAB questionnaire; number of respondents: 294).

Both the ranking in pre-COVID times and the proportion of marketing channels affected by the lockdown that emerge from the FIRAB survey are consistent with those of FEAST, which outlines more clearly the changes brought about by the lockdown in marketing channels for farmers before and during the lockdown (Figure 3).



**Figure 3.** Changes in marketing channels during the lockdown (FEAST questionnaire). Number of respondents: 103.

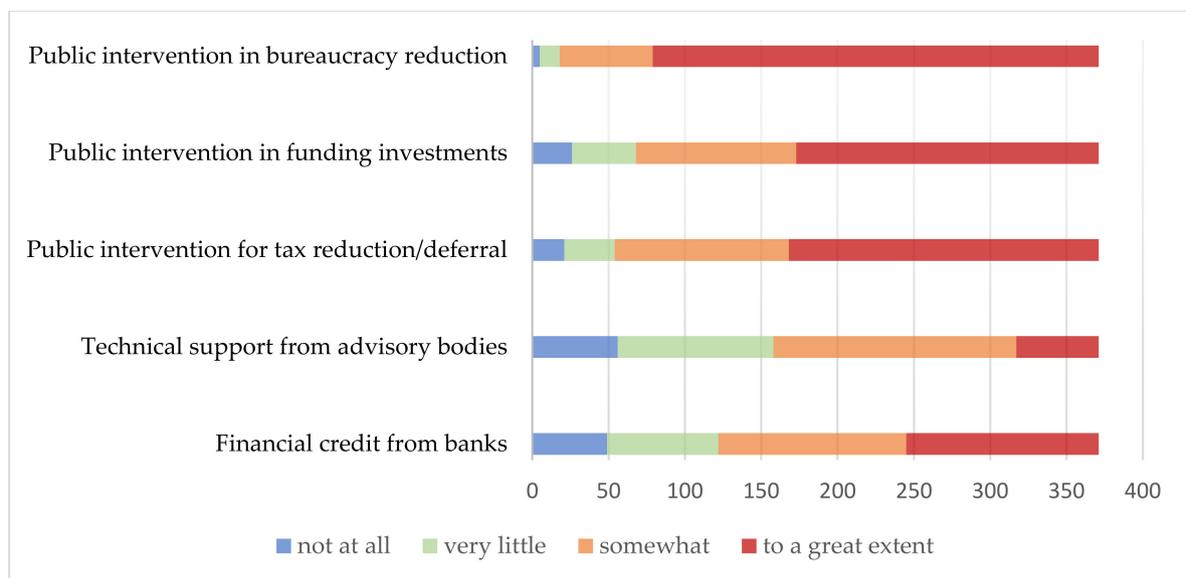
The respondents to the FEAST survey were mainly involved in short food supply chains before the onset of the pandemic, with on-farm sales (63.1%), direct home delivery and online sales (50.5%) and farmers' markets (43.7%) being the top three marketing channels. Solidarity Purchasing Groups were also relevant, with 40.8% of respondents collaborating with them. Conventional channels were significantly less relevant, particularly wholesalers, supermarket chains and processors. This difference can be attributed to the overall smaller scale of the farms participating in the FEAST survey compared to the FIRAB one, and to the fact that many of them were not certified organic, leading to a preference to operate through local and alternative channels rather than more mainstream ones such as specialised organic shops or wholesalers.

During the lockdown, direct deliveries to households strongly increased (+40.4%), which shows the ability of the farms in the sample to quickly adapt to the restrictions imposed by the pandemic. This was likely facilitated by the fact that direct-to-consumer sales (including deliveries) were already well-established among respondents as a marketing channel before the pandemic. Moreover, as most farmers were already selling locally (either on their farm or through farmers' markets), a reorganisation into direct deliveries was likely seen as a relatively easy transition. The exponential growth in the popularity of direct deliveries was commented on by many respondents in the open-ended answers and was generally viewed favourably by farmers. In parallel, online sales also increased, often thanks to cooperative efforts among local farmers to develop e-commerce platforms.

Sales to Solidarity Purchasing Groups saw a slight decrease during the lockdown, as many GAS had to halt their operations, but this decrease is more modest than the decrease observed for other channels; moreover, GAS did remain among the top three sales channels during the lockdown. HoReCa channels were strongly hit, as also shown by the FIRAB survey. Worth noting, however, is the relative stability of small independent shops—typically neighbourhood grocery stores and greengrocers'; these shops saw an overall increase in sales during the lockdown, as people could not (or did not want to) shop at large retailers [74]. Farmers' markets, on the other hand, were strongly negatively affected, especially considering that they were the third most important market channel before the pandemic. Farmers' markets were forced to close in many parts of Italy, as they were not considered "essential businesses" by the government. The closure of this fundamental market channel was a significant blow for many of the respondents; in the open-ended questions, many responses referenced the drawbacks related to the interruption of farmers' markets and events, which for many farmers represented a major (or sole) source of income and locus for direct interaction with citizens and other producers. As one respondent

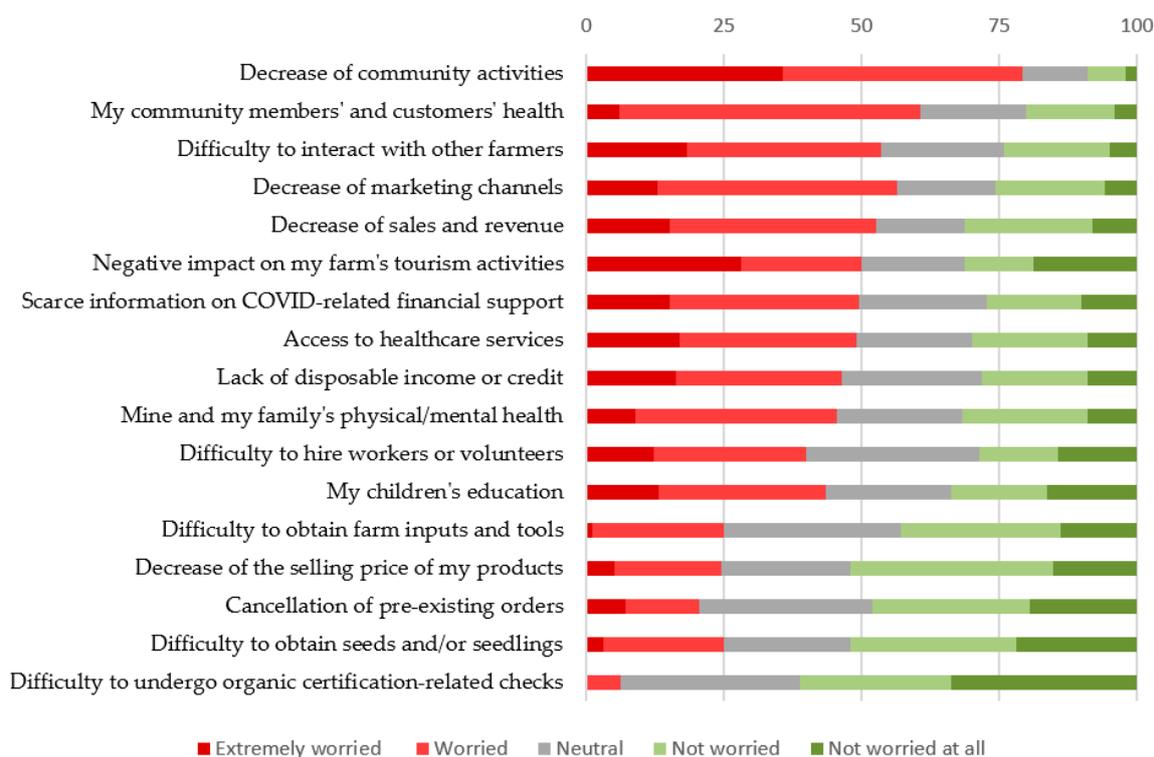
wrote, “Farmers’ markets have been closed for two months. It has been hard for us to find different ways to do direct sales, since we did not have any previous experience, and this has resulted in economic hardships for us.”

The surveys also investigated farmers’ concerns and needs: FIRAB focused mostly on financial aspects and requests for support, while FEAST asked farmers to rate their level of concern in relation to various aspects of their personal life and farming activities. During the full lockdown period, respondents to the FIRAB questionnaire expressed concern for their financial capacity: 65% of the respondents stated that their residual financial liquidity was up to three months, while only 13% expressed a financial solidity longer than 6 months (16% were unable to predict). It is only apparently surprising that when asked about the support priorities (Figure 4), most farmers urged for institutional intervention in reducing bureaucracy (79% answered “to a great extent”), much higher than those who asked for institutional support in fiscal alleviation (55%) and investments (53%), despite their more immediate financial relevance. Bureaucracy, that even in ordinary times is perceived as very cumbersome—particularly for small scale farmers—emerged as even more relevant in an emergency situation such as the lockdown, as it imposed extra burdens on farmers.



**Figure 4.** Typology and degree of needed support (FIRAB questionnaire; number of respondents: 371).

The FEAST questionnaire revealed other facets of farmers’ concerns (Figure 5). The most significant finding that emerged from the responses was the importance of “community” in its various dimensions, and the threats posed by COVID-19 restrictions to community engagement. The highest-ranked source of worry for farmers was the decrease in community-based activities (almost 80% of respondents declared themselves “extremely worried” and “worried” about this). This was followed by worries about community and customers’ health and about the difficulty to interact with other farmers and to participate in farming events. This is not surprising, considering how most agroecology-oriented farmers rely on both local communities and on broader communities of practice not only for marketing but also for sharing knowledge and connecting with like-minded people.



**Figure 5.** Respondents' concerns about different aspects of their personal and professional lives (FEAST questionnaire). Number of respondents: 101.

The open-ended questions to the FEAST questionnaire offer further insights into the changes implemented by farmers as a response to the lockdown. Moreover, they also capture farmers' forecast of the impacts of COVID-19 on their farm, and more widely on the local and national agri-food system.

Overall, answers reflected a conflicted view of the future impacts of the pandemic. On the one hand, there was a cautious sense of optimism surrounding the fact that COVID-19 represents an opportunity to rethink food habits and models of food production, distribution and consumption. These comments predominated in numerical terms, and respondents underlined the increase in citizens' interest for local and sustainable products, which translated, for 31% of the farmers in the FEAST study, into sale increases. This optimism is supported by data showing how the consumption of organic products in Italy has increased due to the pandemic [45,75,76] and is illustrated by some representative quotes from the open answers. Noteworthy, once again, is the centrality given to the local community:

*"The pandemic has forced the community to look for local products and to seek out local producers. I'm receiving orders from new customers. I have always done direct deliveries, but now they are much more appreciated, especially by those who used to avoid them because they were inconvenient. For the first time, our spring harvest is not enough to satisfy demand."*

(Certified farm, Potenza)

*"During the COVID-19 emergency, our community has responded very positively [ . . . ], choosing a local organic farmer that can offer healthy produce with less environmental impacts. We'll have to see whether in the future the economic situation will allow families to satisfy their needs in terms of organic food."*

(Certified farm, Venezia)

At the same time, some farmers also mentioned a rediscovery of local agroecological products, which are increasingly associated with everyday consumption, rather than

with niche and “special occasion” products. Respondents noted how, while their sales of gourmet foods had decreased, those of essential food items, such as vegetables, had increased. This was also accompanied by a perceived rediscovery of proximity relations between producers and consumers. It is interesting to note how positive comments came mostly from farmers who had already shaped their activities around models based on closer relationships between producers and consumers, sometimes beyond mere economic exchange. Emblematic in this sense is the following quote: *“I feel optimistic because we built our farm around direct relationships with consumers, and in a way or another these relationships are being sustained”* (Uncertified farm, Rieti).

If this kind of relationships can be established, farmers argue, the food system will be better poised to withstand crises such as the COVID-19 lockdown. This echoes the indications collected by FIRAB through open-ended questions on what farmers would change in their farm organisation post-COVID: the top three indications were either keeping, strengthening, or establishing direct sales and home deliveries.

Other farmers, however, had a more pessimistic outlook. Many remarked on the preferential treatment given to big players in the food system—such as supermarkets—while farmers’ markets were forced to close without any consideration for their importance to local communities. The dominance of large players also emerged from the considerations of those respondents who depend on more conventional channels (supermarkets, processors, wholesalers), who expressed the fear that they might further lose bargaining power due to the impacts of the pandemic. Finally, many producers worried that the economic crisis that will inevitably follow the pandemic will further decrease citizens’ spending ability, thus pushing them toward the cheaper options provided by the industrial food system. These concerns are represented by the following quotes:

*“During the lockdown, supermarkets have remained open with little restraints, while farmers’ markets have been suspended, and even though they are held outside, they will have to implement more safety measures compared to supermarkets to be allowed to operate again. The suspension of some GAS activities also implies the loss of spaces of solidarity and conviviality, with the risk of transforming these spaces in primarily commercial projects.”*

(Uncertified farm, Avellino)

*“I think that people’s habits and their purchasing behaviour will return to what they were before, and that the crushing dominance of large retailers will keep pushing prices down, especially in a situation of likely decrease in consumers’ purchasing power.”*

(Certified farm, Pisa)

## 5.2. Impact of COVID-19 on the Food System of the City Region of Rome: Findings from the Expert Survey and Secondary Sources

In addition to the national level case of organic farmers, we also focus on Rome’s city region and the COVID-19 responses of grassroots and alternative food actors in the municipality. The experts who answered the survey were researchers (37%), followed by agricultural professionals, such as agronomists (34%), farmers (22%) and public administrators (7%). Respondents were first asked to evaluate the impact of COVID-19 on Rome’s food system. Even though the city region was not one of the epicentres of the first phase of the pandemic, it was still affected by the lockdown, which was extended to the entire country to contain the spread of the virus. In the survey, the impact of the lockdown on the components of Rome’s food system was described on a scale from one to five, where one denotes a strong weakening and five indicates a marked strengthening of the component (Table 1). As expected, negative impacts (weakening) were perceived concerning commercial food services (HoReCa) and public catering services, particularly school canteens. The latter are especially relevant to food poverty, as many low-income families rely on school lunches for the supply of one daily meal to their children. On the production side, multifunctional activities carried out by local farms (agritourism, recreation), were also negatively affected, echoing the findings of the FEAST/FIRAB surveys.

**Table 1.** COVID-19's impact on the components of Rome's food system (average value). Experts indicated the impact on a scale from 1 (very weakened) to 5 (very strengthened). Number of respondents: 32.

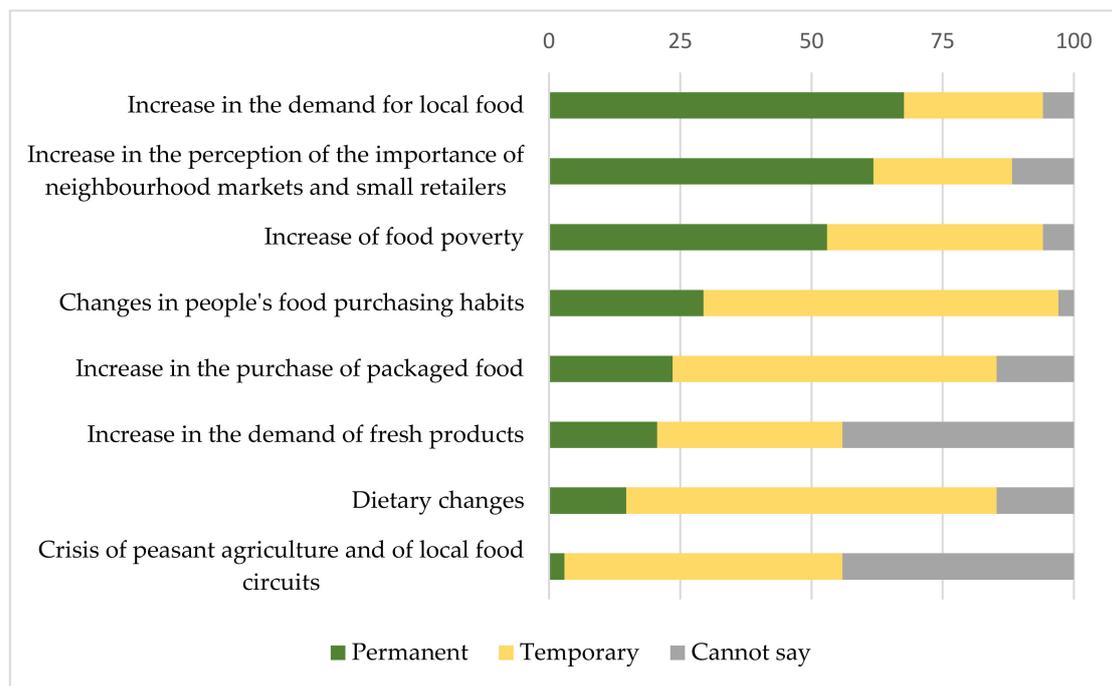
Food System Component	Average	Median	Standard Deviation
Commercial food services (HoReCa)	2.3	1.0	1.9
Public catering (e.g., school canteens)	2.3	1.0	1.9
Multifunctional farm activities (tourism, recreation)	2.3	2.0	1.4
Farm production	2.4	2.0	0.9
Farmers' markets	2.5	2.0	1.3
Regular markets	2.5	2.0	1.5
Export-oriented supply chains	2.6	2.0	1.7
Logistics and transportation	2.8	3.0	1.1
Supply chains of fresh products	2.9	3.0	1.2
On-farm direct sales	2.9	3.0	1.3
Domestic supply chains	3.1	3.0	0.9
Solidarity Purchasing Groups	3.1	3.0	1.3
Box Schemes	3.1	3.0	1.3
Large supermarket chains	3.6	4.0	1.1
Food delivery services	3.7	4.0	1.3

Except for farmers' markets, food system components connected to AFNs (particularly box schemes, Solidarity Purchasing Groups and on-farm direct sales), did not appear to have been negatively affected. Experts, however, indicated supermarket chains (3.6) as one of the components who benefited the most. This is both a further demonstration of the growing influence of large retailers, which remained free to operate during the lockdown, but also of the resilience of AFNs in the face of restrictions and logistic difficulties.

Experts were also asked to rate a series of statements on the impact of the pandemic on the local agri-food system (where one indicates "completely disagree" and five indicates "completely agree") (Table 2). Subsequently, they had to estimate the temporal duration of several observed effects on Rome's agri-food system (Figure 6). These two aspects will be discussed together, as they are closely related. There was a high level of agreement on the increase in home food deliveries—which has been a ubiquitous consequence of the pandemic [77–79]. Furthermore, the analysis of responses shows three trends. The first broadly relates to the increased perception of the importance of places to source food locally (particularly places different from large scale retailers), such as neighbourhood markets and small shops; according to experts, this increased perception is likely to be a permanent change (61.8%). Similarly, experts also expect a permanent increase in the demand for local food (67.6%), a finding consistent with other studies [76]. These two aspects are possible structural changes that could be leveraged from the perspective of a city region agri-food policy.

**Table 2.** Statements on the impact of the pandemic on the local agri-food system on a scale from 1 ("completely disagree") to 5 ("completely agree"). Number of respondents: 32.

According to You, the COVID-19 Pandemic ...	Average	Median	Standard Deviation
is causing an increase in home food deliveries	4.3	5.0	1.1
is causing an increase in food poverty	4.1	4.0	0.7
is causing an increase in the perception of the importance of neighbourhood markets and small retailers	4.1	4.0	1.0
has damaged local supply chains oriented towards exports	4.0	4.0	1.2
is causing an increase in the price of fresh products	3.5	4.0	0.9
is causing an increase in demand for urban agriculture	3.3	3.0	1.1
is having a strongly negative impact on multifunctional agriculture	3.3	3.0	1.4
is causing a crisis of industrial agriculture	2.9	3.0	1.4

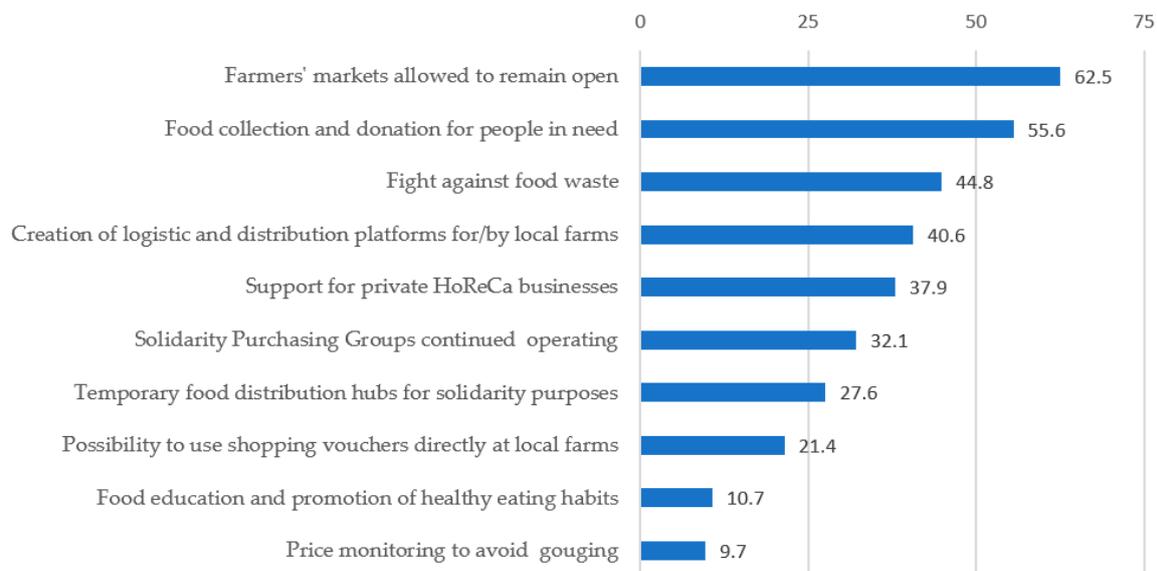


**Figure 6.** Type of effects on Rome's agri-food system and estimation of their temporal duration. Number of respondents: 32.

On the production side, the situation appeared less clear. On the one hand, experts believed that local export-oriented production was likely to be affected negatively by the pandemic (an aspect that also emerged from the FIRAB survey). This underscores the importance of re-localising the destination of farm products, and also resembles the reorientation from “niche” towards “everyday” food products described by some producers in Section 5.1. On the other hand, the pandemic is believed to have caused neither a significant crisis of industrial agriculture nor of local peasant farming and food systems. These contradictory results are likely due to the high levels of uncertainty surrounding the long-term effects of the ongoing pandemic but are consistent with the results of the previous question.

Experts agreed considerably more on the social consequences of the pandemic in term of increases in fresh food prices and food poverty. Moreover, the increase in food poverty is believed to be a permanent outcome according to 52.9% of the respondents. These findings are complemented by secondary data: between January and April 2020, *Banco Alimentare* (the regional food bank) distributed 1800 tons of food, 40% more than in 2019. Furthermore, the beneficiaries increased by 37%, bringing the total number to around 120,000 people [80]. According to informal interviews with members of *Banco Alimentare* conducted by the authors, an estimated 10% of beneficiaries were people who never had to turn to welfare agencies to acquire food before the pandemic.

The next step in the expert survey was to understand which actions had been put in place to respond to the negative effects of the lockdown on the city region's food system, with an emphasis on AFN-related initiatives. For each intervention, respondents were asked whether it had been undertaken or not in their specific location within the municipality (Figure 7).



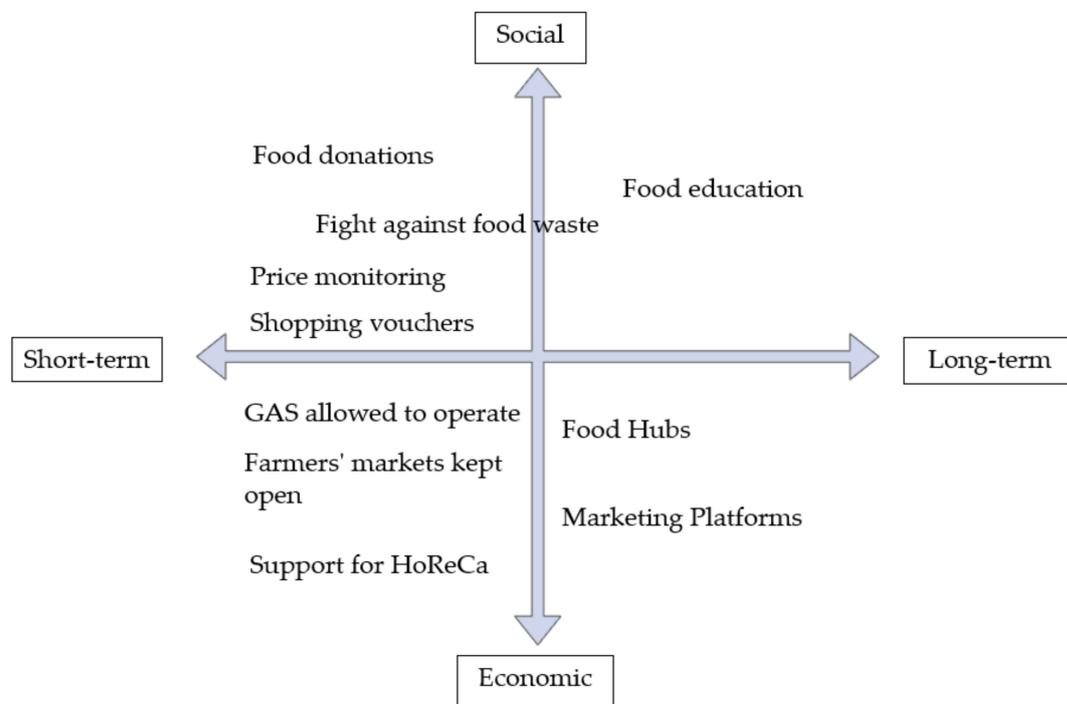
**Figure 7.** Actions undertaken to respond to the negative effects of the lockdown on the city region's food system and frequency of experts who indicated the action being put in place in their area. Number of respondents: 32.

Allowing farmers' markets to remain open was the most common measure (indicated by 62% of respondents); unlike other parts of Italy, Rome's farmers' markets and other outdoor markets were sometimes allowed to continue operating. The second most common intervention was food collection and donations to people in need (56%), followed by the fight against food waste (45%) and by the creation of logistic platforms and hubs for food marketing and distribution (41%). Secondary sources show how the initiatives put in place by the municipal government were mainly oriented at distributing food to low-income families: in May 2020, for example, the municipality distributed 45 thousand food parcels, and also provided shopping vouchers for the purchase of basic supplies to people in need to over 200,000 people, for a value of around 21 million Euro [81].

Many citizens organisations, including those belonging to AFNs such as local farms and solidarity Purchasing Groups, also mobilised to respond to the crisis, often developing innovative practices and tools to deal with the lockdown emergency. Existing GASs, for example, created "*Gruppi di Acquisto Condominiale*" (Condominium Purchasing Groups), in which families living in the same flat complex organised shared purchases from local producers. A large GAS also launched a fundraiser to donate fruit and vegetable boxes from a local organic cooperative to those in the neighbourhood who could not afford them [82]. Local farms and small neighbourhood retailers also provided free-of-charge deliveries to vulnerable citizens, such as the elderly [83]. This in turn also helped to support local farmers, many of whom had been negatively impacted by the lockdown. The crucial role played by non-institutional actors, and especially by different kinds of citizen solidarity networks, also emerged from the open answers to the question outlined in Figure 7: a recurring word in the open answers was "self-organisation". In the words of one respondent, "*Nearly every local level action started from the initiative of local associations and networks, while institutions have operated with great delay and lacked a structural outlook in their interventions*".

The convergence of experts' responses and secondary data suggests that institutional interventions focused almost exclusively on alleviating vulnerable citizens' immediate food needs. We attempted to examine this aspect by qualitatively re-classifying interventions according to two criteria: their (predominantly) social versus economic nature; and their short term versus long term (structural) orientation (Figure 8). As shown in the figure, most institutional interventions were short-term ones; this contrasts with the tendency of many grassroots initiatives towards creating distribution hubs and platforms. From

the perspective of supporting the local alternative food systems economically, the most impactful institutional intervention was to ensure that outdoor markets remained open, which had the double benefit of supporting local family farmers and providing more places to purchase local food.



**Figure 8.** Interventions in Figure 7 re-classified according to two criteria: their (predominantly) social versus economic nature (y-axis); and their short term versus long term (structural) orientation (x-axis). The location of the interventions qualitatively reflects the nuances of their positioning along the two axes.

The lack of structural institutional responses suggests the need to identify priority areas to be addressed by future policies to foster more sustainable, resilient and fair city region food systems in a post-COVID scenario. Experts were therefore asked to rate a series of priorities for agri-food policies to be implemented (Table 3). In addition to this structured question, experts were also asked to indicate, through a separate open-ended question, key policies, instruments, and incentives conducive to improving the governance of the local agri-food system. The results of the thematic analysis of responses are summarised in Table 4 and will be described together with the results shown in Table 4.

**Table 3.** Priorities for the policies to be implemented in the post-COVID food system rated from 1 (lowest priority) to 5 (highest priority). Number of respondents: 32.

	Average	Median	St. Dev.
Managing farm labour (domestic and migrants) according to principles of legality, equity, and solidarity	4.5	5	0.9
Strengthening short food supply chains	4.4	5	1.0
Safeguarding small scale food retailers	4.4	5	1.0
Promoting knowledge of local producers and agriculture	4.4	5	0.9
Creating more equitable relationships between local producers and large retailers	4.2	5	1.0
Fostering awareness of citizens' role in steering the development of local food systems	4.2	5	1.1
Fostering awareness of the centrality of food for sustainability	4.2	5	1.0
Supporting the development of small-scale peasant farming integrated within local consumption circuits	4.2	5	1.2
Promoting healthy diets	4.3	4	0.8
Fighting against food waste	4.2	4	1.0
Developing logistic platforms to support local production and consumption	4.1	4	0.8

**Table 4.** Policies, instruments and incentives conducive to improving the governance of the local agri-food system. Thematic analysis of open answers (Number of respondents: 18).

Priority Areas	Characteristics	Frequency of Mentions
<b>Integrated territorial approaches</b>	Networks, logistic connections and infrastructure for small local producers, processors and retailers; Coordination between municipal (city region) and regional levels to increase food self-sufficiency; Prioritising policy interventions at the city region level, but with better integration among policies at different levels (regional, national and EU); Systemic approach: agri-food policy interventions should reinforce each other and coordinate with different (non-agri-food) policy areas	12
<b>Equity, participation and democracy in all facets of the local agri-food system</b>	Democratic use of underutilised public assets, e.g., allocation of public unused land for social and educational farming purposes and collective use by citizen associations; Revitalising peripheral/abandoned areas through farming; Agency and democratic participation in food and agricultural policies; More attention for marginalised agri-food system actors (especially farmworkers).	9
<b>Food, agriculture and nutritional education</b>	Food and agricultural education to be prioritised in schools Creation of “safeguard areas” around schools, public parks, etc. Sustainable menus; More involvement of schools, universities and research institutes in the dissemination of knowledge about sustainable agriculture and local food systems.	8
<b>Institutional support for local, healthy and sustainable food consumption</b>	Procurement of local and sustainably produced food in public catering; Incentivising the purchase of locally and sustainably produced products, so that they are fairly priced both for consumers and producers; Simplifying bureaucracy for small scale producers and increasing financial support for sustainable farming practices;	7

Even though all policies in Table 4 received a high score, the results highlighted an aspect that so far had not emerged from the analysis, namely the importance of managing farm labour according to principles of legality, solidarity and equity. The next area of highly rated priority interventions relates to food relocalisation. The answers highlight three key aspects in this sense: the strengthening of short supply chains; the safeguarding of small-scale food retailers (including by ensuring more equitable relations between large-scale distribution and local producers and retailers); and promoting knowledge of local producers and agriculture among citizens. Moreover, the need to foster citizens' awareness about their own centrality to steering the development of local food systems also scored highly.

These policy directions can be further elaborated upon through the thematic analysis of respondents' rich corpus of open answers, which led to the identification of four broad priority areas (ranked according to the number of experts mentioning them): (1) Integrated territorial approaches; (2) Equity, participation and democracy in all facets of the local agri-food system; (3) Food, agriculture and nutritional education; and (4) Institutional support for local, sustainable and healthy food consumption.

Employing an integrated territorial approach lies at the core of agri-food system redesign: according to experts, creating or strengthening networks and logistic connections among local producers, processors and retailers, especially small-scale ones who have less bargaining power in the agri-food system is a key policy need. To realise this, decentralised infrastructures and processing services such as smaller-scale slaughterhouses or dairies also need to be re-established.

Although most experts emphasised the importance of policy interventions at the city region level, they also stressed the need for better integration among policies at different levels (regional, national and EU) and for a systemic approach in policy-making: policy initiatives should be part of a coordinated effort and reinforce each other. For example, better coordination is required between the municipality and the region for sourcing food not produced at the municipal level and increasing regional self-sufficiency. Finally, a systemic approach implies coordination with different (non-agri-food) policy areas (e.g., transportation, housing) an aspect that appears particularly timely in the perspective of leveraging the (positive) behavioural changes introduced by the pandemic (such as a decreased need to commute due to smart working).

Enhancing equity, participation, and democracy in all facets of the local agri-food system was another priority area indicated by experts. Responses emphasised an ethical approach to food production, the democratic and equitable access to local agricultural resources (particularly land) and their use to advance social and environmental goals. For example, an aspect mentioned by several respondents was the need to facilitate the free-of-charge allocation of public unused land for social and educational farming projects, shared vegetable gardens, and other collective uses. This priority area also concerns, more broadly, participatory and democratic decision-making processes regarding food and agricultural policies, also in recognition of the role played by grassroots actors in addressing needs not adequately met by institutions (as demonstrated by COVID-19). Finally, experts raised attention about marginalised agri-food system actors, particularly agricultural workers. Both in Italy and in Rome, the spread of racketeering and exploitation of agricultural workers, especially migrants, is a well-known problem. This issue has been harshly exposed by COVID-19: migrant workers were especially vulnerable during the pandemic, which led to numerous appeals—including by the Italian Farmers—to regularise non-EU migrants who work illegally in the Italian countryside [84].

A third priority area concerned food, agricultural and nutritional education. These forms of education should be promoted, first and foremost in schools, but also more broadly among citizens. To this end, the creation of “safeguard zones” around schools, public parks, etc. where the opening of new fast-food joints or the advertisement of processed products is forbidden, was indicated as a possible intervention. Concurrently, school menus should be made healthier and more sustainable (e.g., with a decrease in animal products, more local supplies from agroecological producers, attention towards the use of local varieties).

The need to strengthen institutional support for local and sustainable food consumption was the last priority area emerging from the analysis of experts’ responses. First, local and sustainably produced food should be prioritised in public procurement (schools, hospitals, other institutions). Furthermore, the consumption of such foods should be economically incentivised (e.g., through EU funds), to ensure that they are fairly priced both for consumers and producers. Finally, the relevance of small-scale family farming to agri-food system sustainability and resilience should be recognised in tangible ways, such as by simplifying bureaucracy for small-scale producers (an aspect indicated by the FIRAB survey as well) and increasing financial support for sustainable farming practices.

## 6. Discussion and Conclusions

The COVID-19 pandemic has highlighted the social and environmental unsustainability of an agri-food system dependent on global, industrial and corporate-led supply chains. As a result, it has attracted mainstream attention to the need for agri-food systems grounded in principles of resilience, sustainability, agency, solidarity and fairness, which

we exemplified through three case studies. We acknowledge the limitations of the research design due to its imperfect overlap and non-randomised sampling of respondents. However, to the best of our knowledge, the studies represent the only research effort made towards capturing the situation of AFNs and agroecological farmers in Italy during the first lockdown—also thanks to farmers and other grassroots actors who agreed to share and answer to the surveys despite the circumstances. The value of this paper lies in how it captures a snapshot of a period of agri-food system stress and radical reorganisation, which allowed us to examine both the strengths and weaknesses of AFN responses in Italy and Rome during the lockdown, and the opportunities for agri-food system transformation brought by the pandemic.

The results of the three surveys show how actors involved in AFNs—both on the production and consumption sides—played an important role in ensuring the supply of local, healthy and sustainably produced food to their communities during the lockdown. The case of Rome, in particular, demonstrates how grassroots AFN initiatives were able to use their organisational structure to quickly respond to citizens' food needs—including the most vulnerable segments of the population—while at the same time supporting local sustainable producers. This case also illustrates how networks of producers and consumers directly connected at the local scale contributed to the resilience of local food systems by facilitating the introduction and spread of social and technical innovations (sustained by beyond-economic relationships of solidarity and mutual help). Finally, it offers a blueprint towards the creation of a sustainable, resilient and equitable city region food system [38,77] grounded in agroecological production practices and more democratic and localised food systems.

The research also shows how the solutions proposed by grassroots actors, far from being just the result of shock mitigation intentions, were also driven by a *transformative aspiration*: they are not just short-term responses to a crisis but contain elements that could be harnessed and scaled up for a faster transition towards more sustainable agri-food systems. This contrasts sharply with institutional responses, which have, for the most part, focused on giving short-term economic relief while failing to seize the opportunity to make much needed structural changes. In other words, grassroots actors have been acting in a *proactive* way, leveraging the pandemic as an opportunity to find new and more sustainable (environmentally and socially) arrangements. Institutional responses, on the other hand, have been mainly *reactive* and focused on solving short-term issues, making little to no attempt of finding systemic solutions oriented towards the redesign of the local agri-food system itself.

Concerning this aspect, the results also highlight how the direction of institutional choices (such as those related to farmers' markets) can significantly influence the resilience of AFNs vis-à-vis mainstream ones. Mainstream food system players have benefited immensely from the pandemic, since they were identified as "essential" and governments were partial in supporting them, while farmer's markets and restaurant closings took revenue sources away from alternative producers. In times of economic crises, consumers strapped for cash also look to the established food system for cheap products, which further entrenches mainstream actors and institutions, making it harder to achieve transformation. This is compounded by the well-known capacity of capitalist endeavours to reinvent profitable solutions to problems they have contributed to creating [6,7]. The prompt return to normal demanded by the dominant narrative, for example, carries the risk of a push towards technology-driven solutions stripped of any social connotation, and to the worsening of existing unequal power relations in agri-food systems, leaving issues of corporate power unaddressed [13]. This imbalance implies the need for policies that explicitly address power asymmetry, for example by giving small scale, local and sustainable producers preferential access to local market channels (including through public procurement).

At the global level, the battle is underway between an effort of corporate capture of food governance—in the form of a Food Systems Summit co-sponsored by the UN Secretary-General and the World Economic Forum—on the one hand, and, on the other,

the civil society defence of the UN Committee on World Food Security, the only global food forum in which small-scale producers and other social constituencies are full and autonomously-organised participants [85]. This battle has parallels in Europe, where the Farm to Fork and Biodiversity Strategies could represent a chance to enact a new pact between state and civil society, steering agri-food systems towards more sustainable and resilient policies and practices. At the same time, however, the need to mitigate the pandemic's economic impacts is providing useful fodder to discourses and policies focused on renewing support for unsustainable practices in the name of economic recovery, perpetuating a condition of "undesirable resilience" [35].

Among tensions on different interpretations of the desired new normal, however, the unprecedented disruption caused by the COVID-19 pandemic is outlining more and more clearly the contours of a reconfigured food system. The increased attention towards local and sustainably produced food that emerges from the responses to the surveys, for example, reflects a cautious hope regarding the strengthening of some positive changes that have occurred as a result of the pandemic. Moreover, as environmental breakdowns and further disturbances to "normal life" are likely to multiply in the future [86–88], alternative and grassroots actors need to step up their efforts to make their voices heard and their initiatives relevant for building innovative scenarios. This implies consolidating existing social movements and networks, establishing participatory and inclusive governance processes, and building linkages among food system actors to identify opportunities to scale up education and participation, according to principles of fairness and democracy [55,89–91]. This is especially relevant to the new "agency" dimension of food security, which is critical to leverage these opportunities. Many of the grassroots responses to COVID-19 described here are oriented in this sense, and therefore represent an ideal starting point for long term food system transformation [15,19,25,31,39,92]. This process will also necessarily involve a strengthening of linkages and resource flows between urban and rural areas [38,93] in order to relocalise food production, achieve the goals of ensuring food and nutrition security to the population, supporting the livelihood of local sustainable producers, and increasing environmental quality and climate change resilience.

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