1 Food Networks: Collective Action and Local Development. The Role of Organic Farming as Boundary Object

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- 9 Abstract
- This article aim at analysing the innovation potential of a local food network, which sees different actors that cooperate to build a local organic food production-provision system and progressively develop a broader mobilization on food issues, health and sustainability. The case analysed is that of Crisoperla, an Association located in Italy, between Tuscany and Liguria, which involves organic farmers, social farming and fishermen cooperatives, consumers' groups
- 14 and association, and agronomists. The analysis is based on the empirical data collected in the three year European
- 15 Project SOLINSA (FP7, 2011–2014).
- 16 The focus is on the role of organic farming and organic food as *a boundary object*, a binder element around which
- 17 actors involved work in order to develop common visions, languages and goals and organize their activities.
- 18 These processes are, in fact, at the basis of the organizational consolidation of the association, as well as of the growth
- 19 of its political awareness and its willingness and capacity to interact with the outside both at local and higher levels.
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- 21 Key words: organic farming, organic food networks, innovation networks, boundary object, local development
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40 Introduction

41 Over the last 20 years, there has been a growing interest in innovation that is not necessarily technical or top down in its 42 spreading, but rather emerges from below and looks for more environmentally and socially sustainable systems of food 43 provision (Klerkx et al., 2010). This innovation "does not occur in the medium of technical artefact but at the level of 44 social practice" (Howaldt and Schwarz, 2010). Key to the evolution of new social practice and relationships is the role 45 of collective action, as interaction is at the centre of any social innovation (Woolthuis et al. 2005). In this view, 46 agricultural and rural innovation is a collective process, which involves a range of actors in building relationships and 47 facilitates the generation, exchange and exploitation of new knowledge (Bassi et al. 2014). Collective action outcomes 48 are not viewed in the mere aggregation of the individual results, but they come forth from the interaction between actors 49 engaged in diverse socio-economic sectors. Collective action thus enables farmers and other rural actors to improve 50 their socio-economic performance and creates new opportunities for growth, especially at a local level (Bassi et al.

51 2014).

This type of social innovation it is based on an interactive learning process that originates from a common interest or an impulse for of change by a variety of actors that brings to the creation of networks. These networks have become particularly relevant during the last decade as an organizational model that is able to achieve objectives of sustainability. Cooperation between different actors, in fact, is considered as a key factor when one confronts the challenge of sustainability of food production and consumption.

57 The analysis presented in this paper is part of the research done within the EU Project SOLINSA (FP7, 2011–2014).

The Project was conceived as a response to the need for identifying new ways of transition from "*productivist*" practices to more sustainable agriculture and rural development, where traditional institutions in charge of fostering innovation appeared not always relevant and effective. The EU SOLINSA project proposes a new organisational pattern, Learning and Innovation Networks for Sustainable Agriculture (LINSA), as a policy device to help farmers and rural actors to generate innovation for transition towards sustainable agriculture and rural development (Moschitz et al. 2014).

64 In this article, we consider relevant to explore the questions of why it is important that these networks develop and of 65 what impact they may have in terms of achieving the goals of sustainability. Sustainability has different meanings, since it can be put in relation with social, economic or environmental aspects of development. In this paper, organic farming 66 67 represents an entry point for the development of a broader vision of sustainability that goes beyond environmental issues connected to farm practices including also social, cultural and relational dynamics related to food production and 68 69 consumption. Based on the data collected according to the SOLINSA methodology (Home and Moschitz 2014), we 70 present the analysis of one of the two LINSA studied at the University of Pisa, Crisoperla Association, a local organic 71 food network (Seyfang 2006; Milestadt et al. 2010), for which organic farming appears as a cohesive element and a 72 factor of impact on local context. We focus on the elements characterizing the members' willingness to act collectively 73 in order to create change in their context. In detail, we deal with the following research questions: what role did organic 74 farming and food have in creating conditions for cooperation and common action? What kind of benefit this network

75 produced for its members and for the local community?

The paper starts by describing the conceptual and theoretical framework we have used when defining Crisoperla as "a local organic food network", as a driving social bottom-up innovation, and through that, an agent able to influence the local context. The following sections of the paper refer to the methodological approach and to the description and analysis of the case study. The paper ends with concluding remarks and reflections.

80

81 Conceptual framework

Social innovation manifests in changes of attitudes and behaviours resulting in new social practices. From our perspective social innovation becomes relevant when it changes not only the way social agents act and interact with each other, but also when these changes affect the social context in which these actions are taking place bringing to the creation of new institutions and new social systems (Cajaiba-Santana, 2014).

86 These characteristics of social innovation are present in multi-actor networks active in the field of sustainable 87 agriculture and rural development (Ingram et al. 2013; Tisenkopf et al. 2014). The SOLINSA Project studied the 88 opportunities and constraints for the support of LINSA, considered as multi-actor "networks of producers, consumers, 89 experts, non-governmental organisations, small-medium enterprises, local administrations official researchers and 90 extensionists that are mutually engaged with common goals for sustainable agriculture and rural development. These 91 networks are seen to cooperate, share resources and co-produce new knowledge by creating conditions for 92 communication" (Brunori et al. 2013a). The SOLINSA studies took into account the diversity of these networks. With 93 respect to their innovation objective the experiences analysed were selected from: i) purely agricultural networks or 94 networks for sustainable land use e.g. soil conservation, biodiversity, ii) non-food oriented networks e.g. biomass, 95 energy, and iii) consumer oriented networks e.g. direct marketing, urban/local food networks (Ingram et al. 2013). 96 Local and Organic Food Networks form a specific typology of consumer-oriented networks. In this paper, for the 97 analysis of the case study, as Seyfang (2006) and Milestad et al. (2010) we refer to local organic food networks when 98 exploring the links and relationships between organic farmers, consumers, civil society organisations and other agents 99 commonly engaged in this specific form of food sustainability as a network operating at local/territorial level. Anyway, 100 there are in the literature many descriptions of the characteristics of the local organic food networks, according to the 101 attention paid to the structure and to the relationships amongst the actors or to the impact of their actions on the territory 102 in which they operate.

103 Considering their internal structure, the local organic food networks can be described as food systems with a shorter 104 distance between producer and consumer, where enterprises are small-scale and/or use organic production methods, 105 where alternative food purchasing venues exist (such as farmers' markets) and where there is a commitment to 106 sustainable food production, distribution and consumption (Jarosz 2008).

107 These networks can also give a significant contribution to rural development, by having the potential to mobilize new 108 forms of associations through the development of new relationships and methods of adding value (Renting et al. 2003).

In line with the perspective of social innovations as agents of change, we consider it essential to characterize the local food networks according to the kind of benefits they can produce both for the agents and for the local community.

111 Kirwan et al. (2013), adapting from Seyfang and Smith (2007), identify two main benefits. The first one regards 112 obvious benefits at a community level, such as generating job opportunities, developing the skill base or helping to 113 engender self-esteem and confidence amongst those involved. In this case the focus is on local level improvements that 114 develop as a result of putting local level skills into action in order to address local level issues. The second kind of 115 benefit regards visions and norms that may influence the transformation of the dominant system. In both cases, local 116 food networks play an important role in developing the capacities of communities to respond to locally identified 117 problems. In the case of local organic food networks, being "organic" is a fundamental point of identity. It proves to be 118 an important driving force, as we will see later, for the development of the network itself, since the "organic" character 119 expresses its quality, its "alternativeness" and since the members of the network perceive themselves as something 120 distinct from mainstream food chains, with "local" and "organic" as ideals (Milestad et al. 2010). In these networks, the 121 idea of "organic" can be seen as a "boundary object" (Star and Griesemer 1989) that operates as the main cohesive

- 122 element, since around which actors interact, negotiate and create commonality of intent. A boundary object is defined as
- 123 "an entity shared by several different communities but viewed or used differently by each of them, yet robust enough to
- 124 maintain a common identity across sites" (Star and Griesemer 1989). A boundary object can be something tangible or
- 125 intangible, an object, a publication, a code of practice, a strategic document, an idea of common interest that form an
- arena for communication and interaction. As a boundary object, organic so acts as vehicle for change by enabling the
- actors of the network to align around a certain vision and enhance collaboration in innovation processes (Klerkx et al.2012).
- In this paper, the common idea of organic farming proves to contribute to the cohesion of a network, to its progressive structuring and to its potential as "an agent" able to be pro-active at local level development.
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132 Methodological aspects

- 133 The data gathering for the analysis of the case study was carried according to SOLINSA Project methodology (Home
- and Moschitz 2014), based on action research and participatory approach, other qualitative methods (Starr 2012) and
- 135 desk research. In detail, will follow the main steps of the research process and the methods used in order to gether data.
- 5 thematic workshops dealing with facilitated discussion on different topics (common perspectives; concept of
 innovation and network analysis; internal rules; shared network history analysis, future perspectives).
- 138 Structured and semi-structured interviews to the network members (20 in total). We interviewed representatives of
- different groups of actors of the network: farmers (with diverse level of involvement in Crisoperla's activities), two
- agronomists initiators of the network, representatives of Solidarity Purchase Groups (GAS) (Brunori et al. 2011,
- 141 2012), fishermen and women members of the other two cooperatives. The interviews were mostly addressed to
- deepen the history of the farm/cooperative/GAS, to the type of involvement in Crisoperla (time spent, for which
- 143 activity etc.) and to what they considered as innovation, regarding Crisoperla and their individual work.
- Participants observation in several monthly meetings of the association. This participation was significant as it
 provided occasions of reflection with the network and opportunities for setting up future collaborations (e.g. we
 planned together a research to deepen the functioning and the potentialities of GAS).
- Participation in public initiatives and events organized by the Crisoperla. The SOLINSA research team has been
 involved as scientific representative in several public seminars (on organic farming, solidarity economy and
 GMOs) organized by Crisoperla; these events were useful to deeply interact with the network and to observe its
- behavior and relationships in a public context (e.g. with local public administrations).
- 151 Analysis of documents, papers and press articles related to network activities.
- Analysis of the internal communication flows (actors involved, topics, main participants and related topics); this
 due to the fact that the research team had access to the mailing list of the network.
- These activities were aimed at understanding network functioning and organization, actors' perception of innovation, organic farming and sustainability as well as the effects of the activity of this network at local level. By analysing both the origin and the development of the network, we explored how the common idea of organic farming contributed to
- 157 change the network configuration, tightening the links among actors and forming new links, both inside and with the
- 158 outside, and how it helped to align different frames (Tisenkopfs et al. 2014b) in order to create common space for
- 159 collective action. Below there is an introduction to the case study.
- 160 The case study: Crisoperla and its network

161 "*Crisoperla – free from parasites*"¹ is an association aimed at promoting organic farming and, more generally, 162 sustainable lifestyles and development models. It is located in an area at North of Tuscany (in the province of Massa-163 Carrara) and, partially, in the territory of Liguria region. Born in 2006 and formally established in 2009, the Association 164 has grown in number and types of actors. Now it involves 15 organic farms, 6 consumers' groups (GAS), a consumers' 165 association (Consumers and Users Association of Tuscany - ACU Tuscany), two agronomists, 1 social farming and 3

166 producers (farmers and fishermen) cooperatives.

167 Crisoperla has developed in a territorial context, Lunigiana, characterized by particular social and economic features. 168 Lunigiana is an area where the production activities, agriculture and crafts, are in decline and depopulation is a growing 169 phenomenon. Towns far apart, inadequate infrastructures and consequent abandonment of marginal sites affect the 170 production capacity and social interaction. The need for new relationships among individuals and among the different 171 social and economic components contributed to the creation of the conditions for the development of Crisoperla 172 network.

The first relationships began to develop among farmers. In 2007 two agronomists started to collaborate by giving technical assistance to organic farms in a project funded by Regional Government of Tuscany. While working on this project, they observed that most of the farmers had never interacted with other farmers, so they started to get in contact with organic farmers and other producers of the area of Massa. This group started to meet periodically and to share information and experiences. Thus, at the beginning, the activities of the group had a strong technical and economic orientation: the group consisted mainly of farmers and the prevailing need was to solve the difficulties related to the

179 practice of organic farming, lack and high price of inputs, a pre-condition for being able to sell on the market.

To help the farmers' group to broaden the opportunities for sales, afterwards the agronomists favoured the encounter with the local GAS. The partnership was established and this marked a turning point to the farmers. Moreover, the GAS, together with other local associations, helped them to enter into some farmers' markets in the Province.

183 The link established amongst the group of organic producers, technicians and consumer groups, based on the sharing of

the same values - promoting more sustainable way of producing and consuming and a more sustainable way of living in general - brought the actors to formalize the relationship, so that in 2009 Crisoperla was set up.

186 Soon Crisoperla grew in number of members and relationships. It also extended its area of action: there was the 187 adhesion to the association of some Ligurian GAS and, as an effect, also of some Ligurian organic farmers.

The multi-membership of some actors, as node of other networks (e.g. social movements, civil society organizations, etc.) opened new opportunities, in terms of relationships (at local level but also outside the territory, at regional and national level), initiatives (e.g. participation in/organization of local events, workshops related to the issue of sustainability and solidarity economy) and fields of action (e.g. education, dissemination, political action). All these

192 were important to develop and spread locally innovative approaches and practices related to organic farming and food,

- 193 re-localization of food production and consumption and, more generally, to sustainable lifestyles.
- 194

195 Results

196 In this section, drawing on the data gathered during the research process described in the methodological section, we

197 explore how the network has built its collective dimension through the development of a boundary object and how this

198 construction of the common identity has affected the capacity of network's members to act in order to spread their

199 visions and principles.

200 The development of the collective dimension

¹ The case study draws on to the analysis conducted within the SOLINSA Project (Brunori et al 2013b).

The shared perception of the problems of organic farming, especially amongst farmers, was the first element fostering the interaction among actors. In addition to that, the perceived distance from mainstream institutions regarding the approach towards organic farming was another important driver.

Another crucial step in the development of the network was the establishment of relationships between farmers and consumers organized into a GAS. This new cooperation around the organic food was decisive for the common redefinition of the production and consumption patterns and of the respective roles. For both these groups this relation has meant deep internal changes due to the need to achieve new skills and to redefine own identities and responsibilities as producers and consumers and due to the necessity to negotiate on many aspects.

209 In more general terms, the encounter with the civil society, like GAS, consumer associations, other local networks 210 engaged on issues related to local/sustainable development, has highlighted the importance of the broader appreciation 211 and promotion of organic farming, outside the agricultural sector itself. Also in this case, however, the process has not 212 been so easy. In the official statute of the Association the sentence "...to promote organic farming and production, by 213 encouraging synergies between producers, consumers and technicians" refers to the primary aim of the group, i.e. 214 promotion of organic farming, and to the way to achieve it, that is synergies from interaction. At the beginning, 215 however, the presence of different social groups in the Association has highlighted some differences regarding the 216 priorities. To farmers it was important to make the community to understand the quality of their work, the difficulties 217 they encountered, their need (especially in the case of organic farmers operating in marginal areas) to be recognized for 218 their contribution to the protection of the territory and of the environment and, of course, to get a better income. 219 Consumer groups identified as priority the recognition of the intrinsic values of organic agriculture within a model of 220 local development, ranging from the protection of health and environment to the improvement of the quality of life in 221 general. The two visions are complementary. Nevertheless, the apparent distance has implied a work of negotiation 222 amongst the two parties, from the definition of a common language that was able to express the point of view both of 223 producers and of consumers to its application for the definition of a common strategy to increase public and institutional 224 awareness on the issues brought forward by Crisoperla. In this respect, the effort to establish the internal rules of the 225 Association, recalling also its objectives, as well as that to draft a document to send to regional institutions in support 226 for organic farming are emblematic. Crisoperla called this document as "Policy document on organic farming" and in 227 order to draw up it, the Association organized itself by setting up a working group including representatives of all the 228 categories of its members. Through internal discussion involving all the parties, it has arrived to a definition of a 229 broader, shared vision of organic farming, which also includes "political" aspects. Hand in hand with this process there 230 was the progressive drafting of the document, which is organized into 13 points that focus on the most frequent 231 technical and operational problems of organic farming, which contains proposals to solve them as well as, more 232 generally, to promote and support organic farming. The document has become the identity element for the Association.

The shared definition of the meaning of organic farming has acted as a boundary object and as an entry point to the development of a broader vision of sustainability, including issues such as: re-localisation of food production and consumption, environment and health protection through organic food production and consumption, enhancement of territorial resources, education and networking as strategic tools for a local, sustainable development. The group has progressively come to a common understanding about these issues and developed a shared approach in dealing with the political and institutional actors and, more generally, in communication practices with the outside.

239 The consolidation of organisational patterns

These processes of internal interaction around the mission of the Association have led to the consolidation of an organisational structure as well as to the definition and sharing of an operational strategy. Both these processes have 242 been crucial to the effectiveness of the actions of the Association. Crisoperla is a formal organization and, as such, has 243 its own managing bodies by statute, i.e. president, steering committee, general assembly of members. This is also 244 relevant for the relationships held with public bodies. However, in order to carry out their activities, the Association 245 adopts a flexible and informal model of governance. The partners take all the decisions and manage network activities 246 together. Any matter concerning the Association - participation in a fair or in a conference, organization of special 247 events and official positions with respect to local matters etc. - is shared by activating the different forms of 248 communication that the Association has adopted (Brunori et al. 2013b). Amongst these, the discussion via web results 249 particularly effective and efficient.

250 With reference to Kirwan et al. (2013), looking at the direct benefits that collective action brings to Crisoperla members 251 we can identify: i) individual benefits, regarding both the economic sphere and the personal sphere, such as increased 252 economic performance, growth of self-esteem, capacity for reflection, ability to engage in collective action and 253 leadership skills; ii) benefits for the whole group, such as improvement of organizational skills, strategic capacity, 254 greater visibility, development of political awareness, capacity for interaction with local institutions. Collective action 255 has contributed to the individual growth of Crisoperla members and the development of skills that were latent before the 256 establishment of the Association, such as the leadership skills of the president and the vice-president of Crisoperla, 257 which emerged when problems within the group occurred and there was the need to take decisions or to motivate the 258 group to act.

This growth and the related sharing of common objectives, like promoting organic farming, principles of sustainability etc., has helped to define and shape the different activities performed by Crisoperla, including: i) organizing collective initiatives of farmers, ii) managing a direct relationship between consumers and producers, iii) activating training amongst producers and between producers and consumers, iv) awareness raising and education activities for the community, v) interacting with local public institutions and civic movements, and vi) broader networking. By performing these functions, Crisoperla members try to promote their values and to achieve their objectives of sustainability.

266 The action on the local context

The common values developed by Crisoperla and actualised through its collective action have had an effect at the locallevel, on economy, culture and local policies.

269 The economic effects of the activity of Crisoperla are attributable to initiatives of re-localization of the processes of 270 production and consumption of organic food, which are realised through spreading of forms of direct relationships 271 between producers and consumers, such as farmers markets and shops, direct selling on farm and trade relations with 272 GAS. Currently, the organic farmers of Crisoperla participate in six farmers markets in the provinces of Massa and La 273 Spezia and at the beginning of 2014 they contributed to the realization of the second farmers market in Massa, by 274 interacting with other local organisations and public institutions. With respect to GAS, in addition to those already 275 members of Crisoperla, with which the relationship established goes beyond the commercial aspects, farmers have 276 business relationships with other GAS in Liguria.

These experiences of short food supply chains have proved to have a positive impact both on producers and on consumers. From the producer side, they represent an opportunity to widen the market for their products and to get a fair price for them; moreover, the direct relationship with consumers allow farmers to communicate about the "quality" of their work, their contribution as organic farms to the environment and health protection, and so obtaining a public recognition for this. From the consumer side, the direct relationship with the organic farmers, based on reciprocity and trust, allow them to have access to quality and safe food at a fair price. These changes in economic terms are mainly due to collective action: before Crisoperla, the organic farmers sold their production through conventional channels, because in Lunigiana there did not exist an active market for organic products. The collective organization of diverse initiatives of direct selling is one of the main aspects of the innovation driven by Crisoperla.

286 The common agreement on the intrinsic value of organic farming was the basis of the commitment of Crisoperla 287 members in organising dissemination activities, such as public workshops, demonstrations, conferences related to the 288 main issues linked to their idea of sustainability and development: i) sustainable food and diet, ii) GMOs, regarding 289 laws and implications of their introduction, iii) territorial planning, regarding public policies about natural resources, 290 management of land, vi) small-size agriculture and related problems and v) patterns of local development. The intent is 291 to try to raise awareness of the local community, including the institutions, regarding the need to adopt more sustainable 292 behaviour towards food and agriculture, in particular highlighting the potential of organic and local farming as an 293 answer to the increasing concerns about food access for local communities and, more generally, the needed transition to 294 more sustainable (food) systems.

This last point was also the aim of Crisoperla at policy level, especially at local/regional level, where Crisoperla began to act as a political entity, putting pressure to change the policies. Its "policy documents" on organic farming and diverse sustainability issues, as well as the initiatives organised, were useful to that end. Moreover they favoured the establishment and strengthening of relationships with other civic movements, allowing the creation of a network for sustainability assuming organic farming as ideal of development.

301 Figure 1 – Collective action around the value of organic farming

302303 Conclusions

300

This paper has provided insights on how to address one of the most debated problems of italian agriculture, that is the reluctance of farmers to cooperate. The case study analysed in this paper shows how cooperation can be fostered by activating networks of a multiplicity of actors around 'boundary objects'. In the Crisoperla case, organic farming is a boundary object with a sufficient degree of commonality and generality, that enables actors belonging to different social worlds to share their knowledge and build trust. The network emerged from this interaction is the necessary platform to produce innovation and local change

The processes of participation and negotiation around this boundary object inside the network results in a consolidation of the network through its formalization and the definition of its organizational structure; this consolidation translates into a better capacity to interact with other actors in order to widen the network itself. Moreover, the commitment of the Association in interacting with public actors concerning common issues results in the legitimation of Crisoperla as an official interlocutor for local administrations, with a consequent improvement of the effectiveness of its action.

The experience of Crisoperla has also shown the potential of the network as a form of organization able generate new forms of governance of sustainable food system. The internal relationships as well as the interaction with public actors have proved to be particularly significant for the impact that multi-actor networks can have in terms of promotion of change. The establishment of collaborative relations amongst civil society, economic agents and political actors represents the first step to produce change and/or transition towards more sustainable patterns of food production and consumption (Renting et al. 2012).

The analysis conducted has highlighted the potential role of local organic food networks as drivers for the development of this new approach to food governance, showing these networks as particular spaces of social innovation, where

323 different social actors cooperate according to common principles. This alignment on common principle and vision is

- acknowledged as one of the main factors of success. However, this process is not immediate, but rather it develops
 through specific moments of confrontation and negotiation; to that end, the presence, acknowledgement and "use" of
- 326 boundary objects can represent an important "tool" in order to create commonality within these networks.
- We also have to underline that the development and the effectiveness of these kind of networks shows some criticalities and, specifically, we observed that these critical points are mostly connected to the continuity of actors' involvement. Most of them act voluntarily and the limitations of the voluntary work (provided inter alia by a few members), are
- 330 evident: the absence or reduction of commitment by one or more members results in a reduction of the activity of the
- 331 network as a whole. Moreover, it is evident the difficulty to involve all members in the various collective activities,
- 332 which in its turn contributes to make the work of the few volunteers harder.
- So, although experiences such as Crisoperla mostly originate from bottom-up initiatives, the need of support for a greater effectiveness appears crucial. From a policy perspective, one can see the key role of structures that are able to foster networking and to enable the agents to think and act reflexively within a collective dimension (Cajaiba-Santana 2014).
- The operational tools that policy makers could use to support LINSAs to improve their effectiveness and to make them successful should be placed within the strategies for research and rural development of the European Union (EC 2011,
- 339 2013), and then filter down to local level, in the operating context of LINSAs.
- 340 For networks like Crisoperla, the support should be addressed to build capacity to develop relationships with different
- 341 actors; to cover the cost of work for the functioning of the organization; to promote collective strategic capacity and 342 cooperative relationships between producers, between producers and consumers and other actors (including institutions)
- in order to carry out joint projects (Brunori et al. 2013).
- 344 With regard to the needed tools, these could result in funding projects aimed at the organization (through participatory
- methods) of training activities, addressed to enhance the knowledge and the skills of all the types of actors involved producers and consumers and related organizations, technicians of advisory services, CSOs, public institutions and
- 347 administrators -; the organization of public events (fairs, seminars) addressed to raise awareness on specific issues; the
- 348 exchange of knowledge and experience among peers, at local level and also with similar experiences outside the
- 349 territory. "Cooperation" measures of the rural development regulation would offer the opportunity to support integration
- 350 of competences around specific innovation problems: research institutes could provide their expertise to training and
- 351 research needs, advisory services could better tailor technical assistance to the needs of farmers, farmers themselves
- 352 could get resources to invest in innovative solutions..
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