

Article

Participatory Guarantee Systems in Spain: Motivations, Achievements, Challenges and Opportunities for Improvement Based on Three Case Studies

Marta López Cifuentes ¹, Christian Reinhard Vogl ^{1,*} and Mamen Cuéllar Padilla ²

¹ Department of Sustainable Agricultural Systems, University of Natural Resources and Life Sciences Vienna, 1180 Vienna, Austria; m.lopezcifuentes@boku.ac.at

² Department of Social Sciences and Humanities, University of Córdoba, Plaza del Cardenal Salazar, 14080 Córdoba, Spain; mcuellar@uco.es

* Correspondence: christian.vogl@boku.ac.at; Tel.: +43-1-47654-93312

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Abstract: The increasing number of producers and consumers of organic products means that there is an increasing need to guarantee the organic characteristics of organic products. Certification is a tool that bridges the information deficit between demand and supply, ensuring that a product complies with the specified standards. Third-party certification (TPC) is the main tool for assessing compliance today. However, there have been criticisms about the suitability of TPC for small-scale producers and alternative certification systems have been developed, such as Participatory Guarantee Systems (PGS). PGS are quality assurance systems in which stakeholders are expected to be involved and assure the quality claims being made by producers. This paper presents three PGS initiatives in Spain. The research methods used in this study were semi-structured and structured interviews. Interviewees felt that their PGS initiatives fulfilled the important motivations of building a community and adding value to their products. The main challenges mentioned were the participation of stakeholders and the efficiency of internal organization. The absence of official recognition for PGS in Spain and insufficient dissemination were also perceived as challenges. Although PGS has the potential for further development in Spain, the interviewees believed that more support and official recognition were still required.

Keywords: certification; organic agriculture; Participatory Guarantee Systems; Spain; alternative certification systems

1. Introduction

In Europe in recent decades, organic agriculture has evolved alongside the regulations that are applicable to it, as well as support programs and subsidies available to the organic sector [1]. Based on these regulations, a control and certification system for organic production is in place in Europe and in an equivalent way for organic imports to Europe as well. Third-party certification (TPC) is currently the main assessment system used to ensure the conformity or compliance of organic agriculture (and its products) with the regulatory framework.

Although required by law and recognized in the literature and in practice for its benefits, there has also been criticism of TPC [2–10]. Participatory Guarantee Systems (PGS) appeared as an alternative to TPC. PGS are expected to provide an organic guarantee, based on the participation of producers and other stakeholders, and are built on participation, trust, social networks and knowledge exchange.

Besides frequent claims made about the possible benefits of PGS, with a few exceptions, the debate on PGS lacks empirical data about their actual performance, benefits and challenges worldwide, including in Spain. The objective of this article is to provide information about three Spanish PGS initiatives in the regions of Valencia, Murcia and Granada in order to identify their members' motivations as well as their achievements, challenges and opportunities for improvement. This paper may serve as an empirical contribution to the global debate on the performance of PGS and the opportunities they present.

1.1. Organic Certification in Europe

In the 1930s and 1940s, farmers and farmers' groups developed the first organic agriculture associations in most industrial countries in response to the industrialization and intensification of agriculture [11,12]. However, it was not until the 1970s that associations of organic farmers started organizing themselves in order to develop their own private organic standards. At the end of the 1980s these associations lost their regulatory importance in certifying their members as governments started regulating organic agriculture themselves [12]. Certification was viewed as a necessity in a growing market to improve the efficiency of the market by creating a "common language" [13].

The first common organic standards in the EU were laid down in 1991 with the aim of protecting organic agriculture and consumers by ensuring fair competition between producers and transparency in the production system. This regulation established the basic guidelines for production, labeling and control [14]. Organic agriculture in the EU is currently regulated by Council Regulation (EC) No. 834/2007, Commission Regulations (EC) No. 889/2008 and No. 1235/2008 [15] and their respective amendments. Inspection and certification in the organic sector are performed by private or public certification bodies in order to ensure that the actors along the organic supply chain follow the European organic agriculture regulations [16]. Certification is a process through which written assurance confirms that a product, process or service conforms to specified requirements [17]. This quality sign depends then on the credibility of the institutions awarding them. And to be credible, quality signs should be given by an external body with no interest in the sales of the products [18]. In the case of organic agriculture, certification is used to guarantee marketing claims for organic quality attributes [4]. TPC is now the main assessment system [13]. According to Deaton (2004) [19], (p. 615) third-party certifiers are "external institutions that assess, evaluate and certify quality claims". TPC bodies are independent and therefore are perceived as objective and transparent [2,13,19]. Furthermore, TPC bodies have to prove their competence, including their capability to carry out inspections, through accreditation based on ISO/IEC 17065:2012 [15].

The importance of TPC is increasing in international quality food markets due to consumers' need for clear and reliable indications of food quality and safety (Anders et al., 2010). Certification of compliance with specific standards has the potential to communicate product claims beyond national boundaries and improve access to markets [20]. TPC reduces the risk of fraud and thus increases confidence in regulatory compliance [2]. It also appears to help producers implement sustainable improvements efficiently in their production practices and legitimizes organic agriculture in the eyes of European consumers [21,22]. Furthermore, TPC's compliance with established EU standards gives producers access to the organic market and economic support or subsidies from member states [23].

Nevertheless, TPC has been criticized for being expensive for producers, which results in consumers paying more for their products, for not being adapted to local circumstances, being hard for small producers to achieve, making agriculture more bureaucratic, simplifying production processes, and for not always being clear about the procedures the TPC bodies are implementing [2–5,7,9]. In addition, TPC does not distinguish between different kinds of organic producers. Thus, small and large producers have to fulfil the same standards in order to certify their products under TPC [10].

In the debate on TPC, it has also been claimed that it is important to develop organic agriculture and its standards in a respectful and coherent way adapted to traditional ecosystems, linked to cultural diversity and including farmers' technological knowledge, aiming at participation, respect

and democracy [8,12]. In this context, alternative certification systems that allow producers to create their own locally-based definition of organic agriculture have been developed [23]. Smallholders in the Global South, for example, have developed producer groups with internal control systems or Participatory Guarantee Systems (PGS) [14]. PGS are thought to have first appeared in the 1970s, when groups of organic farmers started certifying themselves using first-party certification, and have reappeared recently in the 21st century as an alternative system following criticisms of TPC [24].

1.2. Participatory Guarantee Systems

The term Participatory Guarantee System was first used on a global level in 2004. PGS initiatives were presented and analyzed during a workshop run by the Latin American Organic Agriculture Movement (MAELA), International Federation of Organic Agriculture Movements (IFOAM) and the Centro Ecológico in Torres, Rio Grande do Sul (Brazil) [25]. PGS were defined as “quality assurance initiatives that are locally relevant, emphasize the participation of stakeholders, including producers and consumers, and operate outside the frame of TPC”. The basic elements of PGS, according to IFOAM, are participation, a shared vision, transparency, trust, being a learning process, and horizontality [26].

PGS are expected to be culturally appropriate, require less paperwork than TPC, and are linked to local and alternative commercialization channels (Alternative commercialization channels are considered to be those based on the reconnection and close communication between producer and consumer, building new forms of relationships and governance of the network of actors [27]) [8,26,27]. PGS appear to help producers improve production, achieve political independence, boost livelihoods and establish social networks, and are thought to be appropriate for small producers due to their participatory and horizontal structure allowing a more suitable and less costly system of certification [8]. A PGS initiative should reflect a community’s capacity to prove trust through the implementation of diverse social and cultural control instruments in order to provide information to guarantee the integrity of their organic producers [25].

However, PGS are not exempt from mistrust. There is potential for dishonesty, which might raise some doubt concerning PGS [23]. The possible opportunistic behavior and the commitment of members are two of the most common challenges faced by PGS initiatives [28]. The participation of members, especially consumers, is a barrier being faced by PGS initiatives in various countries [23,25,29,30]. This dependence on voluntary work seems to be a significant obstacle to the development of PGS [31].

Despite the obstacles being faced by PGS, there are PGS initiatives operating in Latin America, USA, India, New Zealand, South and East Africa and Europe [26,32]. Even though local conditions and cultural contexts differ, all PGS initiatives appear to share the abovementioned basic elements and principles and also to be similarly organized [33]. In countries such as Brazil and Mexico, PGS work in parallel with organic legislation and TPC [23,34,35], whereas in EU member states producers without TPC are not allowed to sell their products as organic or receive subsidies from organic funds [29], with the exception of Sweden, where the government gives economic support to non-certified organic producers [36]. According to Padel (2010) [14] (p. 70) there are no objective reasons why PGS should be limited to smallholder producers in the Global South. PGS initiatives also have the potential to support organic production based on agroecological ideas and to create fair markets in EU countries [30].

1.3. Participatory Guarantee Systems in the Context of Spain

The first pioneers of organic agriculture in Spain appeared in the 1950s. Nonetheless, it was not until the 1980s that farmers established the first producers’ organizations for organic agriculture in the country. In 1988, the name “Organic Agriculture” became official in Spain through Royal Decree 759/1988 and the Regulatory Council of Organic Agriculture (Consejo Regulador de la Agricultura Ecológica, CRAE) was established [6]. Since then, there has been continuous development in this sector, both in terms of the number of producers and area of cultivated land. The area dedicated to organic agriculture in Spain has increased considerably in recent decades, from 4235 ha in 1991 to

1,610,130 ha in 2015 [37]. Nevertheless, the domestic organic market in Spain has not developed in line with its existing productive potential. Around half of the national organic production is destined for export [38].

Cuéllar Padilla (2008) [6] argues that TPC in Spanish organic agriculture could result in the loss of associations and networks that were around at the start of the organic movement in Spain. Moreover, TPC seems to be losing its connection with local conditions in Spain and not taking the socio-political aspects of agriculture into account [23,39]. As a result, there has been a concentration of farms in this sector: in Spain larger farms are certified with TPC, while small and medium-sized farms (farms with less than 10 ha) have been ignored [40,41].

Given the lack of empirical data on PGS, this article attempts to answer the following research questions:

- What are the internal challenges and benefits identified by members of these three PGS initiatives?
- What are the motivations and underlying beliefs about PGS held by stakeholders in these three PGS initiatives?

2. Materials and Methods

2.1. The PGS Initiatives Studied

The PGS initiatives studied are located in the Spanish regions of Valencia (PGS Ecollaures), Murcia (PGS Vecinos Campesinos) and the Valley of Lecrín, Granada (PGS Ecovalle) (Figure 1). They were chosen for their proximity and different characteristics. Based on the authors' own empirical data, they can be characterized as follows:



Figure 1. Map of Spain with its different autonomous communities (grey dotted lines). Drops: well-established Participatory Guarantee Systems (PGS) initiatives in Spain in the year of research (2016); in green: the three PGS initiatives studied: Ecollaures, Vecinos Campesinos and Ecovalle (own creation, Paint, Microsoft Office package, 2010).

Ecollaures was founded by producers in 2010 with the assistance of a student at the University of Valencia (first for his Master's thesis and then for his PhD thesis) to help producers connect with consumers and subsequently improve their participation and communication skills during meetings.

Vecinos Campesinos was founded in 2011 by producers from the region of Murcia who were not interested in TPC and decided to create a PGS initiative. After some meetings and based on a

Master's thesis and the example of Ecovalle's internal regulation, these producers created the PGS Vecinos Campesinos with the involvement of a consumers' association.

Ecovalle started in 2008 by a group of producers in this rural environment who shared an interest in organic and family agriculture. These producers ran workshops, specialist training courses and other activities related to organic agriculture [42,43]. In 2010 they started working on the development of their PGS initiative with the help of a PhD student from the University of Córdoba. Ecovalle is both a production cooperative and a PGS initiative. In 2016 Ecovalle merged with the "vergel de la vega" cooperative. Following the merger, the cooperative changed its name to "Valle y Vega", but the PGS initiative maintained the name of Ecovalle and is independent from the cooperative.

2.2. Data Collection and Analysis

In 2016, research began with exploratory fieldwork based on semi-structured interviews with five regional key actors [44], followed by a questionnaire based on the design of Kaufmann [45]. Field research was supplemented by participant observation, i.e., participation in farm visits, meetings, fieldwork and social gatherings, a field diary, pictures and the collection of documents [46,47].

As a next step, within each initiative, snowball and purposive sampling was used [46] to ensure the variety of stakeholders (consumer groups, Non-governmental organizations (NGOs), shops) and areas involved were covered. In total 29 structured interviews were conducted (22 producers, three members of consumer groups, three members of NGOs and one owner of a shop). All semi-structured and structured interviews were recorded using a digital voice recorder (SONY ICD PX333, Sony Corporation, Tokyo, Japan).

The structured interview included pre-coded questions, but also several open questions as well. The answers to these open questions were analyzed as qualitative data. The qualitative data were given numerical values and analyzed quantitatively in just two cases. This was for the use of the word "agroecology" and for statements about the members' political motivations. For the latter, topics related to politics (e.g., food sovereignty, demonstrations, political parties) or the direct use of the words "political" or "politics" were counted as political motivation (Table A1).

For two questions, interviewees had to rank the importance of a list of proposed statements (about the current status of their PGS initiatives and their motivations for joining PGS) (Table A1).

All raw quantitative data were recorded in an Excel table (Microsoft Office package, 2010) and analyzed using SPSS (version 21) for Windows (IBM SPSS 2012). The analysis used was descriptive analysis and cross-tabulation. The significance of the association between PGS initiatives and the selected variables was tested using Fisher's exact test, which was carried out at a significance level of 5%. To analyze qualitative information, the recorded interviews were transcribed using Listen N Write (Listen N Write 2016, Elephant Software, Italy) and coded with Atlas.ti (Atlas.ti 2012, Scientific Software Development GmbH, Berlin, Germany). Descriptive and values coding were used to create the codes. A conceptual order display was then created with the qualitative data [46,48,49].

2.3. "Producer" vs. "Farmer"

In the literature, the words "farmer" and "producer" often appear in the same text without a clear definition of or differentiation between the terms. Nonetheless, it is considered important to make a distinction between the two terms for this paper. The Oxford dictionary [50] defines producer as "a person, company, or country that makes, grows, or supplies goods or commodities for sale", while a farmer is defined as "a person who owns or manages a farm". According to this definition, while a farmer does not have to be personally involved in the production process (another person might work the land he or she owns), a producer has to "make, grow or supply goods". However, agriculture is implicit in the word "farmer", but "producer" can also be used to talk about non-agricultural products.

Interviewees mainly used the term producer and "producer" rather than "farmer" is always used in the documents collected from the PGS initiatives studied. Moreover, interviewees never talked about farms but about projects. One reason for this might be that not all producers work on a farm,

but might produce other food products such as honey (beekeeping) or bread. There are probably several other reasons for the preferred use of the term “producer” over “farmer”, but they are not relevant for the purposes of this article.

The term “producer” has been used in this article because the interviewees themselves used it. “Producer” here means people who produce food goods that come either directly from agriculture or from the processing of agricultural products. The term “farmer” is only used in the literature review where it was actually used in the literature. “Farmer” refers to those working in agriculture, whether or not they own the farm.

3. Results

3.1. Main Characteristics of Members of the Three PGS Initiatives

The arithmetic mean age of the interviewees ($n = 29$) was 40.3, with ages ranging between 27 and 60 years old. A total of 72.7% of the interviewees had a university degree and in the case of Ecovalle none of the members came from Granada (Table A1).

A total of 85.7% of all the members of the three PGS initiatives were producers. Other stakeholders involved in the studied PGS initiatives were NGOs, food cooperatives (FoodCoop), a consumer association and shops. The various stakeholders had their own particular characteristics and functions in the three PGS initiatives, but all stakeholders participated equally in running the PGS initiative (Table 1).

Table 1. Stakeholders involved in the three PGS initiatives studied, their numbers and functions (based on authors’ own quantitative and qualitative data).

Stakeholders	PGS Initiatives			Function Based on the Perception of Interviewees; $n = 29$
	Ecollaures	Vecinos Campesinos	Ecovalle	
Producers *	25	29	6	Production
NGOs	3	0	0	Support (technical, economical . . .) Dissemination of PGS Supporting access to public bodies Outside (external) point of view Political lobbying
FoodCoops **	2	0	0	Communication about PGS (networking) Providing the consumers’ point of view
Consumer association	0	1	0	Distribution and consumption of produce Voluntary work
Shops	0	4	0	Communication (information about PGS in the shops) Commercialisation of produce Voluntary work
Total	30	34	6	

* The number of producers corresponds to the so-called ‘units of production’, i.e., more than one person might be involved in a unit of production, but in this study this unit will be counted as one producer. ** A FoodCoop (food cooperative) is an association of consumers that is self-organized and purchases organic and local products that have been produced under fair work conditions. FoodCoops operate a democratic decision-making system based on the participation of members through the distribution of labor and responsibilities. The members seek a direct relationship with producers and thus avoid intermediaries [51,52].

A total of 43% of the interviewed producers had TPC as well as PGS, and their areas under cultivation varied between 3000 m² and 13 ha, with an arithmetic mean across the three PGS initiatives of 2.25 ha (Table A1). Of the 22 producers interviewed, five were able to live on agriculture alone. The other 17 producers had another income alongside agriculture, either from their own personal additional income or additional income from their partner.

Agriculture represented 54% of the producers’ income (arithmetic mean across PGS initiatives) (Table A1). Producers from Ecollaures had the highest percentage of income from agriculture compared to the other two PGS initiatives (73.5% arithmetic mean, Fisher’s exact, $n = 22$, $p < 0.05$) (Figure 2) (Table A1).

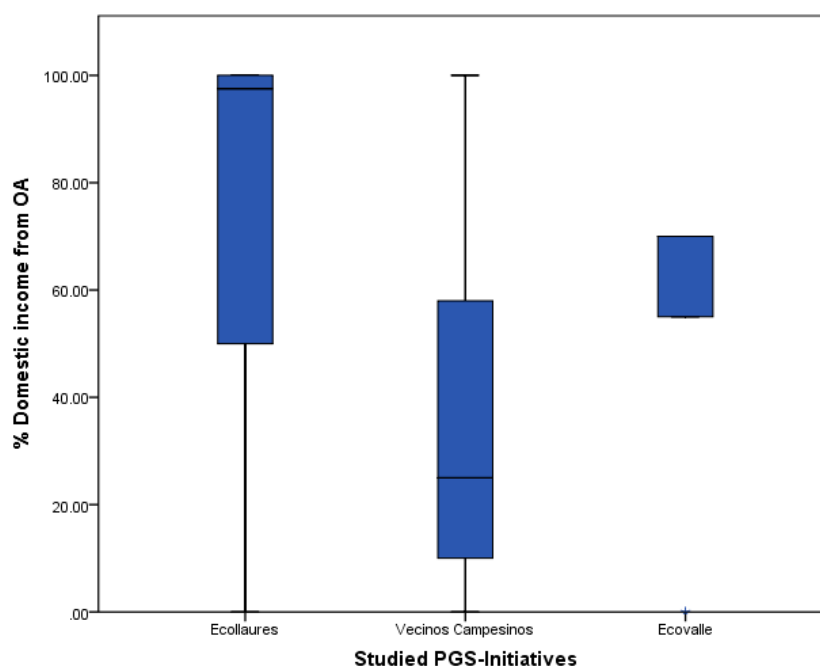


Figure 2. Percentage of domestic income coming from organic agriculture (OA) per PGS initiative studied. The 100% = total family and farm income as perceived by the interviewees. (Ecollaures: $n = 10$; Vecinos Campesinos: $n = 9$; Ecovalle: $n = 5$). Significant difference between PGS initiatives studied (Fisher's exact, $n = 24$, $p < 0.05$) (own data, SPSS (version 21) for Windows).

3.2. Motivations for Joining a PGS Initiative

There was no relationship between the different PGS initiatives studied and the degree of importance attributed by the interviewees to the different statements about why they decided to join a PGS initiative (Fisher's exact, $n = 22$, $p > 0.05$). Interviewees considered PGS to be a tool for social change and a (very) important reason for joining the PGS initiative (Table A1). More than 50% of the interviewed producers did not consider as important the fact that implementing a PGS is cheaper than implementing a TPC (Table A1). Moreover, the possibility of a higher income with the PGS was not a reason for producers to join the PGS initiatives. However, the establishment of a community of producers, consumers and other stakeholders and mutual support were very important to the producers (Table A1) because they shared similar values and ideology. In addition to the proposed statements, interviewees also mentioned other motivations for joining their PGS initiatives such as marketing advantages and less bureaucracy than TPC.

Disagreement with the current certification system was a significant factor in joining/creating their PGS initiatives mainly for producers. Some interviewees perceived TPC to be easier for larger producers with monocultures, and that "it does not meet the needs of small producers". Therefore, the interviewees wanted to differentiate themselves from TPC and "other kinds of organic producers". One member said they did not want to certify products but "certify or guarantee processes, projects and collectives, and people".

Interviewees perceived PGS to be more interactive, real and fair than TPC. The socioeconomic criteria included in the internal regulation of the PGS initiatives studied were an important motivation for the interviewees, especially the fact that the three PGS initiatives studied consider employees' working conditions, support the viability of the projects and include the biodiversity of the fields. Interviewees explained that their PGS initiative was better adapted to their reality and that "PGS go further and give the organic products extra value; PGS show the real work behind organic production".

Other stakeholders of the PGS initiatives (i.e., consumers' groups, shops and NGOs) perceive as main drivers for joining or creating a PGS initiative the support of local producers and the direct

relation to them, the promotion of local products and the fact that PGS is a tool for social change. Other important motivations were related to the production methods used by the producers (organic, environmental care) and the quality of the products (variety, healthiness). The implication of NGOs in the PGS initiatives seems especially important to them in order to get to know the reality of producers and consumers in the organic scene, so that they can organize projects or campaigns according to the realities and needs of producers and consumers. Moreover, being part of PGS helps NGOs building bridges between the civil society and the agrarian sector. On the other side, consumers and shops are part of the decision making of the PGS and this way they are able to participate in the decision process linked to their food.

Consumers who join the studied PGS look for organic, local and healthy foods. In the cases of Ecollaures and Vecinos Campesinos, consumers' groups and shops participate in decision making and even were part of the creation of the PGS initiatives. This involvement allows them to adapt the PGS also to their needs, e.g., discuss prices and crops with producers, visit the fields, agree on production method and in general being informed about the food they consume.

All stakeholders in the PGS initiatives discuss together in assemblies and field visits all possible matters related, not only to their internal organization, but also to more general issues such as values, social implications (working conditions), environmental impacts of their production methods or retail, etc.

Some interviewees explicitly expressed a political motivation. The statistical analysis suggested that there was a significant relationship between the PGS initiatives studied and the frequency of terms used that could be attributed to the explicit political motivation of their members (Fisher's exact, $n = 29$, $p < 0.05$). Whereas members of Ecovalle and Vecinos Campesinos did not mention any political motivation during the interviews, 40% of the members of Ecollaures interviewed explicitly perceived PGS to be a political tool (Table A1). While participating in different activities run by Ecollaures and Ecovalle, the members of these PGS initiatives were found to participate or have participated in political activities such as demonstrations, the 11-M movement, talks, events from left-wing parties, etc. Topics such as food sovereignty or farmers' rights came up several times during the research.

The relationship between the use of the word "agroecology" (the number of interviewees who used the term at least once) and the political motivation shown by the interviewees was analyzed. The results indicated a strong and significant relationship between the use of "agroecology" and political motivation (Fisher's exact, $n = 31$, $p < 0.05$). Thus, interviewees who used the word "agroecology" were likely to be politically motivated. There was also a significant relationship between the PGS initiatives studied and the frequency of the use of the word "agroecology" (Fisher's exact, $n = 31$, $p < 0.05$). A total of 80% of the interviewees from Ecollaures ($n = 100\% = 16$) and 60% from Ecovalle ($n = 100\% = 5$) used the word "agroecology" (or derivatives of it) during the interviews, while none of the members of Vecinos Campesinos interviewed ($n = 100\% = 11$) used this word (Table A1). In the words of the interviewees from Ecollaures and Ecovalle, "agroecology is not the same as organic agriculture", "its definition is so broad and deep (...) that we have to break it down into its true meaning so the consumer is more aware of it", "agroecology includes social factors" and "it's organic agriculture understood in a broad sense".

3.3. Achievements of the Three PGS Initiatives Studied

The interviewees claimed that despite the initial motivations of the members of the PGS initiatives studied, not all of them might be fulfilled. Interviewees perceived the community, network and exchange within the PGS initiative as the most important achievements of their PGS initiatives (Table A1). Interviewees felt supported by other members and that they learned from one other, not only about agricultural techniques but also social skills. Interviewees were satisfied with the group formed in their PGS initiatives, despite the internal issues they might face.

Another achievement perceived by interviewees was the extra (non-monetary) value PGS conferred on their products. These values were established by the members of each PGS initiative and

are summarized in their internal regulation. Almost 80% of the interviewees were (very) satisfied with their internal regulation (Table A1), but they considered their own PGS initiative to be an active system that is continuously developing alongside the internal regulation. They mentioned that the internal regulation could be improved and some parts of it should be revised as the first drafts were produced without any experience. Interviewees considered that producers in the PGS differentiate themselves from organic producers with TPC, and that their PGS initiative represents their kind of production, as they expected.

Some other expectations met by the PGS initiatives were product quality, transparency, control, education and personal satisfaction. Transparency and control were achieved through the farm inspections and daily interaction between members. Some members perceived the farm visit to be an important part of their PGS initiative because it is a tool for checking that the others are producing according to the principles established by their PGS initiatives. One member of Ecovalle considered day-to-day life with the other members as fundamental for the trust built within the PGS initiative and assurance of compliance.

The implication of consumers in PGS initiatives increased their interest on eating healthier and organic. For example, one shop (member of a PGS initiative) mentioned that they try to create awareness among consumers about the benefits of organic products for the environment and their own health. They included in their stock different kind of vegetables, not so common among the typical Spanish consumer, and explain to them the benefits of these products and even how to cook them. This was done by other producers and shops too.

Interviewees from Ecollaures and Ecovalle also perceived the commercial opportunities and political battles as achievements. Some markets in Valencia and Granada have started to accept PGS as a guarantee of organic products, with producers allowed to sell them as organic. Interviewees from these PGS initiatives perceived ongoing improvement in the acceptance of PGS in local markets. In the case of Ecollaures, some interviewed members perceived this success in part to be a result of their political work. They also acknowledged the important work of NGOs in fighting for farmers' rights, the widespread use of the word "agroecology" and acceptance of PGS as a valid guarantee.

3.4. Challenges Perceived by PGS Members

Although producers with PGS might be able to sell their products in some Spanish markets, PGS is still not formally accepted as an organic certification and producers are not officially allowed to sell their products as organic. Interviewees were asked about the importance of future legislative recognition of PGS in Spain. Here, interviewees had to evaluate its importance from none to very high (Figure 3). However, before answering the question, several interviewees considered it important to re-define "recognition". Interviewees differentiated between three kinds of recognition:

- legislative recognition: refers to the question asked as to whether PGS are considered a legal certification system as TPC bodies;
- institutional recognition: the acceptance of PGS by public institutions, so that PGS initiatives have a political voice and are allowed to sell their products as organic (at least on a local scale), but without being an official certification body;
- social recognition: consumer acceptance of PGS as a valid guarantee system that consumers can trust.

Interviewees evaluated legislative recognition and some of them pointed out the importance of the other two types of recognition. Interviewees who considered the importance of the legislative recognition of PGS to be (very) low (Table A1) perceived social recognition to be more important than legal recognition. They considered that social recognition could be enough to help producers with commercialization. Other interviewees perceived institutional recognition to be important so that PGS can establish communication on a political level. There were also those who did not consider

any of these types of recognition as important and perceived the current independence of PGS as an advantage (Figure 3).

Some interviewed producers mentioned that they were in their PGS initiatives because they preferred group certification. Nevertheless, they had been forced to have TPC because some shops or consumers have demanded TPC in order to reassure consumers that they are buying organic products. These producers stated that as soon as PGS was recognized as a valid organic guarantee, they would no longer certify their products under TPC. These producers also admitted that the high amount of voluntary work and time compared to TPC were major obstacles to adopting PGS.

One interviewee mentioned the difficulty in finding a balance between family duties and the PGS initiative, as the work required for PGS involved a considerable investment of time. In general, time constraints were perceived to be a problem and an obstacle to members' participation in their PGS initiatives. Although 76.6% of interviewees ($n = 100\% = 29$) considered producers' participation to be normal or high (Table A1), they mentioned the participation of all members (not only consumers) as one of the main challenges. The interviewees considered the low participation of their PGS members to be a problem that might eventually lead to just a few members doing all the work (or to "burn out"). Consumer participation was reported as being especially low. This was perceived as a challenge that the interviewees did not know how to address. The interviewees proposed some reasons for low consumer participation such as disinterest, other priorities, lack of need or consumers not finding participation appealing.

"Organization" was mentioned several times as a challenge related to participation. According to the interviewees, "organization" was understood to be the effectiveness of committees and working groups (e.g., in completing tasks), the planning of meetings and farm inspections (e.g., establishing and implementing a calendar of farm inspections), the compilation and formulation of documents, preparation of events and communication of achievements. The perceived low level of participation was thought to influence the organization of PGS initiatives (Table A1). Interviewees perceived that the low participation of members in their PGS initiatives made organizational matters more difficult.

Based on what the interviewees said, efficiency was mainly defined by the performance of meetings (duration, communication between members, capacity for decision-making, participation of members, ability to focus on topics relevant to the PGS initiatives), but also by the quality of the farm inspections and the work undertaken during the year (communication, workshops, publicity, document management, involvement of members etc.). Interviewees perceived the progress of their PGS initiative to be slow. Moreover, interviewees felt that they did not know how to work in a participatory manner, making it difficult to take decisions in a participatory and horizontal way. As communication tools for sharing information and the decisions made, the initiatives and their members mainly used emails and WhatsApp, which were not always perceived as the best methods.

Some interviewees perceived the communication of their PGS initiatives as a challenge that still needed to be addressed (Table A1). Interviewees found publicity of their PGS in the media too low and wanted this to change. Ecollaures was still working on its website, whereas Ecovalle and Vecinos Campesinos had a WordPress site. Interviewees believed publicity could raise awareness among the Spanish population. The lack of professional communication was mentioned as one reason for consumers not participating in PGS initiatives.

Other challenges mentioned were personal issues between the members, the economic viability of the projects and product prices (Table 2). One interviewee mentioned that it is sometimes "difficult to ensure that technical problems do not affect personal relationships". The dispersal of members was perceived to be a problem by the members of Ecollaures and Vecinos Campesinos. Most of the members of Ecollaures lived near Valencia, but some were in villages a long way from the city, even in the southern region of Alicante. The problem was more pronounced in the case of Vecinos Campesinos as all its members were dispersed in the regions of Murcia and Alicante. The maximum distance between members of Vecinos Campesinos was approximately 140 km. However, the members of Ecovalle lived within walking distance of one another in the same village.

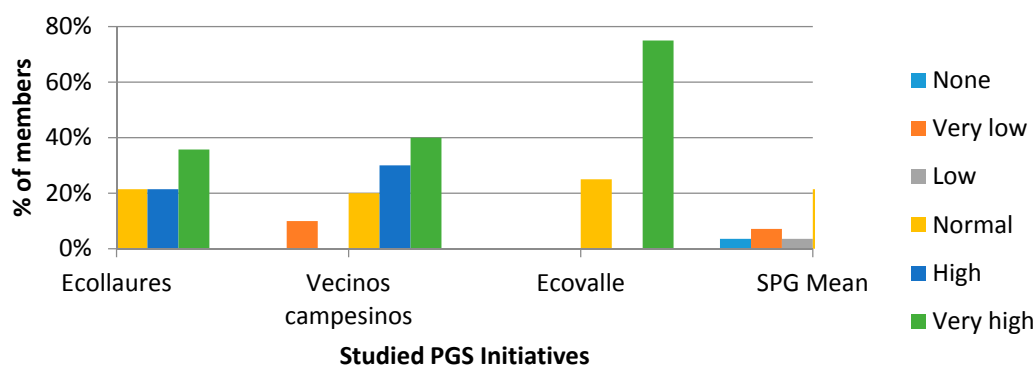


Figure 3. Perception of the interviewed members of the three PGS initiatives about the level of importance of possible future legislative recognition of PGS in Spain (Ecollaures: $n = 100\% = 14$; Vecinos Campesinos: $n = 100\% = 10$; Ecovalle: $n = 100\% = 4$). No significant difference was found between the PGS initiatives studied (Fisher's exact, $n = 29$, $p > 0.05$) (own data, Excel, Microsoft Office package, 2010).

Table 2. Challenges perceived by the interviewees in the three PGS initiatives studied (own creation from qualitative data).

Challenges
Consumer involvement
Economic viability
Efficiency
Legality/official recognition
Dispersal of members
Participation
Personal matters
Prices

3.5. Opportunities for Improvement

Interviewees were aware of the challenges faced by their PGS initiatives and wanted to overcome them in order to improve the initiatives. Several interviewees perceived a need to rely on a hired person who would be in charge of running their PGS initiative (Table 3). They said that producers had too much work and no time to run it. These interviewees thought that an employee would help make progress with their PGS initiative as this person would have more time and the skills needed for the tasks. The PGS initiatives studied were based on voluntary work, but "sometimes it is too much (. . .) and a level of specialization might be good". However, interviewees were also concerned that hiring somebody might increase the annual fee for the PGS initiatives, result in members participating less in other activities, and that the PGS might require external support (producer associations, NGOs, universities, etc.).

As a way of improving the efficiency of the PGS initiatives studied, members felt that meetings should be more efficient (Table 3). Interviewees from Ecollaures found a workshop on communication skills in participatory-horizontal systems to be particularly helpful and would like to have more events like this. The workshop was about facilitation tools for participative meetings and they have noticed a great improvement in their meetings since the workshop.

Topics discussed during the assemblies were the development and improvement of the internal regulation and farm inspection checklist (Farm inspection checklists are also called "visit guides" locally). A total of 64% of the interviewees were (very) satisfied with their farm inspection checklist (Table A1), but they believed that the farm inspection checklist could still be improved. The general guarantee process (farm inspection checklist plus farm inspection) was also perceived as (very) good (69% of interviewees) (Table A1). In the case of Ecollaures they would like to have different checklists for different products and actors, but they are still working on this (Table 3). A total of 75.6% were (very)

satisfied with the internal regulation (Table A1). However, the guarantee process was also perceived to be not good or serious enough by some interviewees (Table A1). Those interviewees perceived that some members did not take the farm inspection seriously and attributed more importance to the social part of it than checking the farm inspection checklist and monitoring that the producer was doing everything right because these members knew the producer and might take it for granted that he/she was working to their standards.

Alongside the potential internal improvements, some producers interviewed were concerned about their production costs (for inputs, machines etc.) and would like to share some costs with other producers in their PGS initiative (Table 3). In the case of Vecinos Campesinos, some interviewed producers perceived production costs to be an important challenge and would like to form an agricultural cooperative and have a distributor selling the products produced by their PGS initiative. They mentioned a wish to have a distributor for more PGS initiatives so that producers from different PGS initiatives could sell their products together. Although this idea was not shared by many interviewees, they all considered it essential to build a PGS network, not for commercialization purposes, but to make the movement stronger in the country (Table 3). PGS in Spain have already started to contact one another. In November 2015 and June 2016 there were two national meetings at which various stakeholders in PGS in Spain met in order to get to know each other and discuss common issues.

Table 3. Aspects perceived by the interviewees that would improve the PGS initiatives studied and suggested tools for improvement (own qualitative data).

Requiring Improvement	Suggestion
Meetings	Respect, good moderator, facilitation workshop
Consumer involvement	Guide for consumers, dissemination, establishing a physical headquarters, fun farm visits
Economic viability /costs *	Collective purchase of inputs, production of seedlings in the PGS initiatives, exchange of products
Publicity	Person in charge of publicity, collective communication work, awareness campaign
Organization	Hired person, farm inspection calendar **
Participation	Monitoring involvement, establishment of minimums
Quality	Different guides for different products
Equality	Different guides for different actors
Relationship with other PGS initiatives	Creation of a PGS network in Spain
Commercialization **	Collective commercialization (cooperative)
Rapid growth ***	Duplication of the PGS initiative, stop admission of new members for a while

* Only producers perceived this to be an area requiring improvement and offered suggestions; ** Only mentioned by members of Vecinos Campesinos; *** Only mentioned by members of Ecollaures.

4. Discussion

4.1. Motivations and Achievements

In other case studies of Latin America, Africa, Asia and Europe most PGS initiatives were initiated by or through the help of other stakeholders, such as NGOs or farmers organizations [32,53]. e.g., in the case of a PGS initiative in Chapingo, Mexico, the initiative was created with support from university and it was gradually taken over by producers [45]. There are also PGS initiatives that were established with the help of a Market (e.g., in South Africa [53]); a network of Markets, such as the Mexican network of tianguis and organic markets; or, as it happens in the Philippines, with the help of an association of sustainable agriculture. These PGS initiatives were mainly established to support small-holder local producers by offering them affordable alternatives to third party certification [53].

In these cases where PGS initiatives were not started by producers, organizers might have had to convince potential member producers of the advantages of PGS [30]. In our case, on the other hand, the studied PGS initiatives were initiated by already-motivated farmers themselves who later on looked for the support of other stakeholders. The high level of education compared to other PGS initiatives

might explain why their PGS initiatives were not initiated by another organization. This might also influence their motivations for joining or funding a PGS initiative.

The subject of lower costs of PGS compared to TPC usually appears alongside less paperwork or bureaucracy as the main advantages of PGS in different studies about PGS worldwide [1,6,24–27,29,42,53,54]. Even though producers in the PGS initiatives studied agreed on the importance of low costs and less paperwork, these were not the main reasons for joining the PGS initiatives. This might be due to the members' high level of education and the fact that most producers had additional income alongside agriculture. In addition, almost half of the interviewed producers also had TPC and had to deal with the related paperwork anyway. Moreover, in contrast to other PGS initiatives, e.g., in Mexico, producers of the PGS initiatives studied did not share their costs or their sales (In the case of Ecovalle, interviewees did not consider PGS to be part of the cooperative. They only used the PGS initiative to guarantee their products and the cooperative was separate from it, thus reference is also only made here to the PGS initiative), which explains why the financial and job security motivations found in agricultural cooperatives were not identified in this study [55]. Previous studies about PGS in other countries (e.g., Mexico, Brazil, India, New Zealand, Peru, Philippines, etc. [23,29,34,53]) have not shown that producers who are members of a PGS also have TPC. One exception is *Natur et Progrés* in France [25]. In the present study producers were found to have both PGS and TPC. This was due to the lack of legislative recognition of PGS in the EU. Producers with only PGS are not allowed to sell their products as organic, except on rare occasions informally established by local authorities [14,56]. Thus, producers of the PGS initiatives studied were not motivated by economic or market access advantages, but by the community building and the extra value added to their products among others. Producers sought to differentiate themselves from other organic producers who did not share their values. PGS members share the values of sustainable agriculture that go beyond an input-substitution production and include a broader definition of organic [23,39]. According to a member of another PGS initiative in Spain: "PGS is not an administrative procedure, PGS is based on trust and takes into account social aspects such as respect for workers, food miles and how farm inputs travel from inputs' suppliers" [56].

This desire for differentiation was also at a political level, which had already been found in Ecovalle by De la Cruz (2015) [42]. In the Global South some politically motivated funding agencies started PGS initiatives because they considered PGS to be more democratic than TPC and decided to make a political statement by supporting PGS. Without previous studies of the local markets or their simultaneous development, the sole political motivation of the funding agencies has been criticized because the reason for starting the PGS initiatives might not have been appropriate for local producers [30]. However, in the present cases, producers themselves instead of external funding agencies were politically motivated and considered PGS to be a tool for social change.

Since 2011, there has been growing discontent with national and European politics and with the global economic system among young people in Spain. Due to the economic crisis that began in 2008, young (mainly high-educated) Spaniards formed the 15-M movement in 2011 to express their disagreement with national politics and the global economic system [57,58]. Members of the PGS initiatives studied here sympathized with the movement and it might have influenced their desire to use PGS as a political tool and differentiate themselves from the certification system dictated by the EU. The PGS initiatives studied are to be seen as a protest movement against modern industrialized agriculture [59].

As a symbol of their protest, Ecovalle and Ecovalle use the word "agroecology" instead of "organic". Although the EU regulation does not directly forbid use of the term "agroecology", it does protect the words "organic", "ecological" and "biological" and their derivatives [14]. As agroecology is actually a derivative of ecological, its use is not allowed in the EU for non-certified organic producers. The members of the PGS initiatives studied would like free use of the term agroecology to sell their products, as happens in many countries in the Global South. For example in Ecuador, producers with PGS are allowed to sell their products at local markets just by using the word

agroecological instead of organic [56]. According to the interviewees, agroecology is a better definition of their products than organic. Although, there are many definitions of “agroecology” in the literature, these definitions agree on the common socio-political interpretation of the term agroecology. From the socio-political point of view, agroecology is defined as a tool for the defense, (re)configuration and transformation of rural areas and the key to revitalizing small farming systems and food sovereignty [60–63]. Rover et al. (2016) [35] (p. 11) also found that members of the Brazilian agroecology network, Rede Ecovida, were motivated by an “ideological engagement by transforming the model of rural development, based on agroecology and biodiversity”. The PGS initiatives studied and Ecovida are not only interested in production, but in new ways of rural development that consider the reality of each ecosystem and territory [35].

Nonetheless, the fact that the members of the PGS initiatives studied wanted to go beyond TPC might also carry a potential risk that should be considered. In a PGS initiative in New Zealand, there was a trend of making PGS more complex, e.g., by increasing the amount of paperwork for farmers [29]. PGS should be an inclusive system and the desire to include stricter standards than TPC might sometimes be too ambitious, thus making PGS more inaccessible than TPC [23]. The PGS initiatives studied here were aware of this risk and reacted flexibly while including the aspects of agroecology that they consider important.

Apart from the desire to include other aspects of agroecology in PGS, one of the main motivations and achievements was the mutual support and community formed in the PGS initiatives studied. Producers felt supported and satisfied with their colleagues and this might be reflected in trust and guarantee the integrity of their members [25]. PGS are not merely certification systems, but rather communities that are seeking mutual support, local and fair commercialization, improvement in the local ecology and education for the local population [31]. Moreover, the horizontal network has the capability to efficiently transmit information and create incentives to behave in a trustworthy way that strengthens the community [64]. This horizontal and democratic system allows producers to elaborate and control their own standards, which empowers producers, one of the characteristics of PGS suggested by IFOAM [25,65].

The importance of community seems to be a characteristic shared by different alternative food networks that are based on collective and democratic action, such as Community Supported Agriculture (CSA), FoodCoop or networks of farmers’ markets [26,66–69]. Nonetheless, in contrast to this study’s results, the building of a community is not identified as one of the main motivations for joining a CSA, but as an intrinsic characteristic of CSA [66,70,71]. In their research about CSA in the USA, Brehm and Eisenhauer (2008) [66] (p. 110) found that “strong community attachment clearly has a positive influence on motivations for joining a CSA (. . .) but community is not always a strong motivation for joining a CSA”. In contrast, the main motivations for joining a CSA are the quality of the products, while in the PGS initiatives studied these motivations were not identified [69–71]. One motivation shared by the PGS initiatives studied and CSA is the support of organic local producers and products [70]. While there are several studies about motivation in CSA, few studies address motivations in PGS. More research is needed to identify why producers, consumers and other stakeholders want to join or start a PGS initiative.

4.2. Challenges and Potential Improvements

The present study shows that the three PGS initiatives shared three of the most common challenges reported in the literature: involving consumers in the PGS initiative, gaining recognition and support from authorities, and relying on voluntary work. One or more of these challenges have been found in PGS initiatives in East Africa, Brazil, South Africa, Peru, Mexico, India, Philippines, France and Spain [6,25,31,32,40,42,53].

The results indicate that the low level of consumer involvement might be due to the lack of legislative recognition and limited dissemination of PGS in Spain. Even though many interviewed producers inform their consumers about PGS, there is a high level of ignorance about PGS among

Spanish consumers [6,32]. The lack of legislative recognition make consumers doubt the credibility of the organic products from PGS if they do not know either the producers or the PGS initiative [6]. Credibility is a difficult concept in organic agriculture, so consumers have to trust the producers' quality claims. There are many different quality signs which leads to more confusion rather than an indication for buyers. Besides, there are many situations in which quality claims are weakened due to producers breaking the law [18]. For these reasons, dialogue with consumers to sustain trust can be more important than specific information about traceability or production techniques [72]. In support of this statement, Pole and Gray (2012) [71] (p. 96) found that members of a CSA in New York considered the relationship with the farmer to be an essential aspect of CSA.

Nonetheless, in a broader environment than the PGS initiative itself, public policies in Spain, as in Brazil, could substantially foster PGS, improve its legitimacy and increase the involvement of the state and other public and/or private bodies [9,68]. Cuéllar (2008) [6] argues that a certain degree of legislative recognition of PGS in Spain is necessary to improve the situation of PGS in the country and increase the number of Spanish PGS initiatives. However, legislative recognition presents some challenges when trying to include PGS in a legal framework so that it preserves its core principles [25]. Indeed, the interviewees were aware of these challenges and for this reason proposed institutional and social recognition as alternatives. The interviewees were afraid that legislative recognition of PGS could result in strict hierarchical structures and increase bureaucracy, threatening the essence of PGS and converging with the TPC system [56]. However, in some countries PGS have developed different strategies in recent years to work within the legal framework.

In Mexico, PGS initiatives met the government to design a new regulation of organic products in a participatory way. Although PGS was finally included in organic law, the process demonstrated the difficulty of achieving consensus [23]. Ultimately Mexico, like Chile, recognized PGS as a valid guarantee system for organic products only for small producers and at local markets or through direct marketing (no export) [23,56]. Yet the legal recognition of PGS in Mexico requires that PGS initiatives must comply with the Mexican law for organic products which can be burdensome for the producers and even unachievable. The increase of bureaucracy together with the time constrains of the producers makes it difficult for producer to obtain the legal recognition [45], as the interviewees of our study fear it could happen if PGS are legally recognized in Spain.

In the USA, the US Department of Agriculture allows producers with a gross annual revenue equal to or less than \$5000 to sell their products as organic in the local market without TPC. This scenario leaves some space for PGS [14,73]. Thus, a financial threshold that suits the Spanish context and is high enough to include all the desired producers could be defined, making space for PGS to work as a valid guarantee system for organic production in Spain [74].

Nevertheless, in most Latin American countries where PGS are officially recognized, PGS initiatives are overseen by the same regulative body as the TPC system. In Bolivia, Paraguay, Ecuador and Costa Rica small producers are allowed to use PGS as a guarantee of organic production on the national market. However PGS initiatives are then audited by the national Food Safety Authority in most cases [56]. Ecollaures and Ecovalle can be compared to the Peruvian case where PGS are not officially recognised on a national level, but the municipalities or markets support and recognize PGS as a valid guarantee for organic production [56].

Apart from official recognition of PGS, in order to assure consumers of the system's legitimacy, PGS should also be sufficiently formal and members should build trust properly within the PGS initiatives [23]. However, the interviewees admitted the challenge of combining this formality with the characteristic comradeship of PGS. This challenge is typical for cooperatives as the internal tension between efficiency and cooperation are competing views that are always present in collective actions [75]. This and other internal matters seem to be a common challenge in PGS initiatives [6,32,42,53].

Internal matters can lead to conflicts and divisions within the community. In collectives such as PGS, interpersonal issues and differences of opinion among members present a significant

challenge [31]. The democratic processes facilitate conflict due to the close proximity and face-to-face decision-making that can lead to an emotional and confrontational environment during meetings [75]. Differences in opinions amongst PGS members and the refusal to compromise and accept others' opinions might result in conflict and separation of PGS initiatives [45]. To avoid conflict and improve the efficiency of PGS initiatives, especially in decision-making, members must establish and uphold standards. These standards have to be clear on issues such as exclusion from the system, monitoring procedures and sanctions for non-compliance [28]. IFOAM (2007) [27] also acknowledges the importance of the clear and prior definition of these issues in order to guide PGS initiatives to put into practice the key elements of PGS as defined by IFOAM.

Another internal issue that affects the PGS initiatives studied was the perceived low level of member participation. In institutions for collective actions such as PGS or agriculture cooperatives, a broad-based commitment and equal degree of participation are the most common challenges faced by members [28,75]. For example, in CSA consumers also acknowledge their wish to volunteer in CSA and support the farmers, "but their busy lives and hectic schedules often prevent participation and active involvement" [71] (p. 97). The present study's results show that the different stakeholders involved in the PGS initiatives also faced time constraints and there was general dissatisfaction with the level of participation by members. One explanation for this dissatisfaction could be the difference in the members' perceptions of their participation and the participation of the other members [76]. The commitment required to participate in meeting can lead to a decline in the quality of democratic decision-making [75]. Time constraints can influence the continuity of the certification process [45] and this might be another reason for the mentioned low efficiency of the PGS initiatives. Nevertheless, a study with a focus on the members' motivation (including consumers) for participation in PGS could help draw more precise conclusions about members' participation and commitment to PGS.

Bouagnimbeck (2014) [53] (p. 58) found that long distances between members of the PGS initiatives and from market to market are a challenge related to time constraints for PGS initiatives in India, Brazil and South Africa. This challenge was not found in the PGS initiatives studied here. Instead the toll on family and free time were considered to be important reasons affecting participation in the PGS initiatives studied. One solution already proposed by producers in the first Andalusian PGS initiatives that is working in some other PGS initiatives (e.g., PGS El Encinar, Granada, Spain) is to have an employee that takes care of the administration, organization and communication of the PGS initiative [6]. Hiring employees for democratic cooperatives has been criticized because it defeats the purpose of the cooperative by creating two types of members [77]. Nonetheless Hernandez (2006) [75] (p. 130) argues for the importance of democracy in the decision-making process of cooperatives, including the choice of whether or not to employ someone. In the PGS initiatives studied here, there is a division of opinion on this matter.

5. Conclusions

Producers of the PGS initiatives studied look for a seal that reflects the work and values behind their products. Their discontent with the current TPC system and the need for a system that assesses their method of production are the main motivations for joining the PGS initiatives studied here. Moreover, the community created through the PGS initiatives is important not only for producers, but for other stakeholders as well.

Currently there are few commercial advantages obtained from being part of the PGS initiatives studied. Instead, the main achievement perceived by members of these PGS initiatives was the community created by their initiatives. The support, knowledge, exchange and social network of the community were some of the benefits of PGS mentioned. The use of PGS as a political tool for improving the situation of organic agriculture and alternative certification systems in Spain was also an important goal of the PGS initiatives studied.

The main challenges perceived by the members of the PGS initiatives were the involvement of consumers, participation of the members, official recognition and time constraints. Moreover,

communication between members and internal difficulties seemed to present a challenge for the PGS initiatives studied. In order to overcome these internal challenges, external help is recommended, following the example of Ecollaures. The establishment of a network of PGS in Spain might be helpful to empower PGS and apply pressure for official recognition.

There is a general desire to improve and develop the PGS initiatives studied here. However, until they receive some kind of recognition and the public are given more information, this growth will be limited. The support of public or private organizations, as well as more research, may help PGS develop further in Spain.

PGS might be an example of how people that want to support a different food system to the current one (more ecological, social and fair) come together and create their own initiatives that nowadays have even become a global movement. They reflect a consciousness among consumers, producers and other stakeholder about a healthier food system, not only in terms of human health, but also for the environment.

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Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Table A1. Summary of results.

Stakeholder	Method	Number of Interviewees	Question	PGS Initiatives Studied			Arithmetic Mean in the PGS Initiatives STUDIED	Statistical Analysis Fisher's Exact ($p < 0.05$)		
				Ecollaures (EL)	Vecinos Campesinos (VC)	Ecovalle (EV)				
All (producers, FoodCoops, consumers association, NGOs, shops)	Structured and semi-structured interviews	$n = 31$ (EL $n = 15$; VC $n = 11$; EV $n = 5$)	Age (years)	36.7	45.5	37.6	40.3	n.s.		
		$n = 100\% = 31$ (EL $n = 100\% = 15$; VC $n = 100\% = 11$; EV $n = 100\% = 5$)	Place of birth	PGS region	67%	69%	0%	58%	s.	
			Studies	University degree	87%	46%	100%	73%	n.s.	
			Interviewees who use the word "agroecology"		80%	0%	60%	47%	s.	
				Interviewees who use of the word "politics" or related topics		40%	0%	0%	13%	s.
		$n = 100\% = 24$ (EL $n = 100\% = 12$; VC $n = 100\% = 8$; EV $n = 100\% = 4$)	Level of satisfaction with the internal regulation of their PGS initiative	Very low	0%	0%	0%	0%	n.s.	
				Low	17%	0%	0%	6%		
				Average	58%	0%	0%	19%		
				High	25%	75%	50%	50%		
	Very high			0%	25%	50%	25%			
		No answer (n° interviewees)	3	2	0	-				
	$n = 100\% = 28$ (EL $n = 100\% = 14$; VC $n = 100\% = 10$; EV $n = 100\% = 4$)	Level of satisfaction with the inspection checklist of their PGS initiative	Very low	0%	0%	0%	0%	n.s.		
			Low	0%	0%	0%	0%			
			Average	43%	30%	25%	33%			
			High	50%	60%	25%	45%			
			Very high	7%	20%	50%	26%			
		No answer (n° interviewees)	1	0	0	-				
	$n = 100\% = 28$ (EL $n = 100\% = 14$; VC $n = 100\% = 10$; EV $n = 100\% = 4$)	Level of satisfaction with the guarantee process of their PGS initiative	Very low	0%	0%	0%	0%	n.s.		
			Low	7%	0%	0%	2%			
Average			43%	10%	25%	26%				
High			50%	90%	50%	63%				
Very high			0%	0%	25%	8%				
	No answer (n° interviewees)	1	0	0	-					
Current status of different aspects of the studied PGS initiatives	Prepared statements	Status	Very poor	0%	0%	0%	0%	n.s.		
			Poor	0%	0%	0%	0%			
			OK	0%	0%	0%	0%			
			Good	60%	60%	0%	40%			
			Very good	40%	40%	100%	60%			
	Organisation	Status	Very poor	0%	0%	0%	0%	n.s.		
			Poor	0%	0%	0%	0%			
			OK	27%	40%	50%	39%			
			Good	73%	60%	50%	61%			
			Very good	0%	0%	0%	0%			
	Communication between members	Status	Very poor	0%	0%	0%	0%	n.s.		
			Poor	0%	0%	0%	0%			
			OK	27%	20%	0%	16%			
			Good	73%	80%	75%	76%			
			Very good	0%	0%	25%	8%			

Table A1. Cont.

Stakeholder	Method	Number of Interviewees	Question	PGS Initiatives Studied			Arithmetic Mean in the PGS Initiatives STUDIED	Statistical Analysis	
				Ecollaures (EL)	Vecinos Campesinos (VC)	Ecovalle (EV)		Fisher's Exact ($p < 0.05$)	
			Dissemination of PGS	Very poor	7%	0%	25%	11%	n.s.
				Poor	20%	10%	0%	10%	
				OK	47%	80%	75%	67%	
				Good	27%	10%	0%	12%	
			Possibility to participate in decision-making	Very good	0%	0%	0%	0%	n.s.
				Poor	0%	0%	0%	0%	
				OK	0%	0%	0%	0%	
				Good	20%	20%	0%	13%	
			Relationship between members	Very good	80%	80%	100%	87%	n.s.
				Very poor	0%	0%	0%	0%	
				Poor	0%	0%	0%	0%	
				OK	0%	0%	0%	0%	
			Internal communication methods used	Good	47%	40%	75%	54%	n.s.
				Very good	53%	60%	25%	46%	
				Very poor	0%	0%	0%	0%	
				Poor	0%	0%	0%	0%	
			Process of decision-making	OK	33%	30%	0%	21%	n.s.
				Good	7%	50%	75%	44%	
				Very good	0%	20%	25%	15%	
				Very poor	0%	0%	0%	0%	
Perceived participation of producers in the PGS initiatives studied	OK	13%	10%	0%	8%	n.s.			
	Good	60%	60%	100%	73%				
	Very good	27%	30%	0%	19%				
	Level of participation								
	Very low	0%	0%	0%	0%				
Perceived participation of consumers in the PGS initiatives studied	Low	8%	11%	0%	6%	n.s.			
	Moderate	31%	56%	25%	37%				
	High	46%	22%	50%	39%				
	Very high	15%	11%	25%	17%				
	Very Low	31%	22%	0%	18%				
Perceived importance of official recognition of PGS in Spain	Low	54%	56%	0%	36%	n.s.			
	Moderate	0%	22%	100%	41%				
	High	15%	0%	0%	5%				
	Very high	0%	0%	0%	0%				
	None	7%	0%	0%	2%				
Perceived importance of official recognition of PGS in Spain	Very low	7%	10%	0%	6%	n.s.			
	Low	7%	0%	0%	2%				
	Moderate	21%	20%	25%	22%				
	High	21%	30%	0%	17%				
	Very high	36%	40%	75%	50%				

Table A1. Cont.

Stakeholder	Method	Number of Interviewees	Question	PGS Initiatives Studied			Arithmetic Mean in the PGS Initiatives STUDIED	Statistical Analysis	
				Ecollaures (EL)	Vecinos Campesinos (VC)	Ecovalle (EV)		Fisher's Exact ($p < 0.05$)	
Only Producers		$n = 22$ (EL $n = 10$; VC $n = 8$; EV $n = 4$)	Size of land (ha)	4	1	2	2	n.s.	
			% of annual home income from agriculture	74%	36%	53%	54%	s.	
			TPC besides PGS	20%	63%	75%	46%	n.s.	
			Prepared statements	Level of importance					
			Promotion of local products	None	0%	13%	0%	4%	n.s.
				Very low	0%	0%	0%	0%	
				Low	0%	0%	0%	0%	
				Average	0%	0%	0%	0%	
				High	40%	13%	0%	18%	
			Direct relationships with consumers	Very high	60%	75%	100%	78%	n.s.
				None	0%	0%	0%	0%	
				Very low	0%	0%	0%	0%	
				Low	0%	0%	0%	0%	
				Average	10%	0%	0%	3%	
			Raise awareness among consumers about organic agriculture	High	50%	25%	0%	25%	n.s.
				Very high	40%	75%	100%	72%	
				None	0%	0%	0%	0%	
				Very low	0%	0%	0%	0%	
				Low	0%	0%	0%	0%	
			With PGS I can have higher incomes	Average	10%	25%	25%	20%	n.s.
High	30%	38%		0%	23%				
Very high	60%	38%		75%	58%				
None	0%	38%		50%	29%				
Very low	20%	0%		0%	7%				
This PGS initiative establishes a community of producers	Low	30%	13%	0%	14%	n.s.			
	Average	20%	38%	50%	36%				
	High	20%	13%	0%	11%				
	Very high	10%	0%	0%	3%				
	None	0%	0%	0%	0%				
PGS is cheaper than TPC	Very low	0%	0%	0%	0%	n.s.			
	Low	10%	0%	0%	3%				
	Average	0%	13%	0%	4%				
	High	30%	13%	50%	31%				
	Very high	60%	75%	50%	62%				
Motivations for participating in the PGS initiative	None	60%	0%	75%	45%	s.			
	Very low	10%	0%	0%	3%				
	Low	10%	0%	0%	3%				
	Average	20%	25%	0%	15%				
	High	0%	38%	25%	21%				
Very high	0%	38%	0%	13%					

Table A1. Cont.

Stakeholder	Method	Number of Interviewees	Question	PGS Initiatives Studied			Arithmetic Mean in the PGS Initiatives STUDIED	Statistical Analysis Fisher's Exact ($p < 0.05$)
				Ecollaures (EL)	Vecinos Campesinos (VC)	Ecovalle (EV)		
			The fact that PGS is a tool for social change	None	0%	0%	0%	n.s.
				Very low	0%	0%	0%	
				Low	0%	0%	0%	
				Average	0%	0%	0%	
				High	40%	13%	0%	
			Very high	60%	88%	100%	83%	
			The opportunity for mutual support with other producers	None	0%	13%	0%	n.s.
				Very low	0%	0%	0%	
				Low	0%	0%	0%	
				Average	0%	0%	0%	
				High	30%	38%	25%	
			Very high	70%	50%	75%	65%	
			The opinion of my family/friends	None	50%	13%	75%	n.s.
				Very low	10%	0%	0%	
				Low	10%	0%	0%	
				Average	20%	38%	25%	
				High	0%	25%	0%	
			Very high	10%	0%	0%	3%	

References

1. Coiduras Sánchez, P.; Díaz Álvarez, J.R.; Porcuna Coto, J.L. Situación y posibilidades de implantación de la certificación participativa en agricultura ecológica. In Proceedings of the VII Congreso SEAE, Zaragoza, Spain, 18–23 September 2006.
2. Tanner, B. Independent assessment by third-party certification bodies. *Food Control* **2000**, *11*, 415–417. [[CrossRef](#)]
3. Certification of Organic Products. Available online: http://www.centroecologico.org.br/artigo_detalle.php?id_artigo=26 (accessed on 10 September 2018).
4. Jahn, G.; Schramm, M.; Spiller, A. The Reliability of Certification: Quality Labels as a Consumer Policy Tool. *J. Consum. Policy* **2005**, *28*, 53–73. [[CrossRef](#)]
5. Getz, C.; Sreck, A. What organic and Fair Trade labels do not tell us: Towards a place-based understanding of certification. In *J. Consum. Stud.* **2006**, *30*, 490–501. [[CrossRef](#)]
6. Cuéllar Padilla, M. Hacia un Sistema Participativo de Garantía para la Producción Ecológica en Andalucía. Ph.D. Thesis, University of Córdoba, Córdoba, Spain, 2008.
7. Albersmeier, F.; Schulze, H.; Jahn, G.; Spiller, A. The reliability of third-party certification in the food chain: From checklists to risk-oriented auditing. *Food Control* **2009**, *20*, 927–935. [[CrossRef](#)]
8. Padel, S.; Röcklinsberg, H.; Schmid, O. The implementation of organic principles and values in the European Regulation for organic food. *Food Policy* **2009**, *34*, 245–251. [[CrossRef](#)]
9. Velleda Caldas, N.; Sacco dos Anjos, F.; Lozano Cabedo, C. La certificación de productos ecológicos en España y Brasil. *Agrociencia Uruguay* **2014**, *18*, 163–171.
10. Certificación ‘de Papel’ o de Relaciones Humanas. Los Sistemas de Garantía Participativa como Iniciativas de Soberanía Alimentaria Local. Available online: http://www.academia.edu/15030312/_Certificaci%C3%B3n_de_papel_o_de_relaciones_humanas_Los_sistemas_de_garant%C3%ADa_participativa_como_iniciativas_de_soberan%C3%ADa_alimentaria_local_Certification_on_paper_or_by_the_people_Participatory_guarantee_systems_as_initiatives_for_local_food_sovereignty_in_Spanish_ (accessed on 31 October 2018).
11. Lotter, D.W. Organic Agriculture. *J. Sustain. Agric.* **2003**, *21*, 59–128. [[CrossRef](#)]
12. Vogl, C.R.; Kilcher, L.; Schmidt, H. Are Standards and Regulations of Organic Farming Moving Away from Small Farmers’ Knowledge? *J. Sustain. Agric.* **2005**, *26*, 5–26. [[CrossRef](#)]
13. Hatanaka, M.; Bain, C.; Busch, L. Third-party certification in the global agrifood system. *Food Policy* **2005**, *30*, 354–369. [[CrossRef](#)]
14. The European Regulatory Framework and Its Implementation in Influencing Organic Inspection and Certification Systems in the EU. Available online: https://www.researchgate.net/publication/277101680_The_European_Regulatory_Framework_and_its_implementation_in_influencing_organic_inspection_and_certification_systems_in_the_EU (accessed on 31 October 2018).
15. Vogl, C.R.; Axmann, P. Regelungsmechanismen im System des Ökologischen Landbaus. In *Das System Ökologischer Landbau*; Freyer, B., Ed.; UTB Stuttgart: Stuttgart, Germany, 2016.
16. Padilla Bravo, C.; Villanueva Ramírez, I.; Neuendorff, J.; Spiller, A. Assessing the impact of unannounced audits on the effectiveness and reliability of organic certification. *Org. Agric.* **2013**, *3*, 95–109. [[CrossRef](#)]
17. Corsin, F.; Funge-Smith, S.; Clausen, J. A Qualitative Assessment of Standards and Certification Schemes Applicable to Aquaculture in the Asia-Pacific region. Asia-Pacific Fishery Commission Food and Agriculture Organization of the United Nations (FAO). Available online: <http://www.fao.org/docrep/010/ai388e/ai388e00.htm> (accessed on 14 September 2018).
18. Bryla, P. The perception of EU quality signs for origin and organic food products among Polish consumers. *Qual. Assur. Saf. Crop. Foods* **2017**, *9*. [[CrossRef](#)]
19. Deaton, B.J. A theoretical framework for examining the role of third-party certifiers. *Food Control* **2004**, *15*, 615–619. [[CrossRef](#)]
20. Moser, C.; Hildebrandt, T.; Bailis, R. International Sustainability Standards and Certification. In *Sustainable Development of Biofuels in Latin America and the Caribbean*; Springer: New York, NY, USA, 2014; pp. 27–69. [[CrossRef](#)]
21. Hatanaka, M. McSustainability and McJustice: Certification, alternative food and agriculture, and social change. *Sustainability* **2014**, *6*, 8092–8112. [[CrossRef](#)]

22. Chkanikova, O.; Lehner, M. Private eco-brands and green market development: Towards new forms of sustainability governance in the food retailing. *J. Clean. Prod.* **2015**, *107*, 74–84. [[CrossRef](#)]
23. Nelson, E.; Tovar, L.G.; Gueguen, E.; Humphries, S.; Landman, K.; Rindermann, R.S. Participatory guarantee systems and the re-imagining of Mexico's organic sector. *Agric. Hum. Values* **2015**, *33*, 373–388. [[CrossRef](#)]
24. Sistemas Participativos de Garantía. Una Herramienta Clave para la Soberanía Alimentaria. Available online: http://www.redcimas.org/wordpress/wp-content/uploads/2012/10/sistemas_participativos_degarantia.pdf (accessed on 31 October 2018).
25. Källander, I. *Participatory Guarantee Systems—PGS*; Swedish Society for Nature Conservation: Stockholm, Sweden, 2008.
26. How Participatory Guarantee Systems Can Develop and Function. Available online: https://www.ifoam.bio/sites/default/files/page/files/pgs_guidelines_en_web.pdf (accessed on 31 October 2018).
27. IFOAM. *Participatory Guarantee Systems: Shared Vision, Shared Ideals*; IFOAM: Bonn, Germany, 2007.
28. Ostrom, E. *Governing the Commons: The Evolution of Institutions for Collective Action*; Cambridge University Press: New York, NY, USA, 1990.
29. Participatory Guarantee Systems: Case Studies from Brazil, India, New Zealand, USA and France. Available online: https://www.ifoam.bio/sites/default/files/page/files/studies_book_web.pdf (accessed on 10 September 2018).
30. Home, R.; Bouagnimbeck, H.; Ugas, R.; Arbenz, M.; Stolze, M. Participatory guarantee systems: Organic certification to empower farmers and strengthen communities. *Agroecol. Sustain. Food Syst.* **2017**, *41*, 526–545. [[CrossRef](#)]
31. Nelson, E.; Gómez Tovar, L.; Schwentesius Rindermann, R.; Gómez Cruz, M.Á. Participatory organic certification in Mexico: An alternative approach to maintaining the integrity of the organic label. *Agric. Hum. Values* **2009**, *27*, 227–237. [[CrossRef](#)]
32. Katto-Andrighetto, J. *Participatory Guarantee Systems in East Africa. Case Studies from Kenya, Tanzania and Uganda*; IFOAM: Bonn, Germany, 2013.
33. Torremocha, E. Los Sistemas Participativos de Garantía. Herramienta para la Definición de Estrategias Agroecológicas. Master's Thesis, Internationa University of Andalusia, Seville, Spain, 2012.
34. Sacchi, G.; Caputo, V.; Nayga, R. Alternative Labeling Programs and Purchasing Behavior toward Organic Foods: The Case of the Participatory Guarantee Systems in Brazil. *Sustainability* **2015**, *7*, 7397–7416. [[CrossRef](#)]
35. Rover, O.; de Gennaro, B.; Roselli, L. Social Innovation and Sustainable Rural Development: The Case of a Brazilian Agroecology Network. *Sustainability* **2016**, *9*, 3. [[CrossRef](#)]
36. Flaten, O.; Lien, G.; Koesling, M.; Loes, A.K. Norwegian farmers ceasing certified organic production: Characteristics and reasons. *J. Environ. Manag.* **2010**, *91*, 2717–2726. [[CrossRef](#)] [[PubMed](#)]
37. MAPAMA. Agricultura Ecológica: Estadísticas 2015. Available online: http://www.mapama.gob.es/es/alimentacion/temas/la-agricultura-ecologica/estadisticaseco2015connipoymetadatos_tcm7-435957.pdf (accessed on 12 June 2017).
38. López Salcedo, P. Caracterización de la Comercialización y Distribución de Productos Ecológicos a Través de los Canales de Venta Especializados. Available online: http://www.mapama.gob.es/es/alimentacion/temas/la-agricultura-ecologica/estudiocaracterizacioncomercializacioncanalesventaspecializados_tcm7-387574.pdf (accessed on 24 May 2017).
39. Proceso de Construcción y Regulación de un Sistema Participativo de Garantía para la Producción Ecológica en Andalucía. Available online: https://repera.files.wordpress.com/2009/08/sistema_garantia_participativa_andalucia.pdf (accessed on 31 October 2018).
40. Boza Martínez, S. La Agricultura Ecológica como Parte de la Estrategia de Desarrollo Rural Sostenible en Andalucía. Ph.D. Thesis, Universidad Atónoma de Madrid, Madrid, Spain, 2010.
41. Cuéllar Padilla, M.; Calle Collado, Á. Can we find solutions with people? Participatory action research with small organic producers in Andalusia. *J. Rural Stud.* **2011**, *27*, 372–383. [[CrossRef](#)]
42. De la Cruz, C. Organizaciones, Sistemas Participativos de Garantía y Procesos Agroecológicos en Andalucía. Ph.D. Thesis, University of Córdoba, Córdoba, Spain, 2015.
43. Ecovalle. Available online: <http://ecovalle.org/> (accessed on 11 October 2016).
44. Miles, M.B.; Huberman, A.M.; Saldaña, J. *Qualitative Data Analysis: An Expanded Sourcebook*; SAGE Publications: Houston, TX, USA, 1994.

45. Kaufmann, S.; Vogl, C.R. Participatory Guarantee Systems (PGS) in Mexico: A theoretic ideal or everyday practice? *Agric. Hum. Values* **2017**, *35*, 457–472. [CrossRef]
46. Bernard, R.H. *Research Methods in Anthropology. Qualitative and Quantitative Approaches*; AltaMira Press: Lanham, MD, USA, 2006.
47. Döring, N.; Bortz, J. *Forschungsmethoden und Evaluation in den Sozial- und Humanwissenschaften*; Springer: Berlin, Germany, 2016.
48. Saldaña, J. *The Coding Manual for Qualitative Researchers*; SAGE Publications: Newcastle upon Tyne, UK, 2009.
49. Bühl, A. *SPSS 23—Einführung in die Moderne Datenanalyse*; Pearson: Hallbergmoos, Germany, 2016.
50. Oxford Dictionary. Oxford Living Dictionary. Available online: <https://en.oxforddictionaries.com/> (accessed on 12 June 2017).
51. Sense.Lab e.V. *Fair, Bio, Selbstbestimmt: Das Handbuch zur Gründung einer Food-Coop*; Books on Demand GmbH: Hamburg, Germany, 2009.
52. Zitcer, A. Food Co-ops and the Paradox of Exclusivity. *Antipode* **2015**, *47*, 812–828. [CrossRef]
53. Bouagnimbeck, H. *Global Comparative Study on Interaction between Social Processes and Participatory Guarantee Systems*; IFOAM: Bonn, Germany, 2014.
54. IFOAM. *Organic Agriculture and Participatory Guarantee Systems: Marketing and Support for Organic Smallholders*; IFOAM: Bonn, Germany, 2006.
55. Sánchez Hernández, J.L. Redes alimentarias alternativas: Concepto, tipología y adecuación a la realidad española. *Boletín de la Asociación de Geógrafos Españoles* **2009**, *49*, 185–207.
56. Varini, F. How governments regulate PGS and where is it taking us? *Org. Stand.* **2017**, *171*, 3–6.
57. Gentile, A. De vuelta al nido en tiempos de crisis. Los boomerang kids españoles. *Revista Estudios Juventud* **2010**, *90*, 181–203.
58. Santos Ortega, A.; Martín Martín, P. La juventud española en tiempos de crisis: Paro, vidas precarias y acción colectiva. *Sociología Trabajo* **2012**, *75*, 93–110.
59. Alrøe, H.F.; Noe, E. What makes organic agriculture move—Protest, meaning or market? A polyocular approach to the dynamics and governance of organic agriculture. *Int. J. Agric. Resour. Gov. Ecol.* **2006**, *7*, 5–22. [CrossRef]
60. Aportando a la Construcción de la Soberanía Alimentaria Desde la Agroecología. Available online: <http://www.ecologiapolitica.info/?p=4848> (accessed on 31 October 2018).
61. Altieri, M.A.; Nicholls, C.I. Agroecología: Única esperanza para la soberanía alimentaria y la resiliencia socioecológica. *Agroecología* **2012**, *7*, 65–83.
62. Rosset, P.M.; Martínez-Torres, M.E. Rural Social Movements and Agroecology: Context, Theory, and Process. *Ecol. Soc.* **2012**, *17*. [CrossRef]
63. Gómez, F.L.; Ríos-Osorop, L.; Eschenhagen, M.L. Epistemological bases of agroecology. *Agrociencia* **2015**, *49*, 679–688.
64. Ostrom, E.; Ahn, T.K. The meaning of social capital and its links to collective action. In *Handbook of Social Capital: The Troika of Sociology, Political Science and Economics*; Gert, T.S., Gunnar, L.S., Northampton, M.E.E., Eds.; Edward Elgar: Bloomington, IN, USA, 2008; pp. 17–35.
65. Alternative Certification and a Network Conformity Assessment Approach. Available online: <https://www.ifoam.bio/sites/default/files/page/files/alternativecertificationandanetworkconformityassessmentapproach.pdf> (accessed on 31 October 2018).
66. Brehm, J.M.; Eisenhauer, B.W. Motivations for participating in Community Supported Agriculture and their relationship with community attachment and social capital. *South. Rural Sociol.* **2008**, *23*, 94–115.
67. Brown, C.; Miller, S. The Impacts of Local Markets: A Review of Research on Farmers Markets and Community Supported Agriculture (CSA). *Am. J. Agric. Econ.* **2008**, *90*, 1296–1302. [CrossRef]
68. Zanasi, C.; Venturi, P.; Setti, M.; Rota, C. Participative organic certification, trust and local rural communities development: The Case of Rede Ecovida. *New Med.* **2009**, *2*, 56–64.
69. Papaoikonomou, E.; Ginieis, M. Putting the farmer’s face on food: Governance and the producer–consumer relationship in local food systems. *Agric. Hum. Values* **2016**, *34*, 53–67. [CrossRef]
70. Bougherara, D.; Grolleau, G.; Mzoughi, N. Buy local, pollute less: What drives households to join a community supported farm? *Ecol. Econ.* **2009**, *68*, 1488–1495. [CrossRef]
71. Pole, A.; Gray, M. Farming alone? What’s up with the “C” in community supported agriculture. *Agric. Hum. Values* **2012**, *30*, 85–100. [CrossRef]

72. Thorsøe, M.H. Maintaining Trust and Credibility in a Continuously Evolving Organic Food System. *J. Agric. Environ. Ethics* **2015**, *28*, 767–787. [[CrossRef](#)]
73. United States Department of Agriculture. USDA National Organic Program: Who Needs to Be Certified? Available online: https://www.ams.usda.gov/sites/default/files/media/who_needs_to_be_certified.pdf (accessed on 18 May 2017).
74. IFOAM. Internal Control Systems (ICS) for Group Certification. Available online: <http://www.ifoam.bio/en/internal-control-systems-ics-group-certification> (accessed on 17 October 2016).
75. Hernandez, S. Striving for Control: Democracy and Oligarchy at a Mexican Cooperative. *Econ. Ind. Democr.* **2006**, *27*, 105–135. [[CrossRef](#)]
76. Österberg, P.; Nilsson, J. Members' perception of their participation in the governance of cooperatives: The key to trust and commitment in agricultural cooperatives. *Agribusiness* **2009**, *25*, 181–197. [[CrossRef](#)]
77. Gunn, C.E. *Workers' Self-Management*; Cornell University Press: Ithaca, NY, USA, 1984.



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