

Participatory Guarantee Systems: social innovation within the agroecological transition

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Abstract: Nowadays, there is an increase in the consumption of healthy food that is produced with respect for the environment. The organic or Bio products have these characteristics and to identify them, there is a label issued by certifying agencies, this label differentiates them from the products produced in a conventional manner. These certification agencies are international companies that evaluate the production processes. Their certification standards are based on the promotion of soil fertility and biological activity, they do not allow the use of synthetic fertilizers or pesticides and search for the protection of the environment and human health. Parallel to this organic or bio certification emerge a verification mechanism called Participatory Guarantee Systems (PGS), PGS is a verification system aimed at small producers who produce for self-consumption and the surplus is sold locally, based on the participation and the commitment of stakeholders who participate in the production and consumption of agroecological products. The agroecological approach looks for healthier foods, produced by small farmers, incorporating social, cultural, economic and political criteria. An experience of PGS in France is implemented by the Federation "Nature & Progrès", created in 1964, involving various stakeholders and pioneers of the organic movement that promote productive processes similar to organic or bio products but with a socio-economic approach. The objective of this paper is to make visible the social innovations which are in the Participatory Guarantee Systems, that facilitate the agroecological transition. To meet this objective, interviews have been conducted with the farmers who have this verification in the 'Département' of Haute-Garonne in the South of France. Our case shows what kind of innovation allows the guarantee system, the social dynamics that it generates, being pedagogical or awareness, the social networks around the production and local commercialisation of these products and how this mechanism allows to build territory.

Keywords: Participatory Guarantee Systems, social innovation, agroecology, local markets, Nature & Progrès, Haute-Garonne, France

Introduction

In front of a commercial scheme that favours export, alternative commercial models are being developed which arise from local efforts based on the trust and appreciation of local resources. These social movements are in response to the lack of the State in matters of promotion of a local economy and food security. Some experiences are examples of social innovation, with regard to the construction of strategies that allow the producer to reduce the number of intermediaries and give public access to quality fresh products at affordable prices without jeopardizing the income of small producers.

Economic relations that go beyond market relations characterize these commercial initiatives that become spaces where farmers and consumers redefine social and cultural values, which motivate their participation in the agro-food system (Nigh and González, 2015). These markets emerge through management capacities that produce transformations in the territory, which seek to be reflected in public policies that support the productive transformation with emphasis on agroecological or similar criteria.

In order to approach the study, the concept of agroecology provides us the framework for evaluating the social dynamics around the participatory certification mechanisms. The study of agroecology is not only based on the study of production systems but, throughout the

relationship between nature and society (Francis et al., 2003; Bocchi and Maggi, 2014). In this context, we use the definition of Francis (et al., 2003) “*agroecology integrates the study of the ecology of the entire food system, encompassing ecological, economic and social dimensions*”.

Agroecology integrates in its vision, equal importance to the social, economic and cultural factors that structure the production and the commercial systems, this is one of the reasons that agroecology differs from other schools of the organic movement (Boza, 2013). The involvement of agricultural, social and economic factors in the agroecological movement has generated the collective participation of interested parties in the creation of alternative markets that motivate the collective action of Participatory Guarantee Systems (PGS) (Boza, 2013).

From the above, the objective of this paper is to make visible the social innovations that the PGS present in the alternative local markets and its contribution to the agroecological transition. To meet this objective, interviews have been conducted with the farmers who have this verification of PGS in the ‘Département’ of Haute-Garonne in the South of France.

Participatory Guarantee Systems: Social innovation

The certification is an evaluation mechanism to ensure the quality of a product with respect to a standard (Pino, 2017). Certification systems were initially motivated by farmers and to some extent by merchants involved in the incipient market for organic food, in an effort to protect their market from fraud (Gonzalez and Nigh, 2005). There are four certification systems whose differentiation depends on the relationship between production and consumption and who takes responsibility for verify. First-party certification occurs when an individual develops its own standards and applies them to the products he sells; the second-party certification is conducted by an association of businesses who agree to adopt a set of standards and a method for verifying; the third-party certification, carried out by an organization independent of the activity it certifies, such as aspects of production, marketing, sales and technical assistance and the fourth-party certification is the case of a multi-lateral agency or an association of third-party organizations that creates rules and agree on a verification method, in order to “harmonize” producers among countries, much organic certification is regulated according to the International Standards Organization (ISO) or the International Federation of Organic Movements (IFOAM) (Gonzalez and Nigh, 2005; Boza, 2013; Pino, 2017).

An alternative to these certification systems have been developing the Participatory Guarantee System (PGS). According to the IFOAM, “*the PGS are locally focused quality assurance systems. They certify producers based on active participation of stakeholders and are built on a foundation of trust, social networks and knowledge exchange*”¹. This certification mechanism is developed in a participatory framework in a network and aims to ensure that the producers themselves and other stakeholders verify the criteria to be evaluated (Boza, 2013).

The Participatory Guarantee System (PGS) is a mechanism of verification directed to the agro-food systems, is intended to small-scale producers or small-organized groups that destine their production for self-consumption, as well as for the local, regional or national market (Lernoud and Fonseca, 2004). The PGS is focused on small producers located within the same region; it has an important influence at the social level, since it promotes the construction of networks and links based in the participation and trust between the different stakeholders that may be from rural or urban areas. For the above, the PGS represent an alternative to the third-party certification system for organic products.

An experience of PGS in France is implemented by the “Fédération Nature & Progrès” (N&P), which in 1978 implement one of the first PGS in the world, although it was not yet

¹ <https://www.ifoam.bio/en/organic-policy-garantee/participatory-guarantee-systems-pgs> [Reviewed: april, 2018].

referred in such a way.² The “Fédération Nature & Progrès”, is created in 1964 involving various pioneers of the organic movement, including farmers, consumers, agronomists, technicians and medical doctors, it was born as a reaction to industrialized agriculture and now it is one of the oldest organizations for organic agriculture in France and Europe.³

In 1971, “Nature & Progrès” establishes a set of specifications on organic production through the “Cahiers des Charges” and the “Charte”, these tools have served as a reference in the organic movement and are recognized by the IFOAM (Torremocha, 2015). The difference between official certification of organic products and PGS is that the first one focusses mainly on practices that respect the environment but for the PGS in N&P, the certification is granted based on technical specification found in the “Cahiers des Charges” and environmental, social and economic aspects established in the “Charte”.⁴

Nature & Progrès promotes a guarantee system centred on the participation and the commitment of stakeholders who participate in the production and consumption of the products (Torremocha, 2015). The social project of N&P is based on the work of the local groups that make up the Federation, organizing conferences, round tables, visits to farms and market and organic fairs. The strength of N&P lies in its members: producers, processors and consumers.⁴

In the case of the verification by N&P, the producers and processors have the label when they respond to the defined criteria. There are 15 different “Cahiers des Charges” specific to the different productive activities, all including socioeconomic and agro-environmental aspects (Torremocha, 2015). The Guarantee System established by N&P is based from its origin on direct links between the stakeholders of production and consumption. It implies this system that takes into account the experiences and know-how of farmers and processors, the demands of consumers but also the professional skills of technicians (Torremocha, 2015).

The PGS in N&P is organized in three levels of work:

1.- The field survey: surveys can be done by an experienced technician or by a producer and a consumer, all of them adherents to the Federation N&P. The visits are made on the farm or in the workshop, once a year. The objective of these surveys is to accompany the producers during the description of their cultural techniques or transformation, used for the production of the product to be approval.

2.- Local groups, COMAC: after conducting the surveys, these are validated in the local assembly or COMAC (“Commision Mixte d’Agrément et de Contrôle”). The COMAC is constituted by producers and consumers members of the local group and must be composed of a minimum of six members. The local COMACs meet at least twice a year, to organize the visits and to analyse the surveys. The role of the COMAC is to take the decision of the approval and to propose when necessary improvements or corrections with the objective of improving the management of the producer. The decision of the COMAC will be registered and transmitted to the Federation, this information is available to the adherents. COMACs are local structures, defined in their own context and in given circumstances. They are financially independent of N&P and are only subject to follow-up the guidelines of the PGS. It is a voluntary job although in some groups there are salaried organizers.

3.-The National organisation: the Federation is composed of four entities: the Management Service, a salaried service that ensure the technical work; the Federal COMAC, in charge of the approval management and the good application of the surveys, is made up of delegates from the local COMACs; the Internal Technical Committee, composed of specialist professional members (agriculture, bakery, beekeeping, cosmetics...) and consumer members, is in charge of reviewing the surveys and validating for the Federal Council and the Federal Council, composed of delegates from local groups and sends approval to the offices of the Federation.

² www.natureetprogres.org/communiqués/actu127.pdf [Reviewed: april, 2018].

³ www.natureetprogres.org/producteurs/professionnels_nature_progres.php [Reviewed: april, 2018].

⁴ www.natureetprogres.org/nature_et_proges/natureetprogres.html [Reviewed: april, 2018].

Finally, the surveys are validated in the general assembly at a national level, that is held once a year. Every year the producer must renew its mention. The mention of N&P does not mean the “organic certification”, even though this mechanism of PGS is recognized by the IFOAM.

The PGS have existed for over 40 years and serve producers and consumers eager to maintain local economies with direct and transparent relationships among producers and consumers. The guarantee system of N&P is a social innovation with agroecological aspects that seeks the transformation of the social system based on the key elements and features: shared vision, trust, horizontality, transparency, participation and learning process.

The theory of social innovation enables us to make visible the reorganization of the organic certification. This is why are interesting the social innovations maintained by this alternative verification mechanism. In this article, social innovations are defined as the emergency of new ways of coordination of the relations between social stakeholders in order to answer social expectations (Harrison and Vezina, 2006; Bouchard, 2006). The process of social innovation includes the creation of news ideas, manifested in social actions that lead to social changes and the proposal of new practices (Cajaiba-Santana, 2014).

The interplay between institutions and actions results in the institutionalization of traditional practices that shape actions modifying the conventional structure (Cajaiba-Santana, 2014). The structure of N&P influences the collective organization, since it has regulations, philosophical and theoretical bases to establish new practices. N&P shows us a change in the institutional practices by allowing autonomy to local groups, a collective with institutional bases and social structures.

Social innovations take form when a new idea establishes a different way of thinking and acting that changes existing paradigms (Cajaiba-Santana, 2014). The aim of the innovation of the guarantee systems is to modify the functioning of the economy and the market and propose other modes of participation. In general, we identify that the PGS contains characteristics that define it as a social innovation like: the participatory approach involving all the stakeholders of the territory, maintaining minimal bureaucracy and working horizontally and to verify elements that contain environmental and socio-economic factors that usually includes an educational and social process.

Agroecological Transition: new modes of operation

The agroecological approach is not only to understand the involved process in the food production, but to propose alternatives that lead to more integral processes (Gliessman et al., 2007). In practice, agroecology is seen as a process of adoption of new practices or techniques that contribute to more environmentally friendly, organic, bio or alternative agriculture; the valorisation of traditional knowledge; the creation of knowledge, and also, the support to social movements that includes new commercial and certified systems promoting the creation of public politics (Wezel et al., 2009). Then, the study of the agroecological process must integrate aspects of the political, economic and social systems within which the agro-food system operates (Gliessman et al., 2007). These relations include a wired rise of disciplines and make evident the involvement of different stakeholders that will work collectively to contribute to the practices that generate an agroecological transformation.

From an agroecological perspective, social transformation constitutes the most advanced phase of the process and involves providing the productive, socio-economic and cultural dimension with a political content (Sevilla, 2007). For us, the agroecological transition approach refers to the development of measures that transform conventional productive and market processes. Nevertheless, the agroecological transition involves a variety of stakeholders, a transformation in the functions of the people and of the local context (Bidaud, 2013). These transformations are presented to solve a social problem by new ways of organizing and the creation of new services, and that during the process the stakeholders became agents of change (Boza, 2013).

Stassart (and al., 2012) raises five perspectives that are relevant to agroecological transition:

- 1.- Dynamics of social and techniques transformation through socio-technical experimentation and knowledge production.
- 2.- Development of an agricultural ecology that integrates the management of nature and the production of food.
- 3.- Development of food systems linked to the territory and the act of consumption, which includes topics such as the recovery of traditional seeds and participatory certification.
- 4.- The reflection about the socio-economic and political principles of agroecology at the level of agro-food systems in the scales of production and consumption.
- 5.- About the perspective of learning, Stassart (and al., 2012) mentions the importance of academic offers with the agroecological approach.

Methodology

The agroecology makes use of methodological tools from various disciplines (Ruiz-Rosado, 2006), and they differ according to the level of analysis in which the research is fixed (Sevilla, 2007). For the agroecology, the analysis of the social and economic dimension implies the proposal of research methods action oriented, with participation and valorisation of the stakeholders (Méndez et al., 2013).

The Participatory-Action Research is the methodological approach that is mainly outlined in the social sciences, within the framework of agroecology. The participatory research approximates a wide diversity of stakeholders located in a territory like: farmers, community members and social organizations (Martínez, 2007). To achieve this approach with the stakeholders, the researcher is set in motion as a social being and is involved in the everyday life of a collective (Martínez, 2007).

Based on the above, we recognize that the study of the agroecology is multidimensional and has an integral approach to agricultural, social, economic, cultural and political factors. The study of these dimensions requires multiscale and transdisciplinary approaches and methods to include the study of the food production systems and marketing (Wezel et al., 2009). In our case, the study will be approached from the dimension of the farm where we will consider socio-economic factors such as the market and the institutions.

Participant Observation was used as a method of data collection. This research method requires that the researcher is involved in the activities of the studied group. The observations can help to have a better understanding of the context and the studied phenomenon (Kawulich, 2006).

In order to achieve this integration to the daily life of the farmers, we have chosen the Wwoofing (World-wide Opportunities on Organic Farms). According to the Federation of WWOOF organisations: *“Wwoofing is a worldwide movement linking volunteers with the organic farmers and growers to promote cultural and educational experiences based on trust and non-monetary exchange, thereby helping to build a sustainable global community”*⁵. Wwoofing’s strategy has allowed us to work with the farmers on their farms, know their production process, participate in the marketing of their products and identify some of their social networks, these activities allow us to build bonds of trust by engaging in their daily lives.

Between the months of July and November of 2017, visits were made to 8 of the 11 farmers that produce vegetable registered in 2017 in the group of N&P Haute-Garonne in the Toulouse region in the South of France. About the farmers who still to be interviewed, one of them stopped being a producer and has not answered the messages to make an interview. The other two, have their farms located in places where public transport does not arrive and

⁵ <http://wwoof.net>

have not had the availability to receive me in their houses because of the excessive work they have, it is expected that in the summer it will be possible to visit them.

We worked with the farmers in 3 different scenarios: the farm, the market and during the sessions of the COMAC. During these visits to the farmers I participated in the activities of the farm and during this time, other strategies were used: open interviews were conducted, document analysis, as well as photographic records for the registration of the facilities, the landscape of the farm and the commercial spaces. A record of the visits was made, where it was registered the reflections made during the visits on the farm and the markets. There was also the opportunity of accompaniment during the certification visits and passive participation during the meetings of the COMAC.

Based on field notes of observations, the informal interviews and the activities that were carried out in the company of French farmers, it was possible to build and apply an interview that evaluates: productive and commercial strategies, social networks and farmer participation to the PGS.

Results

The group Nature & Progrès Haute-Garonne was formed in 2010, the participation and commitment of its members has fluctuated since its inception. Preliminary results are presented on the characterization of farmers interviewed and the productive and commercial practices identified as social innovation and that contribute to the agroecological transition.

The characterization of the eight farmers is presented in table 1 that refers to the general data: sex, age, scholarship, year of foundation of the farm, surface planted and workforce.

Table 1. General Data

	Sex	Age	Formation	Foundation	Surface (ha)	Workforce
1	F	38	University Agricultural training	2013	0,25	Family, volunteers, Wwoofing, academic stays, training, school visits
2	M	50	Agricultural technician	2000	1	Single, Wwoofing, training
3	M	27	University, Agricultural training	2016	1	Family
4	M	38	Bachelorship (BPREA)	2015	0,5	Single
5	M	34	Engineer school	2015	0,4	Single, Wwoofing
6	M	36	Bach and Veterinary	2012	2	Family, volunteers, academic stays, training, demonstrative space, Wwoofing
7	M	40	Bachelorship (ABP)	2010	6	Family, school visits
8	M	36	Bachelorship	2011	0,2	Family, volunteers, Wwoofing

On the table 1, we identify only one female farmer, the age average among the interviewees is 37 years. All the farmers have had an agricultural training before establishing their farm and the average of surface is 1.4 hectares. The workforce is based in first place on the family and in a second place on volunteers that arrive like Wwoofing, academic stays or training. There is a trend for social work like school visits and a demonstrative space that supports the planting or harvesting.

We observe more representation of men than women in the plot -public space-, young people with college studies and agricultural training that have decided to reappear in the rural areas, promoting new social and consumer dynamics at the local level, and with an alternative vision to conventional agriculture.

We decided to return to the field because we want to produce our own food...food that does not have chemical. Nolwenn.

In case of working on family bases, the woman not only participates in the tasks of home care, but also in the education that in some cases is home-schooling. The work in the farm includes programming the crops, sowing, harvesting and transforming the farm products such as jams or bread. On the social aspects, maintaining the social networks, supporting the market channels and in touch with the consumers, receive and accommodate volunteers, among other personal activities.

I work in the fields and my wife takes care of answering mail, delivering vegetables in the BioCoop, making bread and attending N&P meetings. Joan.

The table 2 presents the productive strategies: soil management, origin of the seeds and hydric resource. The productive strategies show us that it's still common to practice soil tillage, this is because in general, these farmers are located in poor clayey soils, so the no-till strategy or zero tillage is only possible after having incorporated enough natural fertilizers into the soil.

At the beginning it was necessary to work to attach the manure, I wanted to create and agricultural soil which could produce food for humans, my soil has a permanent cover of herbaceous plants and I use the heat as a catalyst to create humus. Laurent.

Table 2. Productive strategies

	Soil management	Origin of the seeds	Hydric resource
1	Tillage. Green manures, crop residues. Covers the soil with straw and/or plastic.	Buy organic seeds. Few are produced in her farm. Buy seeds from local producers.	Local network. Subterranean water.
2	Zero tillage. Green manures. Covers the soil with crops.	Buy organic seeds.	Local network.
3	Zero tillage. Green manures, crop residues. Covers the soil with straw and/or plastic.	Buy organic seeds. Buy from a regional social organization. Exchange of organic seeds.	Capture of rainwater. Local network.
4	Medium tillage. Green manures.	Buy organic seeds. Buy from a national farmers organization. Exchange of organic seeds.	River
5	Medium tillage. Green manures, crop residues. crops to till the soil.	Buy organic seeds. Exchange of traditional seeds.	Grey water. Capture of rainwater. Local network.
6	Zero tillage. Green manures, crop residues. Covers the soil with straw and/or plastic.	Buy organic seeds. Buy seed from local producers.	Capture of rainwater. Local network.
7	Zero tillage. Green manures, crop residues. Covers the soil with plastic.	Buy organic seeds. Reuses seeds.	Capture of rainwater. Local network.
8	Tillage with plow and animal traction. Covers the soil with straw.	Buy organic seeds. Reuses seeds.	River

Commonly seeds are purchased by catalogue, either individually or collectively to lower costs, they are farmers that produce some of their seeds on the farm, but still are dependent to obtain their raw material.

I am very interested in producing seeds but at the moment it is complicated, since I am investing all my effort in improving the soil. Joan

I want to have a space on the farm to produce seed and that crops do not mix (because) they can be contaminated. Thomas.

In search to stop being dependent on the seed companies and to have more diversity, some farmers are linked with national or regional groups that favour the production of local varieties.

I buy seed in the “Association Kokopelli” that is dedicated to commercialize seeds of French producers inscribed in a collective at national level and that have a vision of protection of the seed linked to food security... also, I exchange seeds in the Biocoop, since there is a confidence and some are seeds of local varieties. Alexandre.

In regard to the use of water, everyone searched for alternatives, but in general, almost all are supplied from the local network, since when registering as farmers the cost is reduced. The capture of rainwater and those who have rivers or streams take advantage of them.

At the beginning I used the underground water because there are deposits in the farm but I didn't have enough (for irrigation) ... I asked for funding to make a new pit but it didn't work well, that stresses me a lot and I currently use running water.

The table 3 presents social networks: formation, commercial channels and types of certification. About the non-governmental social networks that support them in their formation training and knowledge exchange, the most recognized are: “Nature & Progrès”; “Maraîcher Sol Vivant” (MSV); “GAIA Consulting” and another that was little mentioned but that during the visits I identified agricultural implements constructed linked with a group called “L’Atelier Paysan” (Farmer Workshop).

Farmers identify N&P as a collective that allows them to exchange knowledge between producers and consumers. It is an institution that allows them to have structural bases to work on the improvement of the productive system and the development of an agro-food system with the participation of the stakeholders.

I'm an active producer since 2008, I'm interested in the ethical framework of N&P... this group brings me closer to consumers. Laurent.

By belonging to N&P, there is an exchange between producers and consumers. Alexandre.

“Maraîcher Sol Vivant” (MSV) is a network of farmers-researchers that wants to produce food under the skills of zero tillage -living soil-⁶. It's a network that emerges from farmers linked to other social actors who wish to share and learn new soil management techniques. It is open to participation and promotes learning methods from the know-how

The videos that are published on the MVS website are useful for other people to be interested in this productive strategy... they have spaces for knowledge exchange,

⁶ <http://maraichagesolvivant.org/wakka.php?wiki=PagePrincipale>

visit to farmers and meeting at national level... it gives us a space of experimentation... there are encounters of diversity of knowledge, it looks for innovative practices and it realizes didactic workshops to share experiences since 2011. Laurent.

Table 3. Social Networks

	Formation	Commercial channels	Certifications
1	N&P Erables 31	Local events Markets during the week Neighbors Sometimes to a local restaurant Summer sale on the farm Sale and buy to other farmers	ECOCERT N&P
2	MSV Polyculture	AMAP Sunday market	N&P AMAP
3	MSV ADEAR32 Fédération Régionale des Agriculteurs Bio Midi- Pyrénées	Market Biocoop-shop Sometimes to local restaurants Sale and buy to other farmers Once a week to a school	ECOCERT N&P
4	Erables 31 Vivéa	Market Neighbors Local shop Biocoop-shop Sale and buy to other farmers	ECOCERT N&P
5	MSV GAIA	Market with another farmer, Once a week to a local restaurant	ANY
6	Can La haut, Permaculture en Espagne	Neighbors Restaurant Local shop Biocoop, Summer sale on the farm Sale to farmers	N&P
7	N&P Erables 31 GAIA	AMAP Market	ECOCERT N&P
8	N&P Wwoofing	Market	N&P

“GAIA Consulting” is a company specialized in agricultural continuous training with agroecological bases. Registered as a training organization since 2010, “GAIA” works in partnership with “MSV” and “Can La Haut”, among others. It’s worth mentioning that “Can La Haut” is a family and collective project, founded by one of the producers interviewed.

Can La Haut is a pedagogical space that offers stays for those who wish to settle as farmers. Joan.

Both are organizations that provide training and knowledge exchange. They are spaces linked to a territory and that integrate environmental projects related to the production of food.

The Farmer Workshop “L’Atelier paysan” is a self-construction cooperative which brings together a variety of stakeholders for the development of technology adapted to organic farming practices. It enhances inventions that provide new solutions to farmers. *We measure*

*the importance of socio-technical networks of producers, both in the production and sharing of knowledge.*⁷

I am a partner of the “Atelier paysan”, I work in the design, manufacture and experimentation of agricultural tools, they also give us training. Laurent.

There is a great diversity of marketing channels but the most common marketing channels are: regional markets, restaurants and neighbors. These marketing channels allow the farmers to have a direct contact with consumers. During the visits to the markets and in the farm, I could observe that their relationships with the consumers are not only commercial, the link is based on trust, there is a social and educational encounter, since during the commercialization there is an exchange of recipes and productive techniques among other producers and among consumers, also in most cases barter is made between producers and processors during the market (field notes, 2017).

Other important strategy of commercialization is the AMAP's ("Associations pour le maintien d'une agriculture paysanne" - Associations for the preservation of a peasant farming), that are groups of consumers associated with a producer or with a group of producers and committing themselves with long-term relationship, in which the consumers pay in advance the delivery of a weekly basket of fresh products and other foods.

This commercial system is linked to a territory and has an environmental and socio-economic vision, since it is integrated by responsible consumers interested in eating healthy and local food, with an interest in contributing to the local economy. This structure supports the farmer to have economic resources to prepare his production; in case of any eventuality that decreases the production, the consumer takes the same risk as the farmer.

As far as the certification is concerned, almost all have the PGS, the exception is one farmer who is doing his procedure to obtain it. Only one farmer identifies that, doing the commercialization under the scheme of an AMAP, it generates verification mechanisms on the part of consumer who are members of an AMAP during social visits to the farm. Most of them are certified by an agency and they can have the logo “AB” (Agriculture Biologique), this certification is accessible since there is funding from the French government to obtain it. What is relevant is that the farmers identify themselves with the philosophy of N&P for environmental and social reasons, although it is not widely recognized by consumers.

I have the Bio certification to be able to market but I am also certified by N&P because I identify with its objectives and goals. Nolwenn.

The N&P certification system is personally demanding. Thomas.

I am interested in the N&P certification for the social aspect of the collective but it does not have much recognition by consumers, that's why I would also have the Bio certification. Nathanaël.

Within this group of farmers, 3 of them only have the certification of N&P, this is due to their reflexion on participating in a social and political movement and because this verification is more flexible with its standards than the Bio certification.

The N&P certification is official and has a political focus because it keeps the spirit that agriculture is the tool that links society with the economy. Joan.

⁷ <https://www.latelierpaysan.org>

I'm not interested in government support or being certified by an agency, the N&P certification has things that it forbids but others that it supports... there are things that are not authorized but there is no strong pressure, that is, they are not so closed. Laurent.

Since I was a child I know the N&P logo, my mom knew this brand... I feel that it has a commitment to quality, I do not want to be Bio, I like to be N&P. Estelle.

Other places where the farmers interact are the meetings of the COMAC. The COMAC is a forum for discussion and encounter; it implies collective work and decision making. Being a voluntary work, participation and assistance fluctuate. In this COMAC the decisions on mentions are taken based on the "Cahiers des Charges" to minimize any reason for conflict. The group identify that common objectives have to be worked on for a better functioning of COMAC, but it requires more work and not all members are willing to spend more time (field notes).

Now I am the animator of the COMAC and I think it is necessary to have the will and motivation to work for the operation of the COMAC. Thomas.

I would like the group to have a better management to handle disagreements and remain objective and not make decision on a personal level. Alexandre.

In conclusion, the work of the farmers not only focuses on the farm, the construction of social networks in their territory allows them to have new relationships that collectively develop marketing channels that transform the agro-food system, where marketing is not only the base of an economic exchange but is a social and political action.

Discussion

The analysis of the different dimensions of the agro-food systems has allowed us to have a broader vision of local production and commercialization of products under an agroecological perspective. Through research and Participatory-Action we have become involved in farmer's daily life and thus built trust bonds.

During this investigation, we have identified that the mechanism of verification of N&P represent a social innovation by having new forms of social organization incorporating different stakeholders of a territory, in the evaluation of productive processes at a local level.

The PGS differs from the certification by agency by promoting new forms of coordination and consumer participation, based on voluntary work and including socio-economic aspects, this represent a change of paradigm in terms of certification.

If we take the five perspectives proposed by Stassart (and al., 2012) we identify the PGS of N&P and the social networks that are built around it as social innovations that contribute to the agroecological transition.

1. N&P promotes social dynamics by linking producers and consumers during the verification and the COMAC's, producers are linked with organizations that collectively develop new technologies adapted to local needs, all this allowed by the construction and exchange of knowledge.
2. The "Cahiers des Charges" of N&P is a model followed by other certification agencies for its guidelines that are in favor of a responsible management of natural resources. The "Charte" integrates other aspects that seek to contribute to the development of fairer agro-food systems.

3. The participants in the PGS become agents of change in the marketing of products in their territory. The search for seed production and recovery of local seeds is not included in the guidelines, all farmers seek alternatives to build a local seed autonomy but it is not easy because of the existing laws in France on seed production.
4. The PGS reorganize the certification systems including environmental and socio-economic factors and the participation of several stakeholders involved in the agro-food systems, allowing them to expose what they want to value through the act of the market.
5. These alternative certification mechanisms are generating great interest at the academic level. Their study makes visible the collective actions that can contribute to the agro-ecological transition.

To end, we identify the benefits and the limits of the mechanism of PGS. The benefits are that these new market relationships create a link between the producer and the consumer, the rural and the urban. They transform the territory and promote the involvement of other stakeholders, whether from social or governmental organizations. The participation of stakeholders from different organizational levels may result in the creation of public policies focused on the promotion and recognition of alternative commercial places interested in the PGS, and the presence of educational processes are generally horizontal and a free operation.

The limits of the PGS are that although N&P is a nationwide institution, it is not recognized as it should be. Having the N&P certification does not make you a certified organic farmer. The label attracts a limited number of consumers and many producers do not know it. The farmers who have this label consider it as a political act but are aware that commercially it does not have much impact. The voluntary participation of consumers is necessary and this is not always possible.

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