Towards a sustainable convention: values and practices in the French stone fruits’ value chain

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Paper prepared for presentation at the 149th EAAE Seminar ‘Structural change in agri-food chains: new relations between farm sector, food industry and retail sector’
Rennes, France, October 27-28, 2016

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1. Introduction

As some authors point it out, the food systems are undergoing a “quality turn” (Goodman, 2003) or a “qualitative shift” (Ilbery and Kneafsey, 2000; Marsden et al., 1999; Murdoch et al., 2000; Kirwan, 2006). We assist to the emergence of alternative initiative or alternative food networks (AFN), which have in common to try to overcome the unsustainability of the conventional food systems. The AFN gather “road embracing term to cover newly emerging networks of producers, consumers, and other actors that embody alternatives to the more standardized industrial mode of food supply (Murdoch et al, 2000)” (Renting et al., 2003). They also pretend to have “an ecological and social vision and discourse embracing environmental awareness and progressive social goals (Watts et al., 2005; Hassanein, 2003; Goodman, 2003; Renting et al., 2003; Hendrickson and Heffernan, 2002; Feenstra, 1997)” (Kirwan, 2006). The sustainability outcomes of the AFN are quite hard to catch and their effectiveness too: as Treagear (2011) points it out, it is quite dependent of the goals of each initiative and the border of each initiative can be blurred. Thus, Watts et al. (2005) distinguish weak and strong AFN: the strong AFN are those that are totally independent of the conventional systems (such as the Short Food Supply Chains) and the weaker initiatives are those that are still submitted to the conventional system (such as the organic certification chains). If Watts et al. (2005) states the possibility of hybrid systems, as well as Sonnino and Marsden (2006), the crossing from a degree to another is not very clear and as DuPuis et Gillon (2009) point it out, we suggest that “the dynamics of these alternative markets are poorly understood” and we can add that to our knowledge, the dynamics between conventional and alternative markets could also be further explored.

Yet, for the food industry, the “sustainable” turn seems essential: “Future developments in food markets depend considerably on the differentiated capacity of food circuits to regain consumer trust and establish new institutional arrangements guaranteeing food quality in credible ways. » (Renting et al., 2003; p396). The objective of this paper is to explore this sustainable turn and thus to contribute to the understanding of the dynamics between the conventional and alternative markets. Relying on exploratory data, we place our work in the conventions theory (CT) framework to analyze the restraints to integrate some sustainable dimensions of the AFN for the fruit industry. We treat of the specific
case of the stone fruits chain, by studying the peach and apricot chains. In this article, we first present the framework of the CT and the sustainable criteria of the AFN. Then, we present our results chain’s actor by chain’s actor (processors, supermarkets, corner grocery stores and producers). We indicate their consideration for the local and organic food products and their values around these themes. Finally we discuss these results within the CT conceptual framework showing that the producers seems anchored in the industrial world while the other actors are in majority coordinated by the market world. Thus, we suggest that the levers will be different for the producers and for the other actors of the peach and apricot chains and yet some common values have to been found within the chain.

2. Theory: Alternative food network as a framework to find the drivers of a sustainable convention.

2.1. Food systems and convention theory

In addition to the classical analysis of coordination by the market, several other streams have incorporated the role of institutions into the New Institutional Economy framework, such as the convention theory. The concept of convention, as used in economics, was first exposed by Durkheim. (Dupuy et al., 1989). He criticized the contract that seems too limited to understand the coordination. He argued that contractual relationships require a prior common framework. A convention can thus be understood as an unfixed framework of rules that will guide the actions of actors. Boltansky and Thévenot developed this theory and the concept of convention in their major opus, “On Justification: Economies of Worth” published in 1991. They proposed six worlds (also called worth) in which actors are able to interact. Coordination will be possible if the actors share some common values or worth. In the domestic world: the reference is the family; hierarchy is very important and the place of the “father” is the most important. Respect for tradition and paternalism are part of this world. In the civic world: the notions of group and
democracy are the primary elements. Law, rules and voting are the elements that guide actors. In the industrial world: the reference is the measurement, which means that the engineer is the most important person. The final goal is technical progress. The coordination occurs around quantitative aspect or around technical consideration. In the market world, the final goal is to earn money. The price and the market are the references for the coordination. Originally, in this world, the most important person is the accountant. The world of fame is guided by the public reputation. “The worth is nothing but the results of the other people’s opinion” (Boltonski and Thévenot, 1999:371). And finally, in the world of inspiration, the creation is predominant; it’s the artistic world. Dequech (2008) argues that “worth in the world of inspiration does not depend on prestige and critical success, or on market price and public success”...but “reflects one’s self-esteem and not the opinion of others”.

It is important to posit that actors are not locked into one world but may of course share values from several worlds and that the proposition of the six worlds is not fixed. Thus, Evans (2011: p111) remembers the possibility of new proposal and specifically here in the sustainable domain: « pursuing fully the ramifications of is the emerging possibility of a green order of worth (Boltanski and Thévenot, 1999: 369). The analysis that follows works with the possibility that a green order of worth - underpinned by environmental conventions - might be emerging through which practices of sustainable consumption might be legitimated ». Following this example, it seems interesting to try to design what could be some of the characteristics of a “sustainable” convention. The possibility of a sustainable or green convention has been the object of debates (Boltanski and Thevenot, 1999; Godard, 2004; Boidin and Zuindeau, 2006). To considerate the sustainability, do we have refer to a new order of worth or do we have to focus on the six “classical” orders of worth? In this exploratory work, we will above all consider that the AFN are a reference for a more sustainable food system and that we need to remind the sustainable characteristics of the AFN to guide the definition a sustainable convention or to consider the compromises existing from the “classical” worlds.
2.2. Sustainability drivers in the food sector

We suggest not only considering a “green order of worth” but a 360 degrees sustainable convention. Sustainability in the food systems is generally considered, as in other fields, according to three axes: the economic one, the environmental one and the social one (Forssell and Lankoski, 2015). By linking the sustainable expected outcomes to the specificity of the AFN, we propose to highlight the main themes of the sustainability in the food systems. It is important to precise that the sustainability of the AFN is discussed in the literature, and we assume in this work, that some of the following elements are the object of discussions (Born and Purcell, 2006; Tregear, 2011; Forssell and Lankoski, 2015).

Environmental outcomes

Following the suggestion of Forsell and Lankoski (2015), we will consider that the environmental impact of the AFN will take into account the environmental aspects of food production, processing, packaging, distribution, consumption and the use and damages of resources (water, air, animal welfare, etc.).

The local attribute of the AFN has linked them to the concept of foodmiles (Marsden et Murdoch, 2006; Noberg-Hodge, 2002 cited in Edwards-Jones et al., 2008). The foodmiles is a concept considering the distance traveled by a product before reaching to the final consumer (Smith, 2005 cited in Edwards-Jones et al., 2008). It is often considered that the reduction of the food miles reduces the greenhouse gas emissions, and the AFN, by being local will reduce the food miles. We cannot consider the environmental impact of the AFN only by the local aspect: it is also important to consider the assumption that the AFN production systems could be more environmentally friendly. It is considered that we will not find in the AFN intensive systems of production that will require high levels of chemicals input or drugs for breeding. According to some authors, the organic farming is considered as an agro-alternative system (Qazi and Selfa, 2008; Watts et al, 2005).
Two elements are key in the AFN literature to assure the environment sustainability: the local attribute of the systems and the green practices (as the organic one).

**Economic outcomes**

Forsell and Lankoski (2015) consider AFN economic outcomes including the incomes and livelihoods of producers and the local development. Most of the literature is turned on three economic aspects: the income/livelihoods of the producers and the impact on territories (that can include social aspects, such as the food accessibility).

First of all, at an individual scale, it has been showed that the AFN can have a direct positive impact on the producers’ income. The reduction of the chain seems to confer “a significant amount of value added (…) at the farm level” (Marsden et al., 2000 p 435), the reduction of the informational distance with the consumer can confer a better price for the producer (Marsden, 2000; Renting et al., 2003), elements confirmed by the producers explaining there motivation in participating to local food chains by the greater sale prices they can obtain in such type of selling (Miller and Buller, 2003).

At the territory level, some other economic outcomes of the AFN have been pointed out: it seems that the AFN can support the maintaining of the rural economic activity contributing to the creating jobs but also permitting that the money spent on food contributes to the local economy (Follett, 2009; Forsell and Lankoski, 2015).

**Social outcomes**

Forsell and Lankoski (2015) integrate in the social outcomes the “labor rights, and the safety of the workers, consumer health, food culture, and the accessibility, availability,, and affordability of nutritious food (food security).” The consumers seem to benefit the AFN first by the health dimension: several academics point out the consumers’ interest for a fresher food, which includes more nutrients (Born and Purcell, 2006; La Trobe et Little cited in Treager, 2011). If we consider the “greener” production practices in the AFN, we can suppose that the products will be healthier (less chemicals, etc.) (Forssel
and Lankoski, 2015) but we can also do the parallelism for the producers that will be less confronted to the chemicals, and thus protect their own health. The second dimension for the consumers is the affordability that could be considered as a socio-economic one with the objective to permit the access to fresh food for low-income consumers.

The relations between the producers are less studied, and this can be explained by the fact that the AFN involving producers collective are less numerous. However, Chiffoleau (2009) shows how producers involved in AFN will reinforce their links, especially exchanging information, cooperating technically and developing friendship. She also argues how this type of configuration can finally lead to innovation. Finally, the empowerment and shared governance among the chain can be expected in the social outcomes but also in the economic one. Indeed, if the democracy is expected in an AFN, the control of the chain and thus of the prices among the chain is another key element.

We can see here that in the three sustainable dimensions, several themes seem fundamental to assure this sustainability. In the environment dimension, the local characteristic and the green practices seem essential. The proximity encompasses the local situation and closed relationship and can be associated to the domestic world (Raynolds, 2014). Nevertheless, the references to technical practices and to some certifications permit to include an industrial side to the environmental dimension. The expected economic outcomes are focused on two elements: the income of the producers and the affordability of food for consumers. Beyond the market value, the concern to renew the market power and to get a more collective governance among the chain bring a civic taint to the market one. Finally, the social outcomes are associated to health preoccupation and relationship elements. This permits to consider civic and domestic worth together in the case of the social side of the sustainability.

According to the expectations and these values, which restraints could be found that prohibit the way to the sustainability for the stone fruits chains?
3. Material and methods

Case presentation

According to 2010 Agreste statistics, in the EU 28, 11% of the peach and 31% of the apricot productions were realized in France, mostly concentrated in the Rhône-Alpes and Languedoc-Roussillon regions of the country. These two value chains are now economically "vulnerable because of a drop in acreage, aging orchards and the high cost of salaried labor that pull down continuously the competitiveness of France face to other competing producer countries and against the strong import competition (in particular from Italy and Spain). The introduction of more sustainable pathways to meet the growing demand for "sustainable" fruits and vegetables could be an asset to withstand international competition and thus maintain farm activity. However, organic production represents a very marginal share of the production of peaches (2.5%) while it is slightly higher for apricots (7.3%). Moreover, peach and apricot value chains are complex because of their high seasonability, perishability and high price fluctuations. On the other hand, implementing sustainable practices is not so evident. Thus, it seems important to examine current practices and values of the actors in these value chains as to better identify drivers and obstacles to sustainable development.

Data collection

A semi-structured survey, integrating a set of themes concerning aside general data such as the turnover, the volume produced, collected or processed, integrating specific data on organic fruits, has been developed. Although several questions are common, different questionnaires were created to better target different actors: for super/hypermarkets, corner grocery stores, industrial processors and producers. So, we investigated 16 fruit processing companies, 6 large retail chains, 4 specialized stores (among which 3 coops and 2 organic stores), 4 wholesalers and 51 producers. The interviews have been done by phone or face to face and have lasted between 30 minutes and 2 hours. The geographical
perimeter taken into account in the interviews with industrial processors comprises the whole area of Languedoc-Roussillon region.

Diagram 1: Actors and linkages in the peach and apricot value chain

<table>
<thead>
<tr>
<th>Producers</th>
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<tbody>
<tr>
<td>Direct sale</td>
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Source: Elaborated by the authors

Data analysis

In this exploratory work, we did not consider all the elements of the surveys but only some specific elements that could permit to address the specific dimensions of the
sustainability. Thus, according to the literature review on the AFN, we chose to consider three dimensions:
- the proximity (both sided: localization and relationship)
- the organic certification
- the governance among the chain, that is considered by the vision of the other actors of the chain
- the economic aspect in the case when the interviewees are linked to the first two themes, *i.e.* to the proximity and the organic certification.

During each interview, the answer linked to these themes have been the object of a content analysis permitting us to highlight the different position of the chain actors concerning the proximity, the organic certification, the governance and the economic aspects. It has to be specified that these themes were not present in their totality in each group of actors.

4. Results

4.1. Processors (P)

*Organic*

Considering the fruit processing SMEs, we have found that 10 out of 16 are working with the organic certification. This figure is quite important considering the market share of the organic fruits production in France (7.7% for total fruits and 2.3% for apricots and peaches). Nevertheless, it is important to consider that this share of organic products in the processing industries is highly variable from one industry to another: from less than 20% to 100%. Moreover, it is important to mention that each of these SMEs may have a different reason to include organic products in their industry. For example, market worth prevails when the processors declare that they opt for organic production to better

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1 Estimations based on the figures of 2011 given by FranceAgriMer for total fruits production in volume and by Interfel for organic fruits production
respond to the expectations of their clients (P1, P3, P14, P16) or because they expect to increase their market shares by including organic in their product line (P1, P14). The industrial worth is also mentioned by other processors who consider that the organic certification is above all a set of specifications to follow (P1, P5, P13, P14). Finally, civic worth arises when the processors mention their “values” (P8, P9, P11, P14) or say that they consider above all the welfare of the consumers and the producers (P9) or that they are committed to the organic way of production.

However, some of the interviewed processors did not have organic production in their product line. For those, the market and volume availability (industrial worth) appear to be essential obstacles that restrain them from going organic. One of those processors declared: “we need to achieve economies of scale by working on large and stable volumes. As the customers do not ask it, the volumes [of organic production] stay too small and hazardous” (P2) or another processor said: “the problem with the organic products is the availability of the raw material [fresh organic fruits]: the sourcing is neither satisfactory in quantity, nor stable” (P4).

*Importance of the localization of the production*

The processors are directly linked to the producers (or the co-operatives, *i.e.* group of producers) for their fresh peach and apricot sourcing. When they are choosing their suppliers, most of them pay attention to the farm prices (P1, P4, P6, P9, P10, P13, P15) but some others also consider local sourcing as a priority (P4, P6, P9, P11, P16), while for some others (P1, P2, P3, P4) availability and stability of the quantities are the most important factors that shape their sourcing policy.

*Consideration of the other actors of the value chain*

A quarter of the processors interviewed consider that the most important actors in the chain are the consumers (P1, P2, P4, P16). Nevertheless, for some, all the actors operating on the upstream and the downstream activities of the chain have equal importance (P11, P13) while some others express that the consumers and the producers are the two main group of actors to take into consideration (P14, P15).
4.2. Wholesalers (WH)

Six wholesalers of which 4 are co-operatives were interviewed within the framework of our research. WH1 and WH2 are operating in the Min de Montpellier and deal with great volumes of fruits and vegetables. All the produce that they handle is conventional. Both indicated that they are not selling organic produce because of the lack of market demand. Their sourcing pattern depends entirely on the seasonality of the produce. Most of the volumes that they handle are imported from Spain and other southern Mediterranean countries at the early season, but then they deal with local products. These wholesalers are entirely driven by market worth and do not have any initiative to move towards sustainable chain or alternative food networks. The four other wholesalers (co-ops) are entirely dedicated to the organic fruit chain. They source organic grocery stores as well as large retailers in organic produce. They are certified organic and WH3 and WH6 have also DOP certified produce (apricots). WH5 is also certified EcoCert. Concerning the sourcing patterns, WH3 and WH4 resort to imports at early season but then turn to local procurement at regional level while WH6 sources only locally. Concerning the economic aspects, these co-operative wholesalers are worried about the price and the margins that they make. Another concern pointed out by them was the diminishing number of agricultural producers and the difficulties that they have to continue the local sourcing. The four co-operatives are engaged in the development of sustainable chain and invested (or foresee to do so) in planting solar and/or photovoltaic panels. They can be placed in a hybrid market-civic world.

4.3. Supermarkets (SM)

The supermarkets’ organic fruit sourcing volumes are quite low and change between 1% (SM1) and 5% for the SM2 and SM3. This can be explained by this quote “But in general the organic consumers go mostly to specialty grocery stores”. The three interviewed supermarkets had a real concern about the local dimension as to better respond to their clients’ demand. In fact, consumers have high expectations concerning the local criterion:
“the proximity criterion gains of importance. This takes precedence over the environment” (SM1). SM3 bases its strategy on the proximity, in order to respond to its clients’ demand. Thus, its first criterion to choose its suppliers is the proximity criterion as “to support the local producers” (SM3). However, this proximity criterion has its limits. For example, the sourcing structure of SM2 does not permit its purchasing manager to choose its suppliers, as this supermarket is part of a general buying group. For all these three interviewed supermarkets, the focal point is to “satisfy the clients’ demand”. Nevertheless, we observe that the market worth is tainted by some domestic consideration with the strong local discourse and by some civic values as in the case of SM3 and to a lesser extend, in the case of SM1.

4.4. Corner grocery stores (CGS)

For the corner grocery stores, two main factors taken into consideration are the quality of the produce and the proximity to the producers. One of them is specialized in organic products and 100% of the products sold are certified organic. Three out of four of the interviewed corner grocery sell organic products in parallel with conventional products and one of these has half of its turnover realized by the sale of organic products half of its turnover (CGS4). CGS1 limits its organic products’ line based on vulnerable conservation issues and on the scarce sourcing possibilities at the regional level. The criteria that the corner grocery stores take into account in choosing their suppliers are variable but are not closely linked to environmental consideration: for example, for CFS3, the taste is the first choice element: “I go to the market in Alpilles and taste directly the product, I ask from where it comes and then, if the taste pleases me, I get in touch with its producer”. Further, CGS1 also mention the price as one of the choice criteria.

With regard to the vision on the clients’ demand, the answers collected are very homogeneous despite the fact that the proximity and the taste step out as the two main choice criteria. However, the “proximity” is defined differently from one shop to other. For CGS1, proximity is there to show the quality of the produce while CGS3 exposes the proximity as to justify the price of the fruits. Finally, all of these corner grocery shops
have the same priorities for the future, as they all want to sell local products. However, CGS1 points out the seasonality, CGS2 mentions the quality and the quantity and also the difficulty to provide organic produce, while CGS3 and CGS4 indicate the competitiveness of local produce.

The market worth is present in the discourses of the interviewed corner grocery shops. However the market worth is in one way or in another, always associated with the proximity and the local characteristic of the products. The environment is present but is not predominant and finally the way of growing the produce seems not to be a worry. The “local side” of their values could be seen here more from the domestic perspective than from the civic one.

4.5. Producers

Near to half (24) of the 51 interviewed producers have a part or the totality of their field under the organic certification. The share of the organic area varies from 7% to 100% according to the producers. They are more to sell their products in short supply chains (36/51), and the turnover concerned by the short supply chain are from 2% to 100%. It is important to notice that the producers that are producing organic fruits are not necessary the ones that are selling through the short supply chains.

We suggest to the producers to define the ideal fruit for them: first of all, the producers (26/44) are looking for fruits that tastes good, has sugar, which is juicy, etc. until some hedonistic consideration “a peach that gives pleasure when we eat it” (F32) or “that please the consumers”(F48). Nevertheless, it is important to consider that 15/51 producers mentioned technical elements linked to the difficulties to produce the fruits and thus would have a fruit provided by an exceptional yield or fruits that can resist against the different diseases. Some producers express (4/51) their interest for the environment considering for example an ideal fruit that could be “healthy and not filled with products”(F49). Finally, four of the producers hope a fruit that will provide the “largest net margin” (F42) or “a fair income to the producer” (F29).
Finally the organic certified producers are motivated because they prefer this way of producing and they don’t refer to the clients demand or to the market: “the organic production allows to have a more complex environmental and technical approach thus it is more interesting” (F29). In the same way, the restrains to convert into an organic production mentioned by 20 producers are the technical difficulties and then the fear of the decrease of the yield they associated to “it is almost impossible to have a decent income in organic production because of the technical constraints” (F12). Nine producers mention the lack of clients or the lack of market for this type of production but it is never presented as the first argument.

For the producers, the most important actors in the chain are the consumers (22/51) of replies and the producer in (17/51) of responses. Intermediaries are only mentioned 5 times (5/51).

5. Discussion

Our results let appear that most of the downstream actors (GMS, small retailers and processors) are concerned about market consideration. Motivations to evolve to more sustainable practices are generally driven by market worth. Nevertheless, it is important to consider the local element, that is much more present in the discourse of the retailers (large retailers and corner grocery stores) and the wholesalers (when the produce available locally). We are facing here some market-domestic considerations that are not present in the group of processors. Finally, the producers are specifically concerned about industrial considerations: the main restraints to evolve towards more sustainable practices are technical reasons and the fear to lose their level of income if they if they take the challenge to change their conventional practices.

We first point out that there are not common values among actors of the stone fruits chain considering the evolution to a more sustainable chain. Secondly, it seems that the market
(clients) could be the main driver for the actors operating in downstream activities of the chain. The fruit processing SMEs consider the organic production and the localization as the equally important factors that lead the way to a more sustainable value chain. For the large and small retailers, the way to a more sustainable chain seems rather to pass through the proximity element, i.e. the localization. The producers, operating in the upstream of the chain, consider the market and the client. But they are also influenced by industrial worth, as they think that it is really difficult to overcome the technical difficulties. Thus, the positioning of the retailers in favor of a more sustainable chain will have a direct and positive effect on the choice and the conduct of the producers. Whilst, the processors will continue to have difficulties for their sourcing in organic and local stone fruits and will continue (for some time) to rely on the imports from neighbor countries (Spain and Italy).

Concerning the debate of the pertinence of a sustainable order of worth, we can suggest the necessity to refer to a sustainable convention. If our results permit to understand some restraints to the sustainability in a classical chain, it doesn’t offer a complete view of the levers and differences between a classical and a sustainable system. Indeed to understand, with a more complete view, these differences it would be interesting to consider all the elements present in a sustainable system, starting with their common base. The AFN share their will to renew the food system that could be seen as the “superior common principle”. This let us suggest that even if some elements of the “repertoire” of the “classical” worlds can be present in a sustainable convention (such as the collective / solidarity aspects of the civic world) they are not complete to understand the schemes of action of a sustainable food system. And thus, the reference to the classical worlds is perhaps not sufficient to analyze the differences between the sustainable systems and the not sustainable ones.
References


