Conversion to organic farming and consequences on work organisation and work perception

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Abstract

With organic farming accounting for only 3% of the national agricultural surface area, France will not reach its conversion objective of 6% in 2012. Work surplus (real or supposed) seems to act as a hindrance to conversion as French farmers often seek to reduce their workloads. Thinking about the reproducibility or transmission of organic farming systems has to take into account work conditions on organic farms. In order to identify changes occurring during the transition to organic farming and to understand their consequences on work organisation and on farmers' perception of work, 18 surveys were conducted in the Rhône-Alpes region on dairy farms and cereal farms having converted to organic farming approximately ten years ago. Successive changes in work organisation are important throughout the transition period. Such changes vary according to technical and socio-economic backgrounds, production and processing system organisation. They are also conditioned by farmers' projects and expectations, which evolve during the transition period. Farmers tend to readily accept most of the changes and often take advantage of conversion to solve work problems, by hiring labourers or looking for partners, for instance. In order to encourage conversion to organic farming, modifications to work organisation need to be anticipated while it is also important to keep in mind that going organic may change farmers' perceptions of their work.

1. Introduction

French organic farming is struggling to meet the strong increase in national demand. With only 3% of agricultural land devoted to organic farming, France will not reach the set target of 6% of areas converted or under conversion to organic methods in 2012. Several obstacles to this conversion can explain this stagnation, such as difficulties managing techniques e.g. to counter weeds and diseases (Padel, 2001) or economic uncertainties: Bonny (2006) shows that the gains stemming from the sale of organic produce are too small for some farms in relation to the additional production costs. Social isolation is another hindrance factor as farms going organic can be frowned upon by neighbouring farms (Noe, 2003). These difficulties entail risks that farmers are not always ready to take on. They also foster a climate of uncertainty shedding doubt on the success of converting to organic farming (Sautereau and Bellon, 2010). The situation is further aggravated by the additional uncertainty surrounding the consequences of conversion in terms of work changes. Indeed, as the use of chemical products is limited, adopting an organic production mode is likely to lead to higher labour requirements in some cases (Dupré, 2011; Dobbs, 2006), which, in turn, can result in poorer quality of life for the farmers.

In fact, the question of work has become important in agriculture where representations of work are changing: the vision of farm labour (Barthez, 1986), in which private and professional life seem to meld into one, is being replaced by an increasing number of diverse expectations (Seegers et al., 2006). The introduction of the 35-hour working week for employees triggered questioning about the meaning and pace of work (Dufour and Dedieu, 2010). Today, French farmers are more inclined to reduce their workload. On dairy farms, in particular, where the need for constant presence weighs heavily in the balance, work requirements is seen as an obstacle for current farmers to continue or potential farmers

to start farming (Hostiou et al., 2010). Technical choices are often studied, either partly or exclusively, so as to meet work expectations. On a dairy farm, for example, this may be the decision to milk only once a day (Dedieu et al., 2010).

Little research has been carried out to study the consequences of adopting an organic production mode on the work involved. Hypotheses are at times put forward, like those of Benoît and Veysset (2003), who believed it necessary to provide greater care to breeding animals. A number of studies were set to quantify organic farming workload (Sørensen and Nielsen, 2003), or to assess the work-related differences between conventional and organic systems. Although the general observation is that organic farming involves more work, substantial workload differences can also be seen according to the type of system, the size of the farm and the region (Morisson et al., 2005). Beyond the overall quantity of work, it is the way work is generally organised that can be modified. In other words, organic farming affects the way the labour force is organised, but it also influences the link between farm management choices and activity sizing, work collective configuration and coordination, and equipment (Madelrieux and Dedieu, 2008).

While work is becoming a crucial issue among farmers' concerns, the fear that working conditions might worsen when organic farming methods are adopted can thus be an obstacle to organic farm conversions and transmission. To be reproducible and transmissible, systems operated under the organic farming label must of course be economically and environmentally viable, as well as "liveable" for the farmers. This is why the consequences of switching to organic farming in terms of work organisation need to be addressed. It is also important to look simultaneously at farmers' expectations in terms of work and how these evolve during the switch to organic farming, and to analyse the influence of work-related issues on transformations to farms during the switch to organic farming.

2. Material and Methods

Studies of the switch to organic farming very often focus on the comparison between the prior and subsequent situation following conversion (Lamine and Bellon, 2009). The "conversion" is assimilated to a limited period corresponding to the administrative waiting period required for organic certification. On the other hand, the "transition to organic farming" refers to a longer approach in terms of the farm's trajectory, which can commence before the administrative conversion and last several years afterwards. During this longer period, successive changes occur as the new production mode is gradually adopted (Lamine and Bellon, 2009). It is also during this period that the farmers' projects and expectations are likely to evolve too. The adjustments and system reorganisation, together with their consequences on work, are therefore progressive and continuous throughout the transition period. This means that when one dimension changes, this has repercussions on many others. The changes occur successively and logically according to a process (Madelrieux et al., 2002) that can be tracked in order to understand the consequences of the new reorganisations put into place. We shall adopt a dual approach in our analysis of these processes. Firstly, in order to study the consequences of technical changes on the organisation of work, we shall explore: (1) the evolution of tasks, distinguishing between "routine work", i.e. daily tasks that cannot be postponed such as milking, and "seasonal work", corresponding to tasks that can be deferred more easily, such as field labour (Dedieu and Servière, 2002); (2) changes to the work calendar (distribution of tasks over time); and (3) changes to the labour force: as workers on a farm are different in terms of taste, know-how and availability, it is important to look at how the work collective and the distribution of tasks within this collective evolve (Madelrieux and Dedieu, 2008).

At the same time, we shall study farmers' expectations in terms of work by looking at how their relationship to their work evolves. This will help us to understand how the different tasks, and hence the causes of possible tension, are perceived. We shall use the analysis framework of Fiorelli et al. (2010), who believed that a farmer's subjective relationship to their work is the result of five different rationalities (see table 1).

Table 1: description of the five types of rationality (Fiorelli et al., 2010)

Work rationality	**What the work rationality covers**
Economic	Expectations in terms of income
Technical	Desire to master the production process and achieve production performance and organisational efficiency
Relational	Emotional investment in individuals or animals
Identity-related	Role of breeding for livestock farmers: exercise and development of their freedom, intelligence, personality, and/or embedment in a professional field.
Linked to physical commitment in the work	Way the body is involved in work

The surveys were conducted in the Rhône-Alpes region, which is one of the leading French regions in terms of the number of certified organic farms (2,290 farms at the end of 2010), (Agence Bio, 2011). We focused on two contrasting productions from the point of view of work involved: dairy-cattle production, with especially high routine work constraints owing to the necessity to milk twice a day, and crop production, which have less routine daily constraints but do entail high seasonal workload peaks.

Since the goal was not to perform a statistical assessment of the importance of phenomena but to understand a diversity of situations, we opted for a limited number of surveys on a diversified sample of farms. In all, 18 farms were selected for their diversity in terms of size (surface area and labour force) and combination of the two productions studied (three types of production systems: specialised cattle-dairy farms, mixed crop-livestock farms and cereal farms). The farms which were chosen had been organically certified for approximately ten years, which is the period deemed necessary for the transition to be complete. Information was collected during semi-guided interviews. It thus helped to build up a picture of the change processes.

Table 2: characteristics of farms surveyed at the time of the survey

System type	**Farm code**	**Farm surface area (ha)**	**Number of dairy cows**	**Surfaces used for crops annually (ha)**	**Number of persons in the work collective**	**Changes to the work collective**
Dairy farms	AL9	60	35	0	3	1 employee recruited
	MP14	30	21	3	3	1 employee recruited
	AJ7	55	25	5	1	no change
	SG1	40	30	5	1	no change
	JC11	52	27	6	1	no change
	MR2	52	45	6	3	no change
	JL13	68	30	7	3	1 employee recruited
	EB8	60	40	8	2 +1	1 occasional worker
	JMB12	58	26	9	1	no change
Mixed crop-livestock farms	GR3	65	45	10	2	no change
	GR5	105	68	15	2	arrival of 1 associate
	FG6	90	40	15	2	1 employee recruited
	GL4	110	70	20	5	2 retirements, 3 associates
	JLG10	240	35	20	6	1 employee recruited, then association between 3 farms
Cereal farms	PG15	95	0	60	2 +1	1 occasional worker
	PV18	100	0	80	3	2 employees recruited
	DV16	97	0	87	2	1 associate introduced
	BC17	200	0	182	2	1 employee recruited

3. Results

3.1 Consequences of the adoption of an organic production mode on the organisation of work

During the transition to organic farming, the labour force underwent considerable changes on the farms surveyed. It increased on 12 farms (although only by 1 temporary worker on 2 of these). At the same time, it is interesting to note that while the cereal farms grew, the size of land used by the livestock and mixed crop-livestock farms changed little (by approximately ten hectares at the most), except when associates joined the farm (as part of a farm grouping). As for technical changes, there were many of these and so we shall only focus here on those with an impact on the organisation of work: from modified workloads and altered distribution of work over time to the complete reorganisation of work (tasks performed, work collective and task distribution within the collective.

- Reorganisation of the forage system:

The changes mainly impacted seasonal work linked to forage harvesting on all the livestock farms. To provide the herd with the right food from a quantitative and qualitative point of view given the high cost of purchasing feeds and the difficulty managing organic crops – especially corn – at the outset, the farmers redirected their forage system to the meadows. Although, according to the farmers, this did not affect the overall quantity of work, it did lead to a different time distribution for harvesting tasks. Two trends emerged. The first (7 cases) was based on peaks of workload for the farmer over several busy periods. This was observed when the “conventional” harvesting system was kept involving specific large operations such as ensiling and haymaking. The second (7 cases) involved work that was more spread out with a series of small harvesting operations when the farmer dried out the hay in barns.

- Organic fertilisation on cereal farms

Fertilisation management on the cereal farms represented a considerable amount of additional seasonal work, both owing to the much bigger volume of fertilizer to be spread, compared with chemical products, and because these amendments were not produced on the farms, had to be purchased, stored and composted. Fortunately for the farmers, these different seasonal tasks could mostly be performed during quiet periods and, after several years of adjustment (planning, type of effluents), which did not entail any difficulties from the point of view of work organisation.

- Weeding management

On all of the farms, this involved a series of new seasonal tasks (stale seedbeds, fast mechanical weeding over the whole field and slower hoeing, manual weeding), involving workload peaks during certain periods. It was found that the major peak stemmed from springtime crop weeding (using hoeing machines and manual techniques), which took up practically all of the cereal farmers’ time during certain periods. To be able to assume these workload peaks, year after year, the cereal farmers adjusted the way they ran their farm, each combining different solutions to organise the work: investing in equipment, diversifying crops to spread out work, but also reorganising their labour force. As many of these farmers had individual farms, they resorted to seasonal workers, often specialised in performing a specific task, while the farmer shouldered all the other tasks. In other cases, mutual assistance between organic farms was set up, allowing a more flexible distribution of tasks and investment in higher-performing equipment. On the farms with breeding and cropping activities, 2 types of solution were observed: (1) the systematic abandoning of springtime crops on farms having previously had them (7 cases), together with a forage system switchover to grass; and (2), the dropping of autumn crop weeding, deemed unnecessary after several years of implementation (6 livestock farmers out of the 13 with winter crops).

- Herd health management

Livestock farmers' choices in terms of health management reflected a range of strategies. Some farmers, who had adopted or continued extensive practices (drop in production per cow) in order to limit health risks, only modified their practices marginally (simply switching from systematic treatments to rationalised treatments) without this having any impact on their work organisation. In order to prevent health problems, others implemented new techniques based on animal observation (homeopathy, feeding spread over the course of the day, etc.). These obliged them to be on standby throughout the day, to revise priorities for different operations and share out tasks within the work collective. The use of homeopathy, which 12 farmers had tested but only 6 continued to apply following the transition period, required a long and thorough learning process. It also meant that one person from the work collective had to be able to – and want to- become specialised in herd health management. This was possible on farms where there were several people making up the work collective, otherwise the farm had to take on an additional worker so that someone could become specialised.

Depending on the production systems and technical choices made, changes to work organisation differed. The “seasonal work peak” activity characterising cereal farms generally grew. The situations on the livestock and mixed crop-livestock farms were more diverse: in some cases few changes were made, in others work was simplified (certain crops were abandoned; due to a drop in productivity, health problems decreased), while, in yet others, the work organisation became more complex owing to the increased technicality of tasks and to the larger work collective.

Although all the farms had relatively similar pedo-climatic and socio-economic contexts, the diversity of changes observed demonstrated a certain amount of room for manoeuvre implemented by those who were demanding in terms of work organisation. To understand the farmers’ satisfaction with respect to work organisation changes, their expectations in relation to their work must be taken into account.

3.2 Changes to farmers’ relationship to work and consequences on their perception of work

The surveys revealed that the adoption of an organic production mode changed the farmers’ relationship to their work, affecting the different rationalities underlying this relationship.

For 6 farmers (including the 4 cereal farmers), the technical challenge underpinning the transition to organic farming was a considerably motivating factor for the conversion. For these farmers, but also for 7 others, their technical relationship to their work was strengthened through their practice of organic farming. They were obliged to experiment and innovate and take into account the agronomic characteristics of their production systems: "*going organic makes the job more interesting […]. We have to take more of a technical approach, […] that changes the way we relate to what we’re doing* ". This renewed interest in the technical side of their job helped these 13 farmers to reappropriate their work *("we’ve gone back to techniques and I for one can only see the positive side of that")*. The farmers’ economic rationality to their work was very often relegated to second place after their technical considerations, although it never entirely disappeared from their discourse: "*we’ve got to think agronomy first […] so we’ve got to make crop rotation. There’s still an underlying economic concern in this rotation; we’ve got to optimise margins”.* Only one farmer continued to place economic considerations at the heart of his relationship to work feeling that *“manual work is anti-economic, that’s the downside of organic farming.”*

Professional fulfilment was also revealed to be a major factor. Developing organic farming had to be accompanied by a certain quality of life for the farmers. This comes under the work rationality of the farmers’ physical commitment with their work: during the transition to organic farming, it seemed to be even more necessary for the farmers’ to enjoy their work. One of the farmers went so far as to say the following: "*I like what I do and so I wonder whether I’m actually working”.*

With organic farming, the way the farmers identified with their work changed. It became much more concretely apparent to them that their work involved producing quality food for consumers: *"I’m happy to know that people are eating things that are healthy for them.”* They also saw the certification label

as a form of recognition on behalf of these consumers, and this changed the way they related to their work; many of the farmers developed a wish for more direct contact with consumers during their transition to organic farming.

These changes in the farmers' relationship to their work modified their vision of the tasks they performed. Thus, some tasks such as manual crop weeding, considered in the past as hard-going and archaic, in the end became part of all the farmers' practices and were generally accepted because they contributed to technical efficiency and consumer recognition. As one farmer put it, "*I swore I'd never use a mattock [but] it's part of my work, […] it's a change in the way I see my work*". The farmers' often relativised or minimised the hardness of their work. Some even drew a certain amount of pleasure from it, again underlining a change in their bodily relationship to their work. According to one farmer, *"It's really satisfying to grow things by hand. Sometimes it takes up quite a lot of energy but when you go and deliver to the canteens, you take along your untreated potatoes, it's a really good feeling. You're sure of your product, and you feel good about selling it."* The same applied to the additional work (hoeing) required during certain periods, or the need to become specialised in certain tasks (herd health management). The farmers saw these tasks as a technical requirement and therefore generally accepted them when the results proved to be satisfactory once they had mastered the technique after several years of practice. This is reflected in the words of this farmer, "*it's part of my work, I don't feel as though I'm being forced to do it. Our mental attitude is also changing, working is not just about getting things done as fast as possible. You've got to work your soil, that's the way it is."*

Thus, the very fact that they were producing organic goods altered the farmers' relationship to their work and their perception of the tasks performed. As their work organisation changed, so too did the farmers' expectations of their work. Indeed, during the transition period this actually led to gaps between the work organisation and the farmers' expectations, giving rise to work-related tensions.

3.3 Work-related tensions during the transition to organic farming

The process of switching to organic farming unfolded over a fairly long time period. Present at the start of the process, work-related tensions tended to subside or disappear. As the farmers' relationship to their work changed, some tasks (hoeing) or forms of work organisation (worker specialisation), which the farmers' had initially been apprehensive about, did not prove to pose the most problems. In fact other tensions emerged over the course of the change process causing "breaks" in the farms' trajectories as the farmers attempted to resolve them.

- Solving work problems during the transition to organic farming

Among the farmers met, solving work problems was never the reason why they decided to convert to organic farming. Yet, the choices farmers made when they decided to convert often took into account existing problems. They used the change to organic farming as an opportunity to solve these. Out of the 18 farmers interviewed, 5 addressed work-related issues right from the start of the conversion to organic farming. These farmers were livestock farmers who suffered from too heavy workload in terms of routine tasks. For 3 of these farmers, the conversion to organic farming was the opportunity to try to "simplify" their work. They believed that by reducing productivity targets they would be able to simplify the running of their farm: with a lower strain on the animals, changing the milking time would not be problematic; with lower cereal production yield targets, they could easily drop weeding. For the other 2 farmers, the objective was to reduce their workload and stress due to peak periods. The gains afforded by organic farming allowed them to reduce herd size and hence overall working times. More generally, the farmers accommodated their preference for peak or spread-out seasonal work in the way they reorganised their forage system. Thus, according to the farmers, opting for an organic production mode was not necessarily synonymous with a greater workload or worse working conditions. On the contrary, many saw the conversion as an opportunity to solve their work issues.

- Impact of recurrent work on dairy farms

On 5 farms, the time restrictions imposed by recurrent tasks were an obstacle to work satisfaction. It was not the workload as such that was found to be problematic, but the difficulty of taking time off from duties. This tension usually only emerged several years after the conversion. This problem is not specific to organic farms although it would appear to be exacerbated by the higher standards expected in terms of quality of professional life. The farmers very quickly responded to this tension by taking on more hands on the farm (salaried labour or based on association).

- Additional springtime work

In some cases, springtime crop hoeing prevented the farmers from performing their work in good conditions and was counter to their expectations in terms of work technicality, which were even higher with the adoption of organic farming. This difficulty performing work that "pays" (given that yield and weed control were not fully mastered) led the livestock farmers to stop growing corn (although two of them did take it up again after a break of several years when they hoped for better control of the situation through an increase in their work collective). The cereal farmers, who were not tied to managing a herd, achieved satisfactory results after several years of adjustments. While their workload remained high in absolute terms their technical control and good results afforded them so much satisfaction that the tensions disappeared.

- Lack of contact with consumers

With the adoption of organic farming, the farmers' attitudes evolved and they became more interested in what happened to their produce. As one farmer put it, *"I'm happy to know that people are eating things that are healthy for them".* On 7 farms in particular, this created tensions, which were resolved by setting up diversification workshops (processing, direct sales, opening to the public, etc.). In the words of one farmer, *"knowing that people come for what we produce enhances the value of our work."* However, it was found that the increased workload entailed could not be endured in the long term and quickly – simultaneously in some cases – the work collective had to evolve.

Finally, although the move to organic farming gave rise to tensions, all of the farmers were satisfied with the organisation adopted following a period of adjustment. Their satisfaction stemmed from the fact that their vision of their work had evolved for the better (thanks to the results and the recognition they drew from their work), and from the fact that they very quickly activated the right forms of leverage to solve tensions.

4. Discussion - conclusion

The change process approach and the two parallel analyses (work organisation and relationship to work) of the modification to work on the farms surveyed, have helped us to understand the mechanisms underlying the work-related tensions emerging. Five points can be studied in relation to the conversion to organic farming from a work perspective: (1) the influence of work-related issues in the decision to switch to organic farming, (2) the consequences of changes on work organisation, (3) the evolving relationship to work and work-related expectations, (4) the consequences in terms of work satisfaction (and possible tensions), and (5) the way tensions are resolved.

The transition to organic farming does not necessarily lead to deteriorated work conditions. On the contrary, many farmers see the conversion to organic farming as an opportunity to improve their work organisation. There are many ways in which a farm can switch to organic farming, all of which have very different consequences on work. To develop liveable organic systems from a work perspective, work organisational changes need to be matched with changes in terms of work expectations. Furthermore, although it seems possible to anticipate the consequences of system reorganisation on the farmers' work organisation, it is also necessary to anticipate any tension that may emerge.

The forms of leverage activated rely mainly on the labour force, via salaried work. The farmers balance this frequent recourse to salaried labour against the gains of selling organic produce. While salaried labour is still often a taboo issue in agriculture, it can also be argued that the break in tradition caused by the conversion to organic farming removes any obstacles and facilitates hire. More generally speaking, the risks entailed in the conversion oblige the farmers to implement change and innovation dynamics (Van Dam et al., 2009). Once caught up in these dynamics, their ability to adapt develops, helping them to quickly solve any tensions emerging. What seems to be the most important thing here is trying to reproduce these innovation dynamics because they guarantee the farmers' ability to adapt and allow them to respond quickly when new work-related tensions appear.

The sample used for this research was limited to three types of production systems and a single region; the technical and work-related changes are therefore regionally and type-specific. While our conclusions may have a general reach, specific nuances would need to be applied to other contexts. For example, organic market gardening leads to a substantial manual workload (Dupré, 2011) that decreases room for manoeuvre. The results are also based on a sample of farmers who have successfully converted and established organic practices. Thus this study does not allow conclusions about the general obstacles that labour changes can represent during conversion, or a general perception regarding labour requirements (type, hours) on organic farms.

Several authors have noted a high level of professional satisfaction among organic farmers (Dupré, 2011). Our study also points to this high level of satisfaction. However, it also shows that a sense of professional fulfilment and recognition for their work are just as important, if not more, than work organisation when explaining the satisfaction felt by the farmers.

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