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LABOR-FORCE MANAGEMENT CHALLENGES OF FARMS INVOLVED IN SHORT-FOOD SUPPLY CHAINS

Case Study: Loire-Atlantique, France

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Table of content

I. Introduction.....	5
1. Market facts and key figures of the development of Short Food Supply Chains in France.....	5
2. Social, environmental and economic benefits of SFSC.....	5
3. Organizational challenges faced by small-scale farms involved in SFSC.....	6
i. Multifunctional systems which require higher labor-force and a diversity of skills.....	6
ii. An emerging need for a better balance between professional and personal life.....	6
iii. The difficulty to access qualified labor-force in replacement associations.....	7
4. Strengthen and sustain SFSCs by engaging actions to adapt existing supporting tools to farmer's labor-force.....	7
II. Research questions & Methodology.....	9
1. Aim of the study & research questions.....	9
2. An action oriented methodology.....	9
3. Sampling.....	10
i. Sample choice.....	10
ii. Sample representativeness.....	11
4. Data collection and analysis.....	11
i. Farmers' interviews.....	11
ii. Farmers' and multi-stakeholder's workshops.....	12
iii. Additional expert's interviews.....	12
iv. Data diffusion.....	13
III. Results.....	13
1. Permanent labor-force needs analysis.....	13
i. Qualification & quantification of the existing permanent on-farm employment.....	13
ii. Quantification and qualification of the labor-force needs expressed.....	14
iii. Opportunities & obstacles to the creation of Employers' Alliance.....	14
iv. Collective proposal to answer to permanent labor-force needs.....	18
2. Replacement labor force needs analysis.....	18
i. Qualification of the replacement labor-force needs.....	18
ii. Opportunities & Obstacles to the implementation of more-adapted replacement service to answer to emerging SFSC labor-force needs.....	23
iii. Collective proposal to answer to short-term replacement labor-force needs of farmers involved in SFSC.....	25
IV. Discussion.....	27
V. Conclusions.....	30

List of abbreviations

AREFA : Association Nationale pour l'Emploi et la Formation en Agriculture

CASDAR : Compte d'Affectation Spécial Développement Agricole et Rural

CIVAM : Centres d'Initiatives pour Valoriser l'Agriculture et le Milieu rural

EA : Employer Alliance

FNSEA : Fédération National des Syndicats d'Exploitants Agricoles

FTE : Full Time Equivalent

SFSC : Short Food Supply Chains

RA : Replacement Association

Abstract

Organizational issues appear to be one of the greatest challenges of short-food supply chains. Farms involved in these initiatives developed complex working organizations which need to articulate production, commercialization and processing constraints. Moreover, replacement services rarely offer the skills that these farming systems require. In case of hard blow, small scale farms which have difficulties to manage occasional labor shortage become weakened. The objectives of this study are to analyze structural and punctual labor force needs of 25 farmers who use short-food supply chains in the Loire-Atlantique district and identify the opportunities and obstacles to the implementation of some proposed support tools/service to fulfill their needs (Employer's Alliance, adjustment of the replacement offers). Mainly small scale farmers who have transformation activities expressed both structural and punctual labor force needs. As all structural labor force needs are part-time, the opportunity to create Employer's Alliance within one of the three study areas has been highlighted. However, producers' lack of time and psychological barriers to employment could slow a job-sharing project. As selling tasks are rarely delegated, recommendations to work on developing processing skills in replacement service are done. Finally, the planning phase included in this study aimed to establish an action plan to satisfy the labor force needs expressed. Two action plans have been validated by the stakeholders: the implementation of local workshops for future employers and of a short-food supply chain prospective group with the Replacement Associations Federation.

Keywords: Short food supply chain, Labor force needs, Employer's Alliances, Agricultural replacement services, workload management

I. Introduction

1. Market facts and key figures of the development of Short Food Supply Chains in France

The successive food scandals of the 90's (e.g. dioxin residues in milk, bovine spongiform encephalopathy), the financial crises of some agricultural sectors such as milk industry and the growing consumer's awareness regarding environmental challenges are some of the main factors explaining the development of short-food supply chains (SFSC) these last forty years (Lanciano and Saleille, 2010). Agricultural development, guided by the implementation of a new agriculture paradigm, has been such that today SFSC represents a substantial part of the agriculture economy. In France for instance, the last national agriculture census of 2010 shows that 21% of French farmers (107 000 farmers) were selling the whole or a part of their production through SFSC (AGRESTE, 2012a). In term of food purchase, it was estimated in 2012 that 6 to 7% were made through SFSC (ADEME, 2012).

It is important to mention that the term "short food supply chains" can refer to an important diversity of supply chain models in terms of organizational forms (association, cooperative, social enterprise), type of producer-consumer interaction, type of collaborators (only farmers, farmers and consumers, farmers and chefs, etc.), initiators of the project (farmers, consumers, local authorities), motivation of the collaborators (local economic development, environmental protection, social justice, etc.), type of sales channels used (local market, internet sales, CSA), type of markets (local, regional, national) and production methods involved (organic, conventional) (European Commission, 2015).

2. Social, environmental and economic benefits of SFSC

The European rural development regulation defines short supply chain as "supply chain involving a limited number of economic operators, committed to cooperation, local economic development and close geographical and social relations between producers, processors and consumers" (European Commission, 2015).

SFSC are commonly known as food system models which provide both social, environmental and economic benefits for the territory in which it is implemented. Based on the reestablishment of link between farmers and consumers, SFSC gives more transparency on the origin of food, participates to local economy by encouraging small-scale local food producers and reduces the environmental footprint by shortening transport distance and by encouraging sustainable farming practices (Lanciano and Saleille, 2010; Rentingo et al., 2003; European Commission, 2015).

At the territory level, the implementation of SFSC also generates employment both at farm and supply chain level (European Commission, 2015; Herault-Fournier, 2010). The French national agriculture census recorded that farms involved in SFSC were employing 0.7 more Full Time Equivalent (FTE) than farms not involved in SFSC (AGRESTE, 2012b.). This higher labor-force need can be explained by the number and the diversity of tasks which farmers have to manage on that type of farming systems, such as production, order preparation, delivery, sale, marketing and in some cases processing. The following figure shows the difference of labor-force needs for farms involved in SFSC (left) and the others (right).

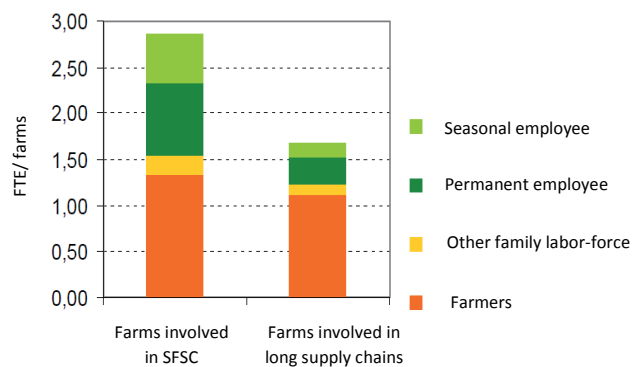


Figure 1 : Number of salary employed in SFSC's farms and other farms (Source: AGRESTE, 2012b)

At the supply chain level, SFSC can create employment through farmers' shops or collective processing units (slaughter house, cannery, cheese dairy). The logistics and communication means which SFSC require represent also new source of employment (Herault-Fournier, 2010).

3. **Organizational challenges faced by small-scale farms involved in SFSC**

- i. Multifunctional systems which require higher labor-force and a diversity of skills

Farms involved in SFSC are characterized by their tasks diversification and the complexity of their work organization. In addition to a production activity (and sometimes a processing activity), these farms have to manage all the tasks related to commercialization such as packaging, order preparation, delivery and sale. The coordination and realization of all these tasks is adding constraints to the systems and is therefore often involving a higher workload.

The workload implied by SFSC can vary from one farm to another. The time constraints imposed by SFSC on farming systems can be linked to the type of production (cheese processing is done more frequently than meat processing), to the type of selling form (farmers market is often time-consuming in comparison to others distribution channels) and to the number of selling forms used by farmers to sell their products (Aubry, 2011; Dufour et al., 2012; Herault-Fournier et al., 2012). It's important to note that this additional workload is not always associated with a higher added value. In this case, the issue of viability is raised and situations of fragility can emerge in some farms (Capt et al., 2011).

- ii. An emerging need for a better balance between professional and personal life

Tackling organizational challenge is becoming one of the major preoccupations of small-scale farmers involved in SFSC. As the following testimony from a General Assembly of the direct-selling farmers network of Loire-Atlantique shows, the issue of social viability of SFSC farms is increasingly addressed within producer's organizations: *"Now, it is crucial to find a better balance between work, family and economic imperative [...] To last, farmers have to take care of their psychological health"* (Brument, 2014). To sustain farms involved in SFSC and allow them to be transmitted to future farmers' generations, tools have to be implemented and propose to farmers to reduce their workload and to optimize their farm organization (Peron et al., 2015).

Supporting farmers in constructing a direct-selling farming system adapted to their aspiration is essential to avoid burnout and prevent situations of fragility. In Loire-Atlantique, *SOS Paysans*, an association which helps farmers experiencing difficulties to recover a balanced situation, has been supporting more and more farms involved in SFSC. In 2015, a quarter of the files treated by the association were involved in SFSC. According to the coordinator of *SOS Paysans*, the complexity stands in finding balance between economic viability and professional/personal balance of the farmers (Gregoire, 2016).

iii. The difficulty to access qualified labor-force in replacement associations

Today's direct-selling farmer's major difficulty is also to have access to a qualified labor-force within replacement association (CERD, 2013). The multifunctionality of their farm implies a need for an important diversity of skills. However, replacement association's employees often don't have the skills required by these farmers such as skills related to processing or selling. They are mostly trained to specific tasks like using machinery and/or doing the milking (Guilbot, 2016). However, the access to replacement labor-force plays an important role in the farm organization. Without any replacement option, some small-scale farms involved in SFSC with high on-call work, become weakened in case of unanticipated absences (Chiffolleau *et al.*, 2013).

In France, replacement associations are local structures which manage employees to ensure the continuity of farms tasks when farmers are absent from the farm in case of: death, disease, maternity/paternity, holidays, training course or union mandate. These replacement associations (RA) have the same legal status as Employer's Alliance (EA) but don't answer to the same labor-force needs. In the case of EA, farmers usually have access to part-time workers regularly to complete the usual labor-force needs of the farms (Blanc and Perrier-Cornet, 1999). The RA have financial partnerships with insurance, mutual and a national account for agriculture and rural development (CASDAR). This financial support covers part of the farmer's labor-force expense. For instance, employee's cost during maternity is covered at 92% and at 50% for holidays (Service de remplacement Loire-Atlantique, 2016).

4. Strengthen and sustain SFSCs by engaging actions to adapt existing supporting tools to farmer's labor-force needs: the case study of Loire-Atlantique

These direct-selling farming systems organizational challenges have been grasped in a case study in the French department of Loire-Atlantique. To engage a discussion on the growing preoccupation of workload management in direct-selling farmers, the departmental direct-selling farmers network named Terroirs 44 organized in 2014 a round table on the following topics: "Optimizing on-farm organization, pooling labor-force, developing skills: which solution to solve high workload in SFSC's systems?" (Brument, 2014). Two important elements emerged from this workshop:

- Direct selling farmers have difficulties to find qualified workers within local replacement associations
- Farmers would like to share part-time workers to reduce their worktime but don't find any support to implement this option

This round table highlighted two different organizational challenges: a *structural challenge* linked to the workload induced by the organizational complexity of farms involved in SFSC and a *situational challenge* linked to the difficulty of farmers to punctually have access to qualified labor-force within replacement association. During the meeting, farmers expressed these issues into two different labor-force needs: *punctual labor-force needs* to overcome punctual worker's shortage and *permanent labor-force needs* to reduce their weekly workload.

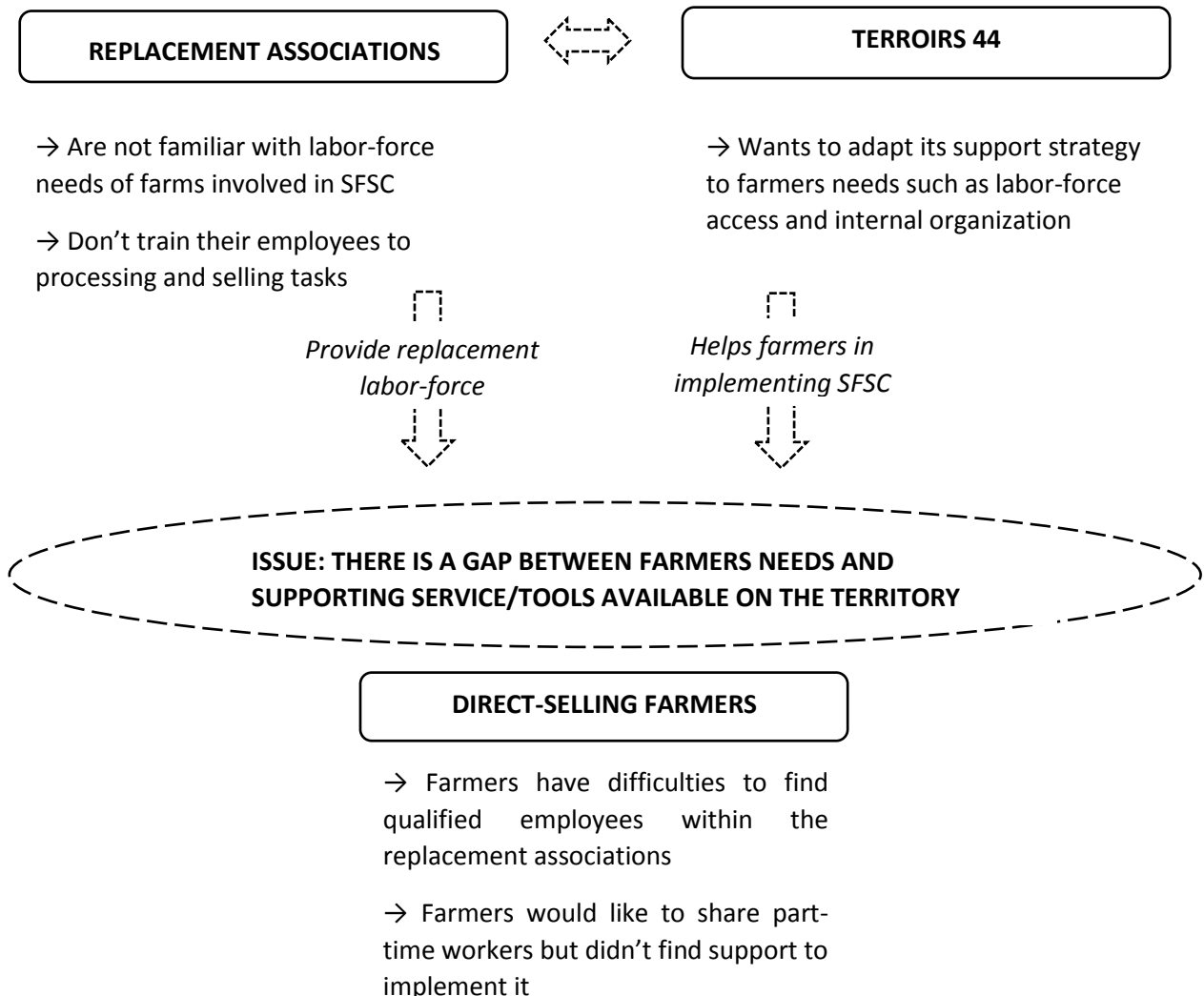
Further to this round table, three farmers of Terroirs 44 engaged replacement employees training actions (on their own farms) to adapt the employee's skills to their special needs such as slaughtering, cheese making or selling in a collective shop. Ten replacement employees have been trained by these three farmers since 2015. In the same year, 5563 hours of replacement has been realized on tasks related to SFSC, which represented 2% of the replacement activity at the department scale (Loire-Atlantique Replacement Service, 2016). However, today the SFSC skills are developed only in the local associations where the three pioneer farmers are localized whereas the department have 27 replacement associations. Moreover, an exploratory interview with the coordinator of the Department Replacement Association Federation highlighted that leaders in the replacement service were still not familiar with the labor-force needs of direct-selling farmers.

The coordinator explains that the mission of the replacement association is to adapt its labor-force offers to emerging needs. He also mentioned that without more information on direct-selling farmers specific needs, no changes could be done regarding their skills offer (Guilbot, 2016).

Due to human resources constraints (the association has only one employee), Terroirs 44 hasn't so far supported farmers in these organizational challenges. Until today, the association purpose was mostly to support farmers in their selling activities by supporting the creation of collective outlets such as farmers' shops or conducting communication projects to improve their visibility on the market. Terroirs 44 plays also the role of mediator between farmers and public entities to establish commercial relationships and to coordinate the food supply. Both Terroirs 44 and the Department Replacement Association Federation decided in June 2016 to engage a collaborative work to adapt their actual supporting services to answer to the specific labor-force needs of farmers involved in SFSC. According to them, consolidating the internal organization of small-scale farm is essential to sustain the activity of SFSC farms and the livelihood of the farmers but also to sustain the whole local food system.

Therefore, this action-research project involved three stakeholders: small-scale farmers involved in SFSC, Terroirs 44 (departmental direct-selling farmers' network) and the Replacement Associations Federation. All the stakeholders gathered to find solutions to fill the existing gap between farmers' labor-force needs and supporting offers of replacement associations and Terroirs 44. The following diagram show the links between the stakeholders and their expected output from this project.

No collaboration before the beginning of this project



II. Research questions & Methodology

1. Aim of the study & research questions

The aim of this study is to initiate collective reflections on solutions that could be implemented to answer the punctual and permanent labor-force needs of SFSC's farmers by engaging both farmers and supporting structures. Through this main objective, the following research questions have been developed:

General research question: How to adapt existing supporting services (farmers' association supporting service & replacement service) to better answer the labor-force needs of small-scale farmers involved in SFSC?

Sub-research questions:

- What are the permanent and the short-term replacement labor-force needs of farmers involved in SFSC?
- What are the obstacles and opportunities to the implementation of structural tools such as Employers' Alliance and a more adapted replacement labor-force offers?
- What are the missing supporting tools or services that are needed but currently not supplied by non-profit farmer groups? How can these be developed, and by whom?

2. An action oriented methodology

Given our objective of engaging a collective reflection on the way that existing supporting service could evolve to better answer SFSC farmers' needs, we naturally chose action-research as our mode of inquiry. Action-research is a collaborative process which aims at simulating change and at improving a situation deemed unsatisfactory by local stakeholders. As it is a participatory process, this type of research needs to be conducted by and for the local actors. Therefore, local stakeholders move up from simple research objects to become co-researchers in the study process. By encouraging innovation and development within local organizations, action-research seeks to gain both theoretical and empirical knowledge on a situation or a particular topic, in our case on the labor-force's access challenges of Loire-Atlantique farms involved in SFSC (Jose and David, 2016; Roy and Presvost, 2013). Problem solving through action-research approach follows a succession of research cycles. Each cycle is composed of four different steps: Diagnosing, Action planning, Action implementation and Monitoring/Evaluating. After the first actions are being implemented and the effects of the action plan analyzed, another research cycles allow us to readjust the initial action plan (Jose and David, 2016). The following figure presents these successive steps (Figure 2).

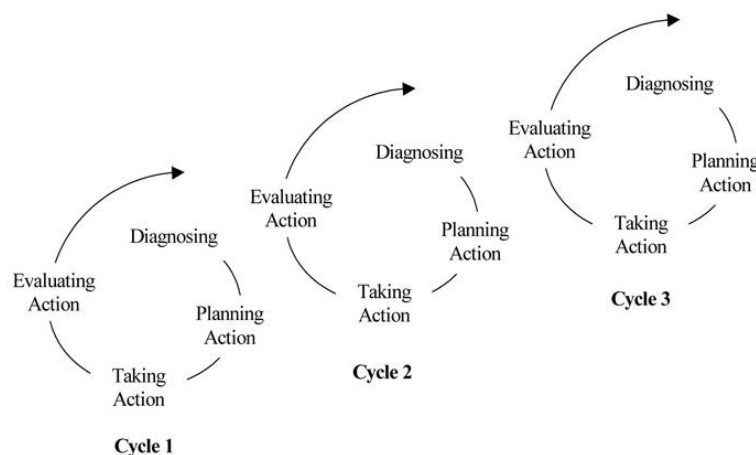


Figure 2 : Successive cycle research of an action-research methodology (Coghlan and Brannick, 2001)

Within the time allotted, this study seeks to achieve the two first steps of the first research cycle, including a diagnostic and an action planning phase. The empirical output will therefore be a concrete action plan to adapt actual supporting tools and explore potential future scenarios for further implementation.

3. Sampling

i. Sample choice

Shared-labor force tools such as Employer’s Alliance or replacement associations are usually implemented in a limited geographical area in order to facilitate travels from one employer to the other, to minimize cost, to limit fuel expenses and to ensure a certain employee working comfort. In Loire-Atlantique, there are 27 replacement associations, each one managing employees on average in 9 towns. Therefore, it was necessary to integrate geographical criteria in the sample selection. As it is shown on the following figure, Terroirs 44’s farms are scattered all over the Loire-Atlantique department. The areas with a higher density of close-by farms were selected. Three different areas have been studied: the *Guérandaise* area (including 17 farms), the *Sillon* area (including 9 farms) and the *Nantes* area (including 13 farms). It should be mentioned that two farms, located in the *Sillon* area and in the *Guérandaise* area, which are not part of the Terroirs 44 network have been added to the sample by the network sampling method. This non-probabilistic sampling method allowed us to recruit two additional SFSC farms interested in engaging a collective reflection on sharing labor-force to answer either to their permanent or punctual labor-force needs.

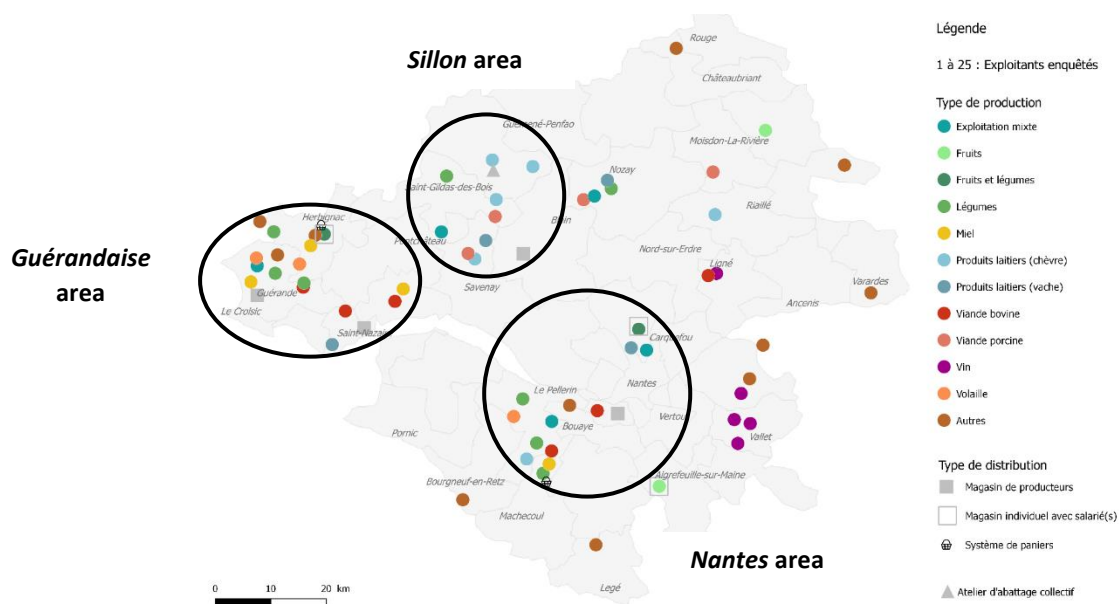


Figure 3 : Terroirs 44 farmers’ geographical repartition (Author, 2016)

In total, 25 farmers of the 63 members of Terroirs 44 have been interviewed during the diagnostic phase. As already explained, Terroirs 44 is only composed of artisanal producers who are managing the entire food supply chain from the raw materials produced on farm to the final products sold to consumers. Nevertheless, it’s important to note that not all artisanal farmers do the processing. Some products such as vegetables, fruits or honey don’t necessarily need to be processed. Others, such as large ruminant meat-oriented systems can’t slaughter on farms. As farm function (production, processing, selling) influences its labor-force needs in terms of competences, we also chose to select a sample with both farms with (14 farms) and without (11 farms) processing units. Within the sample, patterns regarding processing skills mobilized on farm can be highlighted.

- All dairy farms (goat and cow) have on-farm processing plant
- Half of the poultry farms does their own slaughtering (individual or collective plants)
- None of the meat cow oriented farms have meat cutting plant (delegate to providers)
- None of vegetable farms transforms its products

In total, 8 different production systems are represented in this sample: goats (5 farms), dairy-cows (3 farms), meat cows (4 farms), porks (1 farm), poultry (4 farms), vegetables (4 farms), fruits and vegetables (2 farms) and honey (2 farms). As this study is exploratory, a high diversity of systems was sought to assess the global challenges of SFSC farms regarding labor-force access. This sample diversity is also important to identify specific issues of some production that could be further study on the future steps of this action-research project.

ii. Sample representativeness

The production repartition within the sample follows the trends of production repartition within the farmer’s population of Terroirs 44 association (see *Appendix 1*). Only dairy farming systems are overrepresented. This overrepresentation is due to network sampling realized. Indeed, the two farms recruited by this method are dairy farms. Thus, the results of this type of farming systems need to be taken with caution while generalizing the results.

4. Data collection and analysis

The following table summarizes the data collection tools used for each objective and for each phase of the research process (Table 1).

Table 1 : Data collection tools

	<i>Objectives</i>	<i>Tools</i>	<i>Nature of the data</i>
<i>Diagnostic phase</i>	Qualify and quantify farmers’ permanent and punctual labor-force needs	Farmers’ semi-direct interviews	Qualitative and quantitative
	Identify the opportunities and obstacles to the implementation of Employers’ Alliance	Farmers’ semi-direct interviews Farmers’ workshop Additional expert interviews	Qualitative
	Identify the opportunities and obstacles to the creation of a more adapted replacement labor-force strategy	Multi-stakeholders’ workshop Additional expert interviews	Qualitative
<i>Planning phase</i>	Develop an action plan to answer to farmers’ permanent labor force needs	Farmers’ workshop	Qualitative
	Develop an action plan to answer to farmers’ replacement labor force needs	Multi-stakeholders’ workshop	Qualitative

i. Farmers’ interviews

To collect both quantitative and qualitative data, farmers’ interviews have been conducted with a semi-structured survey (see *Appendix 2*). The choice of a semi-structured survey has been done to give farmers the opportunity to develop their own opinion on each topic covered by the survey, to share their perception of the current situation and to suggest any action that could tackle some of the actual challenges (EUREVAL, 2010).

Quantitative data (FTE units, processing/selling working time, hours of labor-force need, frequency of replacement service utilization, etc.) have been processed with Excel to characterize the sample and emphasis on the sample's heterogeneity regarding working organizing and therefore on the labor-force needs expressed.

Qualitative data (objectives in terms of replacement and working conditions, employee competence needs, replacement service satisfaction level, obstacles to the use of replacement service, actual replacement management, opportunities and obstacles to the implementation of EA, etc.) have been analyzed through content analysis method. This method seeks to analyze as objectively as possible the verbal discourse of farmers gathered during the interviews. First, the farmers' answers are transcribed. Then, a transversal in-deep reading process allows to structure the information gathered in categories and sub-categories. This classification step is named coding. Such thematic content analysis aims at identifying trends and patterns in the data (Andreani and Conchon, 2003; Krippendorff, 2003). Farmers' quotes have been selected to represent key themes of perceived opportunities and obstacles.

ii. Farmers' and multi-stakeholder's workshops

To finalize the diagnostic phase and conduct the whole first planning phase, two workshops have been organized with different participants. The first one has been done only with Terroirs 44's farmers and focused on the permanent needs and the role of Terroirs 44 in this topic. In total, 10 farmers¹ participated in this meeting (7 interviewed in this study and 3 other farmers). The second workshop focused on the replacement challenges and gathered the two coordinators of the Replacement Service Federation, the coordinator of Terroirs 44 and three farmers' representatives involved in replacement employee training. Even if they both had different focus topics, the methodology used during the workshops was similar.

1. Present a first diagnostic based on the interviews data to create a common understanding of the current situation and challenges
2. Let the participant react on the results to collect additional data that could be triangulated with the interview data (mostly regarding opportunities and obstacles)
3. Reflect collectively on concrete action plans that could be implemented in the following years to answer both to permanent and punctual labor-force needs

iii. Additional expert's interviews

To complete this diagnostic and check out some data collected during the workshops (regional Employers' Alliance financial support, supporting service of the Agriculture Chamber regarding creation of employers' alliance, etc.), interviews with two experts have been organized: one with the coordinator of the Replacement Service Federation and one with the employment advisor of the Loire-Atlantique Chamber of Agriculture. Triangulating these data with interviews and workshops data allowed us also to identify additional opportunities and obstacles.

¹ 4 goat dairy farmers, 2 vegetables farmers, 2 poultry farmers and 1 beekeeper

iv. Data diffusion

Action-research projects aims at engaging as many stakeholders as possible to create changes. As concrete action plans have been developed with both farmers and supporting structures after the first planning phase, it was deemed necessary to use the results of this exploratory study as a communication tool for the whole SFSC farmer’s population. An article has thus been published in the association newsletter and send to Terroirs 44’s partners such as the local Organic Farming Organization (“*Groupement d’Agriculture Biologique du 44*”) and the CIVAM network (“*Centre d’Initiatives pour Valoriser l’Agriculture et le Milieu Rural*”), an alternative agriculture supporting structure (see *Appendix 3*).

III. Results

1. Permanent labor-force needs analysis

i. Qualification & quantification of the existing permanent on-farm employment

Within the sample, 12 farms out of 25 have employees. In total, 30.1 employees’ FTE are recorded within the farm sample. Among them, 61% are partially or totally dedicated to SFSC tasks such as processing, delivering or selling. The other employees are specialized in production tasks such as animal breeding or tasks related to cropping. In total, 8 farms out of 25 employ on SFSC tasks (specialized or versatile). Farms having processing units tend to employ more employees than farms without processing activity. Thus, 82% of the sample’s FTE (24.7 out of 30.1 FTE) are employed by farms which have a processing activity. Moreover, farms with less than 3 FTE which have a processing unit employ three time more employees than non-processing farms with the same amount of FTE (see *Table 2*).

This additional labor-force needs can be explained by the added workload that processing activities often impose to this kind of farming systems. However, as processing frequency depends on a lot of factors such as the type of processing, the volume processed and the farmer’s choice regarding the processing organization, this processing workload varies a lot among farms. Within the sample, the processing workload per FTE ranges from 4 hours (bread making) to 27 hours (cheese processing) per week. In average, each worker dedicates 14 hours to the processing activity. Cheese processing, which is done usually daily, represents the most time-consuming activity with an average workload of 18 hours per week and per FTE.

As raised in the introduction, qualifying direct-selling farms’ employment has been considered as an important data to better understand the general characteristics of employments within this kind of systems and to highlight some trends between the different farms’ categories. First, the following table shows that 43% of the salaried employment are part-time jobs (17 out of 39). While only one third of the employment created by farms which have more than 4 FTE are part-time, the majority (88%) of the employment created by farms which have less than 3 FTE are part-time.

Table 2 : Employee repartition regarding type of contract and farms categories

		Farms’ categories				Total
		FTE ≤ 3		FTE ≥ 4		
		Without processing	With processing	Without processing	With processing	
Number of farms per category		10	10	1	4	25
Type of employment	<Half-time	0	0	1	2	3
	Half-time	1	6	1	6	14
	Full time	1	0	3	18	22
Total of employment created		2	6	5	26	39

Among the 17 employees who have part-time jobs, three are apprentices and only one is employed by an Employer Alliance (where one farm of the sample is involved). It is also interesting to note that 3 farms with more than 4 FTE propose employment contract lower than a half-time job (0.07 FTE, 0.2 FTE and 0.4 FTE). These farms need additional labor force to help during busy farmers' market, to do delivery tours or to help in the processing activity.

ii. Quantification and qualification of the labor-force needs expressed

Seven farmers of the 25 farmers interviewed have expressed a need for additional part-time labor-force. Among them 5 expressed a labor-force needs for processing tasks, one for production tasks (in this case, vegetable growing) and one for selling tasks (see *Table 3*).

Table 3 : Permanent labor-force need expressed per category of farms

		FTE ≤ 3		FTE ≥ 4		Total
		Without processing	With processing	Without processing	With processing	
Number of farms per categories		10	10	1	4	25
Number of farmer's who explained a permanent labor-force need	Prod./ Breeding	1	0	0	0	1
	Processing	-	4	0	1	5
	Direct selling	0	1	0	0	1
	Total	1	5	0	1	-

These 7 farms can be classified in two different groups. Two farms need part-time workers to replace an ancient employee (1 with FTE ≤ 3 and 1 with FTE ≥ 4), while 5 farms with less than 3 FTE want to employ their first employee to reduce their weekly workload. Among these first-employers, 4 have on-farm processing units and need additional labor-force on this activity: 3 for cheese processing or one for slaughtering and pork meat processing. The last farm is a vegetable farm which needs an employee dedicated to production tasks. Their labor-force needs range from 7 to 15 hours per weeks.

The following part aims at identifying the opportunities and obstacles to the implementation of Employers' Alliance between farms involved in SFSC. These results are based on the triangulation of data gathered through farmers' interviews, farmers' workshop and expert interviews.

iii. Opportunities & obstacles to the creation of Employers' Alliance

- *Opportunities*

The importance of existent part-time workers in the all the farms studied (43%) and the expressed needs of 7 farmers for part-time employees shows a real opportunity to potentially implement shared-employment between farms involved in SFSC. Moreover, the 7 farmers who expressed a need for part-time labor-force as well as employers who propose today part-time contract expressed their interest in pooling labor force. It must be also noted that three goat-breeders localized in the same study area (the *Sillon* area) have been already talking about creating an Employers' Alliance for several years to share a cheese maker.

During the interview, farmers have been questioned on the interests and the brakes they perceive to the implementation of Employers' Alliance. These elements were important to gather to deeper analyze farmers' preoccupations regarding labor-force management and access, but also to identify the main obstacles to the creation of shared-employment.

Five main interests of implementing Employers' Alliances have been mentioned by farmers.

- 13 of them perceive Employers' Alliance as **an opportunity to improve on-farm work organization** by reducing farmer's weekly workload and/or by allowing farmers to take more free-time. 7 farmers also mentioned that employment-sharing could be a way to integrate a more secure replacement option within their farm organization. As the permanent employees know the farm, they could efficiently replace farmers in case of seasonal high workload or accident.

"The interest is the flexibility and the security that it could allow to our farm organization. If something happens to us, the salary of the Employers' Alliance could run the farm as we already know well our organization" (Pork-breeder, n°9)

- 9 farmers mentioned that Employer's Alliance could be a useful tool to **facilitate hiring** of part-time workers by offering them more attractive job.

«It is too complicated for us to hire someone only few hours per week. We already thought about it but it is really hard to find an employee from 8am to 12am only three times a week, it's not attractive. Employer's Alliance could be an interesting way to answer to our labor-force needs» (Goat breeder, n°1)

- 5 farmers who already employ part-time employees see Employers' Alliance as a way to **consolidate and sustain the existing part-time jobs** by offering employees the opportunity to complete their work time on other farms or on collective selling or processing structures. Indeed, the same concern has been raised by a collective selling initiative which has a high turn-over on the delivery job its needs (12 hours per week).
- Finally, 7 farmers mentioned that the creation of Employers' Alliance represents an **opportunity to create employment** within the local food system. 2 farmers completed this idea by saying that employment-sharing could be **an interesting professional springboard for employees** who could have the opportunity to be trained to process, production and sell tasks in different farms.

- *Obstacles*

Regarding obstacles, 7 limiting factors to the implementation of Employers' Alliance have been identified through farmers' verbatim analysis.

- 15 farmers mentioned **the difficulty to form a sustainable employers' group** as a major obstacle to the creation of Employers' Alliance. Forming a solidary, trusted and flexible group of farmers in which every employer respects his engagement is one of the biggest challenge raised by farmers. Trust is even more important in the case of Employer's Alliance because employers are solidary for the debts payment towards employees and social contributions. The expression of this concern shows how important is to support the upstream work of the creation of Employers' Alliance. Beyond the labor-force needs and complementary, testing the agreement between employers is important.

- The **difficulty to find a complementarity** between farms' labor-force needs is been mentioned in 11 interviews as another important obstacle.

"In our job of cheese making, we all process in the beginning of the week and deliver and sell in the week-ends. We would need the employee the same days!" (Cattle-breeder, n°5)

- As expressed in the following quote, vegetable growers and arborist also mentioned the **seasonality of their labor-force needs** as a limiting factor.

"Having no seasonal farming activity would make employment-sharing easier. If a farmer works 43 hours per week end want to reduce his work-time to 35 hours, he could hire someone 12 hours per week. But in our system, we have such as seasonality that we couldn't do it because we don't have enough work to hire someone in winter. However, I believe in the needs complementarity. In our case, we would need other farms with a different seasonality" (Vegetable grower, n°21)

- Even if Employers' Alliance allow to create more attractive jobs, 8 farmers expressed their concern regarding **the difficulty to find adapted employees** which could be at the same time qualified, versatile on different tasks (production, processing & selling) and mobile on several farms. During the interview, 4 farmers mentioned that they often struggle to find employee adapted to the exigence of their systems.

"The biggest difficulty is to find an employee who could sell our product the way we would like to sell it" (Arborist, n°22)

- The verbatim of some farmers highlight that there is **a lack of information** regarding the benefits/engagement linked to the creation of Employers' Alliance but also regarding the qualified supporting structures which can support their implementation. Thus, this lack of information doesn't encourage farmers to consider Employers' Alliance as an employment option.

"We would be interested in joining an Employers' Alliance but we don't know which its implies to be part of it..." (Goat-breeder, n°1)

"It must be heavy to implement this kind of project. Therefore, before starting something we would need to know who can support us in this project..." (Goat-breeder, n°3)

- Finally, **several psychological barriers to hiring** have been identified: 4 farmers mentioned not to be comfortable with their employer's role, and 3 said to have difficulty to accept the difference of salary between them and the employee in comparison to the effort their put on the farm.

"We are not good employers, we are not really comfortable with employment. It is really complicated to be the boss, it's really hard for us to have a central position like that" (Goat-breeder, n°1)

An interview with the employment advisor of the Loire-Atlantique Agriculture Chamber allowed us to identify additional hindering factors:

- Since 2008, Employers' Alliances of Loire-Atlantique don't receive departmental subsidies anymore. According to him, this **absence of financial support** has hampered the creation of Employers' Alliance this last past years.
- Moreover, the advisor mentioned that "since 2008, supporting the implementation of Employers' Alliances isn't a priority of the Agriculture Chamber anymore" which means that there is **no more official training for farmers who wants to create an Employers' Alliance**. Therefore, it seems that the financial support removal had an important impact on the supporting service of the Agriculture Chamber. The lack of information and training provides by the Agriculture Chamber can be seen an additional barrier to the creation of Employers' Alliance on the department of Loire-Atlantique.

All the opportunities and obstacles identified though farmers' and the employment advisor of the Agriculture Chamber are summarized in the following table.

Table 4 : Opportunity and obstacles to the implementation of Employers' Alliance identified though verbatim analysis and additional interview

	OPPORTUNITIES	OBSTACLES
Internal	<ul style="list-style-type: none"> - Farmers are interested by the opportunities offered by Employers' Alliance - It could improve farms work organization (more free time, reduction of weekly workload) - It could create more attractive jobs and thus facilitate hiring -It could integrate replacement within the work organization 	<ul style="list-style-type: none"> -Lack of information on Employers' Alliance and on supporting organization helping its implementation -Psychological barriers to employment
External	<ul style="list-style-type: none"> - It could consolidate the existing part-time jobs (within farms and collective initiative of commercialization) - It could participate to employment creation within the territory -It could play the role of professional springboard for employee (future farmers' training on the management of a direct selling oriented system) 	<ul style="list-style-type: none"> - Fear of wrong deal between employers - Difficulty to find complementary between needs - Difficulty to find qualified and versatile labor-force for processing and selling activities - Lack of financial support

iv. Collective proposal to answer to permanent labor-force needs

All the results presented on this first section are part of the diagnostic phase. A synthesis of all these elements have been presented to several direct-selling farmers and the coordinator of Terroirs 44 to allow them to have a clearer understanding of today's trends and challenges of labor-force access and management on farms involved in SFSC. Based on this collective understanding of the actual situation, the second phase of this research aimed at identifying which supporting tools or services could be implemented to better answer to farmers' needs while considering farmers' preoccupations.

During a participatory workshop, the participants agreed that there was a lack of information on Employers' Alliance but also a lack of interaction between farmers' who reflect on hiring a part-time employee. Farmers and the coordinator of Terroirs 44 decided that Terroirs 44 should play the role of mediator by creating spaces of dialogue between future employers who might be interesting in pooling employees. The farmers' group proposes to the coordinator of Terroirs 44 to implement in 2017 local discussion groups which would gather farmers from 10 to 15 communes. The objective of this discussion groups would be to create a first bond between employers looking for part-time labor-force and give them all the practical information related to Employers' Alliance (functioning, advantage for the employers, economic commitment, ect.). Farmers also suggests to invite farmers already involved in Employers' Alliance to testimony.

Thus, these groups would be the starting point of potential collaborations between farms. As the proximity between farms is also one of the success factor of the implementation of Employers' Alliance, it has been decided to invite to these groups also farms which are not necessarily involved in SFSC to increase the chance of collaboration between farmers within a restricted zone.

If by chance these local group lead to the creation of farmers group who want to employ in common, Terroirs 44 could propose them a deeper support to help them implementing an Employers Alliance. The idea of this support is to help them to build a sustainable employers group by supporting them in developing a collective vision of the repartition of the employee work among the farm and the rule they want to set up.

2. Replacement labor force needs analysis

i. Qualification of the replacement labor-force needs

As replacement labor-force needs are punctual and often unexpected (e.g. disease, accident) there are hard to anticipate and therefore to quantify by farmers. Thus, the second part of the diagnostic phase aims at better understanding which skills direct-selling farmers would like to access though replacement services and at identifying the opportunities and obstacles which could exist to the implementation of more-adapted replacement labor-force offers. These data will then help stakeholders to collectively propose a concrete action plans to answer to replacement labor-force needs of direct-selling farmers. First, the following table summarizes the different skill needs mentioned by farmers during the interviews.

Table 5 : Punctual needs mentioned by farmers within each category of farms

		FTE ≤ 3		FTE ≥ 4		Total
		Without processing	With processing	Without processing	With processing	
Number of farms per categories		10	10	1	4	25
Number of farmer's who mentioned a replacement labor-force need	Prod./ Breeding	0	1	0	1	2
	Processing	-	5	0	1	7
	Direct selling	0	1	0	1	2
	Total	0	7	0	3	-

- *Processing skills*

This previous table shows that half of the farmers who have a processing activity on the farm would like to have access to replacement employees qualified in processing in their replacement association. Among the 7 farmers who expressed a need for processing skills, 5 are cheese makers, one slaughters his pork and processes his meat and one makes bread. The high diversity of farm in the sample and the low quantity of farms in each processing category don't allow us to make any conclusion on which processing skill replacement service could start to focus to answer globally to direct-selling farmers (see Table 6).

Table 6 : Number of farmers in each processing category who expressed a specific processing skill's need

Skills' needs expressed	Cheese processing	Meat processing	Poultry slaughtering	Bread processing	Fruit processing	Honey processing
Number of farms mobilizing these skills	8	1	2	2	1	1
Number of farmers who expressed a specific skill's need	5	1	0	1	0	0

However, these interviews highlighted the importance of developing processing skills in replacement associations. In the introduction, it has been mentioned that three farmers have trained replacement employees to processing activities. Nevertheless, each replacement employee depends to a local association which is covering the labor-force needs of farmers from one "canton" (approximately ten municipalities). Therefore, not all the farmers from the sample have access to this kind of qualified labor-force. The dissatisfaction of some farmers regarding the lack of skills' offer within their local replacement service led recently 3 farmers to abandon their membership to their replacement association.

"I stopped my membership to my local replacement association because I asked several times for an employee to milk my goats and process cheese but they had unfortunately no one qualified to do the job" (Goat breeder, n°4)

The gap between farmer's skills need and the existing skills offer could weaken some farms, such as processing farms with low internal labor-force for instance. In the interviews, farmers from farms with less than 3 FTE expressed a higher need for processing skills than farmers from farms with 4 FTE. As they don't have enough internal labor-force to absorb all the additional work caused by the absence of one of the farm's permanent workers, small farms are more dependent on external labor-force. This external labor-force can be either family, neighbors or employees from replacement association. As the following testimony shows, the lack of processing skills within replacement service could represents a real handicap for farms which have low internal work-force.

"Last year, I broke my arm and the replacement association couldn't send us an employee both for milking and for cheese-processing because none had the skill to do it. Hopefully my son was at home at this moment, therefore he did the cheese making. [...] Without him, I don't know how I could have sustain my farming activity for one month." (Goat breeder, n°3)

This speech analysis shows how important is the access to replacement service labor-force for the resilience of low internal labor-force farming systems in case of accident or disease. Indeed, “informal” labor-force which farmers usually mobilize such as family or neighbor don’t necessarily have the know-how required to manage the whole processing activity. Replacement needs seems to be even more important in the case of cheese processing because cheese is mostly done daily which therefore imposes a high on-call work (see part 3.1.1). The insurance of having access to qualified replacement employee is thus essential to allow farmers to secure their system during their period of absence.

Beyond the management of non-expected events which can unbalance the functioning of farms, 4 breeders also mentioned the importance of having the opportunity to have access to qualified labor-force within replacement association to take holidays (see following quote), to get involved in agriculture unions or to have time to do technical training.

« We really would like to take holidays in summer to enjoy some family time and relax but we can’t because today there is no replacement employee qualified to process cheese » (Goat breeder, n°3)

Having the opportunity to take holidays or to have social activities out of the farm is essential to avoid burn-out and therefore to sustain the moral health of farmers and as a consequence his farming activity.

- *Breeding skills*

One dairy-farmer explicitly expressed a need for a more adapted replacement for breeding skills. Despite the important skills’ offer in terms of cattle breeding in the replacement associations of the department, 2 cow dairy-farmers out of 3 said not to be satisfied by the replacement employees’ skills and behaviors. The following quote shows that processing farms are looking for labor-force with different technical knowledge than farms which don’t have any processing activities. As the quality of the milk is determinant for the cheese-making quality, these processing dairy farms look for more milking rigor (e.g. udder cleaning, milk selection). These dairy-farmers also mentioned how animal welfare is important in their system and that several replacement employees they had were not having good reaction when they were managing the herd. Finally, the verbatim analysis highlighted that some direct-selling farmers associate replacement service to intensive agriculture and think that replacement service are not adapted to diversified small scale farms.

“Until then, we rarely had the service we wanted. We need someone who is able to take into account both the farm management and the cheese making plant management. We need someone who knows that processing raw milk implies rigor and a real respect of the animal. I think that by absence of training or by “culture” replacement employees are not trained for working in our farming system. They are used to work in big farms!” (Dairy-farmers, n°6)

- *Production skills*

- Honey production

Only one farmers, a beekeeper, from non-processing farms category expressed a replacement labor-force need. The two beekeepers of the sample have so far never been involved in replacement association because there say that none of the employee have the know-how to run honey production. However, during the interview one of them mentioned how useful it could be to have access to replacement labor-force during heavy workload period such as harvesting and hive scattering. He added that it could be easy to implement because any specific skills would be required for this kind of task.

« There are times of the years when we would need additional labor-force. I think about the July's honey harvest which is the most important one and also the hive scaping in winter. » (Beekeeper, n°25)

This beekeeper said that he never naturally thought about asking for labor-force in replacement association because he sees it as only specialized in breeding skills. Thus, diversifying skills in replacement service would need an important work of communication to break down the actual image of replacement service.

- Vegetable production

This prospective work allows us also to identify that some actors, either breeders or practitioners, were concerned about the actual lack of skills on diversified vegetable production in replacement associations. It is indeed interesting to note that in the study sample, none of the vegetable growers have ever used replacement service. According to the different testimony gathered, vegetable production seems to be missing in the pool of competence proposed by replacement association.

«We never use the replacement service because no one is competent to work on system like ours» (Vegetable growers, n°20)

“A lots of small diverse vegetable growers are settling up in the department, often alone. They are able to receive some punctual help from neighbors or friends but if one day someone stay three months with a plaster foot, it won't be possible to replace him! Therefore, we have to find replacement solution for these farms if we want to sustain them!” (Goat-breeder, n°5)

As mentioned in this previous quote, there is today, both at the departmental and the national level, a high installation rate of small vegetable farms engaged in direct-selling (Jouanneau & Froger, 2010). These farms require a high level of flexibility and technical knowledge which are not available within replacement service. According to some interviewees, the arrival of these type of diversified systems, often with low internal labor-force resource, in the agriculture landscape should be supported by an adaptation of the replacement skills proposed in replacement association. However, the verbatim analysis allows us to understand that the use of replacement wasn't common within the vegetable grower's community. As illustrated in the following quote, 3 vegetable growers out of 4 were not aware of the role and benefits of replacement service.

“No, we are not member of a replacement association, because we haven't think about it. We don't know if it is easy to join it. If we are sick, we can employ someone directly without going through an association. I think I don't see the point of these associations” (Vegetable grower, n°19)

• Selling skills

During the interview, only two farmers explicitly mentioned that we would like to have access to direct selling skills in replacement associations: one beekeeper who wants to have a replacement employee in charge of the markets when he is on holidays and one who wants to have access to replacement labor-force to manage his on-farm shop during high consumers' affluence. 5 farmers also said to regret that replacement service don't provide any labor-force qualified in commercialization. Globally, the lower demand for commercialization skills in comparison to processing skills can be explained by different factors which are further developed.

- The sale needs less know-how than processing. Neighbors or family members can easily manage commercialization when a replacement is needed.

« We haven't had any issue to find labor-force to commercialize our products. I have friends who can do it in case of urgency. They don't need to have any special know-how to do that. However, if I have to replace my cheesemaker, it's longer, it has nothing to do, it doesn't require the same amount of know-how» (Dairy-farmer, n°7)

- The sale represents the image of the farm and its products. Thus, most the farmers said that it was hard for them to delegate the sales. If they have to delegate it, they reorganize the tasks of different farm's workers and give the sale's responsibility to a permanent worker who already knows «the farm and the life's project which lies beyond». Delegating sales in a collective shop seems to be easier for farmers because unlike farmers' markets, consumers don't associate the producers' shop to a single farmer.

« It's really hard to be replaced on direct-selling farms. Which could be desirable is that my husband or my son replace me for the sale when I am sick and that we take someone for the replacement association to replace them on the breeding tasks. » (Cattle breeder, n°12)

- The last explication is a financial constraint. Some farmers said that they would choose not to do the market than employing a replacement employee to do it. Indeed, markets is a sale mode which is time-consuming and sometimes not profitable enough to hire someone.

« I prefer not to be replaced and miss a market than hire someone to sell 10 honey pots. I lose money if I do that. However, in summer it could be practicable because the consumer attendance is higher. » (Beekeeper, n°25)

The following part aims at identifying the opportunities and obstacles to the evolution of replacement service toward a labor-force offers more adapted to SFSC's famers needs. These results are based on the triangulation of data gathered though farmers' interviews and the multi-stakeholders workshop.

ii. Opportunities & Obstacles to the implementation of more-adapted replacement service to answer to emerging SFSC labor-force needs

- *Opportunities*

- The recent implementation of a specific replacement training course «discovery of SFSC skills»

For one year, two direct-selling farmers have been working in close partnership with the Departmental Replacement Association Federation to create a training course for replacement employee to allow them to better understand the skills mobilized within direct-selling farms. The first training session will be done in Autumn 2017. In five days, this course which is mostly based on practical exercise on voluntary farms provides to replacement employees the basic knowledge in commercialization and meat and cheese processing. This training program represents a real opportunity to increase the number of replacement employee qualified in SFSC skills.

- The existence of digital tool: the DEMETER software

All the replacement association are equipped with a software named DEMETER. This software has the capacity to manage an employee and employer database for each replacement association. If it is well complete, this software could be used as a prospection tools by identifying needs which are not fulfil by the exiting skills offers. By identifying which skills are available in each replacement association, this tool could also allow the neighboring replacement associations to exchange labor-force in the case of specific skills' needs such as bread processing for instance.

- *Obstacles*

- Lack of internal communication

The presentation of the diagnostic on replacement needs during the workshop made all the stakeholders realized how communication on the service which replacement associations propose toward both actual farmers' members and non-members was lacking. The results of the interviews show that many famers didn't know that some replacement employees where trained to processing or direct-selling skills in some local association. They also didn't know that they could mobilized free training tools (linked to professional integration goals) to train on their farms actual replacement employees on the skills they need. Some of them thought that training employee was at their own expense whereas they have the possibility to receive financial compensation for that. This lack of information regarding the work which has been done these last few years on the integration of processing and direct-selling skills in some replacement association and the opportunity of access to free labor-force training tools represent a real obstacle to the adaption of the actual replacement service to emerging skills needs. As farmers don't know that this kind of qualified labor-force can be or could be accessible, farmers are not encouraged to use the service of replacement association. Until today, this information has been spread through word of mouth by farmers who have been mobilized on the training process on SFSC skills of some replacement employee.

- Lack of external communication

The second obstacle is the lack of communication toward farmers who are never been members of replacement association. As the coordinator of Departmental Replacement Association Federation said in one of the additional interview realized, “we don’t really communicate on the role and benefits of the replacement association because we assume that replacement service is well-known in rural areas” (Guilbot, 2016). However, though the analysis of replacement management of the study sample the following hypothesis was been developed: Farmers which are not initially from farming families are less informed on the role and organizational benefits of replacement service than the other farmers. In the three production in which farmers don’t use replacement service such as vegetable, fruits and honey, 6 farmers out of 8 are in professional reconversion in agriculture. In the others production studied, only 5 farmers out of 17 are in reconversion. These recent years a lot of farmers in professional reintegration are setting up direct selling farming project mostly in diversified vegetable production. The continuous improvement of the replacement service requires an important effort of communication and sensitization toward this type of public.

- Farmers exhaustion from training employees

The improvement of the replacement labor-force offers regarding the diversity of skills available won’t be possible without the involvement of farmers in the training process. The field experience is indeed essential for the know-how acquisition. However, some farmers expressed that they were tired of training people who won’t stay long as replacement employee. The following quote illustrated this obstacle.

« I already trained a lots of replacement employees but they stay only one or two year then they leave. The disadvantage is that each time you have to train someone new, it’s really tiring and time consuming. Therefore, I chose to stop to use replacement employee. » (Goat-breeder, n°4)

- Lack of reference regarding existing skills resources

The Departmental Replacement Association Federation doesn’t have any information on the number of actual replacement employee who have skills which can be mobilized on farms involved in SFSC. These data are not accessible because the local association are mostly managed in an informal way. The communication is done only by phone and there is no uniform database which identify both employee’s skills or employer’s needs. The absence of any formal following up of the adequacy between actual replacement skills resources and farmers’ needs complicate the improvement of the replacement service. This lack of information on skills resources make the exchange of labor-force between associations difficult in the case of specific skills such as bakery or honey production. A software which as the capacity to manage an employee and employer data base for each replacement association has been implemented a few years ago by the National Replacement Association Federation. However, secretaries from the replacement association have difficulty to keep it updated because there is a high turn-over of employee but also because they are not used to work with this kind of tool.

- Political and cultural barriers

The last obstacle is political. This barrier has been mentioned by the coordinator of the Departmental Replacement Association Federation when she said that «braking cultural and political barriers will be essential to make replacement service evolved». She meant that the management board of the Federation are mostly involved in the FNSEA union which is known to support intensive agriculture. Even if the coordinators have shown an important interest in the project, the decision farmers' board of the federation might not agree on putting effort on finding solution for farms involved in SFSC which don't represent the model of agriculture they would usually support.

All the opportunities and obstacles identified though farmers' interviews are summarized in the following table.

Table 7 : Opportunities and obstacles to the implementation of more-adapted replacement labor-force offers to SFSC skills

	OBSTACLES	OPPORTUNITIES
Internal	<ul style="list-style-type: none"> -Some farmers (mostly vegetable growers) ignore the role and benefits of replacement service -Lack of information on exiting free training tools -Farmers exhaustion to train employees 	<ul style="list-style-type: none"> -Existence of free training tools which can be used by farmers to train replacement employee to the functioning of their farm and secure their replacement -High mobilization of two direct-selling farmers on the practical training of replacement employees
External	<ul style="list-style-type: none"> -Lack of internal and external communication by the Departmental Federation of Replacement Associations -Lack of reference regarding existing skills resource -Political and cultural barriers within the Federation 	<ul style="list-style-type: none"> -High mobilization of the two coordinators of the Federation on SFSC needs -The recent implementation of a specific replacement training course «discovery of direct-selling skills» -The existence of structural tools: the DEMETER software

iii. Collective proposal to answer to short-term replacement labor-force needs of farmers involved in SFSC

In addition to the new training course which will be propose this year to replacement employees, the stakeholders agreed during the participatory workshop that the Departmental Replacement Association Federation must implement other tools to be in a prospecting dynamic regarding the emerging SFSC skills' needs. To allow the federation to adapt progressively replacement labor-force offers, the group gathered for this workshop decided to create a SFSC steering comity within the Federation which would meet two time a year. It has been decided that in addition to the coordinators of the Departmental Replacement Associations Federation, Terroirs 44 and the organic producer's association, a group of five farmers from different zone of the department would be part of it. The stakeholders present during the workshop decided to include the departmental organic producers' association because a high proportion of their members are also involved in SFSC. This steering comity will aim at developing communication tools and to start a referencing work on the skills available in each replacement association. Secretaries will also be solicited to report skills which are lacking in their local replacement labor-force pool. Moreover, it has been decided that right after the end of this study in December 2016 the first results of this action-research project would be presented to the supervisory board of the Departmental Replacement Association Federation to build their awareness on the existing labor-force needs of farms involved in SFSC.

The following figure presents the action plan which has been establish collectively during the workshop.

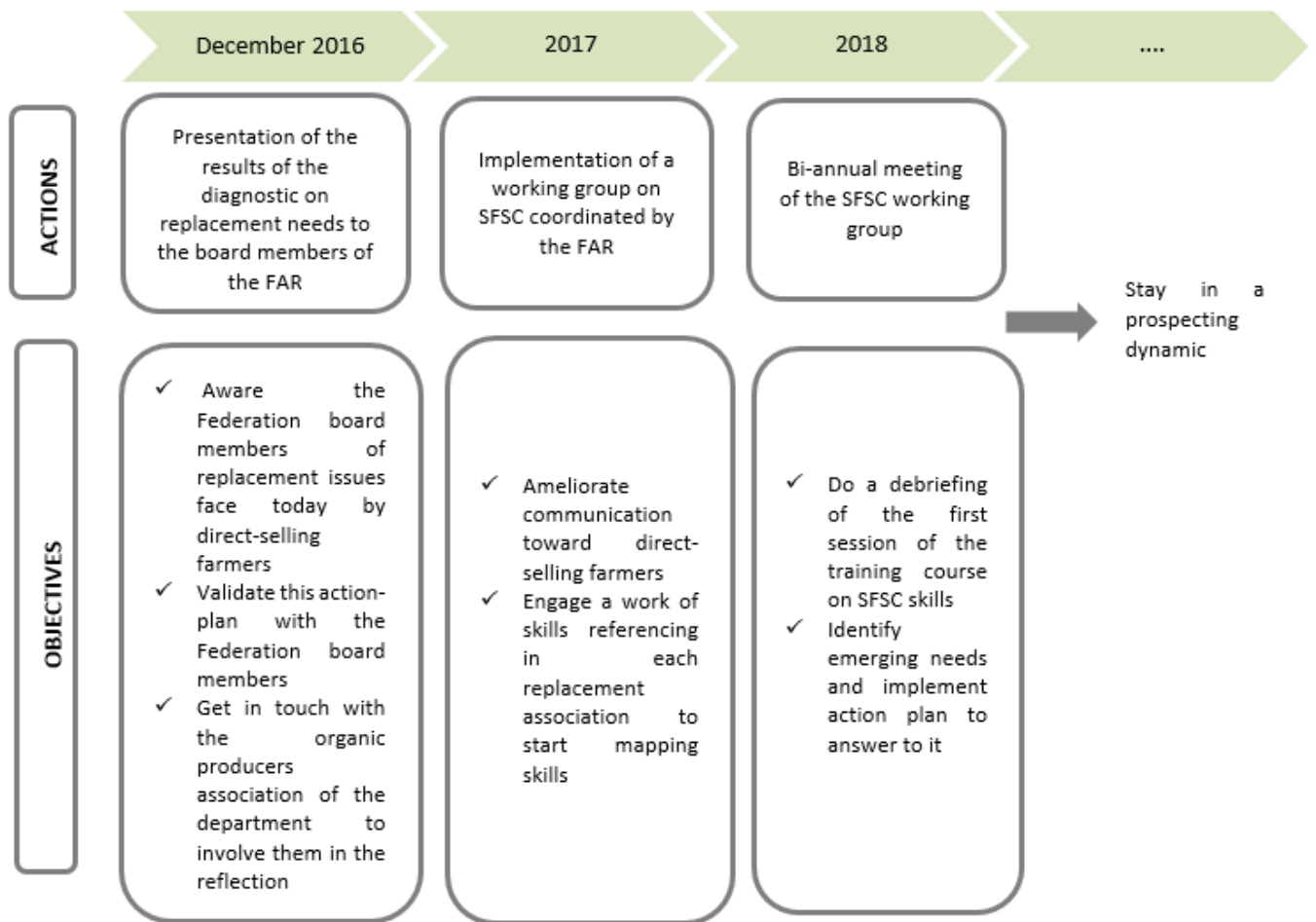


Figure 4 : Collective proposal to answer to short-term replacement labor-force needs of direct-selling farmers

IV. Discussion

1. Employees' skills requirement of farms involved in SFSC

SFSC references papers published by the National Resources & Study Centre on diversification (2013) is, so far, the only study that gives references in terms of salaried employment of SFSC farms. Based on more than 500 surveys, this study shows that 34% of SFSC farms have employees on tasks related to the farm's SFSC activity. Our results, with a percentage of 32% farmers having employees go along with these national references. However, by analyzing the function of the existing employee within farms organization and the employees' skills needed by farmers, this paper pushes deeper the analysis of permanent employment in SFSC farms.

Overall, the two labor-force needs analysis done allow us to conclude that farms with a processing activity have higher labor-force needs (either permanent or replacement) than farms without processing activity.

Table 8 : Triangulation of permanent and replacement labor-force analysis

		FTE ≤ 3		FTE ≥ 4		Total
		Without processing	With processing	Without processing	With processing	
Number of farms per categories		10	10	1	4	25
Number of farmer's who explained a permanent labor-force need	Prod./ Breeding	1	0	0	0	1
	Processing	-	4	0	1	5
	Direct selling	0	1	0	0	1
	Total	1	5	0	1	-
Number of farmer's who mentioned a replacement labor-force need	Prod./ Breeding	0	1	0	1	2
	Processing	-	5	0	1	7
	Direct selling	0	1	0	1	2
	Total	0	7	0	3	-

Concerning the skills required, this paper highlights that 61% of the salaried employment created are linked to one or several SFSC tasks. The permanent needs analysis shows an important need for processing skills. In France, the Regional Associations for employment and training in agriculture (AREFA) oversee the recruitment needs for agriculture employee and promote the agriculture employment. So far, only the Languedoc-Roussillon Associations for employment and training in agriculture did a prospective study on the employment and skills induced and needed by SFSC farms. However, the conclusion made on this prospective study go against the results obtained in this paper. Regarding processing skills, the AREFA assumes that the processing farms are often family farms which don't delegate the processing tasks to employee and therefore that processing don't necessarily create new salaried employment (AREFA Languedoc-Roussillon, 2010). The results of this study shows the contrary by identifying a high external labor-force demand on processing skills.

The triangulation of permanent and replacement labor-force analysis shows that 50% of processing farms with less than 3 FTE expressed a labor-force needs for both permanent and replacement labor-force (See Table 8). This high labor-force demand of this farm category is due to the high on-call work of these systems but also the lack of qualified employee in the replacement association.

Finally, the added-value of this study also lies on its action-oriented purpose. Indeed, according to internet researches and an interview with the coordinator of the National Replacement Association Federation, it seems that since today none of the Departmental Replacement Association Federation of other French regions have realized such collective reflection and actions on replacement needs of SFSC farmers. Only the Languedoc-Roussillon Replacement Association Federation have sent an on-line survey to its SFSC members to identify their needs in term of replacement. The results showed that 40% of the interviewers expressed a need for processing, delivery or direct-selling skills (Service de Remplacement Languedoc-Roussillon, 2015). However, no special actions have been taken to adapt the actual skills offer to their special need. An exchange of experience between the Loire-Atlantique Federation and the Languedoc-Roussillon Federation would be interesting to organize to see how the tools which are going to be developed in Loire-Atlantique could be implemented there.

2. *Optimizing the economic and social benefits of SFSC by securing on-farm and off-farm part-time jobs*

The results of this paper question the social and economic benefits of SFSC in term of local employment. By analyzing on-farm employment through a qualitative angle, this study shows that almost half of the on-farm employment created are part-time. SFSC are often promoted for their employment benefits however this paper highlighted a potential new challenge for SFSC: securing on-farm and off-farm employees who have part-time job. On the farmer perspective, securing part-time job is also important to avoid turn-over and have a better return on investment on the time they spend to train their employee to the activity of the farm.

Additional data would be necessary to conclude on the “precarity” of the part-time jobs created by farms or intermediaries of the SFSC. However, the important employee turn-over of some collective selling initiative or the concern of farmers to lose their employee if their find a better offer suggest a certain degree of fragility of these systems. A further study on employee’s expectation and employees’ turn-over would be interesting to conduct at bigger scale (the departmental SFSC system for instance) to grasp the level of precarity perceived by these employees, and analyze how they complete their work (in agriculture or others sector).

3. *The necessary evolution of the agriculture training programs*

To adapt the skills offers of the local replacement associations to SFSC tasks, the Loire-Atlantique Replacement Associations Federation will propose in Autumn 2017 a SFSC practical training program to replacement employees. This project represents obviously, an opportunity to gradually integrate SFSC skills in replacement association. However, by stepping back, we could say that this internal training program won’t tackle the issue of skills access at its source. To answer to this challenge in the longer-term, it would be relevant to associate the actors of the national agriculture training programs to the reflection to step by step adapt the training program to the emerging skills needs of farmers. For further research, it would be interesting to do a state of the art of the local agriculture training program offering today SFSC notions and merge it with the actual labor-force needs of farmers. Regarding this action-research project, it could be interesting to invite the coordinator of the departmental agriculture training structure to the SFSC steering committee of Departemental Replacement Associations Federation.

4. Concrete implications of the findings

As this study was done in collaboration with the stakeholders, it had a direct impact on the beneficiaries. First, the diagnostic allowed them to have a clearer and a common understanding of the local challenges of labor-force access on small-farms involved in SFSC. It also gave the actors the space and time to reflect collectively on how could it be solved. The workshop led to the implementation of two different actions plans with mid-term objectives to answer for both permanent and replacement labor-force needs. An article on the findings of this study has been published on Terroirs 44's newsletters to give all the members a feed-back on the project. Thus, in addition to generate results, this study also participate to its diffusion and understanding.

During the preliminary work on this project, some contact have been taken with the National Replacement Associations Federation and others Departemental Replacement Associations Federation such as in Languedoc-Roussillon. According to what they know, the Loire-Atlantique Replacement Associations Federation would be the precursors of a concrete work on SFSC skills. These structures expressed their interest in receiving the results of this action-research project to see how they could implement it on their territory.

As action-research implies a succession a research cycles, the impacts of the action plans would have to be analyzed after being implemented. At the end of the first cycle of actions in 2017, an assessment phase would be necessary to identify the key strenghts, difficulty encountered and the learning of the first actions realized. This assessment phase will be important to readjust the action plan for the following years.

V. Conclusions

The general objective of this action-research was to identify the actions that could be implemented by the two supporting structures involved in this project, Terroirs 44 and the Departemental Replacement Associations Federation, to gradually answer to the labor-force needs of small-scale farmers involved in SFSC. To start a permanent and replacement labor-force analysis has been done to better understand the nature of SFSC farmers' needs. The high percentage of part-time workers (40% of the total employee FTE) within the farms sample and the expression of additional part-time labor-force needs by 7 farms first highlights the opportunity to potentially implement Employers' Alliance between small-scale farms involved in SFSC. Farmers interviewed see essentially Employers' Alliance as an interesting opportunity to improve their internal organization and to make the part-time jobs they usually propose more attractive to employees. This diagnostic also shows that processing farm tend to present a higher labor-force needs than non-processing farms and that processing skills are sought more than direct-selling skills. However, employers from SFSC farms often require employee to be versatile also on selling and/or production tasks, which reduces a lot the number of qualified employee available.

In addition to permanent labor-force needs, 40% of the farmers interviewed expressed a need for replacement labor-force to have the opportunity to take holidays or to be temporally absent from the farm without fragilizing the work continuity. Overall, the results highlighted the necessity to train replacement employees to processing skills. The need to better understand the replacement labor-force needs of diversified vegetable growers, which is a sector in expansion in the departement of Loire-Atlantique has been mentioned.

In a second phase, the results of the diagnostic served as a working basis for the workshops to build concrete action-plans with the stakeholders. Based on the obstacles and preoccupation expressed by farmers on the implementation of Employers' Alliance and a more-adapted replacement offer, two specific actions plans have been developed collectively. The first one plans to implement local discussion groups on labor-force sharing in different zone of the department to fill the actual lack of training course and information on Employers' Alliance. Terroirs 44 will be the coordinator of this action. The objective of this groups are to give farmers all the information on EA and give them the opportunity to meet others future employers that could be interrested to share employees. Terroirs 44 will thus suport all the upstream work of the creation of Employers' Alliance including the employers' group dynamic.

The second action which focuses on the evolution of the actual replacement service plans to implement a steering comity dedicated to SFSC specific needs within the Departmental Replacement Associations Federation. The diagnostic showed that tools such as training program have already been built to train replacement employees to specific SFSC skills such as processing or direct-selling but that no communication has been done to promote it. It has also been mentioned that replacement service should develop communication supports tools to explain the service they can provide. Indeed, the diagnostic highlighted that farmers are not encouraged to use replacement service if they don't know that this kind of qualified labor-force is accessible. Finally, it has been mentioned that the Federation should develop prospective tool such as the implementation of an employees and employer's database to identify the gap which exist between the actual skills offers and farmers' needs in each local association.

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Appendix 1 – Sample representiveness

	Dairy products		Meat products		Poultry	Vegetable	Fruits and vegetables	Honey
	<i>Goat</i>	<i>Cow</i>	<i>Cow</i>	<i>Pork</i>				
Sample (without farmers not in Terroirs 44)	4	2	4	1	4	4	2	2
Number of farmers in Terroirs 44's association	5	3	6	4	7	8	4	4
% of farmers interviewed	80%	67%	67%	25%	57%	50%	50%	50%

Appendix 2 – Farmers’ survey

1. General informations

Producer’s name :

Farm’ name :

Legal structure :

Production :

Quality label :

Date of installation :

Short-term/long-term objective of the farm :

Evolution of the number of the on-farm labor-force since the installation :

Year of SFSC creation:

Processing units : YES/ NO

If YES. Where? Who? Frequency? Hours of processing /weeks?

% of sale revenu though CA :

Number of selling channels :

Do you have some seasonal selling channels? Yes No

2. Labor-force

Total FTE :

Number of family FTE :

Number of employee FTE :

Number of hour/week done by the employee :

Type of employee contract :

Are you involved in a Employers’ Alliance?

If YES, what are the benefits, disadvantage?

Are they volunteers working on the farm? If YES, family? Friends? Trainees? Woofers?

Have you ever think about sahring labor-force though Employers’ Alliance? If YES, explain why?

3. Working organization

Division of labor

Who ?	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
<i>Production :h/week</i>							
<i>Farmer</i>							
<i>Employee</i>							
<i>Others</i>							
<i>Processing : h/week</i>							
<i>Order preparation(.....h/week) – Delivery (.....h/semaine)</i>							
<i>Selling (.....h/week)</i>							
<i>Management :h/week</i>							

What do you judge your actual working organization?

Very satisfactory Satisfactory Moderately Satisfactory Unsatisfactory

How do you judge your professional/personal balance?

Very satisfactory Satisfactory Moderately Satisfactory Unsatisfactory

According to you, which lever could you use to improve your working organization?

Employ someone Change selling strategy Change internal organization Other.

According to you, is your farm transmitted as it is? Yes No. If no, why?

4. Replacement management

How do you usually manage your replacement?

Disease/Accidents: Replacement service Family Friends Neighbors

Maternity/Paternity: Replacement service Family Friends Neighbors

Holidays: Replacement service Family Friends Neighbors

Are you member of a replacement association? Yes No

If, YES. Since when?

Frequency of the replacement solicitation?

Tasks realized by the replacement employee.

Level of satisfaction regarding employee skills.

Which skills would you need?

If NO. Why? Lack of skills (which one?) Too expensive Other.

5. Labor-force need analysis

Do you have any additional labor-force needs on the farm?

If YES. Seasonal? Punctual? Permanent?

In which tasks would he be needed? Production Processing Selling

If, permanent, estimation of the number of working hours/ week.

Which skills you would require?

You want to employ to Face the actual workload To have more free time To develop a new activity

Would you be interested in sharing employee? Yes No

Under which condition would you be able to share labor-force?

According to you, what are the benefits/opportunity of EA?

What are the obstacles to the creation of EA?

What are the tasks which you can easily delegate?

4 ECHOS DES TERROIRS

DOSSIER > REMPLACEMENT ET EMPLOIS PARTAGÉS : QUELLES PERSPECTIVES POUR DEMAIN ?



L'organisation du travail apparaît aujourd'hui comme un des enjeux majeurs de la pérennisation des exploitations en vente directe. Ces fermes reposent en effet sur des organisations de travail complexes, souvent très chronophages, qui imposent aux producteurs d'anticiper les contraintes de production, de transformation et de commercialisation.

LA DIVERSIFICATION DES SERVICES DE REMPLACEMENT COMME FACTEUR DE RÉSILIENCE ET DE FLEXIBILITÉ DES FERMES DE PETITS EFFECTIFS.

Parallèlement à une surcharge de travail chronique très souvent ressentie par les producteurs, les services de remplacement proposent rarement une offre adaptée à leurs besoins. Une majorité d'agriculteurs peinent en effet aujourd'hui à trouver des agents de remplacement compétents en transformation et en vente.

Les résultats d'enquêtes réalisées par Marie LOISEL en 2016, montrent que ce besoin en remplacement sur des postes liés aux circuits courts est essentiellement exprimé par les fermes de petits effectifs (moins de 3 ETP) ayant un atelier de transformation. Ces profils d'exploitation sont souvent très sensibles aux pénuries de main d'œuvre non anticipées (résultats associés) car elles n'ont pas suffisamment de force de travail en interne pour assurer leurs

LE MURON PARTAGÉ : UNE RÉPONSE AUX BESOINS EN MAIN D'ŒUVRE À TEMPS PARTIELS ?

7 producteurs sur 23 ont évoqué explicitement lors des enquêtes, l'embauche à temps partiel comme l'une des options qu'ils souhaiteraient adopter prochainement pour diminuer leur charge de travail ou pour remplacer un de leurs salariés. Les besoins exprimés oscillent entre 7 et 15 heures par semaine.

Notons aussi, que sur les 39 emplois créés au sein de ces 23 fermes, 70% sont à temps partiel. L'emploi partagé pourrait donc être une option intéressante pour permettre les emplois salariés sur les fermes si des complémentarités sont trouvées entre elles.

Depuis 2014, trois agriculteurs de Terroirs 44 font vivre une dynamique de formation d'agents de remplacement aux métiers des circuits courts, notamment sur les sites de la Renjardière et de La Terre à l'Aspiette. Ces complémentements sont toutefois minoritaires et leur accès localisés. La mise en place d'une formation « circuits courts » à destination des agents courant 2017 présente une très belle perspective d'évolution du remplacement pour les années à venir (voir encadré ci-après).

Vers une diversification des compétences au sein des services de remplacement

Lancement d'une formation « Circuits Courts » par la FAR au printemps 2017 !



Depuis 2014, Gérard Poisson, Patrick Dubrel et Sébastien Guibot travaillent en étroite collaboration avec la Fédération des Services de Remplacement pour former des agents de remplacement aux compétences liées aux circuits courts comme la transformation et la vente directe.

Ces formations démontées par le biais du programme ADEMA (Accès des Demandeurs d'emploi au Métier Agricole) et Pôle emploi ont permis à ces agriculteurs d'être en contact avec une quinzaine de personnes et de former des salariés aujourd'hui compétents sur ces postes de travail. Pour ouvrir cette formation à l'ensemble des salariés agricoles et adapter progressivement l'offre des services de remplacement aux besoins des producteurs en vente directe sur l'ensemble du département, une formation « circuits courts » à destination des agents de remplacement va voir le jour à la mi-Mai. Cette formation, entièrement financée par le FAPEEA, s'étendra sur 6 demi-journées et apportera aux stagiaires à la fois des connaissances théoriques (règles sanitaires, etc.) et pratiques (fabrication de pain, de fromage et découpe de viande) leur permettant de réaliser de manière efficace leur remplacement sur des fermes en circuits courts. Cette formation « pilote » représente une réelle opportunité pour diversifier les compétences des salariés des associations de remplacement. Parlez-en autour de vous pour qu'un maximum de salariés puisse profiter de cette formation !

Pour avoir des renseignements complémentaires sur cette formation, n'hésitez pas à contacter Christèle Guibot, l'animatrice de la Fédération des Services de Remplacement, au 02.53.46.60.51.

Marie LOISEL

BRÈVES ...

• 20 % de bio en restauration : l'Assemblée nationale et oui, le conseil constitutionnel retorque le 21 décembre 2016, l'Assemblée nationale a adopté définitivement le projet de loi Egalité et Développement, où Brigitte Ahlin s'est introduite deux amendements sur un "égal accès à une alimentation saine et de qualité pour les citoyens sur les territoires".

- Introduction de 40% d'aliments d'origine (de saison, et d'origine locale, non agnés de chèvre...) dans 20% de produits issus de l'agriculture biologique ou en conversion dans la restauration collective d'ici à 2020.

- la prise en compte de l'illumination durable dans la responsabilité sociale et Environnementale (RSE) des entreprises. le Conseil Constitutionnel, saisi par le parti politique Les Républicains, a censuré le mercredi 25 janvier 2017 l'obligation de fournir 20% de produits bio et locaux dans les cantines jugeant cette obligation contraire à la Constitution. Mieux inouï, "non-respect de la procédure parlementaire". A noter...

• Règlementation : Les produits fermiers dispensés d'étiquetage nutritionnel

Le secrétaire d'État chargé de la Consommation est parvenu à exempter les produits fermiers de l'obligation de déclarations nutritionnelles. Les produits fermiers non préemballés et sans préemballés en vue de leur vente immédiate ne sont pas visés par l'obligation d'étiquetage. Par ailleurs, la déclaration nutritionnelle n'est pas obligatoire pour :

- Les produits non transformés ;
- Les denrées alimentaires conditionnées dans des emballages ou des récipients dont la face la plus grande a une surface inférieure à 25 cm² ;
- Les denrées alimentaires (composés de fabrication artisanale) fournis directement par le fabricant en petites quantités au consommateur final ou à des établissements de détail locaux fournissant directement le consommateur final.

Les denrées fabriquées par les micro-entrepreneurs (moins de 20 personnes et dont le chiffre d'affaires est inférieur à deux millions d'euro) sont aussi dispensées.