

The social sustainability approach as a systemic framework for analyzing work organization in livestock farms

Sylvie Cournut, Claire Balay

▶ **To cite this version:**

Sylvie Cournut, Claire Balay. The social sustainability approach as a systemic framework for analyzing work organization in livestock farms. 2nd International Symposium on Work in Agriculture. Thinking the future of work in agriculture, Mar 2021, Clermont-Ferrand, France. hal-03257850

HAL Id: hal-03257850

https://vetagro-sup.hal.science/hal-03257850

Submitted on 11 Jun 2021

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

2nd International Symposium on Work in Agriculture
Thinking the future of work in agriculture

March 29th – April 1rst, 2021
Clermont-Ferrand (France)

WS 6
Forms of work organisation
in farms

The social sustainability approach as a systemic framework for analyzing work organization in livestock farms

Sylvie Cournut [a], Claire Balay [a]

[a] Université Clermont Auvergne, AgroParisTech, INRAE, VetAgro Sup, UMR Territoires, F-63000 Clermont-Ferrand, France

***Abstract**: The social dimension of sustainability in livestock farming has been poorly documented, yet it is essential element in considerations regarding the future of livestock. We designed a framework to analyze the subject more deeply, taking into account its subjective and context-dependent nature. Social sustainability then was defined by drawing from statements made by actors and farmers who were interviewed in four different territories in France. The different facets of social sustainability identified were organized into seven main axes. The first four are related to farm-focused sustainability: job meaning, work organization, balancing private and professional life, and health. The last three axes take into account the embeddedness of farms in a territory and a society: territorial and societal conditions, local and social networks, and contribution to social sustainability of the territory. This framework which clearly reveals the complexity of social sustainability, was used to explore our understanding of work organization. We were able to explain the different facets of this organization, taking into full account the singularity and sensitivity of individuals as well as other scales, such as family, farm, territory and society. The social sustainability framework enriched our understanding of work organization including organization in place, wished for and experienced. We have drawn lessons from it concerning how to approach work organization, notably when accompanying farmers in transitions towards more sustainable work situations.*

***Keywords:** work organization, livestock farms, social sustainability, job meaning, balancing private and professional life*

Introduction

The concept of sustainable development, which is widely disseminated in the agricultural sector, has led to the development of many assessment methods (Bockstaller *et al.*, 2009) which are mainly focused on economic and environmental dimensions. The social dimension of farm sustainability remains far less documented (Lebacq 2013), although it is an essential element for understanding how livestock farms operate, their territorial and societal roles (Guillaumin *et al.*, 2007), and their evolution in response to major socio-economic changes at local and global scales. With an increase of social expectations concerning livestock (animal welfare, product quality and environmentally-friendly practices), a shrinking agricultural labor force, the enlargement of structures and changes in farmers' expectations concerning their work (Dedieu and Servière, 2012), this social dimension of sustainable development can no longer be ignored. In the context of a research and development project, we therefore sought to design a framework to analyze and better understand the social sustainability of livestock farms. The objective was to show the diversity of registers related to social sustainability and to make it explicit rather than to try to build a diagnostic tool. Does our social sustainability analysis framework provide keys to understanding work situations and in particular with regard to the organization of work, which is often at the heart of the concerns of farmers and those accompanying them? This is the question we explored in this study. We first present our methodology and the framework that we developed. We then apply the framework to broaden our understanding of work organization, and to reconsider the frameworks used to analyze this organization, notably when supporting farmers in a transition towards more sustainable work situations.

Method

Social sustainability is a vague and values-laden concept (Bacon *et al.*, 2012) related to privacy and the inner-self (Kling-Eveillard *et al.*, 2012). It is socially and culturally constructed in a given context and at a given moment (Boogaard *et al.*, 2011). We associated two perspectives on social sustainability. The first, focused on the farm level, considers that a farm itself must be sustainable; the second, focused on the territory level, considers that the farm must also contribute to the sustainability of its home territory (Terrier *et al.*, 2010). To take into account the subjective and context-dependent nature of social sustainability, we chose to develop a comprehensive and non-normative approach. Social sustainability was thereby defined using statements of farmers and territorial actors interviewed in four French territories that differed in terms of socio-economic and geographical contexts as well as the forms and dynamics of the livestock farms. In each territory, two emblematic production systems were considered and four farms of each type were surveyed taking care to cover a diversity of ages, installation itineraries and work collectives as much as possible (Table 1). The interviews covered the farmer's career path, his activity and what contributed or not to the sustainability of his farm, apart from the economic and environmental dimensions. Eight actors per territory (advisers, operators of the sectors, bankers, natural parks, elected representatives of local authorities, environmentalist, consumer association, teachers, etc.) gave us their point of view on the social sustainability of livestock farms and their contribution to the sustainability of the territory;

French territories	Context, livestock forms and dynamics	Livestock systems surveyed	Characteristics of Livestock systems
Livradois-Forez North-east of the Massif central	Rural area of medium mountains where grazing livestock (cattle and sheep) coexist with the forest	4 dairy cattle farms 4 meat sheep farms	60 to 250 ha 1 farmer to 4 partners, with or without employees
Sarthe Center of France	Peri-urban plain zone with Intensive and soilless breeding and a strong presence of the food processing industry	4 poultry farms 4 pig farms	4 to 390 ha 1 farmer to 6 partners with or without employees
Cévennes South of the Massif central	Pastoral breeding zone, with transhumance and precarious land tenure (oral leases) and diversification	4 specialized meat sheep farms 4 meat sheep farms with sweet onion cultivation	150 to 600 ewes No land to 150 ha 1 to 2 partners
Ardennes North of France	Rural area where grassland cattle breeding is in competition with crops	4 dairy cattle farms including 3 with field crops 4 meat cattle farms including 2 with field crops	140 to 260 ha 2 to 3 partners with or without employees

Table 1. Study sample.

When information was being collected, equal attention was paid to the facts and to how these facts were experienced by the interviewees. The statements were transcribed and then analyzed to identify recurring themes and their different modalities which describe the registers of social sustainability. This thematic analysis was guided by: (1) a literature review to inventory the criteria considered in major farm sustainability assessment tools, notably the social dimension (Fourrié *et al.* 2013; Vilain *et al.* 2008); and (2) the use of frameworks from psychology (Lenoir and Ramboarison-Lalao, 2014), sociology (Van Tilbeurgh *et al.,* 2008) and ergonomics (Leplat, 2008). This inductive approach, which involves a comprehensive thematic analysis and the mobilization of the literature, enabled different social sustainability registers to be identified and organized into seven axes, constituting our social sustainability analysis framework. The framework then was used to broaden our understanding of work organization.

The different axes of social sustainability

The four first axes are related to farm-focused sustainability: job meaning, work organization, articulation between private and professional life, and occupational health. The last three take into account the embeddedness of farms in a territory and a society: territorial conditions, local and social networks, and contribution to the social sustainability of the territory.

Job meaning

The decision to become a farmer often was made very young ("*I always said I would be a farmer*") with an important, even deterministic, family dimension ("*the path was clear*"). Others developed their activity over time by merging life and work as a couple ("*I gradually started working with him as the years went by*"), or after having assessed the disadvantages of salaried work ("*the boss, timetables, reports to deliver, pressure from above*"), sometimes breaking with a previous way of life ("*after pointlessly racing around, I wanted to rediscover the meaning of things*").

Social motivations are present ("*I feed people*"), as well as the pleasure of working with animals, achieving good technical results, striking out on one's own ("*making and taking responsibility for one's own choices*"), and combining intellectual work with physical work. For livestock farmers, having a meaningful job means building a career where their work conforms with their values and is a source of pleasure and pride, which also assumes a certain recognition from their friends, family and society. As the profession evolves, certain constraints can, however, call this perspective into question: *"All this paperwork is exhausting. I no longer feel free in my profession, I feel like I'm under surveillance, this is no longer my profession".* Society's perception of livestock farming also is changing and challenging farmers about the meaning of their jobs: *"Honestly, we get the impression that we are assassins, that's what they say...it drags you down."*

Occupational health

Most of the livestock farmers found it difficult to discuss their own health, likely because the subject was too personal. The territorial actors think that farming is a hard job, one where farmers can "*sacrifice themselves for the animals*" and even ignore a doctor's orders not to work. To "*make it until retirement*", one must prevent physical wear and tear on the body, particularly muscular skeletal problems and joint disorders, admit when one is getting tired, and not hesitate to "*ring the alarm before it is too late*". Occupational safety and health experts from MSA, the farmers' mutual insurance fund, think that farmers often endanger their own health. They point to a denial of, and/or lack of knowledge about risks, and explain that the means to remedy them run up against economic constraints. Moving from one type of activity to another (harvesting hay in the afternoon after cleaning out barns in the morning) and the multi-faceted nature of the job render it difficult to set up good protection practices.

Many stress factors also are mentioned (health hazards, weather conditions, wolf predation, overwork, administrative controls, economic difficulties, society's vision of animal husbandry...) which can generate ill-being and even exhaustion.

Balancing private life /professional life

Despite their frequently heavy workloads, livestock farmers highlight "*a certain freedom*", being able to "*stop working for 5 minutes if a neighbour drops by*", to free themselves during the day to go hunting, or take their child to school. Some impose on themselves "an escape hatch (a hobby, for example). But it

can be difficult, as this livestock farmer testifies: "*When we are invited out, I no longer go (because it ends too late), that's what bothers me*."
From the actors' perspective, vacations are an indicator of the modernity and image of the livestock farming profession and an essential condition for the profession to endure, but few livestock farmers take vacations and they tend to limit them to a week to 10 days. Some are satisfied with a few days of respite, two or three weekends a year, while others express the need to rest or suffer from not being able to free themselves more often, even saying to themselves "*you've worked like an idiot, you don't have a private life*."
The livestock farming profession often interferes with family life, yet the family can provide moral support or sometimes financial and practical help for domestic tasks. Having a spouse work outside the farm provides farmers economic and mental security; it also promotes social openness. Spouses urge farmers to pay more attention to work organization and the preservation of free time : "*Madame returns in the evening at half past six, she likes her husband to be there at seven*". However, tensions also can develop over not spending equal time with the children or on the couple.

Work organization
The remarks often reflect the length of the work day ("*we know that in just 8 hours we'll get nothing done*"), the pressure of routine work and the unexpected events that can occur, including on Sunday. For some livestock farmers, peak periods cover "*basically the entire year*" while for others, most often pig and poultry farmers, "*there are slower periods too*." While some are fine with these work days: *"it's not a chore"*, it is hard for others: *"I am going to crack, I work too much".* Some would like to develop a pace closer to other socio-professional categories.
However, social norms vaunting "farmer's work" weigh heavy: "*It's our parents, our neighbours who are farmers, who make us feel guilty, saying that to be a good farmer, you have to work 11 hours per day*."
In jointly-run farms, relationships between partners is regularly discussed. Developing a joint project enables the sharing of ideas and "*responsibility for choices*". It is easier to be replaced and this provides "*security*" in case someone falls sick. But making decisions with others also involves "*making compromises... that satisfy no one*", and can sometimes lead to the departure of one partner. Sharing information becomes an issue. Failing that, "*one would blame the other for everything*". Some meet together, many do not mention it. In some jointly-run farms (French acronym: GAEC), each farmer manages his or her livestock unit and this specialization limits the potential to be replaced.
Volunteer family labor remains precious and fragile. It can be experienced badly when it reflects that a farm is not profitable. Employing hired labor is sometimes mentioned. This leads to delegating and managing, and to building relationships based on trust. Keeping wage workers and finding ones with very specific skills remain difficult.
The infrastructure and equipment influence work organization and the way it is experienced. Fragmented, dispersed, or sloping field patterns affect working time and production costs. It can also become "*an advantage thanks to consolidation*". In the Cévennes, oral leases render access to land precarious ("*you don't feel at home, it's hard*"), for others this is not a "*problem*". Some livestock farmers invest to make work more comfortable by acquiring new equipment, sometimes with a real enthusiasm for mechanization: "*we hardly do anything by hand, you will never hear me saying that we struggle*". Others favour controlling costs ("*we make do with what we have*").

Networks

Our interviews reflect how farmers belong to several types of networks (professional, associative, family and neighbours) which strengthen their social and professional status. Cooperation between farmers involves material needs, but also social and symbolic ties which contribute to the construction of a professional identity. Farmers attend technical meetings to "*hear what others think, find out what's going on elsewhere*". This provides reassurance and resources for their activity (exchanges of practices, knowledge, mutual support) and this makes their job more convivial: "*there's also the get-togethers after meetings which are fun*". Taking responsibility, as a professional and a citizen, enables human enrichment and sometimes reconnection to life in the territory: "*going to school cut me off from the life of the town, but joining the young farmers group got me involved again*". In this self-employed environment, the recognition of peers is essential, as much with regard to technical and economic performance as that of quality, "*winning a medal gave me confidence in my skills*". While forms of cooperation between farmers are diversifying, contrasting trends of rising individualism also can be observed, notably related to increased workloads, equipment performance and automation: "*they never stop working, not even for a chat, because they are so pressed for time*," observed one agricultural advisor.

The image of livestock farmers is better image than that of livestock farming. To clear up misunderstanding, some farmers explain their practices to their clients, through farm visits, and other forms of outreach.

Nonetheless, there are numerous sources of conflict with other users of rural areas. Having "*neighbours bothering you all the time saying there's a stink*" or that "*the building is big, an eyesore*", causes tension that even can reach into the school yards, "*being the kid whose parent has the slurry tank, it can be hard*".

Territorial conditions affecting social sustainability of farms

The infrastructure development in the peri-urban Sarthois territory, ("*we are still in the country but we're close to anything we might need*") is different from that of the three others, which are characterized by an overall decline. There are, however, intra-territorial differences. Distance also is subjective, *"in rural areas, far means an hour's drive; if you live in a city, it means ten minutes away".*

Overall, public, professional and agricultural services are moving away, even disappearing, and internet access remains patchy; for medical care, the situation becomes even more serious. The dynamism of the *communautés de communes* (French administrative units made up of groups of communities) as well as the voluntarism of the rural elected representatives are welcomed and community groups and associations remain "*the cement of this micro society*". The vibrancy of the employment market also is essential for the spouse working in a paid job outside the farm.

Territorial conditions contribute to people remaining single because it is difficult "*to attract a girlfriend up there*." The falling population is accentuating trends and the low density of farmers is heightening tensions: "*How can you have a CUMA with people who live 20 km away?*" Nonetheless, the large majority of livestock farmers interviewed are deeply attached to their territory and cannot imagine themselves living anywhere else.

Farms' contribution to the social sustainability of territories

Livestock farming contributes to the vitality of a territory through direct and indirect jobs and by maintaining the social fabric of rural areas, especially in territories where "*if you take away farming, there is nothing left*". The poultry industry in the Loué territory in Sarthe creates both economic and symbolic wealth, ("*they all have the Loué sign at the entrance to their farms*"), one which is reassuring because

it cannot be relocated. The same holds true on a smaller scale for rillettes (a kind of paté) from Le Mans, Fourme d'Ambert cheese and onions from the Cévennes. These local products, and recognition (even without an official quality label) of traditional know-how, create value added.
Livestock farming also contributes to the building and transmission of a landscape, architectural, and cultural heritage. Both the territorial actors and livestock farmers are attached to this heritage. The risk of losing it was expressed by the inhabitants of Livradois-Forez, who fear that their region "will become a summer pasture land" benefiting non-resident farmers; similar fears were expressed in the Ardennes vis-à-vis so-called "'travelling'" grain farmers who manage to live in Reims while farming land in Argonne.

Using the framework to address work organization

In this section, we show how our understanding of work organization is enriched through the use of the social sustainability framework described above.

Work organization as an axe of social sustainability

Livestock farming systems zootechnicians view work organization as the articulation between a technical behaviour expressed in tasks to be performed over time and a workforce with varying availability, skills and expectations. This ensemble is conditioned by the dimensions of the system, equipment, and links with other activities (including private ones), and is subject to adjustments induced by hazards (Dedieu and Servière, 2012; Cournut *et al.*, 2018).
The work organization axe of our framework, which resembles this definition, highlights the elements that, from the point of view of livestock farmers and actors, are important to consider when talking about work organization from the perspective of social sustainability. These are the duration and pace of work, the length of the working day, distribution of work over the week or over the year, assignment of units or tasks between workers, working in groups, the possibility of being free during the day, taking weekends or holidays, being replaced, work efficiency, type of task, and even material and structural constraints… To tell us about it, the interviewees described facts ("*I start every day at 6 am and finish at 7 pm*") and experiences ("*these days are tiring*").

Interaction with the other axes of social sustainability

Using the social sustainability framework to tackle work organization highlights the many interactions between this axe and the others. This enables a better understanding of how the organization develops and evolves, and the sources of tension and enjoyment in work.
Considering what livestock farmers like to do, what is important to them, and what guides them can clarify choices regarding the system set up, the mode of production, and the distribution of tasks between workers, and explain how a high workload can be experienced positively. Examining the balance between professional and private life provides other keys. This articulation can thus prove to be decisive in organization choices when “work is calibrated to be done from Monday to Friday because the weekend must be devoted to other things”, or “you have to be super organized to juggle everything well": farm work, time spent on professional responsibilities, family, leisure. This can take the form of organization rules, like being obliged to stop working at a certain hour, by a division of tasks within the collective that allows one to be replaced, or by an adaptation of the technical system to reduce the workload or distribute it differently. In certain cases, private and professional spheres are so interlocked that work organization does not seem to be affected. In other cases, work organization does not take this balance into account because work comes first. Looking at health issues also is a rich source of

information. This helps to clarify the organization choices aimed at preserving workers' physical and mental health and to identify what in the organization endangers their health. Work organization also is linked to social ties cultivated by farmers. It can feature processing and direct sales activities motivated by a quest for contact with consumers. To preserve the peace with neighbours, some tasks may be scheduled differently: "we no longer start the tractor at 6:30 am Sunday morning, or spread manure behind the houses right before the start of the weekend". New tasks can arise, such as alerting residents when the combine will be passing. Considering a farm's integration into a territory provides other insights into work organization, which must take into account, for example, possibilities of mutual aid and collective organization, as well as constraints and opportunities in terms of road infrastructure and downstream firms. It also means taking a different look at work organization depending on whether or not it fosters employment and territorial vitality.

The different facets of work organization

Approaching work organization through the lens of social sustainability leads us to broaden our view of it by focusing not only on the organization in place, but also on the organization that is wished for and the one that is experienced.

The organization in place corresponds to the objective characterization of what is done, or "who does what, when, and where". The interviews that we conducted provide information about the organization in place from external (actors) and internal (farmers) points of view, providing accounts of what is important for the interviewees with regard to social sustainability. Looking at the organization in place means examining the scale of the farm and the group that works on it: the workers contributing, via their characteristics (availability, expectations, skills, capacities) to the construction of this organization.

The organization wished for is that desired by the individual, the worker, who in our case is the livestock farmer. It is the organization in which s/he could work in accordance with his/her values, preferences and expectations. It is the organization which would take into account what the farmer likes to do, what s/he does not like to do, and his/her determinants of a job well done. It involves the individual's feelings, and can change over time. This desired organization is a personal vision of a collective organization on the farm scale in which the farmer finds what matters to him/her: reaching a high production level, giving a job to as many people as possible on his/her farm, preserving his/her health, being able to keep learning, experimenting, working with his/her spouse, freeing him/herself for personal activities and family, keeping in touch with the rest of society, obtaining recognition for his/her work, etc.

The organization that is wished for, which is expressed on an individual scale, is confronted with the reality of work, with necessary compromises that are more or less negotiated with others (other workers but also family, neighbours, society, etc.), and constraints that are specific to the system and the environment that are constantly changing. **The organization experienced** is the way that the individual experiences this confrontation between the organization in place and that which s/he desires. This experience, which can translate into pleasure, pride, and motivation, but also stress and fatigue, is a prime entry point for identifying sources of tension or fulfilment in work. This experience can lead to modifications in both the organization in place and the one that is desired.

The interplay between the organizations desired, in place and experienced never stops, and putting these different facets into perspective enriches our understanding of work organization and its weight in social sustainability.

Discussion

Elucidating the complexity of social sustainability

Social sustainability concerns the farmer, his/her associates, potential employees, family, farm and even territory (Darnhofer *et al.,* 2010). These different levels of expression, and the way in which they are interwoven, must be considered when addressing social sustainability. The organization of the framework into seven axes may be discussed, notably in the light of their multiple cross-references. The place of the family, for example, appears in the work organization axe (as a volunteer workforce), in that of health (for listening, empathy, moral comfort or pressure), job meaning (in reference to the financial and symbolic heritage handed down and the acceptance of the profession by close friends and family) and of course in reconciling professional and private life. Far from calling into question the relevance of the framework for addressing social sustainability, these cross-references and overlaps help to clarify its complexity. The objective of our approach was to provide keys for interpreting and understanding situations rather than thoroughly describing and assessing them (Servière *et al.,* 2018). The joint consideration of objective and subjective dimensions also contributes to achieving this objective. The registers interact with each other; passion for and pride in one's profession can make a very heavy workload bearable and an imbalance in professional and private life sometimes disturbs the harmony with third parties. These interactions often cause knock-on effects that can be harmonious, but sometimes destructive as well: for example, if work/family are too interlocked, it can become impossible to achieve a balance between filial and conjugal ties, as Deffontaines (2017) also shows. Understanding social sustainability means exploring these different intertwined registers, which deal with facts and feelings, touch on individual and collective dimensions, and explore professional and private life to ultimately understand how they come together to express a unique compromise in motion.

Enrich approaches to work organization

The use of the social sustainability framework to approach work organization rendered it possible to clarify what, from the perspective of livestock farmers and territorial actors, was important to consider in order to define it. The methods used to approach work organization derived from livestock systems research (Dedieu and Servière, 2012) take an objective look at the farm level and provide indicators describing the organization put in place in a relatively robust and repeatable manner (Cournut *et al.,* 2018). While they make it possible to produce useful knowledge and references for extension services, these methods have limits that are highlighted by the confrontation of indicators with how farmers experience work (Cournut and Chauvat, 2020). Farmers do not have the same relation to working time and free time (Dufour and Dedieu, 2010), and the consideration of feelings (Chauvat *et al.,* 2016) and singularity (Coquil *et al.,* 2018) enabled by our framework proves necessary.

Highlighting the links between work organization and the other components of social sustainability has shed light on what contributes to the construction and evolution of this organization. Few frameworks allow such a comprehensive reading of work organization, expressly taking into account the situated nature of each work situation (Coquil *et al.,* 2018) and associating other dimensions of social sustainability, such as, for example, the logic behind work (Fiorelli *et al*, 2012). The application of the social sustainability framework has broadened our perspective on work organization and enriched our understanding of it. Approaching this organization cannot therefore be limited to taking into account and assessing the organization in place. It must integrate other aspects of the organization which involve individual views and experiences, and the interactions between these multiple aspects. It takes into

account the individual in all his/her uniqueness and sensitivity, but also other scales, such as family, neighbourhood, territory, and society.

Accompanying towards more sustainable work situations

Enriching approaches to work organization to better grasp its complexity, understand its determinants, how it is constructed, how it can evolve, and what effects it has on individuals and farm operations thus is necessary to support transitions towards sustainable work situations. This enrichment, made possible through the use of the social sustainability framework, led us to demonstrate the critical importance of paying attention to individuals and their experiences. This seems to us a key point in the accompaniment process, one that enables us to identify what matters or not, what works or not, and what can be modified or not. It also allows us to understand the place of this organization in the sustainability of a work situation, and what is not directly related to it. However, special listening skills are required in order to be able to work from a farmer's experience to accompany change. This implies returning to a closer relationship between those who are accompanied and those who accompany, and a change in the perspective and posture of the latter (Coquil *et al.*, 2018). Revisiting approaches to work organization in view of accompaniment thus assumes a change in those who accompany (Omont *et al.,* 2019). Therefore, it is not only farmers who must be supported to bring about change in work situations but also those accompanying them; this is achieved through specific systems such as communities of practice (Coquil *et al.,* 2019; Wenger, 2010).

Conclusion

The social sustainability framework that we have developed renews and enriches the analysis of the sustainability of farms by better integrating the human dimension. It explains the complexity of this notion, one which concerns the individual, the family and larger collectives, explores both professional and private life, and takes into account the integration of farms in a territory. We have demonstrated the advantages of this framework to address work organization. By considering work organization as an element in the social sustainability of a farm, we explain what is important to consider, from the point of view of livestock farmers and territorial actors, in order to define it, and the links uniting this organization with the other components of social sustainability. This allows us to compare our understanding of work organization derived from livestock production research frameworks with that enabled by the application of the social sustainability framework, and to draw lessons on approaches to work organization, especially when it comes to supporting farmers transitioning towards more sustainable work situations.

References

Bacon C., Getz C., Kraus M., Kraus S., Montenegro M., Holland K., 2012. The social dimensions of sustainability and change in diversified farming systems, *Ecology and Society* 17(4).

Bockstaller C., Guichard L., Kleichinger O., Girardin P., Galan M.-B., Gaillard G., 2009. Comparison of methods to assess the sustainability of agricultural systems, *Agronomy for Sustainable Development. A review* 29, 223-235.

Boogaard B.K., Oosting S.J., Bock B.B., Wiskerke J.S.C., 2011. The sociocultural sustainability of livestock farming: an inquiry into social perceptions of dairy farming, *Animal* 5, 1458-1466.

Chauvat S., Servière G., Cournut S., 2016. Prendre en compte le sens du métier, l'organisation et la productivité du travail, pour mieux accompagner les éleveurs, *Innovations Agronomiques* 49, 69-82.

Coquil X., Cerf M., Auricoste C., Joannon A., Barcellini F., Cayre P., Chizallet M., Dedieu B., Hostiou N., Bellec F., Lusson J.M., Olry P., Prost L., 2018. Questioning the work of farmers, advisors, teachers and researchers in agro-ecological transition, *Agronomy for Sustainable Development* 38, 47.

Coquil X., Cerf M., 2019. Accompagner le développement de l'activité des agriculteurs au service de la durabilité du secteur agricole : un développement en milieu ouvert via la communauté de pratiques, *54e Congrès de la Société d'Ergonomie de la Langue Française* (SELF), 8 p.

Cournut S., Chauvat S., Correa P., Dos Santos Filho J.C., Diéguez F., Hostiou N., Pham D.K., Servière G., Sraïri M.T., Turlot A., Dedieu B., 2018. Analyzing work organization on livestock farm by the Work Assessment Method, *Agronomy for Sustainable Development* 38, 58.

Cournut S., Chauvat S., 2020. Taking work into account in the production of benchmarks in organic livestock farming, *2nd International Symposium for Work in Agriculture*.

Darnhofer I., Fairweather J., Moller H., 2010. Assessing a farm's sustainability: insights from resilience thinking, *International Journal of Agricultural Sustainability* 8, 186–198.

Dedieu B., Servière G., 2012. Vingt ans de recherche - développement sur le travail en élevage : acquis et perspectives, Numéro spécial, *Travail en élevage*, INRA Productions Animales, 25.

Deffontaines N., 2017. *Les suicides des agriculteurs. Pluralité des approches pour une analyse configurationnelle du suicide*, Thèse Inra – Cesaer.

Dufour A., Dedieu B., 2010. Rapports au temps de travail et modes d'organisation en élevage laitier, *Cahiers Agricultures* 19, 377-382.

Fiorelli C., Mouret S., Porcher J., 2012. Les rationalités du travail avec les animaux d'élevage : produire, vivre ensemble et se construire, INRA *Productions Animales* 25(2), 181-192.

Fourrié L., Cresson C., Letailleur F., Sautereau N., Willot M., Berthier C., Vallas M., 2013. References for organic farming systems: proposal for an innovative analytical frame, *Innovations Agronomiques* 32, 271-284.

Guillaumin A., Hopquin J.P., Desvignes P., Vinatier J.M., 2007. Des indicateurs pour caractériser la participation des exploitations agricoles d'un territoire au développement durable, *Projet Casdar OTPA*, Institut de l'Élevage, Paris.

Kling-Eveillard F., Cerf M., Chauvat S., Sabatte N., 2012. Le travail, sujet intime et multifacette : premières recommandations pour l'aborder dans le conseil en élevage, Numéro spécial *Travail en élevage*, INRA Productions Animales, 25.

Lebacq T., Baret P.V., Stilmant D., 2012. Sustainability indicators for livestock farming, *Agronomy for Sustainable Agriculture. A review*, DOI 10.1007/s13593-012-0121-x.

Leplat J., 2008. *Repères pour l'analyse de l'activité en ergonomie*, Coll. Le Travail humain, Presses Universitaires de France.

Lenoir F., Ramboarison-Lalao L., 2014. *RIMHE : Revue Interdisciplinaire Management, Homme & Entreprise* 12 (3), 45-61.

Omon B., Cerf M., Auricoste C., Olry P., Petit M.S., Duhamel S., 2019. CHANGER–Échanger entre conseillers sur les situations de travail pour accompagner les agriculteurs dans leurs transitions vers l'agroécologie, *Innovations Agronomiques* 71, 367-383.

Servière G., Balay C., Cournut S., 2019. Sociel-La durabilité sociale des exploitations d'élevage dans leurs territoires, *Innovations Agronomiques* 71, 109-121.

Terrier M., Gasselin P., Le Blanc J., 2010. Évaluer la durabilité des systèmes d'activités des ménages agricoles pour accompagner les projets d'installation en agriculture. La méthode EDAMA, *ISDA*.

Van Tilbeurgh V., Le Cozler Y., Disenhaus C., 2008. La durabilité des exploitations laitières : rôle du territoire dans leur fonctionnement en Ille-et-Vilaine, *Géocarrefour*, Vol 83/3.

Vilain L., Boisset K., Girardin P., Guillaumin A., Mouchet C., Viaud P., Zahm F., 2008. *La méthode IDEA Indicateurs de durabilité des exploitations agricoles*, 3e édition, Educagri.

Wenger E., 2010 Communities of practice and social learning systems: the career of a concept, *In* Blackmore C. (Ed.), *Social Learning Systems and communities of practice*, Springer Verlag and the Open University.