Advice and advisory roles about work on farms. A review

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Abstract

The organization of work and changes in patterns of working life is of increasing concern to farmers worldwide. This creates challenges for advisors, who do not always know (i) how to recognize farmers' or their own needs for knowledge and new approaches to farm work organization or (ii) how to assess different methods of advice to tackle this issue. How are advisors responding to this concern and what are the implications for advisory roles and the advisory situation? In this paper, we review the situation of farm work organization changes and advisory responses. We describe a conceptual framework integrating different foundations relating to work organization on farms, the farmer-advisor relationship and methods of advice. Applying this framework to farm work organization and advisory responses in Australia, Belgium, France and Uruguay, our findings are as follows: (i) the specific characteristics of work are a source of difficulties for both farmers and advisors; (ii) for the farmers, work is a very personal subject linked to identity; (iii) for the advisors, it requires different methods of advisory practice and skills; (iv) success of advisory roles in the context of farm work requires the control of various 'role statements'; and (v) the organizational framework in which advisors carry out their activity, as well as specific training, can make it easier to identify and organize the skills.

Keywords Work · Labour · Livestock farms · Organization · Advice

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1 Introduction

Work, the form it takes and how it is organized, is increasingly a major issue in farming. Structural evolutions affecting the liveability and sustainability of farming in many countries include the expansion in farm size, increased productivity per worker through labour-capital substitution, decreasing family workforce and increased reliance on non-family farm employees and contractors (Findeis 2002; Nettle 2015; Nye 2018). Accompanying these structural changes, farmers are themselves proposing new visions of their profession and increasingly expressing aspirations in terms of improvements in their work conditions to free up time for leisure or other activities (Couzy and Dockès 2008).

These on-farm changes and the diversity of responses to work and work organization have implications for advisory services (Couzy and Dockès 2008; Nettle et al. 2018b).

Farm advisors support farmers in their technical, economic, organizational or social decisions. They help them adapt their ways of doing things, improve their livelihood and gain more satisfaction from their profession. The farm-advisor relationship has been described as the means by which advisors support farmers in developing farming systems that address issues of sustainability. This creates new professional situations for advisors and a demand for learning to deal with challenges (Cerf et al. 2011). Traditionally, most advisors have focused on technical issues, such as agronomy, pasture management or animal husbandry, and less on the farm work or employee management implications of running a successful farm (Nettle et al. 2018b). While advisory expertise and capacity to support the new farming challenges may be considered an important contribution to an advisor's repertoire, few studies have examined the nature of advisory roles in supporting farmers in these challenges.

In this paper, we address this gap by reviewing the main changes in farm work and the features of advice about work. We provide a conceptual framework for the study of farm advisory practice and draw on four international case studies (Australia, Belgium, France and Uruguay) to explore the changes in farm work and advisory services in the livestock sector and the different approaches to support advisory capacity. We discuss the extent to which these characteristics of work advice are a source of difficulties for the advisors, how they experience them and how they can overcome them. We conclude with key factors in the success of advisory practices

relating to work and the implications for sustainable development in agriculture.

Figure 1 shows a group of advisors training together with a farmer.

The next section reviews the main changes and issues in farm work, followed by the conceptual framework to guide the study of advisory practice in this context.

2 Work issues in agriculture

2.1 Work in agriculture in a changing context

Agricultural contexts are changing all over the world, under multiple influences that can be broadly organized in three categories: agricultural policies (regulations, support systems), food chains and industries (products, price volatility) and societal expectations (quality of life, climate, water, animal welfare) (Dedieu and Servière 2012). These transformations require continuous adaptations of agricultural practices and organization.

In most developed countries, the transformations have induced deep changes in farming systems and in work organization on farms, which we define as the number, type and forms of employment (Nettle et al. 2018a).

The agricultural workforce in developed countries has progressively evolved into a much smaller proportion of the total workforce and a secondary role in overall employment. Farm sizes have increased by 30% (2000–2010) (OECD/FAO 2018), but agriculture is now employing just 1–3% of the total workforce in most developed countries (OECD/FAO 2018). In emerging nations, such as Uruguay, less than 10% of the population is employed in agriculture. However, the reduction in total workforce hides an increase in reliance on hired farm labour.

Accompanying these changes is an increase in work productivity, reorganization of the workforce on farms and different workforce strategies (i.e. how farm workforce organization supports the needs and priorities of the farm) (Nettle et al. 2018a).

On the one hand, more farmers are working alone on medium-sized farms; on the other hand, paid labour, either permanent or flexible, is developing, as well as outsourcing of work or automatization of tasks (Chauvat et al. 2016). The move from an owner-operator base has provided new challenges in terms of staff recruitment, deployment and retention and necessitates a change in how farmers design and implement their farming systems. Being an employer requires specific skills in people management, including communication, leadership, setting expectations and allocating work (Nettle et al. 2018b).

With permanent workers, the importance of seasonal work on farm leads to a dilemma in balancing labour supply

Fig. 1 Illustration of a training course for advisors

and demand (Neiman 2016). Farmers try to resolve this dilemma by hiring temporary workers or contractors. For instance, about 87% of the British farmers surveyed by Nye (2018) said they now use contractors; this number was consistent across all types of farming systems. Moreover, in a context of social and productive restructuring, large farms evolve a more flexible agriculture that will affect labour markets, conditions of occupation, types of workers, labour relations, worker recruitment and the overall management of labour (Lucas and Gasselin 2018). The development of machinery and labour cooperatives, which involve more than one-third of the French farms (Lucas and Gasselin 2018), is an alternative that offers many opportunities for machinery- and labour-sharing arrangements between neighbouring farmers.

The professional identity of farmers is diversifying Farms now take many forms, including farmers working alone, traditional family and modern entrepreneurial farmers (Pritchard et al. 2007), associative farms (Lucas and Gasselin 2018), farmers managing employees (permanent and/or casual) and corporate farms with only paid workers and business-to-business relations through work contracting (Hervieu and Purseigle 2013). Farmers and rural workers are also expecting living conditions commensurate with the general society (Couzy and Dockes 2008). Farmers' family members are not necessarily working on the farm and, if they do, expect the same kind and amount of leisure and holidays as other social categories (Gambino and Vert 2012).

In short, agricultural work is more intense, to increase productivity and reduce production costs; more diverse, from outdoor manual work to management or paper work; and more questioned or criticized by the global society. These evolutions contribute to a real and/or perceived deterioration in work conditions (Kling-Eveillard et al. 2012) and to a need to support or advise farmers about human and labour issues to facilitate new organizations or practices.

2.2 Work, a complex, intimate and multifaceted issue

As explained by Kling-Eveillard et al. (2012), work is a particularly complex subject. Work is done in a relationship with the material and living world, in which the individual engages his body (the physical dimension) and his person (the identity and social, emotional and cognitive dimensions) (Méda 2007). It is undoubtedly even more important in agriculture, where work is very much bound up with family and personal life and closely structured with the life plans of farmers (Béguin et al. 2011). Dedieu and Servière (2011) formalized three models (see Fig. 2) that underlie approaches to work analysis in livestock farming systems and therefore approaches for the support and guidance of farmers: 'resource work' regarded as a production factor to be optimized; 'organized work', considered as a complex system of activities articulated in time; and 'subjective work' centred on the human and subjective reasons for 'working' (described by Fiorelli et al. 2010) and personal identity. In addition, work mobilizes knowledge from disciplines as varied as animal science, sociology, economics, ergonomics and management. Work is both an 'intimate' subject and a 'multifaceted' subject in the way it is tackled in livestock farming systems.

The next section defines a conceptual framework for considering advisory roles and practices in supporting farms within this challenging context.

3 Farm advice as a way of guiding and helping change

3.1 The general framework of advice

The agricultural advisory sector plays a critical role in facilitating on-farm change, but advisors have traditionally offered advice in technical areas, such as crop management or animal husbandry. While it is well recognized that farmers will seek information and support from a variety of sources when

Fig. 2 Three dimensions of work

managing change on-farm (Cerf et al. 2011), there has been less focus on the advisors themselves. There are expectations that farm advisors will be involved in achieving change, but little attention has been given to their interests or motivations for altering their advisory practice, given that their practices affect the formation of their professional identity.

Advice relating to social change or innovation is drawn from many scientific fields (Dockès et al. 1999). These include economics; sociology (in particular rural sociology), which has studied the diffusion of techniques in the agricultural domain; social psychology, which understands the individual factors of change; and educational science, to provide a better understanding of the advisor's work. Integrating these domains, we propose the following conceptualization of agricultural advisory practice centred on factors related to farm change in work (see Fig. 3).

1. *The input of knowledge* and information is often essential when farmers have to make decisions. As an example, having a clear vision of agricultural policy or social regulations can help when making choices. This can be technical, economic, market or scientific

knowledge, but it can also involve practical knowledge, learned from experience.

2. *Social representations* play a central role in the implementation of a technique. We consider representations in the sense of Jodelet (1989) as a form of knowledge or a perception socially created and shared that has a practical aim. Representations are a way for every individual to organize his or her knowledge according to a coherent system specific to him or herself. They refer to precise objects (the profession, working practices, the status of the animal, the human-animal relationship, the situation of livestock farmers in society) and are expressed in terms of judgments, opinions and mindsets (Frappat et al. 2009).
3. These representations are shaped within *social groups* (family, professional and technical). The professional group of farmers is often considered as the place for working out technical standards (Darre 1985), which evolve via dialogue between peers. Advisors provide information that is integrated into these discussion networks. The quality of the debate between the technician and the livestock farmer is one of the factors in the success of advice.
4. Finally, *the materiality of practices and their economic and organizational relevance* are central elements of change. Having daily actions to modify or a new organization to implement is often a great hindrance to the adoption of practices. The implementation of certain actions can be facilitated if appropriate account is taken of their material conditions for implementation, their cost and their expected benefit (Compagnone 2006).

Fig. 3 Four factors facilitating change in agriculture

This framework includes the factors advisors have to take into account. Advisors also need to consider their role in the farm-advisor relationship and the most effective way to support change.

3.2 Different types of advisory actions

Advisory actions can be classified according to their purpose, the main method applied and the role or ‘postures’ of advisors.

3.2.1 Different purposes for the advisory activities

The design of advice activities has everything to gain from taking into account the diversity of situations, expectations and points of view. To this end, extension organizations have gradually developed a range of tools and approaches, with various aims, although they do not involve all types of livestock farmers equally. Broadly speaking, advice actions can be classified around four groups of objectives: technical control, economy or strategy, work organization and responses to social expectations (see Fig. 4).

Advice with a *technical purpose* can relate to various *aspects of the operation of a unit* (outputs, optimization of inputs, feed, fertility, quality of products, buildings, etc.). It involves providing a variety of elements that enable interested farmers to progress in their technical control of an activity, in line with the economic and organizational balance of their farm. *Economic approaches* aim to help farmers optimize the economic performance of their farms within sectors and a territory. They are often based on benchmarks based on units or production systems, placed at their disposal using diagnostic and advisory tools that are often computerized. Since the 1980–1990s, farms have increasingly been regarded as systems that take account of the complexity of farmers’ objectives (Chia et al. 2014) beyond economic optimization. Strategic advice helps to analyse, for instance, the installation of new equipment or some other development, taking into account the social, economic and ecological environment, and—above all—the farmers’ projects and objectives. Such advice attributes a central role to the women and men who run the farms and to participatory approaches. Advice on work and organization can be embedded in technical advice when it deals with ergonomic or implementation issues. This advice includes some decisions about the way farmers organize their

time or hire and manage paid workers. In that way, it can be quite close to strategic advice.

Finally, in recent times, it has been essential for advisory activities to take into account the expectations expressed by society, whether in relation to environmental protection, animal welfare or the quality of food products. Taking the expectations of society into account requires changes in practices, but it also involves adapting the way both farmers and advisors think about their respective professions. The advisors are often found to be divided between the collective logic of ‘the public good’ and the short-term economic interest of the farmers they support (Compagnone and Lémery 2009). It appears essential to work on the points of view and representations of both farmers and advisors.

3.2.2 Different methods of advice

The various reasons for advice are translated into a variety of intervention methods, mobilized according to the means available and the motivations of the farmers and their advisors (Dockès et al. 1999, Laurent et al. 2006) (see Fig. 5).

Individual advice enables a farmer to communicate directly with one or more advisors, so it is possible for the specific constraints and assets of each farm to be taken into account. It also enables the farmer to become closely involved in the definition of his project, providing him with aids to decision-making and tools to analyse his situation. In general, this advice is all the more relevant and effective because it takes into account the points of view, knowledge, know-how and objectives of each farmer. It requires advisors to have technical or economic skills, mastery of teaching techniques and ‘active listening’ and a willingness to take into account farmers’ differing expectations. Within individual advice, different strategies can be explored.

Group advice, with dialogue between an advisor and a group of farmers, is a way to forge points of view, practices and organizational methods that are adaptable to each farmer’s own particular situation. This kind of approach, which enables discussions between peers and dialogue with one or more advisors, can be enriching for the participants but requires a real involvement from the farmers. Approaches like this were among the first to be mobilized by agricultural extension services in France in the 1950s and 1960s (Vedel 2008). These groups lost ground in the 1990s and 2000s but now seem to be well attended in all countries as a way to break down the isolation in which farmers sometimes work and encourage discussion and dialogue within their professional group. Targeted more towards farmers who are spontaneously open to change and innovation, these approaches require a high level of skill on the part of the group facilitators, with structured programs providing information and raising the awareness of farmers.

Fig. 4 Four main purposes for advice

Mass distribution primarily consists of informing farmers of results or technical information through the general media (e.g. press, bulletins, websites). This form of advice has the advantage of reaching a wide audience at a modest cost and of preserving individual autonomy in decision-making. However, it does not enable debate or allow for the particular characteristics of each farm, and it requires an active approach when seeking information.

Integrated advice (Dockès et al. 1999) is a combination of the methods presented above. It targets a numerically large audience (e.g. several thousand livestock farmers) and brings together different forms and tools of advice. The targets' expectations are taken into account through preliminary studies and evaluations. The diversity of livestock systems and farmer attitudes can be allowed for through typologies. Participatory meetings or focus groups are generally a key element of these actions; they allow the points of view of all of the participants to be expressed and discussions to take place between farmers as well as between advisors and farmers.

Equipping farm advisors with the necessary skills and knowledge to address complex issues on farms is often viewed as the most effective approach to achieve the desired practical changes.

3.2.3 Different roles for advisors

In addition to the different methods and forms of advice, advisors can play different roles. On the one hand, they can provide advice that aims to foster development of farmers' capacity; on the other hand, they can seek a result (a practical change). For instance, the advisor who takes on a 'hands-on expert' role actually undertakes the task on behalf of the client. In this role, the advisor has most, if not all, of the responsibility for producing good results. The client is not expected to grow in capacity very much. He or she will need the advisor again next time in order to perform the task equally well. A

'reflective observer' or 'coach' role gives more responsibility to the farmer for the results and capacity building. The advisor's task is limited to feeding back observations and impressions, which can have a dynamic effect on the client. If an advisor correctly assesses the situation, he or she is likely to choose the role that will be most effective (Champion et al. 2010). Nettle et al. (2018b) found advisors working with farmers on workforce issues adopted different individual approaches among which incremental support and guiding/coaching are relevant for the present analysis. In incremental support, the advisor plays a role of expert or technical advisor. The farmer has a technical question and expects a technical answer. The advisor often uses an audit tool and proposes a technical change in a rather directive way. This kind of advice is not appropriate with strategic or work issues. Coach roles are more relevant. It assumes that a big jump in the client's capacity to do the task is an important goal. In the coach role, the advisor does not have direct responsibility for performing the task. Instead, he or she may observe the performance of the task and provide feedback. The coach uses highly directed instructional techniques to improve the client's performance, providing feedback, prescribing and observing practice sequences and giving advice and support during actual job performance. The coach is indirectly involved in carrying out the task but closely involved with the client and his or her growth. The farmer experiencing a difficulty is often unable to describe and analyse it. The farmer expects the advisor to be able to bring new insights and to help with making new decisions or trying new organizational practices. The objective of this kind of consultancy role is to build solutions together. In some cases, an advisor will have to take on any or all of the above roles on a temporary, situational basis, which is often a challenge. The involvement of several advisors can sometimes be a solution to facilitate the taking on of many roles.

In the next section, we use case studies to illustrate the situation of work in agriculture and of advisory activities about work in four countries.

Fig. 5 The main advisory methods

4 Advice about work in four countries: Australia, Wallonia (Belgium), France and Uruguay

To explore the specificities of advisory services about work, we studied the situation in four countries where work is a topic of advice to livestock farmers. We first present the main issues about work on livestock farms in the four countries. Second, we describe four examples illustrating the main forms of the advice. This leads to the last section: a discussion about the extent to which these characteristics of work advice are a source of difficulties for the advisors. How they experience them and how can they overcome them.

4.1 The main work issues on livestock farms in France, Wallonia, Australia and Uruguay

Table 1 presents a few statistics about the four countries studied.

4.1.1 The situation in France and Wallonia

In France, agriculture employs 2.5% of the active population; about 1% are on livestock farms. Ruminant livestock production directly involves 260,000 full-time job equivalents (Lang et al. 2015) on about 200,000 farms (Perrot et al. 2013). The number of livestock farms has fallen consistently, for instance, a decrease of 25% between 2000 and 2010 (ibid). The typical farm raises about 60 dairy cows or 100 suckling cows on 80 to 100 ha. Livestock farming is primarily family-based (17% of paid workers on French livestock farms). About 25% of the young French farmer wives work on farms (Gambino and Vert 2012) and about 32% of the livestock farm workers are women.

Seventy per cent of farmers obtain regular advice. Among the approximately 10,000 advisors (Vedel 2008), very few (about 100) deliver specific advice about work.

In Wallonia (Belgium), according to DGARNE (2018), agriculture employs 1.2% of the active population. Agriculture directly employs 20,900 people, 54% of whom are farmers (60% full-time and 40% part-time). Women represent 10.3% of the full-time workers and 22.8% of the part-time workers. Two in three farmers do not have a wife working on the farm. Non-family labour accounts for 13% of the work in agriculture. In 2016, the number of Walloon agricultural and horticultural farms reached 12,870, of which 68% had livestock. This number is decreasing steadily (−3.1%/year). In 2016, there were 3754 dairy cow holders and 5870 suckler cow holders. The average number of cows per farm is 54 on dairy farms and 45 on beef farms.

In France and Wallonia, work is a major issue for livestock farmers. Turlot et al. (2016) reported that 80% of farmers thought they should improve the work organization of their

farms. The following topics were particularly central to them: saving time during the week or weekends, management of peak activities, paperwork, compliance with regulations and physical arduousness. Routine work, with its daily, repetitive nature, is often perceived as a constraint that is difficult to accept compared to other social categories, and perceived working conditions have a direct influence on the continued existence of farms. When farmers no longer consider them ‘liveable’, they can sometimes close down their business. The structural developments that are taking place, such as enlarging herds and land areas, reducing the family workforce and increasing the physical productivity of the worker, are contributing to a perceived deterioration of working conditions. The automation of certain tasks (robots for milking or feed distribution) is both a solution that limits routine tasks and a source of major changes in the relationship with work and with the animals (Hostiou et al. 2014). In addition, in farms organized as companies, or in farms with paid employees, control and management are becoming more complex and the work issue is exacerbated. Salaried work and associations are becoming more frequent in France, though not in Wallonia. Finally, the farmers themselves are now putting forward new visions of their profession, comparing themselves with other socio-professional categories. They are increasingly expressing aspirations for improving their working conditions in order to have free time for the family, for leisure or other activities. Advisory organizations are identified as resources on the subject, with specific support approaches and tools made available, and individual or group guidance (training programs or meetings). Specific training is carried out, as well as advisors with high skills on work in livestock farming being identified (Landini et al. 2017 or Kling-Eveillard et al. 2010).

4.1.2 The situation in Australia

In Australia, agriculture employs less than 3% of the active population and there are about 132,000 farms of which around half are mixed crop and livestock farmers (22%), beef cattle farmers (20%) or dairy farmers (8%) (ABS 2012). Most farms are family farms despite their large scale (Nettle et al. 2018a). There are about 6000 dairy farms with an average herd of 260 cows. More than 70% of farms that do employ staff typically have one or two people working for them (Dairy Australia 2017). Skilled migration makes up 2% of the dairy farm sector’s workforce and temporary/seasonal migration makes up 12%. About 50% of Australian dairy production is sold on export markets and about 50% on domestic markets. A combination of drought, and market and pricing volatility, has seen only modest growth in dairy production over the past 5 years with 28% of farms reporting that they are in a ‘growing phase’ of the business and 16% planning to recruiting staff in the next 12 months (Dairy Australia 2017). The dairy industry has

Table 1 Summary of the situation in the four countries

	France	Wallonia (Belgium)	Australia	Uruguay
Number of farms	300,000	13,000	120,000	45,000
Number of dairy farms	60,000	3800	5700	4500
Full-time jobs on dairy farms	125,000	7000	24,500	15,000
% of women in livestock farm workforce	32%	18%	28%	20%
Typical dairy herd size	60 cows	55 cows	260 cows	100 cows

supported the development of advisors' capacity to support farmers in their workforce issues since 2006 with more than 120 advisors completing a Diploma of Human Resources (Dairy) (Nettle et al. 2018b).

Family farming is predominant, but there have been significant changes in the social organization of family farms with the general use of different workforce categories (casual, contract, overseas workers). Some agricultural sectors report up to a third of their farm workforce as casual, including the use of working holiday visas, and more than 69% of Australian farms use contractors to undertake a range of farming operations (Nettle 2015). This trend may be linked to the search for flexibility, given the dynamic nature of agricultural production in terms of seasonal variation, drought, resource availability and product price variations from year to year, or it may be a response to large-scale regional labour market trends, such as the mining boom in Australia's regional areas affecting workforce availability. In the Australian dairy sector, the average herd size is now more than 260 cows per farm (Nettle et al. 2018b). As a result, the number of dairy farms operated by a single person, or with a partner, has fallen steadily from 43% in 2007 to 28% in 2013. The move from an owner-operator-based industry has provided new challenges in terms of staff recruitment, deployment and retention and necessitates a change in how farmers design and implement their farming systems. Being an employer requires specific skills in people management, including communication, leadership, setting expectations and allocating work.

4.1.3 The situation in Uruguay

In Uruguay, agriculture employs 8–10% of the active population. According to Ackermann and Cortelezzi 2017, there were 44,781 farms in 2011, with an average area of 365 ha. The agricultural population amounted to 115,371 people (2.6 workers per farm and 142 ha per permanent worker). Sixty per cent of the rural workers have completed primary school as the highest grade and two in 10 jobs (20%) are occupied by women. Forty-five per cent are 50 years old or older and 30% perform non-specialized jobs. In 2016, cattle ranching (bovine meat, sheep and dairy) employed 61.3% of rural workers, followed by crop production (26.7%) and forestry (9.4%).

Within the livestock industry, 48.4% reported working in beef cattle, 12.8% in dairy and 5.2% in sheep. Between 2011 and 2016, there was a decrease in the number of rural workers (−17%), with livestock being the most affected with a decrease of 24.4%.

Since the 2000s, a reduction in the population and number of farm workers has been noted, accompanied by enlarged land areas per farm and per worker. In extensive livestock farms, these processes of workforce intensification take place without any mechanization but with increasing recourse to outside services to complete the seasonal work. Using new technologies makes the production process more complex (De Hegedüs 2011). Work became more important as a factor that limits the production of livestock companies in Uruguay (Ferreira 1998), with the appearance of certain specific problems: (i) the implementation of new technologies (Correa 2010), (ii) problems of quality of life and succession related to the ageing population of cattle and sheep (wool/meat) farmers (Malaquin et al. 2012) and (iii) the availability, training and presence of paid employees in the workplace (Correa et al. 2016). In addition, work issues are not always well identified by farmers. Consequently, technical training programs have been carried out to answer questions that farmers initially presented as belonging to the field of work, and work issues have also been taken into account in advisory work regarding technical changes on family farms (Albicette et al. 2016 and Dogliotti 2012). The next section focuses on advisory activities about work, through practical examples in our four countries.

4.2 Examples of advisory programs centred on work issues

We illustrate advice about work from four examples of the principal methods of advice described above. We chose not to describe all the programs carried out in each country but rather a set of tools and methods so as to present a diversity of situations: (i) individual advice with the use of Work Assessment in France, Belgium and Uruguay; (ii) group advice and participatory workshops in Uruguay; (iii) actions of integrated advice, which associate individual advice and participatory groups with the example of the 'Living Livestock Farming' in France; and (iv) the training of advisors in Belgium and Australia in order to build a team of advisors

able to engage with the complex and intimate people and work issues. In each of the examples, we describe which dimensions of work (according to Dedieu and Servire 2011) are tackled in the program.

4.2.1 Individual advice and the use of benchmarks: the Work Assessment method in France, Wallonia and Uruguay

The first tool structured to provide advice on work issues in livestock farming in France was the ‘Work Assessment’, developed by the French Livestock Institute and the INRA (Dedieu et al. 2000; Bischoff et al. 2008). This method is based on the identification of the various types of workers on the farm (permanent, occasional, family, paid workers) and the evaluation of two types of work. *Routine work* (estimated in hours) is carried out practically every day and is difficult to postpone and not possible to concentrate. It relates to the daily care of herds: distribution of feed in buildings and in the fields (fodder, water, concentrates), monitoring, care at calving and of young animals, moving mobile fences, mulching, scraping and milking. *Seasonal work* (estimated in days), which is easier to postpone, relates to the various seasonal activities associated with crops, land and the animals; it can cause serious workload peaks. The Work Assessment aims to provide a simplified and objectivized representation of the working situation on a livestock farm through a practical tool usable by both farmers and advisors.

The Work Assessment focuses on two dimensions: work as a production factor and organization of work at farm levels.

More than 600 analyses of this type carried out in France in 2009 produced ‘working times’ benchmarks in eight herbivorous and seed-eating animal sectors (Cournut and Chauvat 2012). These benchmarks and the Work Assessment tool are used for individual advice, but their development has remained relatively modest compared to the extent of the problems. Livestock farmers, even though they say they are very concerned about work, are still not very inclined to finance advisory services on this topic. They still consider it as too intimate an issue.

In Belgium, the method has been used in order to analyse work in dairy livestock systems and produce benchmarks on more than 70 farms (Turlot et al. 2013). The analysis shows that 65% of farmers live under pressure with a lack of ‘free time’, particularly those managing more than 50 cows per worker. Beyond the statistics, farmers’ attitude towards work has been taken into account. A ‘perfectionist’ farmer can postpone some of the tasks if something unusual occurs, whereas a ‘simplifier’ who already focuses on the main tasks will have no margin to manage unexpected events.

In Uruguay, Work Assessment has been used in addition to traditional diagnoses offered by accounting services as a tool to accompany technical changes. It has also made it possible to define benchmarks, such as the time necessary to raise a calf

(Dieguez 2008) or to answer questions of organization such as whether it is possible to produce more while working less (Dieguez and Scarpitta 2013). The method has also been used to analyse the various strategies of livestock farmers to adapt their work to changes of context (Correa et al. 2016). This involves understanding how farmers in an extensive zone of natural pasture adapt to changes in workforce and thus build actions targeted within the framework of development policies. Three strategies have been identified: (i) an ‘efficiency’ *strategy* in which farmers seek to master techniques, accomplish tasks correctly and sub-contract mechanical or seasonal work with animals; (ii) a ‘flexibility’ *strategy* in which tasks are accomplished according to the availability of a group of ‘trusted’ workers; and (iii) an ‘autonomy’ *strategy* in which farmers seek to optimize the skills and the quality of life of workers rather than their performance.

4.2.2 Participatory group advice in Uruguay

For about 10 years, the Instituto Plan Agropecuario (IPA) has implemented a participatory approach with discussion workshops. The workshops are regarded as invaluable educational tools for development (De Hegeds 2011) and enable the IPA to provide an original form of advice different from other organizations in the country. Participatory group advice makes it possible to consider problems together, to gradually incorporate new ideas or information and to clarify the situations in which the various decisions (exchange of experience) are made. This creates a synthesis between the experience of the farmers (local knowledge spread throughout the rural population) and the technical or scientific knowledge provided by advisors or group facilitators. This approach provides concrete changes for farmers, adapted to their individual realities. Within these groups, work issues are approached in different ways: (i) discussion of an individual case, within the framework of a group of farmers, and (ii) discussion workshops on specific problems or dynamics of work (changes and their effects on farm management). Work can be analysed in its three dimensions: production, organization and as a part of a personal identity.

4.2.3 Integrated advice: ‘Living Livestock Farming’ in France

The ongoing regional program ‘Living Livestock Farming’ (LLF) was created in 2006. It includes an action on the theme ‘Work and quality of life of livestock farmers’ (Kling-Eveillard et al. 2010), which is regarded as a priority in this region, where livestock farming is often in competition with crop farming. Investigations of the situations, perceptions and expectations of livestock farmers with respect to work were carried out at the beginning of the program. They provided local, up-to-date knowledge, contributed to the design of actions and helped actors to appropriate the main challenges and

issues. The program mainly considered two aspects of work: organization and identity. The actions since 2007 have been grouped around three requirements in terms of farmer support: (i) raising awareness in order to legitimize work and management issues as a topic of advice (using press articles, departmental meetings of advisors, information in local farmer meetings, etc.), (ii) helping livestock farmers express their concerns and aspirations with respect to work (video testimonies, solution cards, self-diagnosis leaflets) and (iii) offering farmers more detailed information about a theme (work organization, health and safety, buildings and equipment, etc.). Actions were first targeted at advisors, who are now organized in a network of skills and contributors, and then addressed farmers. A positive assessment can be made from the point of view of the actors, who have expressed their satisfaction with the quality and utility of the materials and tools available as well as with the general objectives of the program. They also stressed the value of the network of partners and the importance of being organized collectively to tackle a subject that none of them has the skills or means to deal with alone. The regional scale of the program made it possible to (i) mobilize public finance over time from the reflection and preparation phase to the project assessment; (ii) build a consensus among the structures, gradually integrating new partners; (iii) produce a domino effect over the whole program; and (iv) communicate on work issues through different media in order to show farmers and advisors that the issue is recognized, solutions exist and advice is possible. This program allows intimacy through participatory approaches and complexity through mobilization of diversely skilled advisors.

4.2.4 Training and support for advisors in Australia and Belgium

In these two countries 5 years ago, there were very few advisory activities concerning people and work issues, but there were some skilled and experienced dairy advisors. A change management program has sought to provide training and build advisors' technical expertise and facilitation skills to address issues of people management and work issues on dairy farms.

In Wallonia (Belgium), a network of five 'work advisors' was created in 2015, coming from various advisory organizations. A 7-day training course was organized by skilled French and Belgian trainers. The training course was designed after an analysis of the advisors' needs and with the following aims: (i) a detailed presentation of the different facets of work issues for farmers, (ii) the designing of an audit tool and (iii) the provision of benchmarks for work advice. Both theoretical and practical activities were carried out, with wide use of facilitation methods and on-farm work. The training course was organized in four steps to allow participants to put their learning into practice and to come to each session with new experiences and questions. The training was assessed by a

questionnaire that showed a very high level of satisfaction on the part of the trainees. In addition to the training course, practical tools were designed and shared, such as (i) a diagnostic tool based on a semi-structured interview, (ii) solution leaflets structured by topic and showing practical tips and tricks used by farmers and (iii) a directory providing information about comprehensive specialist Belgian material relevant to specific work issues. Belgian farmers from Wallonia are not used to paying for advice. For the moment, advisory activities are free and carried out either by public bodies or by private firms. The challenge is to progressively organize paying or partly paying for advice in order to increase farmer involvement.

In Australia, the 'People in Dairy' program (Dairy Australia 2014a) includes professional development of farm advisors as a core element to support farmers to (i) consider their people resources when building the strategic vision of their farm business, (ii) build an efficient and productive farm workforce, (iii) attract and retain the people they need to achieve the strategic vision of the business and (iv) comply with legal requirements and have a low business risk around their people resources. A formal qualification (the Diploma of Human Resource Management—Dairy) has been designed and delivered to develop and train advisors. The Diploma provides a theoretical and practical foundation in dairy recruitment, retention and remuneration, analysis of roles and responsibilities, employment law and industrial relations, policies and procedures, management of working conditions, training and development issues, succession planning and occupational health and safety. Advisors participate in four face-to-face workshops, each of 3 days duration. The workshops are delivered by local and international guest presenters experienced in dealing with people issues and with considerable on-farm consulting experience. The course material is delivered within a framework of dairy industry case studies and supported with tailor-designed online resources and tools. Participants complement the course learning with workplace-based activities. Since its inception in 2007, more than 150 advisors have completed the Diploma and have been involved in an advisory network focused on people issues in farming. An evaluation of the advisors' perspective in this program (Dairy Australia 2014b) found that the advisors' level of interest in building their advisory repertoire in this field of work varied. Some advisors saw this area as an opportunity for building their business and offering new and different services. An advisor spoke of integrating people management skills into their core business as part of a 'reinvention' process to offer more to their clients (Nettle et al. 2018b). However, not all advisors saw this new area of advisory services as a significant area of change for them or their business. This was mainly due to personal preferences not to work entirely on people management issues (Nettle et al. 2018b).

5 Discussion: work advice—difficulties and pathways for progress

In this section, we discuss the case studies with respect to the conceptual framework, with a focus on the difficulties identified by the advisors and proposed solutions.

5.1 Is advice about work a source of specific difficulties?

As we saw above, work is an intimate subject, which deeply affects people's identity. This characteristic makes it difficult for livestock farmers to speak about it and for advisors to tackle it or to welcome or encourage a request for support on this subject. As mentioned, advice about work issues has not yet found a place worthy of the challenge. But pathways are emerging from field feedback to overcome these difficulties. The use of tools, of questionnaires of the self-diagnosis type or quantification tools like Work Assessment, which encourages farmers to express their views, is appreciated by advisors. Tools of this type constitute a basis for discussion, offering the possibility of examining several facets of the subject and also making it possible to reassure the advisor (as in the LLF project). The training offered to advisors on the various facets of work is recognized as useful, even essential, and often allows them to ponder the specificities of the subject and their own relationship with work (LLF project, training programs in Australia and Belgium). Organizing groups of livestock farmers to encourage reflection about work (as proposed by the IPA in Uruguay or LLF Project in France) makes talking about work easier and gives participants a new perspective on their experiences and on the expression of their wishes or difficulties, while at the same time reassuring them that they share these problems with other farmers in comparable situations. Comparing experiences and ideas helps attitudes to change and peer testimonies are more convincing and eloquent than a theoretical contribution made by an advisor or a lecturer. Sometimes the group even reaches collective solutions at a local level (e.g. pooling equipment or work). Although farmer groups unquestionably make it easier for farmers to express their problems of work organization, it is still difficult to convince them to take part in these collective sessions.

In the Australian situation, the advisory response to farmers' requirements was mediated by the business and career context of the advisors. The advisors' personal and professional situation influenced their decision to engage with a training and support program to expand their repertoire of advice and modify their services. While increasing knowledge to better support farming clients was an important motivation of advisors, it was not their only consideration. Improving their professional standing, widening their interests and building their business or organizational profile were also

motivational factors. It follows that formal training or skill acquisition opportunities for advisors would not necessarily be enough in themselves to stimulate advisors to change their practice. However, when formal training was provided that was consistent with advisors' business, career and client context, they had a relatively quick pathway to develop necessary knowledge and skills in an area of increasing farmer demand.

5.2 The complexity of work issues

The complexity or the multifaceted character of work issues often requires a comprehensive approach to the farm and not just to a sector or a theme and needs consideration to be given to all the people who work there, whatever their status. With regard to this complexity, the tools advisors can mobilize are (i) active receptiveness to social representations and points of view of farmers; (ii) taking into account the people—what they are experiencing, their aspirations, their pleasure and discontent at work and their subjective rationalities; and (iii) joint identification by the farmer and the advisor of the problems to be treated and the improvement plan, which is a process requiring time, skills and a new framework for advice adapted for this complex and global subject. These three essential elements can also be mobilized in strategic guidance and support, which often leads to changes in the production system and work organization. For example, in response to the challenges confronting them, livestock farmers may have to intensify their production, at the same time decreasing the workload, which involves simplifying the farm management.

To respond to this complexity and the various facets of work issues, it is unlikely that one person will have all the advisory skills. The findings from the examples we presented are consistent with theories of learning in the development of a 'community of practice' (after Wenger 1998) and the importance of dual learning processes in the formation of new advisory practices as advisors deal with the new situation of farmers and also their own learning (Schön 1983; O'Kane et al. 2008; Cerf et al. 2011). It is useful to mobilize and organize a network of skills that can be deployed separately or together according to requirements, with contributors able to come from different organizations, as in the 'Living Livestock Farming in Picardy' project in France or in the formation of an advisory network in Australia. It allowed advisors to share common experiences, learn from each other and form a community of practice.

Still in response to the intimate and complex nature of the subject, advice requires time (Kling-Eveillard et al. 2012). After making only one visit to a farm, it is impossible for advisors to begin thinking and guiding the farmer towards solutions that may involve serious reconsideration of his or her organizational structure and ways of doing things. Approaching the topic of work as a process of technical organization makes it possible to identify the reorganization of

tasks in the annual calendar and their distribution among the various members of the work team; the effects on time spent and on working conditions can therefore be assessed. Moreover, this makes it possible, over time, to analyse the evolution of the relationship between livestock farmers and their work. Work, and the advice required, has a different focus and rhythm over a 12-month period and remains a reference period for the Work Assessment method to be established.

6 Conclusion

The identification of a need or the making of a request for support and guidance on the subject of work is a delicate matter for both livestock farmers and advisors. For the farmers, work is a very personal subject; it reflects their personal identity, self-image and values. For the advisors, tackling the question of work requires them to take into account issues about identity, relational aspects and physical engagement with work. Given its multiple dimensions, work can be approached by advisors in a wide variety of ways, depending on the type of request and its degree of formulation. This involves advisors grasping if they can answer the request themselves or must seek other skills, other profiles and even other approaches or disciplines. The organizational framework in which advisors carry out their activity can make it easier to identify and organize the skills.

Work advice requires the control of various ‘role statements’ for advice and, in particular, abilities of active listening and leading groups or workshops of reflection, as presented above.

Taking work issues into account in advice seems to be an opportunity to question the advisors on their role(s), their practices and their skills and is consistent with current trends in the development of advice in agriculture.

To facilitate advice on work issues, three types of recommendations can be noted. First, it is important to take into account the three main facets of work (a labour factor, an organization issue and an identity). To tackle the third aspect, a priority appears to be to enable advisors to develop their knowledge and skills with regard to human approaches, postures of receptive listening, guidance and participatory leadership. The advisors’ organization can provide efficient training and support to allow advisors to envision a new professional identity. Next, it is important to be able to organize, within structures, the different forms of advice, which we presented in the first part in ‘integrated advice’ structured around operational programs defining the forms of interaction and coordination between different people and organizations at the level of a territory. Such a framework also ensures that work guidance will be provided for the right length of time, an important factor in encouraging reflection on the farmer’s

situation and daily experience, forming a diagnosis and developing an improvement plan. Finally, leading actions that associate actors in advice and applied research, if necessary, to generate training activities for advisors on the skills to be acquired or actors in experimental research likely to answer some of the questions that have been raised.

Our preliminary analyses and recommendations need to be refined through further research work to validate their conclusions. This requires building on grassroots experiences in various countries, assessing the effects both in terms of satisfaction of the actors and of the impact of advice on the farmers because the aim is ultimately to improve the livestock farmers’ situation. Work issues can rely on specific advisory activities, for example focused on working teams, wage-earners, passing the farm on to the next generation or a response to aspirations of farmers in terms of free time. But work issues can also be integrated into any advisory activity, as one of the focuses.

Work is rapidly changing in agriculture and in advisory work. Precision farming, robotics and digital advisory and exchange tools are raising new issues and new needs and roles for advisors.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

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