

Livestock farming systems and society: identification and analysis of key controversies from the perspective of different stakeholders

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Abstract: *Over the last century, livestock breeding in France has experienced significant changes. The impacts on the natural and human environment, and the growing sensitivity of the population to animals' living conditions have led to increasingly radical criticism of certain farming practices, from different segments of French society (NGOs, citizens, politicians, media...). Such challenges concern livestock husbandry in its operation, organisation and even in its basic principles. The aim of this paper is to provide a better understanding of the diversity and strength/magnitude of society's expectations towards livestock farming systems as well as an understanding of their foundations/origins based on many studies and PhD research in sociology conducted from 2014 to 2018. With the aim of identifying the subjects of controversy involving breeding in France, all animal production systems being considered, and to describe the diversity of actors and arguments, fifty interviews were conducted with the various stakeholders: professionals, employees of NGOs, journalists and citizens. Analysis of these interviews led to a classification of elements of debate on French livestock farming into four major areas of impact: the environment, animal welfare, risks to human health and the socioeconomic model of livestock farming. The paper also reflects expectations for different types of system: some people want a gradual disappearance of intensive farming systems for the benefit of production systems under official quality sign/labels or implementing alternative practices; others want the development of intensive farming to produce more and become more competitive; and between them many want a gradual improvement in the intensive system, with stronger environmental and animal welfare requirements.*

Keywords: *Livestock farming, society, production systems, controversy, actors, meat consumption*

Introduction

For several years, French livestock farming has been frequently questioned by society. Those questions concern its environmental impact, sanitary risks or treatment of animals and, more generally, livestock farming's place in a society that is increasingly concerned about its food supply and the way it is produced.

To understand this phenomenon and enlighten agricultural actors on the social evolutions at work, for the last 10 years the three French livestock institutes (IDELE - the French Livestock Institute, IFIP - the French Pork and Pig Institute, and ITAVI - the French Technical Institute for Poultry Production) have been carrying out many multi-partner collaborations and research programmes in order to analyse perceptions of livestock farming that coexist within society. To this end, they conducted many quantitative and qualitative studies with multiple groups of actors: NGOs, consumers, livestock farming professionals (breeders, companies, traders...) and citizens. Based on the results of research conducted by the French project "ACCEPT" (Roguet and al., 2015a; Roguet and al., 2015b; Delanoue and Roguet, 2015),

which benefited from public funding, this paper shows the diversity of citizens' expectations regarding livestock farming.

To present and contextualise the process of the controversy on livestock farming, we will first retrace the historical evolutions of the relationship between the livestock sector and society, then we will describe our methodology. Secondly, we will present more precisely, based on the results of the aforementioned research, society's main expectations towards livestock farming. And finally, we will present a typology of social representations of livestock farming and analyse what place those visions hold within society and the agricultural sector.

Historical evolutions of the relationship between the livestock sector and society

Since the 1950s, French agriculture has undergone major changes. The number of farms has been quartered and the proportion of active agricultural population in the total employment sector of France has gone from 33% to around 3% between 1955 and 2010 (Desriers 2007). According to Hervieu (2002), this reduction of farmers within the French population is an explanatory factor of an identity crisis which concerns many of them. Freed from a fear of lack of food, the general population has gradually trivialised the work of producing food. This trivialisation and this move away from peasantry through urbanisation has led to ignorance surrounding food (processed food products), ignorance surrounding the farming world and incomprehension between farmers and other citizens. Since the 1980s, the term rural is increasingly synonymous, in society, with countryside, natural landscapes and heritage for conservation: agricultural activity is not only taking a back seat in reality but also in how it is portrayed (Mathieu, 1998). Agricultural work is more associated with nature management than with a productive industry. Rural life is seen as idyllic, natural, convivial and alternative compared to town life that is crowded and polluted, but concentrates jobs, services and leisure activities. The countryside has become a place of residence for people commuting to the city and proclaiming this „natural“ life choice. However, this romantic vision is often confronted with modern agricultural practices which, on the contrary, try to be free from natural constraints by mechanising and automating for example (Hervieu, 2002). There is today a wide gap between idyllic portrayals of rural life and the work of a breeder and the realities of farming, which contributes to local conflicts between farmers and other residents. Agriculture has gone from being a world organised around its own values and relatively isolated from the rest of society, to being an industry like any other, or almost, subject to everyone's scrutiny. Indeed, farmers themselves are trying more and more to define their profession in terms of other social categories (entrepreneurs, workers, self-employed...) and not only according to their own standards (Couzy et Dockès, 2006).

Farming modernisation, right from its implementation in the 1950s, raised concerns and led to much debate, initially within the farming community. While the professionals upstream were encouraging farmers to modernise and automate, the unions of the poultry industries were defending the family farm model, highlighting the economic and human advantages and casting doubt over the competitiveness of the productivist model. On the initiative of poultry farmers wishing to promote their production methods (free range, higher slaughter age, local feed...), French agricultural legislation of 1960 instituted the Labels Rouges and defined them as „collective brands testifying [...] that an agricultural product [...] possesses a distinct set of specific qualities and characteristics [...] establishing a level of quality. This product must distinguish itself from other similar products of the species usually commercialised by its particular conditions of production, manufacture and, where appropriate, by its origin“. Chickens from the Landes region obtained the first Label Rouge in 1965, and a differentiation of productions in relation to standard products was introduced.

Around fifteen years later, the spotlight fell on the environmental impact of breeding. In 1980, the Hénin report mentioned for the first time the widespread pollution of water by nitrates of agricultural origin. The law of 1983 then instituted the requirement of a public enquiry for „the execution of installations or works [...] when by their nature, their consistency or by the type of areas concerned, these operations are likely to affect the environment“. This new opening

for concertation allowed the public to express itself regarding the legitimacy of livestock breeding projects and gave the non agricultural rural community a say in farming evolution. It was the beginning of a long chain of accusations against farming as regards its environmental impacts as well as an increase in regulation aiming to limit pollution. By 1984, the Hénin report had resulted in the creation of the CORPEN (Committee of Orientation for the Reduction of Water Pollution from Nitrates of agricultural origin), then, in 1991, the Nitrates Directive was introduced to limit nitrogen waste from farms (Directive 91/676/CEE of the Council, 12/12/91). In the 1990s and even more so in the 2000s following publication of the report „Livestock’s Long Shadow“ by the FAO (Steinfeld et al., 2006), farming’s contribution to the greenhouse effect gained momentum in public debate: the finger pointed at livestock farms due to their natural methane emissions into the atmosphere.

In parallel with environmental concerns, animal protection was tackled by legislation at the end of the 1950s. Changes occurring in Western societies, along with the increase in urbanisation, meant that an increasing number of people only had contact with animals by emotional ties with their pets (Larrère and Larrère, 1997). The difference between how farm livestock are treated compared to pets was a contributing factor to the start of Anglo-Saxon activism, in the 1970s, for the abolishment of livestock breeding. Even though this anti-livestock farming movement did not, at the time, find much support in France, there was nonetheless some moral reflection on the legitimacy of eating meat. In France, animal welfare associations were mainly concerned with improving their living conditions ; they were called „*welfaristes*“ (from the English word „welfare“). The first French association dedicated to the protection of livestock, the OABA (Organisation for Assistance to Slaughtered Animals), was created in 1961. They initially fought for the improvement of slaughter methods and the introduction of enforced stunning of animals before they are killed. Welfarm (global protection of farm animals), which aims more towards improved breeding practices, was created in 1994. More recently, the abolitionist association L214 became the leader in activism against breeding, thanks particularly to its highly publicised campaigns denouncing bad practice in breeding farms and slaughterhouses during the 2010s.

During the 1990s, the spreading of incidents of Bovine Spongiform Encephalopathy (BSE), marked a major change in society’s perception of breeding, revealing a hiatus existing between the breeding world and its evolution with the rest of society (Lossouarn, 2012). Fear of the disease, along with the discovery of breeding and animal feeding practices that caused indignation among consumers, led to a sharp decrease in the consumption of beef in the following months. The administering of animal bonemeal into ruminant animal feed was seen as an immoral transgression of nature, as a sort of cannibalism imposed on livestock (Lévi-Strauss, 2001). In this way, beef became solid proof for the mistrust towards modern livestock production industries, seen as being ready to violate the laws of nature for economic reasons. The crises of 1996 and 2000 sparked debate on breeding practices in which an appeal to return to more traditional and natural production techniques became more significant (Masson et al., 2003). Over and above irrational panic or psychosis, the renunciation of beef became an actual act of protest, a reasoned avoidance of products judged to be dangerous and immoral (Barbier, 2003). BSE triggered a lasting crisis of confidence among consumers towards beef and the sector’s partners, and more generally towards the industrialisation of agriculture. In the aftermath, the actions carried out by the industry aimed to restore this confidence by introducing a system of traceability for all cattle, a method of differentiating products by their origin, breed, or certain characteristics of breeding such as respecting animal welfare. (Sans and Fontguyon, 1999).

From social acceptability to controversy: analysing the relationship between citizens and livestock farming

Questioning acceptability

Conflicts between agriculture and society have often been looked at through the notion of social acceptability (Batellier, 2016). The aim of that such research, whose scale of analysis is focused on a small area around the farm, is to understand what induces local populations

to mobilise against the establishment of an agricultural project. Indeed, breeders who want to build a facility or develop their farm increasingly face difficulties in getting their project accepted. This difficulty is due to different factors: transformations in rural populations' expectations, especially concerning their living environment; emergence of a multiactor society encouraging the expression of opinions through procedures such as public inquiries; the lack of vigilance from project leaders that sometimes show insufficient concern about other local actors' points of view.

In order to assess the perception of a project or situation, we must try to know citizens' expectations, and also what they cannot tolerate or conversely what they can tolerate. The notions of "expectation" and "social demand" are often associated with social acceptability. For Caron-Malenfant and Conraud (2009), social acceptability is the result of a process in which stakeholders build together the minimum conditions for a project to be part of the natural and human environment. An analysis of costs and benefits is a prerequisite. It helps to balance the fears of some and the benefits of others: acceptability is thus following risk management and rational calculation. The ratio between costs and benefits made by each party depends on their perception of the impacts, potential or actual, of the situation or project. While the term "social acceptability" is used in everyday language and is a useful management tool, it is rarely used and defined in sociology because of its normative character. It introduces *de facto* an imbalance between actors, from those who have to accept a project (often considered by the others as irrational), and those who have to make it acceptable, without questioning the very legitimacy of the project. Besides, everyone's perception is itself influenced by the culture and values of the stakeholder, their knowledge and understanding of the situation and its challenges, by their lifestyle and their confidence in the spokesperson or leaders of the project involved in discussions: social agreement is not simply the acceptance of a project by the majority of citizens. Minorities, by their opposition, can also block a project: challenging a situation, a project or a practice may take the form of a collective whistleblower action (Mann, 1991), pressure on governments through petitions, for example, or a boycott by consumers (Hommel and Godard, 2002). Expectations are not always expressed in the form of clear and specific requests. Specifically, the importance and difficulty of working on the issue of social expectations rely on the ability to perceive what is latent, and not expressed by the actors. For Larrère (2007), social demand refers to a form of malaise, frequently linked to ethical issues.

In the field of livestock farming, analysing social acceptability of a farm project (of construction or development for instance) is a tool to avoiding local conflict with residents, but the concept does not allow for an understanding of the deeper reasons that lead citizens to oppose the farmer (Grannec and al., 2017). In other words, this managerial approach falls within the short term and does not help to build strong trusting relationships in the long term, which are still indispensable to local social cohesion and to society's support for livestock farming (Delhoume and Caroux, 2015). To avoid the pitfalls inherent in the notion of social acceptability, conflicts between livestock farming and society can be addressed through the concept of controversy (Raufflet, 2014).

Contribution of the sociology of controversies

Controversy can be defined as a debate on a specific issue, with a dramatic tone, that is, charged with emotion or seriousness, that can expand and involve many different actors, related to scientific uncertainty and giving rise to argued discussions between the protagonists (Schmoll, 2008). A controversy therefore arises from a situation of uncertainty of knowledge, combined with divergent strategies used by the stakeholders, with the challenge of restoring the firmness of a law that is common to the group (Callon and Latour, 2006).

A preliminary definition, by each group involved in the controversy, of its own expectations and defended causes is required. In this definition, social roles will be assigned to the various players, through the construction of narratives identifying victims and perpetrators, the dominated and dominant, priority issues, legitimate actors, rational arguments, etc. The sharing of common definitions and representations is crucial for players to enter into controversy, meaning to go beyond the dispute and debate in a reasoned manner. According to Chateauraynaud (2004), "the validity of an argument emerges from a collective elaboration

that complies with constraints of compatibility with the common sense of the protagonists. The strength of an argument is not found in the proper consistency of points or in a simple balance of power, but relies on the input of the protagonists in a common computing space. Without this space, what forms an argument for some does not for others”.

A controversy does not involve only the questions it raises in the order of knowledge: it involves also different ways of thinking about reality, the world, society, human beings. It mobilises and threatens differing stakes and values (Schmoll, 2008). The controversies are "a means of access to a socio-historical reality that we consider deeper than the controversies themselves. The conflict process is then used as a developer, in the photographic sense, of power relations, institutional positions or social networks that otherwise would remain more difficult to see" (Lemieux, 2007). Controversies therefore enable us to perceive what is acceptable for those concerned, and why.

Thus, as the materialisation of disagreements with a dominant livestock-farming system, described by some intensive or industrial players, controversies over livestock testify to the existence of different ways of viewing livestock farming within society. After a review of the literature on the sociology of controversies (Callon and Latour, 2006; Schmoll, 2008; Lemieux 2007; Chateauraynaud, 2004), we propose the following definition of the concept:

A controversy is a creative process that takes the form of a public debate argued and structured around an uncertainty, that involves disagreeing participants whose strategies aim to rally the public to their cause, by gaining its trust and by reducing its uncertainty.

Materials and methods

The ACCEPT project is managed by the French Pork and Pig Institute (IFIP) and funded by the CasDAR (the special purpose account allocated to agricultural and rural development provided by the French Ministry of Agriculture, Agrifood and Forestry) over the 2014-2017 period. The project studied the controversy linked to livestock farming in France and in other European countries by using different types of approach in order to provide a thinking tool for the industry. This sociological project, which combines qualitative and quantitative approaches, helps to improve understanding of the points of view of farmers, sector stakeholders and citizens on livestock farming, its practices and the challenge livestock farming is facing in order to promote a more constructive dialogue between stakeholders.

The qualitative approach: semi-structured interviews and focus groups

Semi-structured interviews are a data collection method widely used in sociology. Ideally, they are carried out by two people (an interviewer and an interviewee). The interviewee answers freely the interviewer's open-ended questions. In this way, opinions can be collected in a subtle and detailed way. The aim is to achieve a diversity of points of view (instead of a statistical representativeness) and thus the different pictures of those concerned are portrayed (Kauffman, 1996).

About 70 interviews were conducted between 2014 and 2017, 40 of them in France and 30 in five other European countries with professionals from livestock sectors (inter-branches, trade unions, development actors, breeders), animal and environment protection groups, journalists and retailers to gather their points of view about the controversy related to livestock farming and/or local conflicts triggered by livestock management projects (CasDAR ACCEPT, 2014-2017).

Furthermore, three focus discussion groups of 10 participants each were also held in 2017 to allow stakeholders from different professional and geographical origins and with a broad range of backgrounds to discuss the relationships between livestock farming and civil society. These interactive debates raised the original issues and provided innovative solutions. The discussions focused on consumer opinions of livestock farming and animal welfare, and on the changes expected in breeder practices by citizens but also by breeders in the knowledge and the insight of their professions by citizens. These groups, including

breeders and citizens, helped to understand how stakeholders exchange opinions and how standpoints are expressed.

The quantitative approach : questionnaires and surveys

In parallel with this qualitative work, quantitative surveys were also conducted. In this way, an opinion survey of the general public was implemented in 2016 within the framework of the ACCEPT project (Dockès and al., 2017) to measure the image and satisfaction levels regarding French livestock farming, opinions on certain restricting practices on animals, and the objectives assigned to livestock farming and to French sectors. The survey was carried out by the French Institute of Public Opinion (IFOP) online with a panel of 2,000 citizens representative of the French population (using the quota method). First of all, frequency tables and cross analyses of population segments gave an understanding of the points of view and a way to identify the population segments characterised by their answers. Then, a first typology was constructed via a multiple correspondence analysis (MCI), followed by an Ascending Hierarchical Classification (AHC). This classification was refined by crossing with data from the previous qualitative approaches in order to identify archetypes (Perrot and Landais, 1993). These were then clarified by a typology method using aggregation. All the analyses took into account the individual weighting allowing the results obtained to be representative of the French population.

Faced with the discrepancy between practices commonly implemented in farms and the images held by citizens, especially the youngest of these, another survey was conducted in 2014 of 1,083 final year A level students (72% studying for A levels, 23% at agricultural school A level, and 5% other A level equivalents) to collect their views and expectations regarding livestock farming (Roguet and al., 2015b).

Society questioning livestock farming

Topics of debate

The analysis of discourses led to classify the debates on French livestock farming in four major areas of impact (Table 1): the environment, animal welfare, risks to human health and the socio-economic organisation of livestock farming. For some subjects, it appears, as wrote Jollivet (1992), that "we are still largely at the stage of conjecture and unanswered questions. It easily opens the door to an alarmist, doom and gloom viewpoint but also to a range of strategies or defensive tactics based on rebuttals and counter-arguments by social actors whose behavior and interests are at stake."

Table 1. Topics of controversies on livestock farming in France and relevant debates

Environment	Animal welfare	Health risk	Organisation
GHG emissions	Definition	Use of antibiotics	Intensive system
Water pollution	Living conditions	Risks of epizooties and zoonosis	Geographical concentration
Animal feeding (soya, GMOs)	Painful interventions on the animal		
Use of natural resources (water, land)			
Disturbances (odours, noise)			

Debates on environment concern the pollution produced by farms, and particularly by livestock emissions (gas or waste). Gaseous emissions (methane and carbon) play a part in the phenomenon of global warming, whereas solid manure and slurry can pollute soils and water when they are excessively spread. Livestock farming is itself a consumer of resources

(plants and water for the livestock food, energy for premises). More locally, some farms create conflicts related to their responsibility in the occurrence of annoyances (odours, noise, etc...). Environmental debates stemming from uncertainties are more linked to scientific methods and means used to assess livestock impacts than to the recognition of their existence (quite consensual).

Other uncertainties concern livestock treatment in farms from their housing conditions (livestock farming indoors or outdoors, free stall or tie-stall, etc.) to handling carried out by the breeder which could be painful for animals (dehorning, castration, etc.). The specific concept of animal welfare raises questions: its definition and its assessment methods are regularly challenged and the subject of debate. More recently, uncertainties regarding farm ethics have been widely broadcast.

The use of antibiotics on livestock raises questions on the impact of their potential residues in meat or milk on human health. On the one hand veterinarian treatments on livestock may lead to the emergence of bacteria resistant to antibiotics and dangerous for humans. On the other hand, punctual epizootics (livestock epidemics) and zoonosis (epidemics which cross the barrier of species and infect humans) raise questions on how health risks are managed in farms: bovine spongiform encephalopathy in 1996 and 2000 in bovine species, bird flu in 2005 in poultry, foot-and-mouth disease in 2007 in pigs, etc.

More generally, intensive farming systems are considered industrial processes (mechanisation, standardisation, use of chemical inputs...). Alternative systems such as less animals, access to outdoors and short supply chains are suggested instead.

Environmental and health issues lead to technical solutions. Some of these solutions have already been implemented in farms and there are a lot of research projects focused on these issues: a consensus to stabilise the actual effects of livestock farming on the environment and the importance of limiting them, as well as the necessity of keeping health risks to a minimum. Regarding the recent developments in animal status and the results obtained, it seems that uncertainties concerning animal welfare are doomed to remain and that this debate will intensify.

Actor networks

The controversy linked to livestock farming is mostly developed in the public sphere by the agricultural stakeholders (upstream and downstream sectors) and by animal or environment protection groups. Even if it often seems that these groups have come to a compromise so that their representatives can communicate a position that can easily align with that of others, the individual points of view of these groups may be very different. For example, the demands of animal protection groups draw on different types of animal ethics: those who consider that animal species have the right to be treated the same as humans reject the paradigm of human superiority over other species - this idea aligns with abolitionism that strives for an end to livestock farming; those in favour of animal rights defend the idea that animals need rights which would prevent them from being abused by humans, and those that want improved animal welfare in farms but who do not disagree with livestock farming in principle.

Access to the media is crucial for the stakeholders of the controversy because it is not only a way to present their standpoints to the public, but also represents a tool for power politics. The disclosure of livestock conditions to the media is a method particularly used by some groups to put pressure on breeders and the industry or supermarkets. As the broader community has nowadays very easy access to the content broadcast by the media, these represent decisive tools for all the stakeholders who seek to spread their message to a wide audience and promote the ideal they stand for. The media are also considered stakeholders of controversy as they are able to select the messages they want to broadcast. Retailers also have this dual status of being stakeholders as well as the public: they are the targets of groups and industry but become stakeholders when they make decisions which influence a business strategy or production methods.

The stakes of the controversy about livestock farming focus mainly on two points: changes in regulation related to livestock farming and changes in consumption habits, where the objective is to change livestock farming practices, or not change them depending what the standpoint is. Stakeholders therefore suggest changes to the regulations, establish partnerships with manufacturers (for example by giving input for private production specifications) and inform the general public in order to guide consumption habits (notably towards reduced meat consumption). Therefore, the public targeted by this controversy are the public authorities that take decisions on regulation, and citizens who influence the market by their consumer choices and also the political scene by their voting decisions.

Typology of the behaviours of French people towards livestock farming

Taking into account the qualitative works presented above and the Ifop/ACCEPT survey, a typology of behaviours and expectations of citizens and actors in the livestock sector has been prepared regarding livestock farming and all its sectors. Quantitative data provide precise information on the characteristics of the various profiles and a quantification of their proportion among the population (Picture 1). All analyses have taken into account the weighting of individuals in order to guarantee results that are representative of the French people. Furthermore, 10% of our sample could not be allocated to a particular category.

Among 100 French citizens:

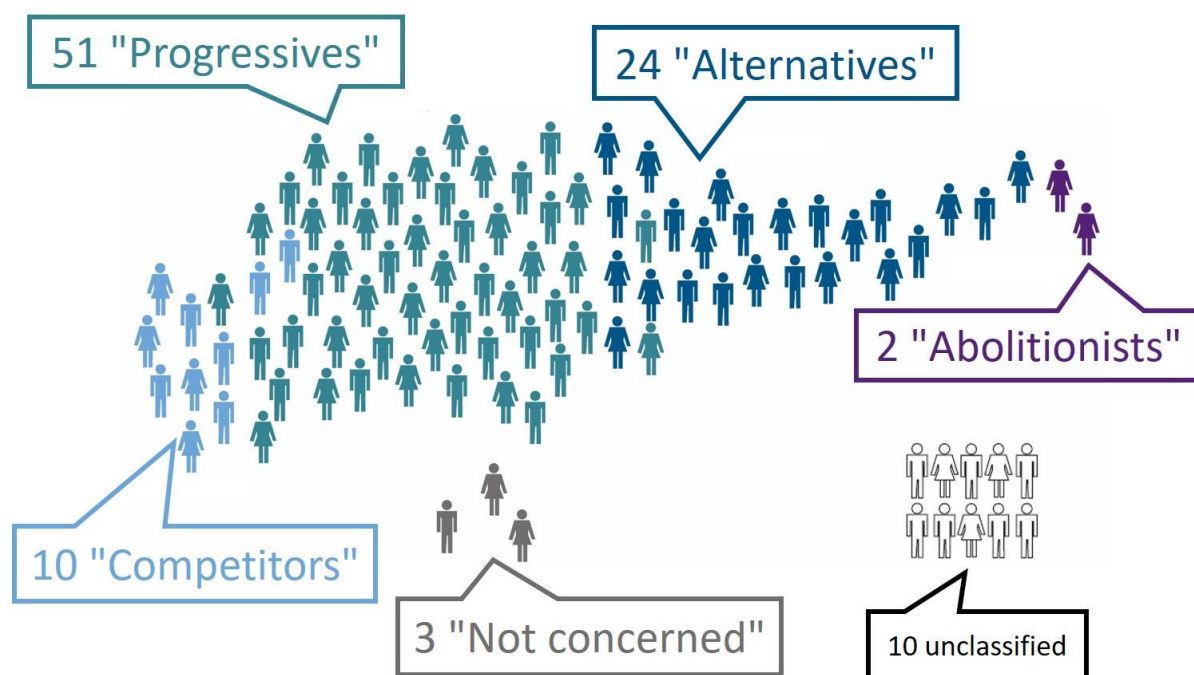


Figure 1. Typology of the behaviours of citizens towards livestock farming. Source: Ifop survey for ACCEPT project, analysis by The French Livestock Institute (Idele), June 2016

A profile of citizens who have neither an opinion nor expectations regarding livestock farming

About 3% of the population has neither an opinion nor specific expectation regarding livestock farming. These are people who said, most of the time, that they know little about the way animals are reared (52.4% of them, against 6.8% of all respondents) and who are not interested in television programmes and press articles on livestock farming (for 98.6% of them). Very often, they have decided not to speak their mind on the other questions of the survey ("Did not answer"). Young people and women are over-represented in this segment of the population. Some of them have mentioned that they do not eat meat, and therefore did not feel concerned with the survey, but their consumption choices were not characterised as

activist at any time (the reasons were not given, but we may assume that this is because of the taste or because of medical or religious bans).

By definition, actors in the agricultural sector as well as controversy stakeholders (sectors and associations) are not listed in this profile of unconcerned people.

The competitive spirit

This profile, which represents about 10% of the population, is made up of people satisfied with the current livestock farming methods and living conditions of animals in French farms. They support the intensive model, in its configuration and its practices, and hope to see its development and a productivity growth of French farms (thanks to expansion and automation), so that incomes of livestock farmers and actors in the industry can increase. According to them, the main goal of French livestock farming must be the export of its products, the increase of its competitiveness and the production of affordable food. They often eat animal products and in the majority, do not want to change their consumption habits in the future. They pay attention to the origin of products, whether they are local or national products.

Compared to the rest of the population, the citizens who are part of this profile are often men, who say they know well or very well livestock farming and that they have an interest in it. This vision is also held by some professionals in the livestock farming sector and other actors in the industry, who want the evolution of livestock farming to continue according to the trend of recent decades in order to become more competitive in a context of intensified European and international competition. The restructuring of livestock farming (fewer livestock farms but bigger) shall continue in order to ensure sustainability and profitability of French farms. Nature is considered as an external aspect of livestock farming and we must control it in order to release production forces, and mechanisation and automation are the means to achieve this. Science shall also contribute and bring technical innovations.

Actors who share this vision defend practices and the business logic of intensive livestock farming, and their vision is based on technical and economic arguments. Generally, they do not understand reconsiderations of the system, as they consider they are the only ones who are qualified to judge practices that should be implemented. They do not want to be part of the controversy and they adopt the strategy of ignoring these reconsiderations and imposing their choice of system on the basis of qualities that they assign to the system.

The alternative spirit

A quarter of people questioned ask for an end to intensive livestock farming for the benefit of “alternative” systems. According to them, French livestock farming is too intensive; they have a negative image of it, judge it as pejoratively industrial and are negative about many aspects that concern it (impact on the environment, on employment, health security, traceability, etc.) However, they support extensive agriculture and/or agriculture with quality and origin certification (“Agriculture Biologique” [organic farming], “Label Rouge”). They defend an agriculture that they consider as “peasant-style”: agroecological, with small-size farms (in terms of number of animals), with few inputs or largely autonomous. They also like this kind of local consumption and short distribution channels (markets, direct sales, etc.)

They claim to be shocked by the deprivation of access to open air for animals in some farms. They are not against the fact that animals are reared to be eaten by human beings, but they would like a net decrease of the global consumption of animal products, and say that they do not eat many animal products. Some of them are even vegetarian (they do not eat meat but eat possibly eggs or dairy products), often because of their sensitivity to the environment or the animal cause. People with this profile are often members of an association for the protection of the environment and/or animals. According to them, priority issues for French livestock farming are to strengthen laws in terms of animal welfare in farms, to make it possible for all animals that are reared in France to have access to open air, to limit the number of animals per farm, and to reduce the consumption of animal products. They are also in favour of product labelling mentioning the method of rearing on meat and dairy products (open air or not), the same way it is done for eggs, so that demanding consumers

like themselves can buy products knowing a good amount of facts about them. Women account for two thirds of people with this profile.

In France, that kind of profile is represented by associations for the protection of animals and their welfare such as CIWF, by environmental associations that are opposed to intensive livestock farming such as FNE, and also by the agricultural union “Confédération Paysanne”. A number of livestock farmers, most of the time people who have implemented alternative systems (organic, farmers with quality and origin certification, short sales channels, grazier, etc.) are part of this profile. They share the views of people with the alternative profile, they refuse intensive models and they support the protection of the environment and animals. But it is important to mention that a number of livestock farmers have also decided to choose an alternative model above all, or also, for economic reasons in order to benefit from more added value.

The abolitionist spirit

This profile, that represents less than 2% of the sample, corresponds to people (80% of them are women) who eat few or very few animal products. A small part of them (0.1% of the total sample) do not eat any animal products: neither meat, nor dairy products, nor eggs, nor fish and do not buy leather clothing.

The behaviour of these people matches their activist engagement (usually, they are members of an animal protection association) and most often, they share an antispecist philosophy: they reject the hierarchical categorisation of living creatures (according to which the human being is a higher animal) and are opposed to any forms of animal exploitation by humans. They consider the domestication of animals as an unfair domination by humans, and they consider it immoral to kill an animal to eat it. They compare livestock farming to a sort of slavery, and the slaughter of animals as murder. They work therefore for the abolition of livestock farming. Furthermore, they are convinced that the consumption of animal products will disappear within the next 100 years.

These people are understandably very shocked when they see the conditions animals have to endure in farms, and have a very negative opinion on all aspects of livestock farming. They think that the main issues for livestock farming are to reduce the consumption of animal products (and therefore their production), to offer animals reared in France access to open air, and to strengthen laws regarding animal welfare in farms. They also seem to be concerned with environmental issues.

In France, the abolitionist vision is essentially supported by the L214 association, which asks for a ban on the consumption of animal products, while its main concern is animal welfare. In livestock farming sectors, that kind of profile is a priori nonexistent.

The progressive spirit

This profile of citizens supports a process of continuous and regular improvement of livestock farming conditions but does not question livestock farming models or meat consumption. They represent about half of the population. They focus on the importance of environmental standards and animal welfare in intensive livestock farming, but are not against this production mode, which they consider to be the main method to produce sufficient quantities of affordable foodstuffs. They are satisfied with the sanitary quality and traceability of animal products, and care about animal welfare in farms, especially access to open air.

Their points of view may vary a lot and are less typical than are the other profiles. In this profile, we meet people interested in debates on livestock farming despite a level of knowledge they consider to be quite low, and who are concerned with environmental issues or animal welfare, but their convictions are not radical. They consume regularly all types of animal products (meat, dairy products and eggs), buy standard products as well as products with quality and origin certification, in supermarkets and short distribution channels, and their main purchase criteria are the price of the products, their origin (France and local area), and feed quality (without GMO). Some of them may plan to reduce their consumption of animal products, but these do not represent the majority of the people in this profile.

Some answers to this quantitative survey seem to be contradictory or in dissonance, and reflect uncertainties that citizens may inevitably have when they want to develop their opinion but are not experts in this complex area. This variability can also be found in their expectations regarding livestock farming: they consider that quality and origin certifications must be extended, while increasing competitiveness of the French livestock sector with the export of products abroad in order to offer affordable prices to everyone.

Finally, we can say that this type of profile is the most representative of French society, with people who would like an improvement of livestock farming conditions, in particular for environmental reasons or because they feel concerned for animal welfare, but they do not want to radically change French livestock farming systems or their consumption habits. But if we look carefully, we can see that a significant proportion of these people are close to the alternative profile, and that a slight evolution of their convictions could easily change their minds and cause them to be classified in the alternative profile, and therefore be against intensive livestock farming models. It looks like this population is the key public in the controversy; i.e. this group is the sector of the public whose views are less radical and whose minds could easily be influenced by mobilisation actions from controversy actors.

Many actors in the livestock sectors get close to this vision profile, and they have of course a level of knowledge substantially higher regarding livestock farming and its issues. They are logically pro-regular changes of practices. In their long-term vision, environmental and animal welfare requirements are gradually taken into account in standard production. They also support the diversity of production methods and the development of quality approaches. In this vision of livestock farming, nature is not a constraint but a partner, and science must produce innovations that will rely on the functioning of ecosystems in order to improve livestock farming productivity, while respecting the environment and animal welfare. These actors point out solutions and alternatives to the most contested practices. Actors who share this vision are receptive to the concept of sustainability when it comprises environmental, social and economic components. They tend to participate in discussions with other actors, while making sure they are open to dialogue. Some of them consider that co-creation of livestock farming models, with the pooling of comments made by a maximum of stakeholders, is needed to design systems in the future that will meet the expectations of society.

Conclusion and Prospects

Depending on topics and periods, the intensity of controversies over livestock farming is more or less lively; nevertheless, several deep evolutions are happening in French society. If the environment has long been regarded as the main concern for citizens, questions regarding animal welfare, and more generally the ethics of livestock farming, have become central in the debates. Beyond specific controversies over practices, debates regarding the very legitimacy of livestock farming or the consumption of animal products gather all the different topics, and are linked with larger society problematics (consumption habits, growth models, globalisation, etc.): we consider that we are facing a global controversy over livestock farming. This feature may complicate the resolution of the controversy and make it hazardous and longer-lasting. A food transition seems to be happening within the population, and if almost all of the population remain omnivorous and still consume animal products, the idea of a progressive decrease of this consumption, and especially of a consumption of “a lesser but better meat”, is growing and slowly becoming a new dominant social norm.

Key points of this controversy, beyond the legitimacy for human beings to exploit animals, run nowadays around several specific words and practices: an outdoor, daylight and fresh air access for animals, the importance of grazing in cattle systems, the number of animals in farms, their density, animals’ lifetime, etc. Breeders and livestock sectors are directly impacted by this situation: questions on livestock farming or intensive systems influence both breeders’ choices in their practices and the very attractiveness of the whole sector.

To go further in the analysis of relationships between livestock farming and society, studies are underway in many directions: on the one hand research activities and prospective insights on controversies still facilitate dialogue between actors, and on the other hand

communication activities, led by livestock sector actors, are engaged. A key-stake is to build, with all stakeholders, breeding systems and agricultural chains for tomorrow that are profit-making for professionals and that meet the expectations of the majority of citizens. Developing a peaceful dialogue between stakeholders can contribute to the improvement of mutual awareness and reciprocal recognition, in order to legitimise breeders in their social role, to showcase the services that they provide to society, to reassure consumers regarding their food and to ensure NGOs that chain actors are concerned about taking their standpoints into account.

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