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in

López-Francos A. (ed.), Jouven M. (ed.), Porqueddu C. (ed.), Ben Salem H. (ed.), Keli A. (ed.), Araba A. (ed.), Chentouf M. (ed.).
Efficiency and resilience of forage resources and small ruminant production to cope with global challenges in Mediterranean areas

Zaragoza : CIHEAM
Options Méditerranéennes : Série A. Séminaires Méditerranéens; n. 125

2021
pages 305-308

Autonomy and herbaceous forage in goat farming of western France. First results of a sociological survey

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Abstract. Our communication is based on the results of a multidisciplinary research (PSDR FLECHE – Fromages et Laits issus d'Élevages de Chèvres conduites avec de l'Herbe – 2016-2020) which aims to study the potential of grass utilization in goat systems, with the dual objective of strengthening the economic resilience of farms and the social image of the dairy goat sector of Western France. The latter currently represents almost half of the national goat population and 58% of the goat milk supplied in France. The sociological aspect of the research concerns the representations, value systems, interests and constraint systems (technical, economic, etc.) that guide the practices of all stakeholders in the sector: farmers, upstream and downstream actors. The objective of this approach is to analyse, at all levels of the value chain, the incentives and obstacles to a possible transition to grass-based feeding systems. Based on 76 semi-directive interviews, this paper presents the first results of this survey by showing how contextual elements (socio-economic, professional, etc.) impact farmers' choices of practices. While, in principle, the whole goat sector seems to be converging towards an agro-ecological transition that ensures its sustainability, in practice, each stakeholder is confronted with a system of constraints that limits actual developments. The articulation of these obstacles seems to lead to a kind of inertia, which prevents the adoption of practices that are nevertheless perceived as recommendable by most stakeholders.

Keywords. Autonomy – Herbaceous forage – Goat – Sociology.

Autonomie et fourrages herbagers dans les élevages caprins de l'Ouest de la France. Premiers résultats d'une enquête sociologique

Résumé. *Notre communication s'inscrit dans le cadre d'une recherche pluridisciplinaire (Programme PSDR – FLECHE – Fromages et Laits issus d'Élevages de Chèvres conduites avec de l'Herbe – 2016-2020) qui vise à étudier le potentiel de valorisation de l'herbe dans les systèmes caprins, dans le double objectif de renforcer la résilience économique des exploitations et l'image sociale des filières caprines laitières de l'Ouest de la France. Ces dernières représentent actuellement près de la moitié de l'effectif national de chèvres et 58% du lait livré en France. Le volet sociologique de la recherche porte sur les représentations, les systèmes de valeurs, les intérêts et les systèmes de contraintes (techniques, économiques, etc.) qui orientent les pratiques de l'ensemble des acteurs de la filière : éleveurs, acteurs de l'amont et de l'aval. L'objectif de cette démarche est d'analyser, à tous les niveaux de la filière, les incitations et les freins à une éventuelle transition vers des systèmes alimentaires plus herbagers. A partir de 76 entretiens semi-directifs, ce papier présente les premiers résultats de cette enquête en montrant, notamment, comment les éléments contextuels (socio-économiques, professionnels, etc.) impactent les choix de pratiques des exploitants agricoles. Si, en principe, l'ensemble de la filière caprine semble converger vers une transition agroécologique qui en assure la durabilité, dans la pratique, chacun de ses acteurs est confronté à un univers de contraintes qui limitent les évolutions effectives. L'articulation des freins relevant des différents maillons de la filière, semble ainsi déboucher sur une sorte d'inertie, qui empêche l'adoption de pratiques pourtant perçues comme souhaitables par la plupart des acteurs.*

Mots-clés. *Autonomie – Fourrages herbagers – Capris – Sociologie.*

I – Introduction

In a context characterized by renewed attention to environmental issues and lower prices for agricultural products (Bourgeois and Demotes-Mainard, 2000), agricultural sectors are promoting the adoption of production systems that are both more sustainable and less costly, thanks to the reduction of inputs (Lécole and Thoyer, 2017). Several authors suggest the use of agro-ecology to improve the self-sufficiency and sustainability of livestock farms (Altieri, 2002; Dumont *et al*., 2013; Dumont *et al*., 2018). With regard to goat systems, the use of grass, when available, can be an asset to strengthen self-sufficiency, control production costs and secure systems against economic hazards (Peyraud *et al*., 2014). In addition, the utilization of grass is likely to bring a positive image to goat cheese, and promote the preservation of biodiversity and landscapes as well. While recent research on dairy cattle farms has helped to identify the obstacles to changes towards grass-based feeding systems (Peyraud *et al*., 2010; Le Rohellec and Lusson, 2013), there are still many obstacles to identify and overcome in order to develop these feeding systems in goat farms. In this context, the PSDR FLECHE project (Fromages et Laits issus d'Élevages de Chèvres conduits à l'Herbe) aims to study the technical, economic and social incentives and obstacles to the adoption of grass-based feeding systems in goat farms of western France, which represent almost half of the national goat population and 58% of the milk supply (IDELE, 2018). It also aims to provide scientific and technical references in order to facilitate this transition. This article presents a sociological analysis of the motivations and obstacles to the adoption of these feeding systems, based on a survey conducted among the actors of the dairy goat sector.

II – Methodology

The survey is based on semi-directive interviews conducted by the authors and 46 engineering and MSc students in "Science and Animal Production" (Agrocampus Ouest), specifically trained in the methodology of interview surveys. The interviews were conducted between October 2016 and November 2017 with the stakeholders of the goat sectors of the Poitou-Charentes, Pays de la Loire and Brittany regions. In total, we conducted 76 interviews with 34 farmers (intensive; extensive with pasture-based system); 37 upstream and downstream stakeholders (11 from processing companies; 6 from technical consulting organizations; 6 from cooperatives and service companies; 5 from agricultural training schools; 3 from health management institutions; 1 from a control authority; 1 from a slaughterhouse); 3 representatives of credit and rural economy institutions; 2 representatives of local authorities. The sample was not intended to be representative of the whole sector, but to reflect the diversity of stakeholders and livestock farming systems. The transcribed interviews were subject to a cross-analysis of the discourses, in order to highlight the dispositions systems, representations systems and constraints systems that can influence the strategies and choices of practices for the different actors in the sector.

III – Incentives and obstacles to the development of grass-based feeding systems in the goat sector

All stakeholders shared two concerns. The first was the medium– and long-term sustainability of goat systems, which are affected by recurrent economic crises, among other things, because of their low level of feed self-sufficiency (Bossis *et al*., 2014). The second concern was the risk of a deterioration of the social image of the sector, in the event that the media reveal the intensive production systems that predominate in goat farms. These concerns have led certain stakeholders to question the sustainability of the current production systems, as also indicated by the emergence of a growing number of research programmes on this subject (FLECHE; REDCap; CAPHerb projects). Several actors (representatives of trade unions and producer groups, technical advisory companies, pro-

cessing companies, agricultural training institutions and some of the farmers) agreed that a transition to grass-based systems would strengthen the resilience of goat farms on the one hand and on the other hand would bring farming practices closer to consumers' expectations. It may be added that, in line with consolidated national trends (Lécole and Thoyer, 2017), the promotion of an agro-ecological transition is also perceived as desirable by local and regional authorities.

With a favourable political context and many actors increasingly concerned by these issues, the conditions would seem to be set for the transition to take place. However, the effective evolution of feeding systems is hampered by a series of constraints at all levels of the value chain.

Milk processing companies are sensitive to issues related to the low resilience of farms (which may threaten the supply of milk) and to the possible deterioration of the social image of the sector (which may threaten the sale of goat products). However, they are also concerned that changes in management systems could lead to a reduction of total milk production, as well as difficulties in the logistical organisation of milk collection (in the event of a double collection); the management of health risks (risk of listeria for raw milk cheeses); the management of fluctuations in milk production (greater in grass-based systems); and the management of variations in milk composition (variations in fat/protein ratios; increased presence of somatic cells). Thus, there is a tension between the favourable perception of a possible transition to grass-based systems and the tendency to maintain current systems that are easier to control.

On their part, technical advisory companies are also sensitive to previously mentioned issues, because their existence is closely linked to the sustainability of the whole sector. Nevertheless, the technicians interviewed felt they did not have the necessary skills to support a transition to grass-based feeding systems. This could be explained by the fact that grassland cultivation is rarely covered in higher agricultural education institutions, where "Animal Production" curricula focus on zootechnical aspects and "Plant Production" curricula focus on field crops.

Training in grass-based feeding systems is also practically absent from agricultural secondary and professional curricula in the regions concerned by our survey. Indeed, while the teachers and technicians from the agricultural training institutions (EPLEFPA) surveyed say they are in favour of promoting grass-based feeding systems, the educational farms of these institutions are faced with a shortage of staff. As a result, students are only exposed to systems that are less burdensome in terms of workload (distribution of corn silage and commercial concentrates). This lack of training seems to be one of the obstacles to the evolution of farmers' practices.

From farmers' point of view, other obstacles stem from the perception that the adoption of a grass-based feeding system implies considerable economic investments (acquisition of land, adaptation of buildings, purchase of suitable machinery, etc.); increased difficulties in managing health risks (parasitism, listeria, acidosis, etc.); a permanent adjustment of the feed ration (due to seasonal variations in the nutritional value of the grass) and fluctuations in milk production (qualitative and quantitative).

However, it must be noted that the main obstacle to the dissemination of grassland systems is the fear of an increased workload due to : grassland planning and management, development of fences and monitoring of animals at pasture; daily collection of grass for green feeding; time spent travelling between livestock buildings and the fields and difficulties in automating the distribution of feed. It is noteworthy that farms that have adopted such systems tend to be smaller (in terms of Utilised Agricultural Area and livestock numbers) and more specialised than the average farm from the sample studied.

Finally, it seems that the dissemination of grass-based feeding systems could also be hindered by difficulties in accessing credit. The representatives of the credit institutions we interviewed are reluctant to support investment towards these systems. Such reluctance is attributed to the absence of consolidated technical references. However, this hypothesis would require verification with a larger number of credit institutions.

IV – Conclusion

While, in principle, most stakeholders in the goat sector perceive the value of grass as an asset to strengthen the resilience of farms, in practice, each of them is confronted with a system of constraints that limit the effective dissemination of grass-based feeding systems. The articulation of obstacles at different levels of the goat sector seems to lead to a kind of inertia, which prevents the adoption of practices that are nevertheless perceived as desirable by most actors. This inertia is so strong that it seems to have transformative effects on the dispositions internalized by individuals. Thus, after an agricultural training, internship experiences, interactions with technicians, and experience of the reluctance of credit institutions and of the specific difficulties of goat farming, some young farmers who initially intended to create an extensive and pasture-based farm, have finally opted for a conventional feed management.

Acknowledgments

We wish to thank the 76 actors who agreed to meet us, as well as the engineering students in "Science and Engineering in Animal Productions" and the students of the MSc " Sciences de l'animal pour l'élevage de demain" from Agrocampus Ouest, who conducted the interviews: Guillaume Auber, Nina Delarbre, Sara Benmansour, Quentin Benoit, Lucile Buffet, Amandine Caille, Sébastien Carnel, Laura Charbonnier, Salomé Constantin, Morgane Coty, Priscillia Derbois, Thibault Desrousseaux, Elisa Dubois, Hajar El Dirany, Elise Fanène, Maxime Foubert, Mélanie Gautier, Augustin Gravier, Arthur Grilleau, Mathilde Laurin, Hélène Le Palud, Aude Pasquet, Loup Piedfer, Aurore Poisson, Carole Sérusier, Margaux Weye, Marianne Berthelot, Lucie Beugnet, Malaurie Chanet, Marie Charleuf, Florent Chervet, Alexandra Courty, Pauline Denis, Manon Féat, Nicolas Génot, Côme Guidou, Mathieu Ladroue, Aymeric Le Mignot, Louis Leblanc, Paul Leroux, Florence Maison, Claire Montocchio, Morgane Pape, Camille Richer, Léa Valenzisi, Lisa Vigneron.

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