

Sheep dairy and meat products: from urban consumers' perspective to industry innovations

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Abstract. Sheep and goat production in Spain represents 8% of the final livestock production and it holds the second largest sheep population of EU-28. However, it has suffered 15 years of negative evolution of sheep numbers and sheep meat consumption. Conversely, cheese production has increased slowly but steadily during the last decade, with a sharper increase since 2012. These trends respond mainly to changes in consumption habits and consumers preferences which are highly influenced by urban way of life. In this context, four consumers' focus groups were conducted in Madrid aiming to explore urban consumers' awareness, attitudes and preferences towards meat and dairy sheep and goat products. Focus groups session showed that despite their high consumption of cheese, participants had an important lack of knowledge on cheese products. Participants also gave increasing importance to environmental, and animal welfare issues; however, it was globally acknowledged that price continues to be the main driver of sheep products consumption. These and other aspects are discussed in term of its implications for the design of sheep products marketing campaigns and inclusion of new goals in breeding programmes.

Keywords. Sheep products – Urban consumers – Focus groups – Awareness – Cheese.

I – Introduction

Sheep production has a long history in Spain that is reflected in a large variety of native breeds, production systems and products. Nowadays, sheep and goat represents 8% of the final livestock production and it holds the second largest sheep population of EU-28 (2015). However, it has suffered 15 years of negative evolution of sheep numbers and sheep meat consumption, which has dropped from 2.7kg per capita (2006) to 1.7kg (in 2014). Conversely, cheese production has increased slowly but steadily during the last decade, with a sharper increase since 2012. These trends respond mainly to changes in consumer habits and preferences which are highly influenced by urban way of life, food scandals, and the Media. In this context, four consumers' focus groups were conducted in Madrid aiming to explore urban consumers' awareness, attitudes and preferences towards meat and dairy sheep products.

II – Material and methods

Four consumers focus group (FG) sessions were carried out in Madrid in November 2016; two focusing on sheep and goat dairy products and another two on sheep and goat meat products. Focus groups consisted of 8 to 12 participants, who were recruited attending to the following quotas: born between 1951 and 1991, a minimum of 2 participants of the least represented gender, at least 4 and at most 8 full-time or part-time workers, unemployed/students/ housewives/retired, occasional consumers, and regular consumers. For dairy products "regular" consumers were those eating prod-

ucts at least once per week, and “occasional” consumers, several times per year. For sheep/goat meat products “regular” consumers had to eat meat at least once per month, and “occasional” consumers several times per year.

The FG sessions followed a guide of discussion used in several other FGs held in other countries participating in the iSAGE EU project. After a brief introduction about the aim of the FG, participants were asked to choose their three most preferred sheep/goat dairy product, and to list positive characteristics of the chosen product. Then, to guide discussion and foster participation, FG facilitator raised one by one the following questions: i) What kind of sheep/goat dairy/meat products do you purchase or happened to purchase in the past?, ii) If you have a choice of several other types of dairy/meat products (from other types of milk/meat) to choose from, what makes you buy those made from sheep/goat?, iii) What do you like/dislike the most in sheep/goat dairy/meat products?, iv) What would make you increase the share of sheep/goat dairy/meat products that you purchase relative to other dairy/meat products?, and v) If you were developing innovations in sheep/goat dairy/meat production/processing, which would they be? Finally, participants were provided a list of innovations in sheep dairy/meat production/ processing, and were asked to choose the three most and least preferred ones. After completing the task, the results were discussed for participants to explain their choices.

III – Results

1. Dairy products focus groups

Cheese was the most preferred sheep/goat product for two thirds of the participants (Table 1). Their main reason, by far, to consume sheep/goat dairy products is its taste, followed by its preparation features (easiness and versatility). Other less important reasons are related to health and digestion or environmental/natural/biological characteristics.

Table 1. Most preferred sheep/goat dairy product and their main positive characteristics

Most preferred product	Main desirable/positive characteristics							
	N	Organoleptic properties	Preparation /cooking features	Health (calories)	Facilitate digestion	Environmental/ natural/ biological	Price	Others
Cheese	7	*3.4	1.9	0.3	0.1	0.1	–	0.1.
Goat cheese	6	3.3	1.3	0.5	–	0.2	0.5	0.2
Goat yoghurt	3	3.7	–	1.3	1.0	–	–	–
Goat kefir	1	3.0	–	–	0.0	1.0	–	2.0
Total	17	3.4	1.2	0.5	0.2	0.2	0.2	0.2

* Importance Weight = (3 x number of times the characteristic is ranked 1st + 2 x number of times the characteristic is ranked 2nd + number of times the characteristic is ranked 3rd) / number of participants.

The main issues regarding urban consumers’ awareness, attitudes and preferences towards dairy sheep/goat products coming from the FG can be summarized in the following points:

- Cheese is highly consumed and is appreciated due to its versatility and easiness to prepare. However, participants showed a wide lack of knowledge about cheese products, i.e. they could not discriminate between cow, sheep, goat or mix-milk cheeses, and between marketing brands, cheese types, PDO and PGI. Cheese taste is both the main positive and the main negative characteristic of sheep/goat dairy products.
- Price was pointed out as the main driver of cheese purchase. Most of the participants usually buy “mainstream” cheese in the supermarket, based on price and personal preferences. Some participants stated to be more selective when buying high quality cheese. Participants

felt that sheep/goat dairy products are more natural than cow dairy products. Changes in buying habits usually follow marketing campaigns and/or supermarkets marketing strategies. Globally, it is believed that standard dairy cow products are of lower quality but since price is also lower it continues to represent the bulk of the daily basket.

- There is another consumer type (25% of participants) who tries not to buy fresh products in supermarkets. They are worried about environmental, and health properties of products and animal welfare (as most of the participants state to be) and do not mind to pay higher prices for “better” products. They do not like what they call “industrial” products and do not trust supermarkets, however, many of them trust blindly the stores where they usually buy in.
- Globally, all innovations that sound to technology, genetics, any sort of modification of traditional livestock systems or dairy products making processes were rejected. Conversely, all innovations that sound to improve feeding and animal welfare, and reduce the use of antibiotics, were seen positively. It was clearly seen during the discussion that participants’ views about innovations were more based on gut feeling and ethical issues than on informed opinions. Most participants showed a profound ignorance on current livestock production systems. There were some references to food scandals and fake marketing strategies as the cause reason of the lack of trust on livestock production industry.

2. Meat products focus groups

Most meat FG participants choose either chops or legs as their most preferred cut (Table 2). Organoleptic properties were by far the main desirable characteristic. Afterwards, participants chose cooking features and health issues related to having less fat than other cuts, as well as product freshness. Most participants stated that rarely consume kid meat, thus issues raised in the discussion were related to lamb meat.

Table 2. Most preferred sheep/goat meat cuts and their main positive characteristics

Most preferred product	Main desirable/positive characteristics								
	N	Organoleptic properties	Preparation /cooking features	Health (fat)	Freshness	Environmental/ natural/ biological	Geographic origin	Origin (type of store)	Other
Lamb/kid chops	10	*3.9	0.6	0.2	0.3	0.5	–	–	0.4
Leg of lamb/kid	7	2.3	0.9	1.1	0.7	–	0.4	0.6	–
Shoulder of lamb	1	4.0	–	–	–	–	2.0	–	–
Total	18	3.3	0.7	0.6	0.4	0.3	0.3	0.2	0.2

*Importance Weight = (3 x number of times the characteristic is ranked 1st + 2 x number of times the characteristic is 2nd + number of times the characteristic is 3rd)/number of participants.

The main issues raised in dairy FG were also relevant for meat. Specific issues regarding sheep meat were:

- Main stated reason to buy chops was that it is easier to cook than other cuts. There was the general feeling that nowadays people eat a smaller variety of lamb cuts than in the old times. Most participants consume lamb occasionally, usually in restaurants, family gatherings and celebrations. Taste is what participant liked the most of lamb. Conversely, some participants considered that taste of sheep meat was very strong, which lead to not consume it regularly. Smell and fat content were considered the main negative characteristics of lamb meat.
- Participants who moved to Madrid from smallest cities or towns, stated that their buying habits have changed; in Madrid they mostly go to supermarkets due to their lack of time. Many participants prefer to buy lamb at butcher stores and at traditional markets because

they think it is of higher quality and freshness. Whereas some others noted that they buy packaged lamb meat in the supermarket and it is of very good quality.

- Most participants said that they do not care much about meat origin. They believe that farming systems are very similar everywhere and that quality of lamb meat is standard. However, when compared to other livestock species, sheep and goat systems are seen as less industrialized.

IV – Discussion

Focus groups findings are in line with the consumers' habits drawn by some wide analysis commissioned by Spanish inter-branch associations (Ikerfel 2013a, 2013b, and 2015). Spain has a strong tradition on cheese production and consumption but a limited cheese culture. Taste is the main criterion for choosing among cheese types. Similarly, the lamb distinctive taste (and fat content) is both its main positive and negative consumption driver. There is a general lack of knowledge on lamb production and cooking recipes. Current urban people cooking habits (fast, easy and healthy) fit with cheese consumption but hamper lamb consumption.

The existing miscommunication between sheep farming sector and urban consumers has to be tackled. Improving consumer knowledge on sheep cheese and lamb production and farming systems is key to transform consumer reluctance to key sector innovations into support. Well-designed TV campaigns are a tool that have proven efficacy in other countries (i.e. Beef+Lamb NZ), but they require large and multi-annual investment programme to realize its potential.

The development of PDO, PGI and ETP labels helped less intensive production systems, traditional systems and local breeds to differentiate their product and fill a market niche. However, our finding showed that many consumers do not really know what those labels mean, and mix them up with commercial brands. Thus, they have become brands and therefore its success might be linked to the capacity of managing it as commercial brands.

Animal welfare, human health and environmental sustainability are concerns for consumers, however price is the main criterion to buy. Similarly, although consumers think that sheep products found in local markets and traditional stores are fresher and most trustable, most of the products are sold in super and hypermarkets, i.e. these large stores had 90% of dairy products market share (Mercasa, 2014). Therefore, although the development and exploration of niche market is of importance, especially for product of outstanding quality, the future of sheep and goat sector will rely on sales on large stores where price is a decisive criterion.

To raise daily consumption, increasing availability at supermarkets and large stores and developing new cuts and product presentation in line with modern urban preferences, is being explored with good results by some Spanish cooperatives (Oviaragón, Pastores) which show a remarkable potential. However, it poses some challenges related to farmers' organization and industry integration. Again, experiences in this regard of farmer levy organizations in other countries like New Zealand and Australia (i.e. MLA) can be enlightening.

Finally, genetic selection for fat content and fat composition could be also a tool to naturally evolve to a most acceptable product; however, consumers should be taught what genetic selection means and how it could contribute to generate healthier products without any manipulation of the animals' genome.

Acknowledgments

This work was carried out in the framework of the iSAGE project (Innovation for Sustainable Sheep and Goat Production in Europe), funded by the the European Union's Horizon 2020 research and innovation programme under grant agreement No 679302.

References

- Ikerfel, 2013a.** “Estudio en torno a la percepción del producto queso de origen español”, *Report commissioned by INTERLAC.*
- Ikerfel, 2013b.** “Percepciones del consumidor y del prescriptor respecto de la carne de cordero y cabrito”, *Report commissioned by INTEROVIC.*
- Ikerfel, 2015.** “Percepciones del consumidor respecto a la carne de cordero”, *Report commissioned by INTEROVIC.*
- Mercasa, 2014.** “Alimentación en España 2014. Leche queso y productos lácteos”, *Mercasa annual report.*