Spanish perspective on meat consumption and consumer attitudes

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Highlights

- A decrease in meat consumption is expected in Spain
- Health, animal welfare and environmental issues are the main concerns for meat consumers
- Hedonic consumption, nutritional properties and health are the main motivations
- Meat analogues are widespread throughout the country and available in major food stores.
- When exporting, meat industry tries to adapt their products to consumer demands of the importing country

Abstract

This paper analyses meat consumption and consumer attitudes towards meat and meat analogues in Spain, as well as the barriers and motives that could modify meat consumption in the future. Probably, the trend observed in the decline in meat consumption before the pandemic, which stabilized during the pandemic, will be observed again, with health, animal welfare and environmental issues being the main concerns and reasons for the reduction of consumption. The main drivers of meat consumption are the hedonic component, its nutritional characteristics, and its perception as a healthy and indispensable in a balanced diet.

Meat analogues can be found in most Spanish supermarkets, some of them produced by large meat industries. Finally, authors highlight the need to provide Spanish consumers with reliable and credible information that will enable them to be aware of the efforts made by the different production players in the meat sector to achieve a more sustainable product and guarantee animal welfare.

Keywords

animal welfare; sustainability; pleasure of eating; meat analogues; cultured meat; meat exports

Introduction

Meat industry is the fourth largest industrial sector in Spain. It is made up of around 3,000 companies, the majority of which are small and medium-sized enterprises, distributed throughout Spain. The combined production of all of them places the meat industry in first place in the Spanish food and beverage business, representing a turnover of 27,959 million euros, 22.2% of the entire Spanish food sector (ANICE, 2022).

Meat production in Spain reached a record high in 2020, registering a total of 7.6 million tons of meat, an increase of +5.1% compared to 2019, according to data from the Food's livestock slaughtering survey (MAPA, 2020a). Pig meat experienced the highest growth (+8.2%), with a decrease in beef (-2.5%) and sheep and goat meat (-5.5%). In 2020, the Spanish meat sector was able to adapt to meet domestic and export requirements. Driven by high Chinese demand and outbreaks of African swine fever in northern Europe, Spanish pork production and exports reached record levels. Now, the sector's strategy focuses on more controlled expansion and diversification of export markets (USDA, 2021).

Since 2020, the pandemic has changed purchasing and consumption behaviour towards meals at home (Maestre et al., 2021), which has boosted the growth of meat products and those considered easy to consume, as well as those normally consumed during leisure time in the catering industry. Thus, household consumption of meat and meat products grew by 10.2% in volume and 12.6% in value (MAPA, 2019, 2020b). There are many factors that have influenced these changes that undoubtedly will have an important effect on the future consumption of meat and meat products in Spain. Because of the importance of the information, experiences, culture and context on consumers' acceptability (Font-i-Furnols & Guerrero, 2014), we could hypothesize that at the same time, aspects such as animal welfare, environmental issues associated with current production systems and even ethical concerns, may also shape the perception and attitudes of Spanish consumers towards this essential component of our diet and our gastronomic culture.

The aim of this paper is to examine perceptions and attitudes of Spanish consumers towards meat and meat products and its alternatives, considering meat consumption trends, concerns and motivations regarding meat consumption, availability and interest in meat alternatives (plant-based meat and cultured meat), segmentation of consumers attitudes by socio-economic classes and, finally, concerns and objectives of the meat export industries different from attitudes in the domestic market.

Meat consumption trends in the last 5 years and any predicted future trend

The most consumed fresh meat in Spain is chicken, followed by meat products and pork, and in a lesser extent by beef (MAPA, 2021a). Meat consumption in Spanish households tended to decrease until 2019 (Figure 1). It declined 5.1% in 2017, 2.6% in 2018 and 2.4% in 2019, in all cases compared to the previous year. However, in 2020, it grew by 10.2% with respect to 2019, due to the pandemic situation that stimulated meat consumption in the households due to confinement and outdoor eating restrictions (MAPA, 2017, 2018, 2019, 2020b, 2021a). Accordingly, in 2020, 91.7% of food and beverages were consumed at home (MAPA, 2021a). Recent official data from November 2021, show a decrease in 8.4% of meat consumption in the households with respect to previous year (MAPA, 2021b), due to steps towards the normalization of the pre-pandemic situation. Thus, although in 2021, meat sales have decreased compared to 2020, they were still higher than those before the pandemic situation in 2019. A recent study carried out in 2021 within the SmartProtein project (https://smartproteinproject.eu/about/) funded by the European Commission, reported that, compared to the previous year, 46% of consumers affirmed to have decreased meat consumption, while half of the participants declared no changes in meat consumption and only

4% acknowledged to consume slightly or a lot more meat (SmartProtein, 2021). However, these percentages were different from those reported by a study carried out by the Association of Producers and Distributors (AECOC) with the collaboration of the Business Federation of Meat and Meat Industries (FECIC), who observed that 2/3 of consumers stated not have changed the amount of meat and meat products consumed in the last years (Munné, 2020). Maestre et al. (2021) also reported that 81.8% of Spanish consumers had constant frequency of meat consumption during the pandemic. In any case, and when comparing all these recent studies, special attention should be paid to the disturbances the pandemic has had on consumption patterns for many different food categories. Regarding future trends and behavioural intention, 40% of the Spanish consumers declared their intention to consume less or a little less meat in the following 6 months. Only 5% declared their intention to eat more or little more meat (SmartProtein, 2021).

According to all these studies, before the pandemic there was a trend to decrease meat consumption, but all these figures and possible predictions about future meat consumption has been altered by the COVID-19. Nevertheless, considering all the results presented, and the fact that Spanish market seems being recovering the pre-pandemic situation, a decrease in meat consumption by Spanish consumers can be expected and envisaged in the following years, when all the exceptional situations will be fully normalized.

Even though the decrease in meat consumption, meat expenditure was relatively constant until 2019 (Figure 2), thus indicating an increase in meat price. The increase in price not only affected the amount of consumed meat but also the type of meat consumed, *i.e.* the most expensive meat was the less consumed. In 2020, meat expenses in households increased 12.6% compared to 2019 (MAPA, 2019, 2020b) , which has been related with the increase of meat consumption at home during the pandemic situation. However, in 2021, the total meat expenditure decreased 7% compared to 2020 (MAPA, 2021b). Most likely, this reduction in meat expenditure can be associated with the return to the trend observed in pre-pandemic consumption and with the increase of prices and reduction in purchasing power of the population (Munné, 2022), because of the economic crisis generated mainly by COVID-19 and the Ukrainian war. Productive system in Spain is too dependent on sectors vulnerable to the pandemic, thus COVID-19 crisis has had serious economic consequences throughout the country (Pinilla et al., 2021).

Regarding meat consumption habits, the amount of omnivorous in the Spanish population ranges between 62% to 87%, and between 11% and 35% for flexitarians (Boereboom et al., 2022; Faber et al., 2020; Lantern, 2021; SmartProtein, 2021) depending on the consulted source. Similarly, non-meat eaters (vegetarians and vegans) vary between 2% and 6% (Boereboom et al., 2022; Lantern, 2021; SmartProtein, 2021), reaching 10% of the population in young consumers (Faber et al., 2020). The differences observed among the different studies lie in the exact definition of each behavioural groups and the way people are classified, especially for omnivorous and flexitarians. For this reason, the results reported in the different studies are difficult to be compared. In any case, it is well-know the existing actual trend towards vegetarian and vegan diets in Western European countries (Ploll et al., 2020). It is obvious that the food industry and food researchers are also aware of this trend and (in)directly tend to favor and encourage it by increasing the range of non-animal protein-based products available on the market and bringing their characteristics closer to their meat equivalents. It is obvious than in this context environmental and animal friendly production are becoming a “must” in a modern and competitive European meat industry.

Principal consumer concerns and motivations regarding meat consumption

Meat properties and its production system are the main responsible for consumers’ dichotomy regarding meat consumption. The main drivers for meat consumption are the sensory properties (pleasure) and the nutritional characteristics, namely the relevance to have meat as a principal source of protein, to follow a balanced diet and because, at the end, meat is perceived as healthy (Munné, 2020). Curiously, regarding the concerns and reasons to diminish meat consumption, health was the most mentioned aspect, followed by animal welfare and environmental issues (Lantern, 2021; Munné, 2020).

Sensory characteristics either visual, taste and texture are important motivations to consume meat, and are related with a positive affective component, specifically the pleasure of eating meat (Audebert et al., 2006). Fifty-nine percent of Spanish consumers stated enjoying eating meat and mentioned visual aspect, price and type of animal as the main meat purchasing criteria (Munné, 2020). When asking mainly about visual properties of pork, Font-i-Furnols et al. (2019) reported that colour, marbling, and subcutaneous fat were key purchasing factors. Taste and odour were also the most important attributes for Spanish consumers affecting their willingness to buy fresh pork meat, compared to price, origin and animal gender (Kallas et al., 2013). For lamb, freshness, type of lamb (light or suckling) and fat content were the main buying drivers (Bernués et al., 2012), meanwhile according to Rodrigues Magalhaes et al. (2022) beef purchase was mainly influenced by meat color and perceived freshness.

Health and nutritional properties of the meat are well documented. Meat is an important source of vitamins, proteins, minerals, and fats. Accordingly, half of the Spanish consumers consider that meat is essential for humans from the nutritional point of view (SmartProtein, 2021), that is in line with what has been mentioned above regarding the role of meat in the diet and health for some consumers (Munné, 2020). However, healthiness is a controversial topic, since meat, especially red meat, has also been linked to some health problems. Concerns of consumers about meat consumption and health related problems are well documented. For instance, 26% of Spanish consumers felt guilty when eating meat products since they consider them as an unhealthy option (Munné, 2020). Moreover, 66% of Spaniards considered that consumption of high amounts of meat might cause serious health problems and, thus believing that a reduction of meat consumption would be better from a health point of view (SmartProtein, 2021).

Animal welfare is one of the most important ethical concerns related to meat production, that has been widely studied. In Spain, it is controlled by the EU and national regulations and, moreover, several certifications are available. Nowadays animal welfare friendly labels can be frequently found in the market. Spanish consumers preferred meat from conventional production system with improved animal welfare than those coming from conventional farming system, although no differences in the sensory acceptability were observed when tasted them in blind conditions (Casal et al., 2018). About 1/3 of Spanish consumers feel guilty as well when eating meat products because of animal welfare issues, and 12% stated to reduce meat consumption to avoid animal suffering (Munné, 2020). In the same vein, 35% of Spanish consumers reported to ‘choose food produced minimizing animals’ cruelty’. However, 42% of them affirm to not think about the animal when buying and consuming meat (SmartProtein, 2021). This protective mental mechanism helps people to face the psychological dissonance resulted from their personal inconsistency (“I eat meat; I don’t like to hurt animals” (Rothgerber, 2014). This meat paradox (Loughnan et al., 2012) highlights the morally complex relationship between people and animals, i.e. we state to love animals, but we also love to eat them. In any case, it is worth to mention, that even Spanish consumers ask for animal friendly products, an important percentage of them are not willing to pay a premium (European Commission, 2016) (Figure 3).

Sustainability, focused on environmental issues and climate change, is also a key concern regarding meat consumption, especially related to productive characteristics from both the livestock point of view and the industrial meat processing. To be more sustainable, encouraging the purchase and consumption of local products is a possibility. However, as stated by Stein and Santini (2021), “Local food” cannot simply be equated with “sustainable food", since many more factors than just transportation are involved. On the other hand, it is true that in terms of social sustainability, local food systems can contribute to rural development and to create a sense of community. In general, meat locally produced has an added value for Spanish consumers (Font i Furnols et al., 2011; Realini et al., 2013), even though probably not always directly linked to sustainable issues, but rather to personal ethnocentrism or as a system to reinforce the sense of identity. Regardless the motivations, national production is meaningful for consumers. In fact, 88% of them consider food origin in their purchasing decision, thus looking for proximity products, preferably with few intermediaries, or at least coming from a known geographical area (European Commission, 2020). According to Blanco-Penedo et al. (2021), environmental issues and sustainable production has a neutral effect on food choices by Spanish consumers. Even though, around 40% of them consider that eating less animal foods and substitute animal-based burgers by plant-based burgers would slow down or would help to reduce the climate change (SmartProtein, 2021). In many cases, sustainability also includes the packaging in the consumers mind (Munné, 2020). In this vein, and according to Otto et al. (2021), consumers demand packaging that causes less waste, incorporates recycled materials, and can be recycled when empty.

Regarding consumers attitudes and preferences towards ethical and ecological aspects of food consumption, in a recent study carried out in 2018 by the Consumer and Users' Organization (OCU, 2018), 73% of the Spanish consumers stated to avoid or prefer buying certain products for ethical or sustainable reasons. However, and although they were ready to consume more ethically, several barriers were reported such as lack of time, limited available information, lack of trust in corporate social responsibility policies, absence of transparency and reliable information and lack of commercial alternatives , as well as other aspects related to the existence of lobbies that work for vested interests and hinder progress on sustainability, discouragement, difficulty to find responsible industries and, especially, the price.

Consumer awareness of sustainability, welfare and environmental issues in meat production

Sustainability is a term that appears quite often, either in the media, in the envelopes or packages of products or in the people's conversations. Some consumers have a limited concept of sustainability, mainly linked to the environment, while other consumers have a wider concept including animal health and welfare and reduction of pesticides and antibiotics in livestock and agriculture (Blanco-Penedo et al., 2021). However, consumers consider the information on sustainable food being poor and confusing, although sustainable foods are perceived in general as safer and having a higher quality than conventional ones. When consumers select food products, aspects related to the 'respect for the environment, recycling, preserving natural resources and sustainable production' are relevant, similarly than quality, health care and food safety (Blanco-Penedo et al., 2021).

In the last ten years, the percentage of Spanish consumers that agree that agriculture is one of the major causes of climate change has increased in 6% and, in addition, 68% of the consumers consider that 'farmers need to change the way they work to fight climate change even if this implies being less competitive' (European Commission, 2020). Thus, it is crucial that livestock sector internalize this information and focus on improve their practices, and, especially, on showing their improvement, since, although 52% of consumers agree that 'agriculture has already made a major contribution in fighting climate change', it is necessary to be transparent and kept consumers informed about the actions taken. This would allow take advantage of the fact that 66% of consumers declared to be ready to pay 10% for agricultural products produced limiting their carbon footprint (European Commission, 2020).

Spanish consumers are informed about sustainability issues and the impact that human activities have on it. However, as mentioned previously, not all of them are aware that sustainability is more than environmental aspects and climate change (Grunert et al., 2014). This can derive to a misunderstanding of the real effect that the different aspects related to meat production may have on sustainability. Consequently, providing trustful and clear information is a sectorial and government challenge that can help to favour real behavioural changes and people’s better understanding.

As well as sustainability, animal welfare appears quite often in the media or in the marketing strategies of different companies and is considered an important topic by most of the consumers. Regarding understanding of animal welfare, it is mainly related to animals’ respect, treatment and quality of life (European Commission, 2016). Consumer demand for products from production systems with high animal welfare standards, that coexists with a low level of knowledge about agricultural issues in general and animal welfare in particular. Multiple factors, such as physical distance between consumers and producers or the negative information provided by mass media among others, may have led to the current situation where consumer opinions on animal welfare are based on perceptions rather than facts (Alonso et al., 2020).

Although the advances in farm animal welfare in Spanish farms, in the last 10 years, the number of consumer that considered that farmed animals should be better protected than they actually are has increased in 13% (European Commission, 2007, 2016). This growth can be explained by the increased awareness of Spanish consumers towards animal welfare, mainly because of the marketing campaigns of dairy and meat producers and different associations that have focused their efforts on promoting farm animal welfare. The launch of animal welfare labels and certifications at European and national levels has also favor the increased awareness and people’s trust on animal welfare issues. Accordingly, in the last 10 years, the number of Spanish consumers that value having a specific label that ensures the quality of the products they buy has increased in an 8% (European Commission, 2020). The high awareness and most likely the aforementioned low knowledge about production practices may have stimulated the interest and willingness to learn more about animal welfare. Accordingly, in

2015, the percentage of Spanish consumers willing to have more information about animal welfare increased in a 10% compared to 2005 (European Commission, 2016). The level of knowledge influences the perception as well as observed by García-Gudiño et al. (2021). According to these authors the lower knowledge about Iberian pig production, the higher the belief that current requirements for animal protection and welfare in Spanish farms should be increased.

Spanish consumers are becoming more and more aware of animal welfare, and although actions have been taken to show the progress made, there is still a need for more information and transparency, which would undoubtedly help consumers to judge and decide for themselves with greater knowledge and better criteria.

Availability and interest in meat alternatives

In Spain, plant-based meat analogues are available in most supermarkets. However, although these products are well known, their sales and frequency of consumption in the households have increased 9.3% (in value) and 19% respectively in the last two years (Barreiro, 2021). This increase is higher in consumers between 18 and 34 years old (Munné, 2022). Moreover, the frequency of purchasing is 6 times a year on average, thus they still represents a small part of the market share compared to the purchased and consumed meat (Interempresas, 2021). The main barriers towards eating plant-based foods and following a plant-based diet are the lack of information about them, the fact that humans like eating animal-based food and the fact that there is not enough choice in plant-based food when eating out (SmartProtein, 2021). Other important barriers are their limited availability in grocery stores or restaurants as well as their relative newness and the corresponding lack of exposure of people to them, and even price, as often the non-meat option on the menu is not the cheapest (Jahn et al., 2021).

Although plant-based foods are direct competitors of animal-based foods, many large meat companies have decided to turn this threat into an opportunity and create their own production lines for plant-based meat analogues. Most probably these companies have visualized the promising future of these products and have decided to diversify their production and cover these emerging market niches. In addition, in many cases, the meat processing installations either using them directly or with small modifications, can also be adapted to process plant-based products, that in turn would allow a better optimization of the production equipment and processes. Just in some cases, if an extruder machinery is acquired, changes in the line are relevant. Plant-based products are also produced by other companies linked to meat industry, and by new companies created to produce meat alternative foods. Moreover, cultured meat will be also a future local option since there is a company located in Spain that is working on this type of products.

Although it is possible to find plant-based products in the Spanish food stores, there is not a high variety and availability compared to other European countries. Spanish consumers would likely try plant-based meat if was widely available in several places, tasty and affordable (SmartProtein, 2021). The same work also reported that, if taste and texture of plant-based meat analogues were identical to those of animal-based products, almost half of Spanish consumers would be more likely to eat and to purchase it, but only around a quarter of them would be willing to pay a higher price for it. Thus, the price and availability of these products seem to be essential factors that could determine their success, as long as they maintain a similar taste and texture to meat products. With respect to the type of products preferred by Spanish consumers, beef followed by poultry and pork plant-based meat analogues were the preferred options. Specifically, plant-based burger patties, followed by plant-based chicken breast were preferred by more than 40% of the consumers, while plant-based minced meat, meat balls, cold cuts (e.g. salami, ham), stick, chicken wings and nuggets, and sausages were preferred by more than 30% of consumers. Additionally, 28% of consumers declared to have the intention to increase their consumption of plant-based meat products. It is worthwhile to highlight that organic label in plant-based products was considered important by 59% of consumers (SmartProtein, 2021). Young consumers (average 23 years old) related plant-based diet to health, environment, animal welfare, taste, and enjoyment, but their position was neutral regarding other issues such as convenience, price, satiety and locally produced (Faber et al., 2020).

Spanish consumers are interested in plant-based products, but the products need to be available, safe, affordable, tasty and of high quality. And if, in addition, plant-based products provide sufficient variety of alternatives, they could be an important option to meet consumers' needs, as observed in a recent study in Belgium (Bryant & Sanctorum, 2021). Nevertheless, it is important to take into account that, taste is an important handicap of plant-based products, since there are still important differences with the animal-based products. Moreover, more than half of Spanish consumers try to buy not overpackaged products and less processed products (Munné, 2022; OCU, 2018) and, plant-based products are characterized by requiring high processing and amount of additives (Zhang et al., 2022) and being over packaged.

Regarding cultured meat, an international study carried out in 10 countries, in which information about how cultured meat is obtained and a list of its benefits was provided to participants, Spanish consumers (n=611) perceived cultured meat as unnatural, but they were neutral regarding their disgust towards it and their willingness to eat it (Siegrist & Hartmann, 2020). The same study showed that acceptability of cultured meat by Spanish consumers increased in parallel with consumers trust in food industry, government controls in the food sector, food retailers and food scientists and with food neophilia. Also, it was affected, although to a lesser extent, by the evoked disgust of this meat and by the perception of naturalness.

Boereboom et al. (2022) identified different segments of consumers according to their attitude towards cultured meat, evaluated if cultured meat might be considered as a source of protein and if they would be willing to try, purchase and pay for it. In Spain, two clusters were defined, those with uncertain attitudes (63.3%) and those with negative attitudes (36.7%). In France the same two clusters were identified but the one with negative attitude being larger. In UK and The Netherlands, participants were more positive and open towards cultured meat since consumers with positive attitudes were 34.7 and 45.5%, respectively. Thus, Spanish consumers do not seem very open regarding this alternative to the traditional animal protein source.

Even though cultured meat might be an alternative or a complementary product to traditional meat, it would be necessary to find a system to decrease the different barriers that exist toward the acceptance of this new meat product.

Segmentation of consumer attitudes to meat consumption by socio-economic divisions.

Meat consumption in consumers from low socioeconomic status, with low purchasing power, is lower than those from medium or higher levels (MAPA 2019, 2020, 2021): It is below the average consumption in Spanish households (Figure 4a) and, moreover, its relative consumption is below the proportion of consumers in this socio-economic class (Figure 4b). Furthermore, even though the average consumption per capita has increased in Spanish households in 2020 as commented previously, the consumption has decreased in the last years in low socioeconomic group, probably because of the increase of the meat price and the crisis due to COVID-19.

Lower income consumers not only tend to have lower meat consumption but also show a different consumption pattern regarding the type of meat consumed (Escriba-Perez et al., 2017), being in this group of the population the cheapest or most affordable meat the most consumed.

Although food security is not a big concern in the Spanish population, some consumer from low socio-economic status, with very low income, might had undernourishment. While there is published scientific work associating undernourishment with geriatrics and the elderly, no data have been found on how undernourishment might affect other segments of the Spanish population, especially children.

Regarding educational attainment, according to Kanerva (2013), higher education has been associated with a reduction in meat consumption in the US. This effect is less clear in Europe, although there is some indication that it might be true for beef consumption, except in Spain, where beef consumption is positively correlated with the proportion of university students.

Apart of socio-economic division of consumers, other types of segmentations based on their lifestyles, food-related habits, culinary skills and other attitudes and preferences (Argemí-Armengol et al., 2019; Blanco-Penedo et al., 2021; Ortiz et al., 2021; Ripoll et al., 2018), are also important factors when a marketing strategy needs to be applied.

Concerns and objectives of the meat export industry different from attitudes in the domestic market

Spain is an important exporting meat country. From 2015 to 2021, exportations of meat increased a 78% in quantity (ITC, 2022). Meat exportations are essential to damper the economic impact of unforeseen circumstances such as the COVID-19, and also when the domestic consumption decreases. Meat industries try to find new exporting markets, carrying out marketing strategies to promote the Spanish meat and to enlarge products shelf life, especially for those commercialized fresh. Meat exportation within the EU does not require of exceptional requirements. However, exportation to third countries is affected by different national regulations that depend on the country, *i.e.* asking for specific requirements or just a generic certificate.

In the lasts years, exportations have been affected by four important factors: (1) the COVID pandemic situation due to border closures, that has impacted all the species to a different extent (Alimarket, 2021a, 2021b, 2021c); (2) the Brexit, that has influenced mainly at the ovine exportation, since after the exit of UK, Spain has become the main ovine producer in EU (Alimarket, 2021a); (3) the African porcine fever (APF), that involves the pig sector, and that has positioned Spain as the main pork producer in EU (Alimarket, 2021b). In previous APF crisis, the sector had important loses, thus, if APF reaches Spain, the impact could be devastating for the pig sector and might change completely the actual scenario. Thus, it would therefore be worthwhile to envisage strategies to help reduce their potential impact (Higuera, 2022), and (4) the Ukrainian war and different political and geopolitical decisions that may affect market shares and prices. With so many uncertainties and variables that can condition the future of the sector, it is difficult to make medium and long-term predictions, but in any case, it is necessary to keep the productive muscle alive and flexibility enough to adapt to the rapid changes that may occur.

Due to different attitudes and preferences for meat and meat products in the different countries, the type of products exported are normally different and adapted to the demands of each market. For example, Japanese and Korean markets demands darker and marbled pork meat, in accordance with the Japanese preferences for this type of meat (Ngapo et al., 2007). Regarding lamb, heavy lambs are mainly for exportation or intracommunity trade since Spanish consumers prefer and are used to the light or suckling lamb mainly fed concentrate (Bernués et al., 2012; Font i Furnols et al., 2006; 2009).

Meat industry face many challenges and needs to know the new habits, trends and demands of the consumers, both at domestic and international level and try to satisfy them. The meat sector needs to consider consumer’s worries about health, environmental issues, ethics and also pay attention to the new consumption lifestyles such as flexitarian, vegetarian or veggie diets, without forgetting the role of the mass media. It is also important to focus on the increase of the on-line channel, the relevance of food influencers, and the different existing channels for marketing and information purposes. As described by Barreiro (2021), all these aspects together with the COVID pandemic situation, has generated several challenges and opportunities for the meat sector: (1) need of information and labelling to provide details about origin of the meat, expiring date, composition and nutritional data and ecological impact (eco-score) of the product; (2) involvement in social networks to allow the meat industry to know the circulating information and to carry out a more effective on line marketing; and (3) examine how plant-based meat analogues evolve in the market to better identify new opportunities for the meat industry.

Conclusions

Although meat consumption in Spain is high, there seems to be a tendency to reduce it, mainly for health, sustainability, and ethical reasons. Spanish consumers need reliable and credible information that allows them to know the efforts that livestock farming, and the meat industry are making to produce in a more sustainable way, and guaranteeing animal welfare. This greater transparency and knowledge will allow consumers to make more informed decisions about which products to consume, being aware of their properties and advantages as well as their disadvantages. Maintaining a healthy and active domestic market is crucial for the survival of the sector in the face of the many uncertainties posed by the external market.

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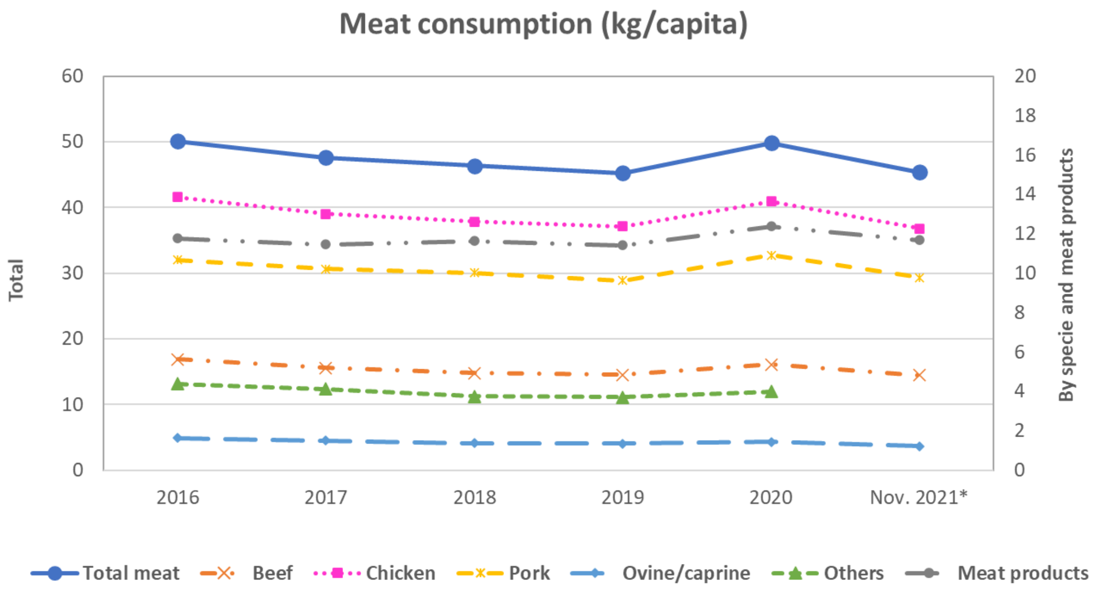


Figure 1: Evolution of meat consumption per capita in Spain (Source: MAPA 2017, 2018, 2019, 2020b, 2021a, 2021b; for year 2021 only official data until November is available).

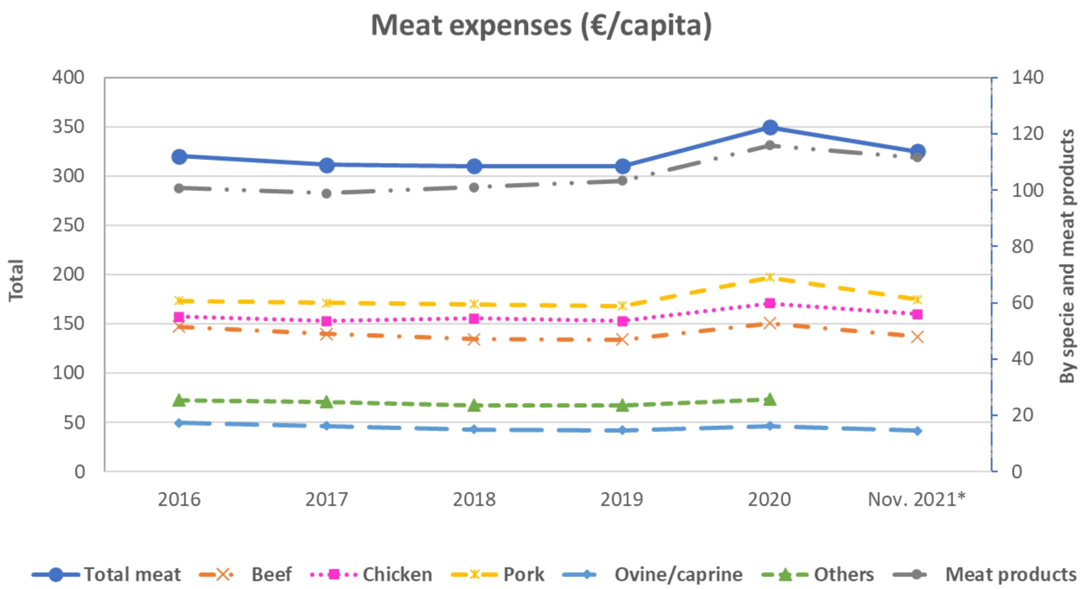


Figure 2: Evolution of meat expenses per capita in Spanish households (Source: MAPA 2017, 2018, 2019, 2020b, 2021a, 2021b; for year 2021 only official data until November is available).

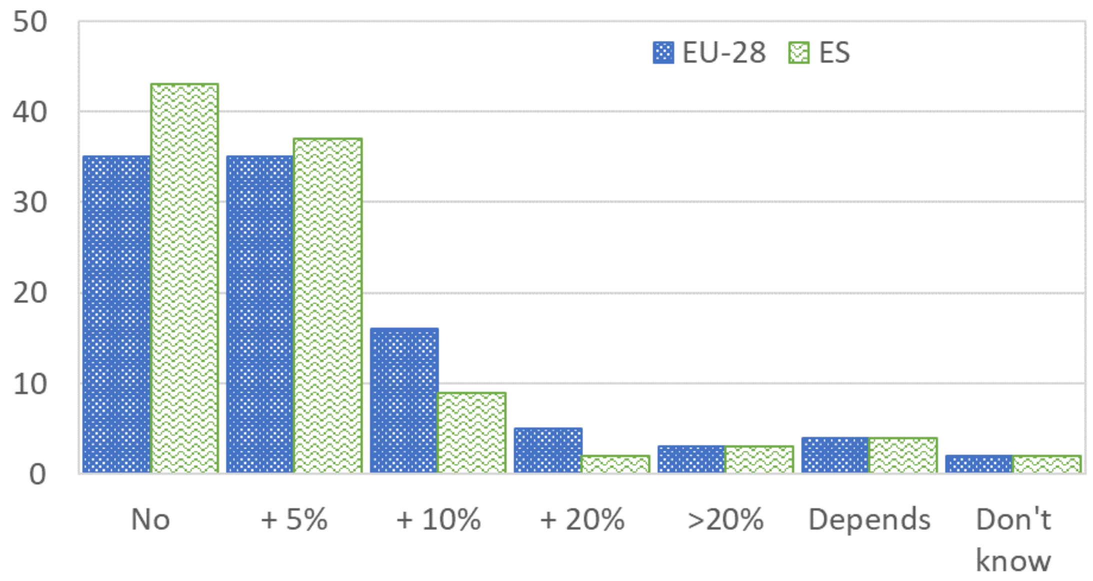
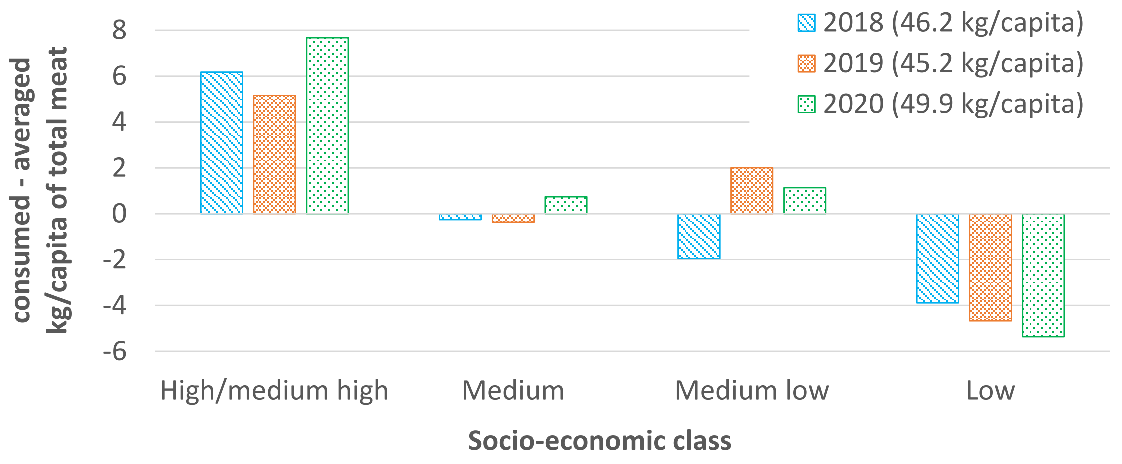


Figure 3: Percentage of Spanish and EU consumers that would willing to pay premium for animal friendly production products (Source: European Commission, 2016).

(a)



(b)

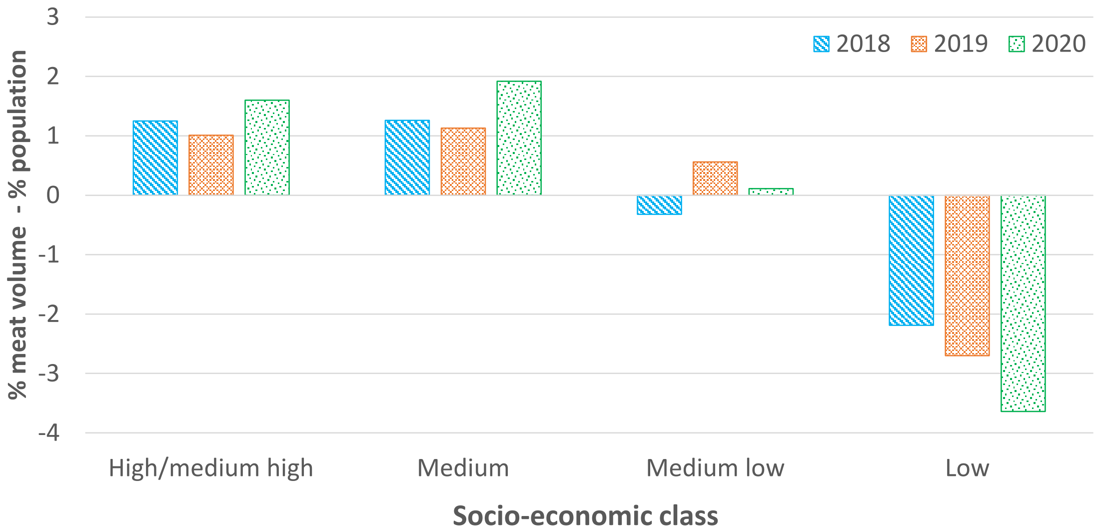


Figure 4: Difference between the consumption per capita of total meat (fresh, frozen and processed) by socio-economic class and the average annual consumption (in brackets after the year) in Spanish households (a) and difference between the total meat volume distributed in Spanish households by socioeconomic class and the proportion of population of each class (b) (Source: MAPA 2019, 2020, 2021).