ANALYSIS OF EUROPEAN CONSUMER AWARENESS FOR IDENTIFYING ANIMAL-FRIENDLY MEAT

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ABSTRACT
The aim of this research was to compare the perception and attitudes of animal welfare meat values between consumers belonging to two different European contexts. A questionnaire was employed to investigate animal-friendly meat attributes and communication strategies, as well as the recognition of this product by consumers on the market. A total of 321 individuals were involved in a cross-national online questionnaire conducted in seven northern European countries (Netherlands, Sweden, Belgium, Luxembourg, Denmark, Finland and Ireland). Results were compared to those previously obtained by the Italian consumer sample investigation. This study demonstrated that the geographical context is an important discriminatory factor that influences the way in which the consumer sets his or her decision-making process, especially for meat. Difference in perception of animal welfare emerged when comparing consumers from the diverse geographical areas. Animal-friendly meat for the North European consumer is a better product of greater ethical value, which should not become a means of enrichment for the producer, but rather a product that derives from a guaranteed condition. These latter results were partially in contrast with those obtained from analysing Italian sample opinions. In addition, differences in terms of meat consumption frequency were highlighted: consumers in northern Europe consume more meat than those in southern Europe, but choose a local, organic product and also buy directly from the farm. However, both consumers' samples reveal that labels are the preferred method to recognise and obtain information about animal-friendly meat.

KEYWORDS
Green consumer, animal-friendly meat, ethical value communication, purchase intention

INTRODUCTION

The modern consumer is increasingly aware of meat quality characteristics, showing a greater willingness to buy environmental, social and economic sustainable products (Mancuso et al., 2019; Pohjolainen et al., 2016; Merlino et al., 2018a; Gaspar, 2013; Blanc et al., 2018). Animal-friendly meat can be defined as a sustainable product deriving from a certified production process that guarantees animal welfare during all phases of meat production, as well as protecting the environment in which it derives from (Borra et al., 2015; York, 2011; Bernués et al., 2003). Several authors have demonstrated a growing sensitivity among consumers towards this product where they recognize and agree to an added value, both in terms of premium price on the market and from the point of view of quality (Merlino et al., 2018b; Miranda-De La Lama et al., 2017; Clark et al., 2017; Di Vita et al., 2015). At the same time, the "green consumer" (those who are environmentally conscious and concerned about sustainable, local production and animal welfare) mentality is now widespread and has led to a change in behaviour and choice during the food purchasing process (Tobler et al., 2011; Gilg et al., 2005). In fact, the consumer recognizes animal-friendly meat as a healthier and higher quality product, but also sustainable for the environment, farmers and the local economies (Henchion et al., 2017; Allès et al., 2017; Merlino et al., 2017; Yu and Gao, 2010; Bernués et al., 2003). In parallel, until a few years ago, the declination trend of meat consumption has negatively affected the meat sector (Verbeke and Viaene, 2000). Recently there have been promotional campaigns for meat consumption, and in particular to a higher-quality red meat, spreading among the media (https://www.lastellinadellacarnebovina.it/).

Previous literature research show that consumers are aware of the quality, characteristics and benefits of animal-friendly meat. Additionally, this research shows that consumers are willing to buy certified product despite its higher price with respect to conventional products available on the market (Massaglia et al., 2018; Risius and Hamm, 2017; Caracciolo et al., 2016). These results strengthen the managerial choices of some farmers who orientate their products and production process for quality certification that usually require higher levels of investment (Nocella *et al.,* 2010). However, the quality certification, together with an effective label design and a communication strategy, can represent a good marketing tool for producers to use for recognition and differentiation in the market (Vebeke and Ward, 2006; Lim et al., 2013; Merlino et al., 2018b). Animal-friendly meat perception differs among consumer's socio-demographic characteristics (age, educational level, gender, religious orientation, etc.) which influences an individual's sensitivity during the product's value evaluation (Grunert et al., 2018; Clonan et al., 2015; Verbeke et al., 2011). For example, in Massaglia et al. (2018), two evaluation lines were described comparing millennial and conventional consumers, highlighting an anthropocentrically consideration of animal welfare meat attributes, in the first case, while an ethical perception of the same product, in the second one. The geographical and social context is also certainly a discriminating factor for defining consumer-purchasing behaviour (Nocella et al. 2010; Grunert et al., 2018). For this reason, an extension of previous research regarding the geographical context (Massaglia et al., 2018) was made in order to define consumer preferences towards animal- friendly meat and create marketing strategies for its identification in the market. In particular, consumers in northern European countries have shown to be more sensitive to animal-friendly meat and see it as an ethical added value product (European Commission, 2016; Verbeke and Ward, 2006; Latvala et al., 2012; Nocella et al., 2010;

Boogaard et al., 2008; Verbeke and Viaene, 2000). In fact, the spread of food retail outlets and supermarket chains specializing in the unique sale of animal-friendly products, or "cruelty free", has been established and continues to grow (i.e. TESCO in UK [1]). Our questionnaire, which involved an online intercepted sample of individuals from seven northern European countries (Netherlands, Sweden, Belgium, Luxembourg, Denmark, Finland and Ireland), provided a socio-demographic consumer characterization and defined styles and habits of meat consumption. The consumer perception and attitude towards animal welfare meat values were explained for the considered sample. In addition, the evaluation of the improved animal-friendly meat recognition and communication strategies for the market was conducted considering consumer opinions. Results were compared to those previously obtained by the Italian consumer sample investigation.

1. RESEARCH METHODOLOGY

A self-developed questionnaire was submitted using the Google Drive online platform to a mailing list of consumers selected from the seven geographical areas described in Figure 1. A total of 321 respondents from Luxembourg, Belgium, Netherland, Denmark, Sweden, Finland and Ireland completed the questionnaire. The research was conducted from January to August 2018. The socio-demographic variables of the considered sample are described in Table 1.

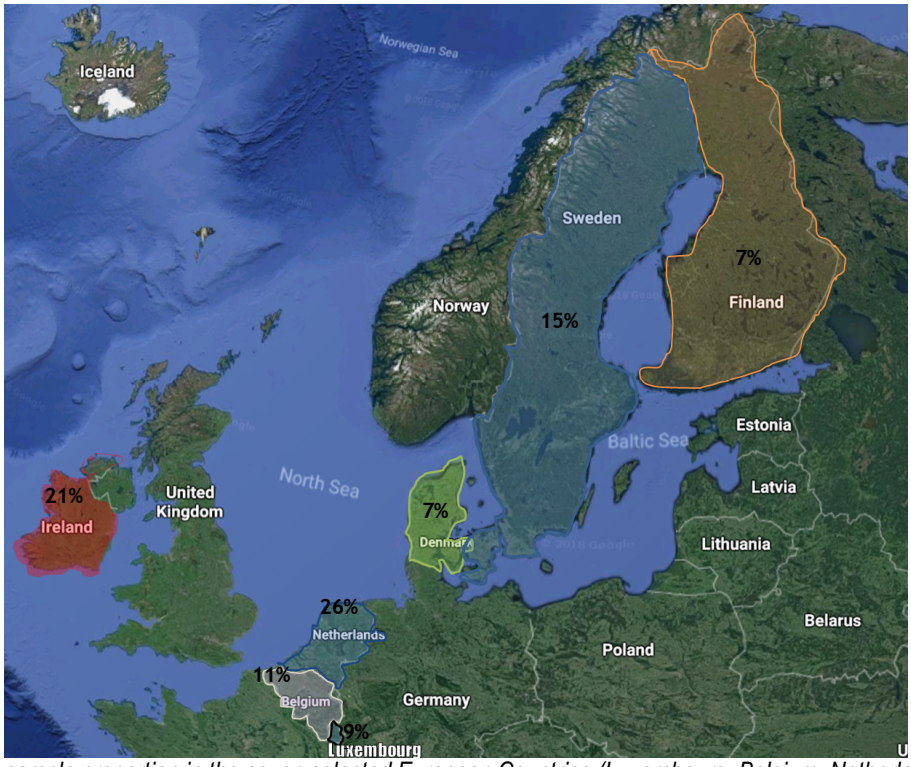


Figure 1. The sample proportion in the seven selected European Countries (Luxembourg, Belgium, Netherland, Denmark, Sweden, Finland and Ireland).

Table 1. Socio-demographical variables of the considered sample of consumers (n=321) from the different selected northern European countries.

EUROPEAN COUNTRY	Gender		Age				Educational level			
	Women	Men	< 25	25-40	40-55	> 55	Primary School	Lower secondary school	Upper secondary school	Master's degree
Belgium	86%	14%	7%	71%	7%	14%	0%	0%	61%	39%
Denmark	64%	36%	7%	50%	29%	14%	0%	0%	0%	100%
Finland	54%	46%	8%	8%	54%	31%	0%	0%	8%	92%
Ireland	63%	37%	8%	25%	39%	27%	3%	5%	10%	81%
Luxembourg	29%	71%	5%	14%	14%	67%	0%	10%	10%	81%
Netherlands	57%	43%	7%	29%	39%	25%	0%	0%	11%	89%
Sweden	70%	30%	3%	33%	25%	40%	0%	0%	28%	73%
Total	**62%**	**38%**	**6%**	**32%**	**32%**	**30%**	**1%**	**2%**	**18%**	**79%**

[1] https://www.tescoplc.com/reports-and-policies/animal-welfare-policy/ available at 9 January 2019.

1.1 The questionnaire

The questionnaire used in this study investigated information about animal welfare perception, which is an extension of a study already performed in Massaglia et al. (2018). In particular, it was divided into three sections: the first included questions related to socio-demographical characteristics of consumers (age, gender, and educational status). The second section investigated the relationship between individuals and animals by proposing questions related to ownership of pets, opinions toward hunting, familiarity with animal breeding and slaughterhouse practices. Meat consumer habits, in terms of place of purchase and weekly frequency of consumption, were investigated in this part of the questionnaire to define a consumer profile with particular focus on beef meat. By using a 3-point Likert scale (ranging from "strongly agree" = 3 to "I don't Know" = 1), the investigation assessed the consumer's perception about characteristics describing animal friendly meat. In a series of statements related to an animal-friendly product, respondents had to express the level of agreement or disagreement with respect to each statement (Massaglia et al., 2018). The third section asked respondents to choose among a series of product identification methods on the market (label, logos, classification or scoring system, etc..). In particular, they selected what they saw as the most effective for an immediate and certain recognition of meat produced in accordance to high animal welfare standards.

Data collected by means of interviews of each considered European Country were analysed in order to:

- Determine whether there is a correlation between the perception of animal welfare and previous experience with farms and slaughterhouses or the condition of owning a pet. The latter factor has also been assessed by comparing consumer perception among the two gender (male and female);
- Compare consumers from different countries regarding meat consumption habits;
- Evaluate consumer perception on the animal welfare topic and determine the best method to distinguish animal-friendly meat in the market by comparing results of the European sample with those related to the Italian consumers (Massaglia et al., 2018).

2. RESULTS

Although the sample selected is not equally distributed among the various countries selected, it includes respondents with a wide variety of socio-demographic backgrounds. More specifically, there were more women than men, but this proportion varied in different geographical contexts with some cases where there was a greater proportion of men interviewed or a gender balance (specifically in Finland, Netherland and Luxembourg). The education level of the whole sample is over-represented with 51% of respondents with a Master's degree compared to 31.4% of the European average (ISTAT, 2017). The age distribution was balanced between the different age groups, with the exception of the under-25s, who were poorly represented in the sample (6%). However, by analysing the individual countries, the socio-demographic background is differentiated (Table 1).

The relationship between consumer and animal was evaluated in order to further investigate an individual's perception on animal welfare. Our questionnaire asked whether or not one owned a pet, their opinions toward hunting and whether they had ever visited an animal farm and a slaughterhouse.

Table 2. Data of owned pets in the different considered European Countries in function of gender (women and men responses).

DO YOU HAVE PETS?	Women		Men	
	YES	NO	YES	NO
Belgium	48%	37%	4%	11%
Denmark	36%	29%	14%	21%
Finland	46%	8%	23%	23%
Ireland	34%	29%	17%	20%
Luxembourg	14%	14%	33%	38%
Netherlands	25%	32%	21%	21%
Sweden	28%	43%	18%	13%
Total sample	31%	31%	18%	20%

On average, all countries considered were about equal regarding owning pets with homogeneity between the two subsamples, except in the case of Finland and the Netherlands, which showed a slight increase in the number of individuals owning pets (Table 2). In general, women had a more positive trend towards pet ownership, except in Sweden, where a majority of men were the ones who had more pets. Concerning hunting, about half of the sample was split in their opinions toward this practice (55%), except in the case of Dutch individuals, who were equally in favour and against, and of the Finns, who were mostly in favour of hunting. A balanced proportion emerged between men and women among consumers in favour of hunting, with a majority of women against this practice. Men, on the other hand, were the most disinterested or doubtful individuals on the subject.

Most of the respondents had never visited a farm, but a large part of the sample stated that they had visited a slaughterhouse (Figure 2).

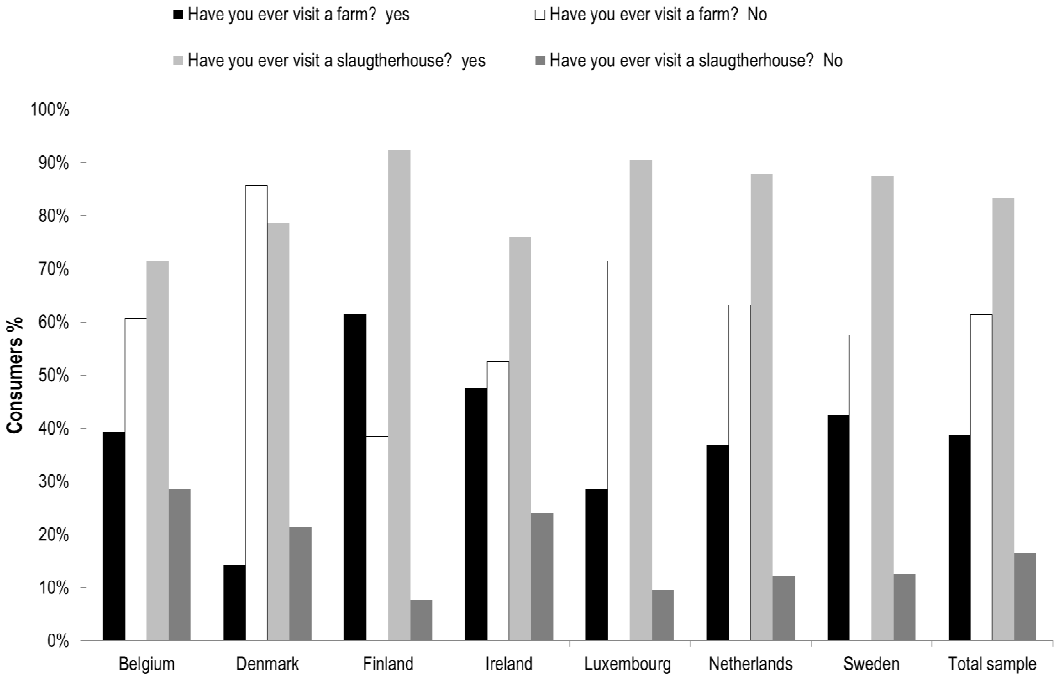


Figure 2. Consumers' previous experiences with farms and slaughterhouses. Responses (yes and no) are reported for each considered country.

A large amount of the whole sample (89%) consumed meat in their diet and no differences emerged among the different considered countries. Among vegetarian and vegan consumers, 46% of them excluded meat from their diet for ethical motivations, 2% for religious purposes, 26% for health reasons and 27% for environmental sustainability. However, the difference between men and women appeared in each European country when analysing the answers related to the motivation of meat exclusion from their diet patterns (Table 3). In general, women considered both the ethical and health aspects as the main motivations for meat exclusion from their diet, while men listed the health aspect as the main motivation followed by the ethical and environmental unsustainability of meat.

Table 3. Motivations expressed by consumers for meat exclusion in diet pattern, divided by gender and country of origin.

Women	**Belgium**	**Denmark**	**Finland**	**Ireland**	**Luxembourg**	**Netherlands**	**Sweden**
Ethical	30%	67%	100%	29%	33%	27%	31%
Religious	4%	0%	0%	0%	0%	5%	0%
Meat hurts	30%	33%	0%	43%	33%	41%	31%
Is not environmentally sustainable	35%	0%	0%	29%	33%	27%	38%
Men	**Belgium**	**Denmark**	**Finland**	**Ireland**	**Luxembourg**	**Netherlands**	**Sweden**
Ethical	0%	33%	33%	0%	57%	50%	42%
Religious	0%	0%	0%	0%	0%	0%	0%
Meat hurts	0%	33%	33%	50%	14%	13%	25%
Is not environmentally sustainable	0%	33%	33%	50%	29%	38%	33%

In general, half of the sample consumed meat 1-5 times a week, with Belgium emerging as the most representative country for this type of consumer. However, individuals who ate meat 6-10 times a week accounted for a large proportion of the total sample. The Finns were the main consumers of meat with 30% of respondents consuming it more than 11 times a week. Belgium and Luxembourg are the countries where meat was consumed the least. Points of meat purchase declared by consumers are reported in Figure 3. Considering the whole sample, 24% of consumers declared to buy meat at the supermarket, 24% at a trusted butcher, 16% at a farm butcher, 15% at farmer's markets, 14% at organic products shops and 6% between butcher randomly chosen and cooperative. These latter results differ among the countries: while supermarkets prevail in Denmark, Finland and Ireland, these countries also showed farmer's markets and farm butchers as points of meat purchase. In addition, shops dedicated at organic certified products were chosen as points of meat purchase by Belgian, Luxembourg and Swedish consumers.

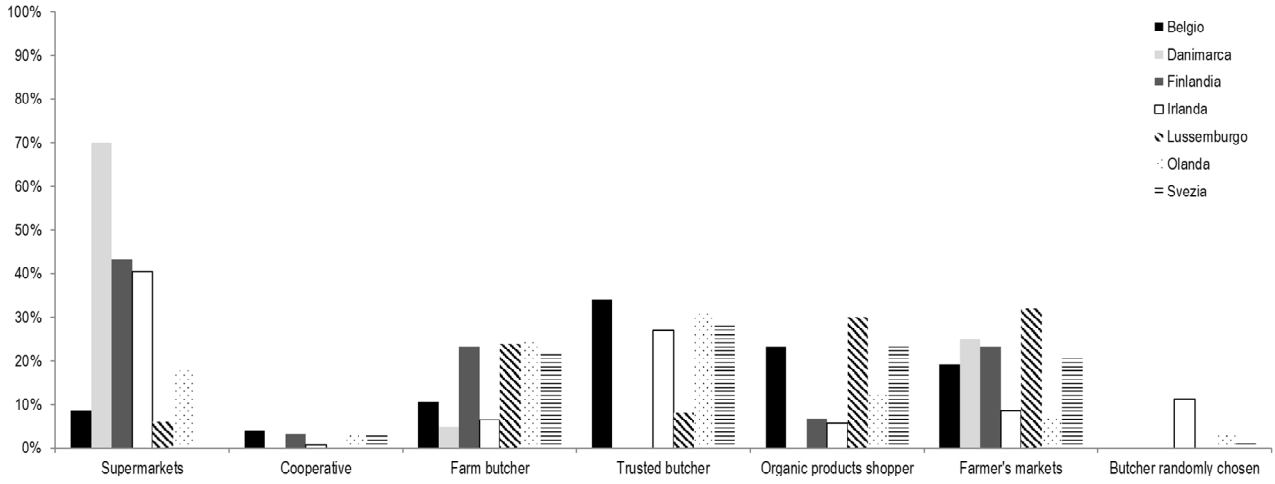


Figure 3. Points of meat purchase declared by consumers interviewed in the different countries.

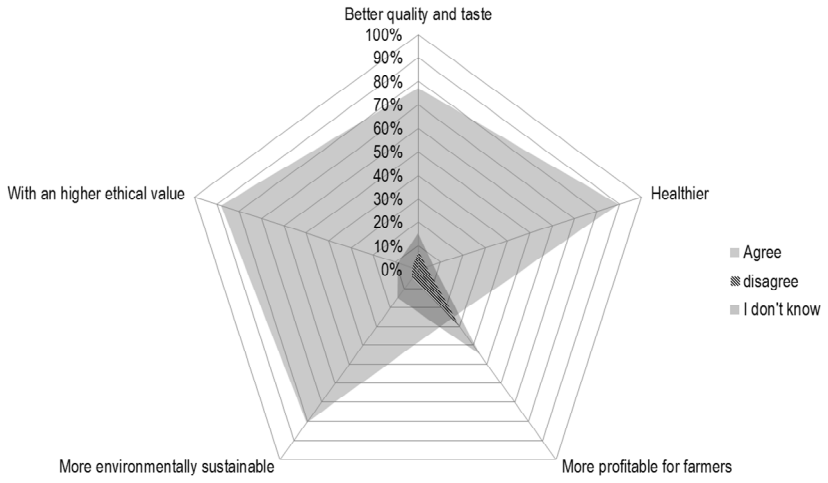


Figure 4. Agreement level about statements concerning animal-friendly meat declared by the European consumer sample.

All the consumers involved were in accordance to the statements regarding animal-friendly meat characteristics: no significant differences emerged in the comparison between the different countries. The possibility to increase farmer's economic sustainability by animal-friendly meat production was in contrast with consumer opinion.

Table 4. Consumer perception of the different proposed methods to better recognize animal-friendly meat on the market. Chosen responses by consumers are reported for each country and of the whole sample.

Animal-friendly meat identification methods [a]	Belgium	Denmark	Finland	Ireland	Luxembourg	Netherlands	Sweden	Total sample
1	38%	28%	33%	37%	38%	30%	27%	33%
2	26%	16%	24%	23%	15%	20%	22%	21%
3	17%	32%	29%	19%	26%	30%	31%	25%
4	6%	12%	4%	9%	3%	9%	8%	8%
5	13%	12%	10%	12%	18%	11%	12%	13%

[a] ***1**: Information labels with adequate details on the topic, **2**: Logo on the product packaging, **3**: classification or scoring system (e.g. five "stars" of well-being for the best products, a "star" for the worst products), **4**: Information posters in the shop or a colouring scale on the product packaging, **5**: Provided a truthful image of the production system (e.g. laying hens outdoors rather than in confined cages).*

European consumers recognize the labelling system as the better method to recognize and distinguish animal-friendly meat in the market. Considering the whole sample, there was a classification system to catalogue meat products in function of animal welfare standards, for example, by means of graphical symbols with a number directly proportion to the well-being of animals during livestock.

3. DISCUSSION

In this research, a cross-national analysis provided a more in-depth description of consumers' perceptions of animal-friendly meat values in seven northern European countries. The interviews were conducted through an online questionnaire which helped to establish a sample represented by mostly women from different age groups with a high-level of education. The central part of the questionnaire investigated the relationship between individuals and animals, including pet ownership and previous experience with visits to farms and slaughterhouses. Our results were confirmed by other literature studies where women between the ages of 45 and 54 years emerged as more inclined to have pets (FEDIAF, 2017). Also, in the European context, as expressed in Massaglia et al. (2018), there is a negative correlation between the tendency to care for animals and the age of the interviewed individuals. The involved sample was composed of individuals who have already had experience with farms and, above all, with the slaughterhouses, making them even more aware of slaughtering practices which can influence the perception of animal welfare (Schnettler et al., 2009). However, in the same countries where consumers declared a previous experience with animals in a slaughter experience (Finland, Luxembourg and Belgium), emerged a higher frequency of meat consumption. In general, the majority of individuals consumed meat 1 to 5 times per week, but the European sample showed a tendency to eat meat with several meals during the week (6-10 times). Some countries consumed even more meat, such as Finland, where 30% of consumers consumed meat more than 11 times per week. No correlation between experience with animal welfare practices (slaughter) and the frequency of meat consumption emerged by this research. These results partly confirm the results of young consumers described in Massaglia et al., 2018. However, the Italian sample of conventional consumers consumed red meat 1 to 5 times or less per week, underlining the claim of a more varied diet, which probably follows the model of the Mediterranean diet.

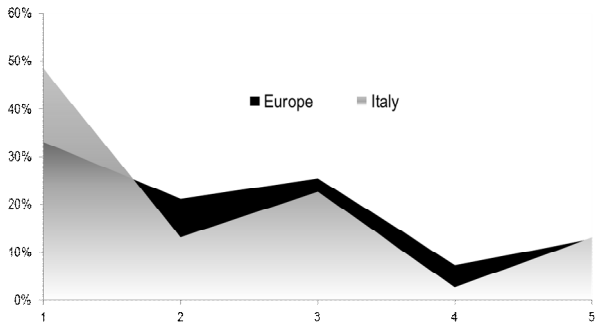
Among the reasons linked to meat exclusion from the diet, northern European consumers expressed ethical motivations and assertions that meat is environmentally unsustainable. These reasons underline the strong ethical component perceived in the vision of the combination of animal welfare / meat consumption by "green" and "environmentally conscious" consumers, which can be identified in the northern European sample. Conversely, among the reasons for not consuming meat in the countries of southern Europe, the anthropocentric reasons emerge, often linked to the fact that consumers in the southern countries perceive meat as dangerous to his or her health (Marelli et al., 2015).

Important differences emerged regarding the places of meat purchase. On average, supermarkets were the main point of sale for meat purchases, but when investigating more in-depth, the picture is more varied considering each country. Large retail chains were in first place as the consumer choice in Denmark (where consumers bought either at supermarkets or at producers' markets, identifying two subgroups of very different individuals), as well as in Finland and Ireland. Therefore, in these countries, consumers prefer to rely on supermarket standards, synonymous with a guarantee of consumer safety for the purchase of meat. However, in Italy, the two places of purchase were supermarkets and trusted butchers, whereas in the larger European context, the large retail chains alternates with farmers markets and farms' points of sale. Trusted butchers were the places of purchase chosen by consumers in Belgium, Holland, Ireland and Sweden. In the latter countries, the purchase of organic meat or meat purchased directly from the producer was also more common and widespread. This result underscores how, despite a high consumption of meat in these countries, the choice of the product is oriented towards aspects of quality and safety sought in organic meat or purchased directly from the farmer. Thus, this expresses the consumer demand for environmentally sustainable, local, quality products guaranteed directly by the producer (Panzone et al., 2016). The informed consumer is extending his or her view of product choice criteria by not only considering the attribute of animal welfare as the only descriptive factor of the product, but in relation to other variables (health awareness, environmental concerns, animal welfare and income) in more complex models of choice during, for example, the purchase of organic food (O'Donovan & McCarthy, 2002).

The European consumer recognizes the added value of an animal-friendly product from the point of view of all analysed aspects, except for the increased profitability for the farmers. This underlines an ethical, environmental and qualitative view of the product as a necessary, mandatory condition linked to animal welfare, which must be a prerequisite guaranteed by farmers, but not a tool to achieve greater profitability. Animal welfare is perceived as a desirable condition, but consumers are not willing to pay significantly more when buying meat in order to gain information about animal handling (Schnettler et al., 2009).

Comparing the European sample with the Italian one described in Massaglia et al. (2018), differences emerge in the perception of animal-friendly meat characteristics in terms of organoleptic quality, ethical value and profitability for farmers. In fact, if the Italian sample was more in agreement with the characteristics "better and of higher quality" and "more profitable for the breeder", the European consumer was distinguished by a greater ethical perspective and the product's environmental sustainability. In particular, animal welfare is conceived as an unquestionable prerequisite to be guaranteed to the animals bred by the farmer and not as a means to achieve greater profits.

Additionally, with regards to the methods for recognising animal-friendly products, the majority of European consumers were in favour of product information labelling, underlining how a good labelling system is the best method for identifying and enhancing a product on the market. However, the sample involved in this study also focuses on other methods such as the logo and the graphic classification method (Figure 5).



1: Information labels with adequate details on the topic of animal welfare
2: Logo on the product packaging
3: classification or scoring system (e.g. five "stars" of well-being for the best products, a "star" for the worst products)
4: Information posters in the shop or a colouring scale on the product packaging
5: Provide an honest image of the production system (e.g. laying hens outdoors rather than in confined cages).

Figure 5. Comparison between Italian and European consumers about preferences of animal-friendly meat recognition methods on the market.

As companies seek to understand and respond to the demands of the "green consumer" who demands greater efficiency of production and products, this type of consumer is becoming a central driver in the sustainable production processes and green marketing development (Peattie, 2001). The limits of this study are in the online interview, which provided an unbalanced sample in terms of gender and age. However, this research shows the difference in perception of animal welfare when comparing consumers in different geographical areas: northern and southern Europe, for example. In the south, as already explained by Nocella et al. (2010) and Boccaletti and Nardella (2000), the lack of consumer loyalty to the production sector and to the honesty of the label/information likely predisposes a mind-set aimed at a greater anthropocentric vision of animal welfare. To mitigate this issue and enhance consumer awareness of animal welfare for the benefit of products and for improving the sustainable farming economy in the market, a shift in focus on governance and certification bodies could be a good starting place. Consumers in northern Europe consume more meat than in southern Europe, but they also choose a local, organic product and often buy directly from the farm. Animal-friendly meat for the European consumer is a better product of greater ethical value and one that derives from an obvious and guaranteed condition. This should not be a means of enrichment for the producer. Instead, producers must aim to communicate the benefits of their product and the label. In our study, the latter remains the best method for enhancing, differentiating and communicating the quality of a product on the market. However, this study stresses that the geographical context is an important discriminatory factor that influences the way in which the consumer sets his or her decision-making process, especially with regards to meat. Our research has shown that animal welfare in the European context is a necessary condition for choosing meat in an ethical and environmentally-friendly way.

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