

Citizens' View on Veal Calves' Fattening System in Italy and Animal Welfare

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Summary

Aims of this study were to assess citizens' view on the current veal calves' fattening system in Italy and on animal welfare, and to find relationships with veal meat consumption. Socio-demographic characteristics, veal meat consumption habits, knowledge of veal calves rearing system and animal welfare attitudes of 100 citizens were investigated through a questionnaire submitted on a voluntary base in supermarkets/butcher shops. Results showed that 61 respondents were veal meat consumers and the remaining 39 were non-consumers. A large proportion of respondents were aware of the modern veal calves rearing system but their knowledge as such did not affect veal meat consumption. Non-consumers declared they didn't like veal meat organoleptic characteristics, opposed the production system or considered it too expensive. Most citizens sustained animal welfare but no correlations were found between concerns for animal welfare and veal meat consumption/purchase ($r_s < |0.17|$; $P > 0.05$). Citizens conceptualized animal welfare through the aspects of care animals received by the farmer and veterinarian and of healthy feed for animals. It could be concluded that consumers don't really think of animal welfare while buying or having meat, and they still have idealised notions of naturalness, traditional farming, free-range and small scale production linked to farm animal production.

Key words

veal calf, fattening system, animal welfare, consumer attitude, meat

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Aim

Veal calves' fattening system faced relevant welfare improvements after the coming in force of the legislation for calves' protection (European Council Directive 2008/119/EC) but it is still blamed by the public opinion for insufficient animal welfare. Evidence of this ethical concern comes from several campaigns, initiatives, and actions that have been and are currently carried out in Europe against white veal meat (e.g. Freedom Food of the Royal Society for the Prevention of Cruelty to Animals, Compassion in World Farming, and Good Veal Campaign). There is a relevant gap between public's perception of animal production and the reality of the modern farming systems (Buller and Morris, 2003; Vanhonacker et al., 2008), particularly after industrialization and globalization arose big cultural and commercial barriers between farmers and consumers (Buller and Morris, 2003; Manning and Baines, 2004; Rollin, 2007). It was aim of this study, therefore, to assess citizens' knowledge on the current veal calves' fattening system in Italy and their point of view on animal welfare and if these affect veal meat consumption/non-consumption. In addition, citizens were characterized in terms of socio-demographic features in order to assess some of the factors affecting veal meat consumption, purchase and purchase frequency.

Material and methods

Preliminary testing of the questionnaire was carried out to make questions comprehensive to participants and to fine-tune its length according to an acceptable time required to complete it, not exceeding 10 minutes. Data used in this study were collected from September to December 2011 and from December 2012 to March 2013. A questionnaire was submitted to citizens in supermarkets/butcher shops on a voluntary base in Padova (city and province). It was composed of four parts. In the first part, the participants answered socio-demographic questions about their gender, age, educational level, residential area, household size and composition. In the second part, they answered questions about veal meat consumption/non-consumption with special emphasis on motivation for veal meat liking/disliking (i.e. organoleptic characteristics, quality/price ratio, healthiness, ethical concerns, etc.) and purchase frequency. In the third part, they answered questions aimed at assessing their knowledge about farm animal rearing systems and veal calf fattening in particular (i.e. the participants answered the question: "Which of the following photos (Figure 1 a, b, c, and d) better describes the actual veal calves' fattening system in Italy according to you?"). The fourth part aimed at assessing their interpretation of the concept of farm animal welfare through selected items as "healthy animals", "natural environment", "natural behaviour", etc. (Vanhonacker et al., 2008).

First a descriptive analysis of the items was drawn up to assess response frequencies and to describe respondents' socio-demographics. Cronbach's alphas were analyzed in order to evaluate the internal consistency among respondents and Spearman rank correlations were investigated. One-way nonparametric tests were performed for location differences of consumption, purchase and purchase frequency across gender, age, educational level, residential area, household size and composition.



Figure 1. Veal calves fattened in small groups (a), in traditional individual cages (b), on pasture (c), in large groups on straw (d).

Results and discussion

Socio-demographic characteristics of the participants are reported in Table 1. Sixty-one respondents reported to eat white veal meat and they were mostly (87%) veal meat buyers. The remaining 39 respondents reported not to eat white veal meat, they were mainly non-buyers (64%) although some of them (31%) defined themselves as non-buyer but occasional consumer. This ambiguous response may be due to both, 1) the fact that less attention is given to meat type when consumption occurs in restaurants, cafeterias and bars as suggested by Buller (2009); and 2) the duality between citizens and consumers in regards to meat production as discussed by Grunert (2006). According to Grunert (2006), there is a distinction between the roles of individuals as citizens and as consumers. As citizens, people follow trends and form attitudes towards given meat production systems while as consumers they buy, prepare and consume meat products and these two roles could not be related or be even ambiguous.

In this study, veal meat consumption and purchase were consistent for $\alpha = 0.89$, therefore the first group of 61 respondents is further termed as *consumers*, and the second group of 39 respondents as *non-consumers*. Veal meat characteristics consumers like are mostly related to its consideration as lean and healthy (57%), followed by one or more of its organoleptic characteristics (taste, odour, tenderness, juiciness, and colour) (48%), use variety in different recipes (21%) and good quality/price ratio (21%). Motivations for non-consumption of veal meat comes from the dislike of one or several of its organoleptic characteristics (44%), opposition of the production system (36%), high cost (21%), habit to other meat types (8%), and consideration of it as not healthy (5%). Despite inferences from this study are limited, it could be discussed that the motivations for non-consumption where within the concerns reported by Rozin and Fallon (1987).

Table1. Socio-demographic characteristics of the survey participants

Characteristic	Level	Number of respondents
Gender	Female	52
	Male	47
Age (years)	< 25	9
	25 - 44	49
	45 - 64	34
	65 +	8
Educational level	Primary or lower secondary	28
	Upper secondary	41
	Superior graduate	29
Living environment	Rural	45
	Suburban	26
	Urban	27
Household size	1	6
	2	25
	3	29
	4	29
	5 +	8
Household composition	Children	57
	Seniors/elders	79
Companion animals	0	44
	1 +	54

According to these authors, concerns related to nature of the food are the first reason of dislike of food, in second place there are concerns related to appearance, texture, smell or taste, and in third place there is the anticipation of negative consequences following ingestion of food. Kubberød et al. (2006) confirmed that moral concerns for animals were in a direct relationship with dislike of meat and dislike of meat was negatively associated to red meat consumption.

Purchase frequencies were either occasional (14), few times a year (15), once-twice monthly (18), or once-twice weekly (14). Among respondents, 84 did not follow any diet, 4 were vegetar-

ians and 12 followed either a gluten-free, lactose-free, low-fat or no-pork diet. As expected considering the survey location, most respondents (97) purchased other types of meat, either fresh or derived preparations (e.g. salami, sausages, etc.). Cattle beef, poultry and pork were predominantly chosen, respectively by 86, 79 and 73 respondents. Rabbit meat and horse beef were ticked by 44 and 30 respondents, respectively.

Twenty-two respondents affirmed they knew how veal calves are reared and have visited a veal calves fattening unit at least once. The proportion of respondents' choice for specific descriptors of the veal calves rearing system is reported in Figure 2. According to these results, respondents views of the veal calves rearing system were clustered as traditional/not aware (40), real/aware (32), ideal (13), or controversial (6) ($\alpha \geq 0.84$). The proportion of respondents ticking the photo in Figure 1a corresponding to the predominant contemporary veal calves farming technique in Italy was 36. Thirty respondents choose the photo in Figure 1d, 16 choose the photo in Figure 1b and 16 the photo in Figure 1c. The choice of the descriptors was consistent with the choice of the photo ($\alpha = 0.63$), but there was a tendency towards a greater number of ticks for the photos in Figure 1c (calves on pasture) and in Figure 1d (calves on straw) than those for the same written response. This is probably because citizens have idealised notions of naturality of the farming systems as reported by Miele et al. (2007) or due to the fact that consumers don't really want to know how animals they eat are reared as speculated by Kenny (2009). In the present study, indeed, knowledge of the veal calves rearing system did not correlate with veal meat consumption ($r = 0.17$; $P > 0.05$) and purchase ($r = 0.16$; $P > 0.05$). People who do not eat veal meat avoid it for reasons that are unrelated to their knowledge of the production process, and those who eat veal meat keep on having it although their knowledge. These findings furthermore point out the issue raised by Grunert (2006) regarding the different roles that people have as citizens and as consumers.

The way in which citizens conceptualize farm animal welfare was shown in Figure 3. The largest proportion of respondents interpreted animal welfare through the aspects of care animals received by the farmer and veterinarian and of healthy feed for healthy animals, followed by concepts of natural environment,

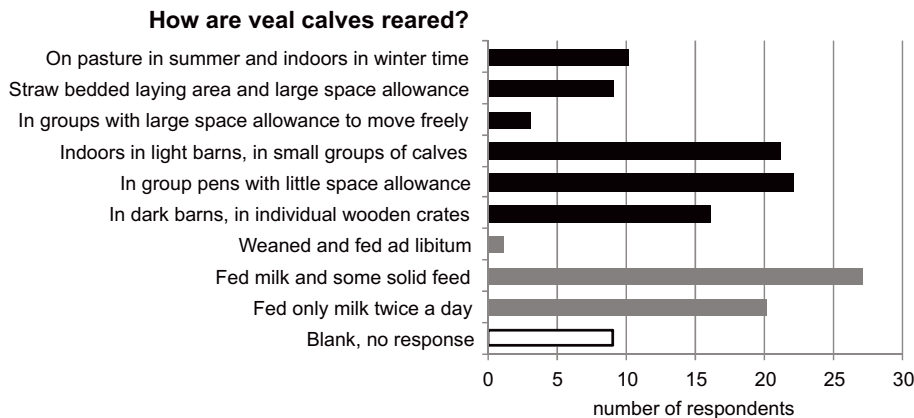


Figure 2. Proportion of respondents ticking specific descriptors when asked how are veal calves reared (1 to 3 answers/respondent possible)

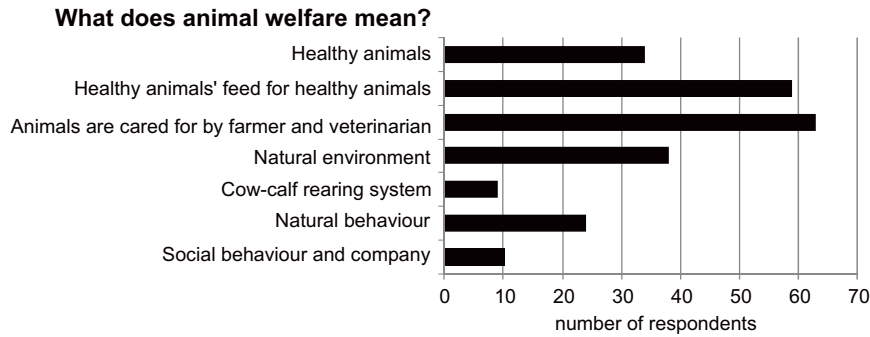


Figure 3. Proportion of respondents ticking specific descriptors when asked what does animal welfare mean (1 to 3 answers/respondent possible)

healthy animals and natural behaviour. Due to methodological limits of this study, no strong inferences to other studies may be done. However, results obtained in this study were in line with those of Vanhonacker et al. (2008) who reported that both, citizens and farmers perceived *feed and water*, *human-animal relationship*, and *animal health* as top priorities for farm animal welfare; with *animal health* given a higher importance by farmers rather than by citizens.

Seventy-nine respondents considered themselves as animal welfare sustainers. The ways they sustained animal welfare were by: not wasting food of animal origin (55); buying locally produced animal-origin food (44); buying free-range eggs (33); sustaining pro-animal-welfare organizations (7); buying organic products (6); and not eating meat (1). This is in line with Buller (2009) who reported that good animal welfare is largely associated, amongst citizens, with idealised notions of naturalness, traditional farming, free-range and small scale production. No correlations were found between veal meat consumption/purchase, purchase frequency and concerns for animal welfare ($r < |0.17|$; $P > 0.05$). These results could confirm that consumers don't really think of animal welfare while buying or having meat, as suggested by Miele et al. (2007) and Kenny (2009). Moreover, these results are in line with findings from Verbeke et al. (2010) regarding pork meat. Verbeke et al. (2010) found weak relationships between citizens' attitudes towards animal welfare and consumers' behaviour because even people who declared to be concerned about animal welfare and environment or who were in favour of small-scale pig farming, kept on eating pork meat. In the latter study concerned citizens, however, ate pork meat less frequently and in a more selective way.

In the current study, frequency of veal meat purchase was affected only by the living environment of respondents ($P = 0.023$). Purchase was less frequent in the rural area (few times a year) and more frequent in the urban area (weekly), reflecting directly the living area of respondents and, therefore, the ease to shop. No other significant distribution differences were detected in the current study for veal meat consumption, purchase and purchase frequency within gender, age, educational level, and household size and composition, although household socio-demographic characteristics were reported to be important clues in explaining variations in food choice (Roos et al., 1998; Ricciuto et al., 2006). In regards to the educational level, literature reported that higher education was associated with lower consumption of meat (Ricciuto et al., 2006), and greater

consumption of vegetables and fruit (Groth et al., 2001). In the current study the lack of significant differences could be due to the fact that most respondents were above compulsory schooling. In a similar way, the largest proportion of respondents not having children and elders in their family, might have interfered with the effect of the household composition on veal meat consumption, purchase and purchase frequency. This was unexpected in particular when considering that, according to Ricciuto et al. (2006), the age of household members reflected the fact that particular life stages (childhood, elder adulthood) have specific food needs and preferences which are incorporated into household purchase decisions.

Conclusions

A large proportion of respondents is not aware of the modern rearing system but their knowledge as such does not systematically affect veal meat consumption. This implies that there is no clear evidence of ethical concerns towards the veal calves rearing system in Italy and means that probably no production changes will be compulsory for the farmers in the short term. Non-consumers declare not to like veal meat, to oppose the production system or to consider veal meat as too expensive. Regardless of veal meat consumption or dislike, most citizens sustain animal welfare and conceptualize it through care and healthy feed for animals. Veal meat choices are not influenced by gender, age, educational level and family context. It could be concluded that consumers don't really think of animal welfare while buying or having meat, and they still have idealised notions of naturalness, traditional farming, free-range and small scale production linked to farm animal production.

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