

## Stakeholder, citizen and consumer interests in farm animal welfare

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### Abstract

The assessment and improvement of animal welfare are the tasks and joint responsibility of many stakeholders involved in the agro-food chain. This paper first looks at the supply side of the chain, and presents different stakeholder views on farm animal welfare, discussing the potential for market differentiation, communication and labelling related to farm animal welfare standards. From the demand side, the paper then examines the duality that exists between citizens' attitudes and consumer behaviour in relation to animal welfare and livestock products, and identifies distinct segments of citizens and consumers. Although the importance that citizens claim to attach to animal welfare seems relatively strong, consumers' interest in information about animal welfare is only moderate compared to other product attributes, and the market shares of products with a distinct animal welfare identity remain small. The paper concludes that while there seems to be substantial consensus between supply chain stakeholders, citizens and consumers about what is relevant for achieving an acceptable level of farm animal welfare, the differentiation and satisfaction potential of increased animal welfare per se as a stand-alone product attribute seems limited to particular niche market segments. It argues that improved farm animal welfare is more likely to be realised and valued by consumers when it is integrated within a broader concept of quality, such as quality assurance or sustainability schemes.

**Keywords:** animal welfare, citizens, consumers, labelling, quality, stakeholders

### Introduction

The improvement of animal welfare is a joint responsibility and challenge for many stakeholders within the agro-food chain. These include farm suppliers, farmers, food and processing industries, retailers, consumers, public authorities, researchers and non-governmental organisations. Interests in the welfare of farm animals and opinions about how it should be monitored and improved are guided by a complex set of personal motivations and attitudes, and decisions are influenced by numerous environmental and situational factors. These factors lie within the socio-cultural and specific task environment of individuals and institutions as well as within the wider macro environment, which includes social, regulatory, economic and political forces. Different stakeholders hold different frames of reference from which they evaluate animal welfare. More often, though, animal welfare seems to be perceived subjectively, particularly by the non-expert or non-scientific stakeholders involved in the agro-food chain.

Commercial actors on the supply side of agro-food chains, such as livestock producers, food processing industries and retailers pursue economic goals. Such economic goals can be compatible with higher standards of animal welfare when the resulting corporate image and end products can be effectively marketed and communicated and generate an

extra margin. Hence, improved animal welfare can pay for itself if consumers are able to differentiate between products and are prepared to pay extra for those that improve animal welfare. On the demand side, consumers strive for satisfaction through aligning, as best they can, their product experience with their expectations formed during the product selection and purchasing stages. In order for animal welfare to have value to actors on the supply and demand sides, it needs to entail both differentiation opportunities and have the potential to increase satisfaction. The objective of this paper is to gain a better understanding of these two interests and find a better match between them.

This paper first presents a summary of different stakeholder views on farm animal welfare and its potential for differentiation. It then concentrates on the consumer side of the food chain, discussing the potential role of animal welfare as a credence product attribute that creates specific quality expectations, potentially influencing purchasing intentions and choices. The extent to which animal welfare influences consumers' choices depends on whether this particular quality can be perceived, and if so, whether this triggers a favourable response *vis-à-vis* other product attributes and socio-cultural interests.

Particular attention will be paid to the duality between consumers and citizens. Individuals are both (potential)

consumers of animal products and citizens who hold particular values and moral stances over issues such as animal welfare and sustainability. Despite a growing societal interest in environmental and ethical issues, such as animal welfare, it has proved difficult to initiate and sustain behavioural change among consumers. The paper will explore the gap between citizen attitudes and consumer behaviour and discuss the marketing challenges that result from this duality.

The paper further illustrates the importance of segmentation in improving our understanding of consumer and citizen interests in animal welfare by extending the analysis from farm animals to aquaculture. From the perspectives of food supply and policy, labelling is the most common vehicle for signalling credence qualities to consumers. The paper concludes by discussing the potential of animal welfare labelling as a means of product differentiation for producers and as a distinct quality sign for consumers.

### Stakeholder views on animal welfare

Stakeholders' views about animal welfare are in line with their frame of reference and goals which, in most cases, are primarily commercially, economically or politically oriented. These frames often have two overlapping evaluation paradigms which can be classified broadly as economic and moral (Bracke *et al* 2005). In terms of task environment livestock producers tend to be focused predominantly on technical performance and (re)production parameters that can be influenced by animal welfare conditions. Scientists focus more on quantifiable, animal-based, physiological and behavioural parameters (Bracke *et al* 2005). However, the objectives of different stakeholders vary. Retailers may aim at attracting particular consumer groups with products produced in an animal-friendly manner, producers may strive to maintain or expand their market share or increase their revenue (Anwander Phan-Huy & Badertscher Fawaz 2003). De Greef *et al* (2006) summarised the different views of key actors towards farm animal welfare as follows: "Farmers focus on regular care based on habit and good intentions; scientists focus on biological parameters; the public focuses on icons like space, straw and outdoor access; and animal protection organisations combine animal nature and maximal care." Their study introduced the three-notion concept of animal welfare, including no suffering, intrinsic value and non-acceptable aesthetic appearance. Despite their differing positions, frames of reference, and objectives, different stakeholder groups were found to commonly strive towards a good life for farm animals, and the notion that 'animals should not suffer' emerged as the shared value and primary target for designing acceptable animal husbandry strategies. The animal welfare programme developed for the food retail, wholesale and chain restaurant businesses in the US is a case where different parts of the agro-food chain collaborate with the aim of achieving positive change based on shared values and goals (Brown & Hollingsworth 2005).

Pines *et al* (2007) evaluated Australian stakeholders' opinions of welfare indicators for sheep and cattle transported by ship. Their study concluded that different stake-

holder groups, including government officials, scientists, veterinarians, transporters and animal welfare representatives, were relatively consistent in their ranking of welfare indicators. Similar findings were reported by Petit and van der Werf (2003) who investigated stakeholder perceptions about the environmental and social impacts of current and alternative modes of pig production in Brittany (France). They also found only relatively minor differences among the different stakeholder groups.

This, however, does not eliminate the possibility of a gap between stakeholders' views about farm animal welfare and those of society at large. Vanhonacker *et al* (2008) investigated the extent to which stakeholder views coincide with public opinion by comparing farmers' interpretations of the concept of farm animal welfare with those held by citizens in Flanders, Belgium. Their study concluded that the interpretation of the concept of farm animal welfare by farmers is quite compatible with that of citizens. More specifically, farmers and citizens both gave quite similar rankings to the importance of 72 aspects relating to animal welfare. The citizens did attribute a higher importance to most of these aspects than the farmers, and had a more negative view of the current situation with regard to farm animal welfare, in particular those aspects relating to natural behaviour, pain, stress and availability of space. The largest perceptual discordance was found for aspects relating to the ability to engage in natural behaviour, over which citizens showed greater concern, while farmers gave this relatively less importance. These findings suggested that aspects relating to natural behaviour in farm animals are one of the more controversial issues within this debate.

While the study of Vanhonacker *et al* (2008) considered farmers as a single homogeneous group, Hubbard *et al*'s (2007) study of pig farmers in the UK, showed that while they share certain key attitudes about animal welfare, they sometimes had different motives for participating in specific animal welfare schemes. A study by Bock and van Huik (2007) distinguished two categories of European pig farmers. The first consisted of farmers who defined animal welfare predominantly in terms of animal health and production-performance. These farmers typically participated in basic or top-quality assurance schemes. The second group, who mainly participate in organic or specific welfare schemes, give more weight to the animals' opportunity to behave naturally. The attitudes and behaviour of the second group clearly matches better with opinions of citizens reported by Vanhonacker *et al* (2008), and the practices of the first group are potentially in conflict with social views about farm animal welfare.

### The potential for differentiation over animal welfare

Product differentiation on grounds of animal welfare is most frequently achieved through private branding or collective, voluntary labelling programmes. The specific structure of such schemes often depends on who initiates them. According to Anwander Phan-Huy and Badertscher Fawaz (2003), retailer-driven programmes are likely to

place more emphasis on securing a competitive advantage in a particular market and on attracting new consumer segments. Producer-driven programmes will seek to create or maintain a good corporate or sector image, to improve their competitiveness against substitute products, such as imported meats, and to maintain or recapture sales volumes. The latter is particularly relevant in meat production chains that, as a result of a series of successive meat safety and healthiness crises, have faced nil or negative market growth during recent years. Last but not least, consumer-driven initiatives focus typically on delivering satisfaction through providing a combination of tangible benefits (such as taste and appearance) and intangible ones (such as safety, healthiness and ethics) (Verbeke & Viane 2000).

The result has been an explosion of schemes for animal welfare standards in recent years (Miele & Bock 2007). These schemes are increasingly designed to complement, and be integrated with, existing regulatory and commercial requirements and as part of quality assurance schemes for livestock products, (see Edge & Barnett 2008 for an analysis of these within the Australian meat industry). Such programmes not only establish animal welfare standards but also the framework for integration and uptake within industries and providing assurance about animal welfare to all those participating in the supply chain. Ransom (2007) discussed the reasons why agro-food industries are under increasing pressure from their trading partners to adopt animal welfare standards, to safeguard market access, political power and legitimacy, although this often does not involve receiving any premium for their products. The rewards are mostly indirect, eg lower transaction (quality negotiation and administrative) costs, preferable supplier relationships and improved reputation. As a result, animal welfare has increasingly become part of a wider notion of product quality, although animal welfare is rarely made a very explicit component within such a composite construction of product quality (Miele & Bock 2007). These findings suggest that animal welfare *per se* has a relatively low potential for differentiation, unless it can be linked and associated with other, more tangible, product qualities.

### Citizen and consumer views on animal welfare

The Eurobarometer survey performed in 2005 (European Commission 2006) clearly shows that European citizens are concerned about the welfare of farm animals. The survey indicated that 82.3% of Europeans evaluated the overall welfare of farm animals as being somewhere between moderate and very bad, with 78.3% strongly believing that more should be done to improve the welfare and protect the living conditions of farm animals in the EU. Additionally, almost 90% of respondents claimed not to receive sufficient information about the welfare and protection of farm animals. Grunert (2006) identified individuals' concerns for animals and the environment as one of four key areas of relevance to future patterns of livestock and meat production.

Despite these seemingly high levels of interest and concern, market shares of animal-friendly products are still little more than resembling niche markets. Several studies have referred to the duality between citizens and consumers (eg Korthals 2001; Bennett *et al* 2002; Liljenstolpe 2008). According to Grunert (2006), consumers make purchases and food choices whereas citizens participate in political processes and the formation of public opinion. Citizen attitudes towards livestock production and the importance of animal welfare may not greatly affect buying behaviour, but can provide some potential that can be tapped through marketing and communication activities that activate these attitudes.

While such concerns are acted upon by at least some consumers, the attitudes expressed by most people rarely inform their purchasing behaviour. People can claim to care about farm animal welfare without buying welfare-friendly products and, even when they do buy welfare-friendly products this may be for motives other than just concern about animal welfare (Bracke *et al* 2005). This apparent inconsistency has also been referred to as an attitude-behaviour gap, which describes how attitudes alone are often a poor predictor of behavioural intention or overt marketplace behaviour and food choices. This occurs because products contain multiple attributes and provide a multitude of possible benefits to consumers. As such, animal welfare is traded-off against other attributes such as price, taste, health or convenience. For example, Vermeir and Verbeke (2006) demonstrated that consumer intentions to buy sustainable dairy products were low (despite strongly positive personal attitudes towards them) because they were perceived as not being widely available. Equally, some consumers reported a strong intention of purchasing sustainable dairy products, despite weak personal attitudes towards them. The explanation was found in those consumer's social environments, where social pressure from peers acted as a purchasing motive.

However, growing numbers of consumers are translating their citizen interest in animal welfare into purchasing intentions. Schnettler *et al* (2008) reported that a large proportion of consumers sampled in Chile perceived animal welfare as a desirable attribute when purchasing beef. Their study also showed that almost one-third of their respondents claimed to have changed their meat consumption habits due to their perception that some livestock management practices were adverse to animal welfare. Several studies have investigated consumers' willingness to pay a price premium for animal welfare attributes. Whereas the study by Schnettler *et al* (2008) reported some willingness to pay among Chilean consumers, the study by Liljenstolpe (2008) indicated that Swedish consumers' willingness to pay for animal welfare attributes in the case of pork fillet could be either positive or negative depending on personal preferences. Attitudes to animal welfare vary as individuals may weigh the well-being of farm animals against other product characteristics, like safety or taste, in different ways. These heterogeneous preference patterns call for appropriate segmentation, as will be discussed later.



## Meat versus fish

Debates about farm animal welfare tend to focus mostly on terrestrial species. At least from a stakeholder and consumer perspective, there are few studies that have examined the role of welfare issues on aquatic animals. Yet, aquaculture (or fish farming) has experienced a tremendous growth during recent decades, as a response to declining natural fish stocks and in an attempt to meet the growing worldwide demand for affordable seafood. Yet, to be sustainable, aquaculture must not only optimise economically and contribute to consumer well-being, but must also minimise negative impacts on the natural and social environment and gain public acceptance. Intensive fish farming, either taking place in cages, ponds or tanks, has raised a number of ethical issues related to scale, intensity and density and related problems of husbandry, which raise new concerns over animal welfare.

Verbeke *et al* (2007) investigated citizen and consumer perceptions of the sustainability and ethical issues related to wild and farmed fish which, in general, were given quite a high importance. However, this claimed importance did not translate into people's attitudes about eating fish, the frequency of fish consumption or the selection of products labelled as sustainably farmed. One potential explanation was limited consumer awareness of the origins of fish and the related sustainability and ethical issues, together with a lack of knowledge of how to integrate these issues with other quality expectations when making purchasing decisions. No more than 10% of the respondents in this study expressed an intention to stop eating either wild or farmed fish, and these choices were made more on expectations about intrinsic product quality, such as nutritional value, safety and taste, rather than on considerations of sustainability or ethics. In the 2004 SEAFOODplus consumer survey (Verbeke *et al* 2008), European consumers showed relatively little interest in receiving additional information about 'fish welfare' in comparison with information about safety guarantees, quality marks, recipes or health benefits.

A 2006 survey in Belgium, with a sample of 250 consumers (data not previously published), found no significant differences between consumers' evaluations of the ethical issues related to fish or meat consumption (Figure 1). Furthermore, the survey revealed few ethical problems relating to the image of fish or meat since both mean scores were around 3.75 on the five-point agreement scale. Not surprisingly, fish was perceived as being healthier, more nutritious, more expensive and more delicate than meat. These findings suggest that consumers do not differentiate much, in ethical and animal welfare terms, between meat and fish.

Two surveys were carried out in Flanders, Belgium in 2006 ( $n = 459$ ) and 2007 ( $n = 451$ ) to assess how citizens evaluate the welfare of farm animals. The 2006 survey only considered terrestrial animal species and the 2007 survey included questions about people's evaluations of the welfare of farmed and wild fish. The composition of the two samples differed slightly, which is a more likely reason for the differences observed than any significant change in views over

the passing of a year. Despite these differences, the two studies were consistent in the rankings that they provided with citizens systematically evaluating the welfare of laying hens and broilers as worse than that of cattle (Figure 2). Although the welfare of wild fish was evaluated as slightly better than that of farmed fish, the combined evaluation of the welfare of farmed and wild fish closely matches the overall evaluation of the welfare of farm animals. This suggests at least a degree of uncertainty or inconclusiveness among citizens over the welfare of aquatic animal species consumed by humans. This may be because of a lack of knowledge about fish farming and fisheries, a lack of awareness about the origins of the fish that people consume or relative unfamiliarity with origin as a criterion to evaluate overall fish quality. The finding that ordinary citizens are relatively unaware of these issues is not surprising; Heleski and Zanella (2006) reported that even animal science students in the USA, who were believed to represent both potential consumers and future industry stakeholders, were poorly aware of the most common animal agriculture practices.

## Divergent interests and opinions

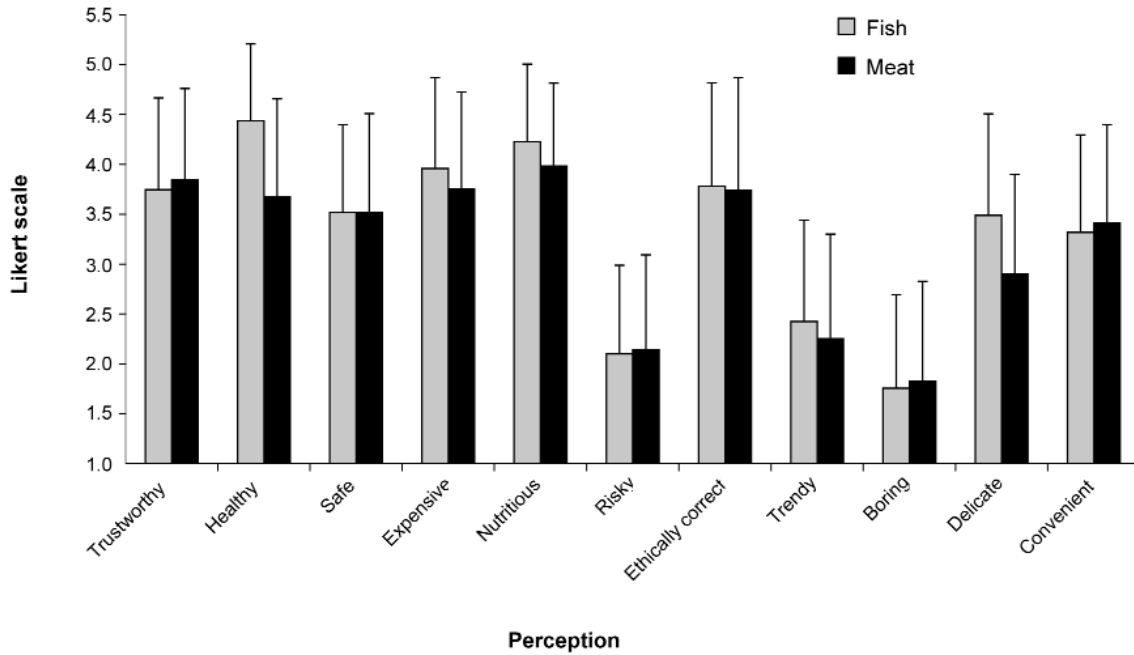
Several recent studies have recognised the need for appropriate market segmentation when analysing and addressing animal welfare concerns. Bock and van Huik's (2007) survey of pig farmers and Liljenstolpe's (2008) consumer survey concluded that individual preferences in relation to the animal welfare attributes of pork are quite divergent. In a similar vein, Hall and Sandilands (2007), demonstrated that people's interests in animal welfare are heterogeneous, with some focusing mainly on basic animal welfare needs, such as access to food, water and appropriate housing conditions, whereas others were interested in getting the bigger picture, including the role of welfare regulations and public opinion. Their conclusion was that some members of the public are more interested than others as to how their food is produced and concerned about the conditions under which livestock is raised.

Because people are not all alike, they do not react in the same way to the information that they have access to. Apart from situational and product-related determinants, numerous individual characteristics such as involvement, knowledge, attitudes, lifestyle and socio-demographics account for differences in people's information needs and how they react to these communications. It has been suggested that future research agendas in this field should focus on distinguishing between different types of consumers, particularly through segmentation studies on consumer interest in information (Verbeke 2008).

## Meat consumer segments

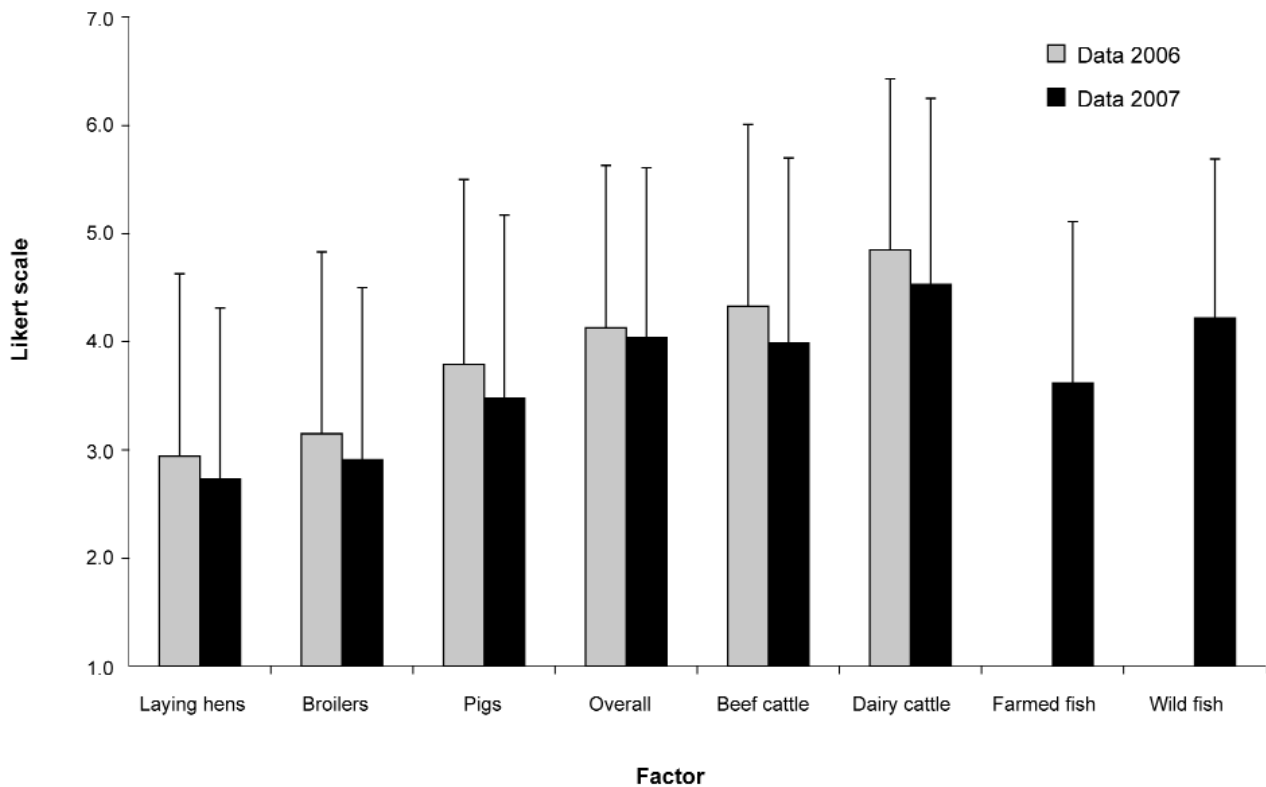
Some work has already been done in this field. Verbeke and Vackier (2004) used different components of consumers' involvement in fresh meat as segmentation variables, identifying four distinct meat consumer segments. Personal importance was attached to meat as a product category by consumers because of higher perceived pleasure value

Figure 1



Mean ( $\pm$  SD) consumer perceptions of meat ( $n = 127$ ) and fish ( $n = 123$ ) in Flanders, Belgium (2006), measured on a five-point Likert scale ranging from 1 = 'do not agree at all' to 5 = 'strongly agree'.

Figure 2



Mean ( $\pm$  SD) citizen evaluation of the welfare of farm animals in Flanders, Belgium ( $n = 459$ , 2006;  $n = 451$ , 2007), measured on a seven-point Likert scale, ranging from 1 = 'very bad' to 7 = 'very good'.

and/or higher perceived risks to human health and these two factors were used as segmentation criteria.

The first segment, typified as 'straightforward meat lovers', included significantly more men and people who consumed fresh meat on a daily basis. This segment displayed a very low interest in external information. Their focus was on taste and the hedonic benefits of eating meat. Animal welfare information is unlikely to affect the choices and behaviour of this segment, unless improved animal welfare conditions would improve the sensory quality of the meat. A second segment of 'indifferent meat consumers' were mostly focused on price. These consumers showed the lowest involvement in meat of all the segments, which translated into them having the more narrow decision-making processes and a very low willingness to engage in searching for, or absorbing, information. As with the first segment, this group is unlikely to respond positively to information about animal welfare, particularly if this implies paying higher prices. The other two segments, which both included more families with children, were much more open to information about animal welfare. The segment of 'cautious meat lovers' took an interest in fresh meat both because of the pleasure they gained from it and the high perceived risk of consumption, and they were mostly interested in information related to health and nutritional issues. Finally, the fourth segment was typified as 'concerned meat consumers'. This segment mainly included consumers who had greatly reduced their meat consumption because of safety concerns. They were strongly influenced by negative reports about meat in the press and media, and frequently sought reassurance from trusted sources of information, such as their local butcher. The latter two segments are more likely to be open to animal welfare information, particularly if animal welfare can be associated with increased product healthiness and/or safety.

The findings from this involvement-based segmentation corroborate other studies which have concluded that all consumers, irrespective of their involvement, are interested in tangible quality attributes like taste, while only more (or highly) involved consumers seek intangible quality attributes, such as information related to credence qualities like animal welfare. These findings, which show clear differences in information interests, provide an initial argument for developing appropriate segmentation and targeting information provision towards segments that will be more responsive.

#### Attitude segments among citizens

Within the broader public or at citizen level, a more diverse range of opinions and attitudes can be found. For example, in The Netherlands Meuwissen *et al* (2007) identified six segments of public attitude towards animal welfare: 'environmentalists', 'ecologists', 'animal friends', 'health concerned', 'unpronounced' (undecided) and 'economists'. The second-to-fourth of these groups showed a significantly higher willingness to pay for pork produced with attention to animal welfare. Together with the environmentalists, these segments ranked animal welfare as one of the three most important product attributes.

In a similar vein, Vanhonacker *et al* (2007) identified six segments in Belgium based on the relative importance that individuals attached to animal welfare and their evaluation of the status of farm animal welfare. These segments were profiled in line with the model set out by Kendall *et al* (2006), who distinguished three sets of factors as structural determinants for public attitudes about animal welfare: place-based urban-rural factors; other structural social factors; and individuals' unique animal-related experiences. This analysis led to the identification of two quite extreme segments, with completely opposing attitudes and belief structures about farm animal welfare, as well as opposing behavioural patterns.

The first segment consisted of people who were socio-economically involved with agriculture and livestock production, in the sense that farming activities were a part of their daily lives and a source of livelihood in their living environments. People within this segment claimed not to take animal welfare into account in their decision-making over food purchasing and they evaluated the current state of farm animal welfare more positively than all the other segments. The second (opposing) segment was highly involved with animal welfare because of personal, moral and ethical considerations. Individuals within this segment were extremely concerned about animal welfare, and claimed that animal welfare was the most important product attribute in making decisions about purchasing livestock products. Both segments displayed a very consistent attitude-value profile (as individual citizens or as members a particular societal group), and behavioural profile (as individual consumers making choices about food).

The differences between the other four segments were less marked, although the study did reveal a major distinction in terms of marketing opportunities for products with higher animal welfare levels. Two segments reported an only modest willingness to pay extra for higher animal welfare and a lower interest in information about animal welfare. These people did not rank animal welfare as a very important product attribute and it was clear that any market success for high animal welfare products within these segments will need to carry very strong tangible benefits (eg taste, tenderness) without high price premiums. Two other segments were considered as providing real marketing opportunities for animal welfare-friendly production. Those within these segments reported high concerns about animal welfare, which was a product attribute that strongly influenced their food purchasing decisions. This group also expressed a high interest in receiving more information and a willingness to pay for products with higher welfare attributes. These two groups comprised 36% of the sample, and thus represent a considerable potential market.

#### Targeted information provision and labelling

The existence of distinct market or citizen segments, illustrated above, calls for a segmented and targeted strategy of information provision as information is most likely to be efficient and effective when it meets the specific needs of a target audience (Wilson 1981). Salaün and Flores (2001)

found that much of today's information about food is ignored and that consumers find it irrelevant, since much of it does not address its audiences' needs and expectations

Information can markedly affect consumers' food choices through influencing consumers' knowledge, shaping their attitudes and redirecting their decision-making. In recent years, the role and potential impact of communication related to food products has gained considerable attention. From the demand side, both consumers and retailers increasingly seek guarantees over food quality and safety, a trend which has been at least partly fuelled by a series of food safety incidents in Europe. Consumers also want information that will help them derive more pleasure from food, achieve a better diet, avoid certain allergens, or know the origin and environmental, ethical and technological conditions under which food was produced and processed. Consumers do use information about animal rearing, housing and processing, including animal welfare in evaluating product alternatives and forming their quality expectations. As such, animal welfare or animal friendliness are product attributes that influence purchase intentions and choice, although, as indicated previously, these attributes are counterbalanced by other motives such as taste, price, health and convenience.

Animal welfare is a credence attribute, which means that this aspect of quality cannot be experienced directly by consumers during purchase or consumption. Instead, consumers have to rely on external information and have to trust the source of this information. From the supply side of information, the food industry and other commercial stakeholders in the food chain face increasing competition and decreasing margins, particularly in the European food market which is characterised by lower levels of agricultural protection, higher and more volatile prices of raw materials, and increasing competition from outside Europe. As a consequence, profitability through strategies that focus on product differentiation and market orientation, in which information and communication are key attributes and activities, are increasingly determinants of the industry's success. At the same time, government and public institutions involved with food policy have become important players on the supply side of food-related information.

Labelling has become the most common vehicle for signalling credence qualities to consumers. However, several studies have illustrated that it may be unrealistic to expect immediate and substantial behavioural changes from consumers in response to process-related information. For example, following the BSE crisis at the end of the nineties, consumers found it much easier to reduce beef consumption and substitute beef by another protein source rather than to engage in active searching and processing of information about traceability (Verbeke & Ward 2006). This fits with the rationally-ignorant consumer hypothesis, which states that even when information is free it may be the most rational decision for consumers to remain ignorant (McCluskey & Swinnen 2004). This is because the opportunity costs of processing information (ie the time costs, cognitive capacity

and effort) exceed the expected marginal benefit of processing the available information.

In addition, there is a substantial risk of information overload and potential adverse effects resulting from consumer indifference or misunderstanding when confronted with too many information cues on a package or label. Food labels and packages already carry an enormous amount of mandatory and voluntary information, which makes them an "information cue high density area" (Verbeke 2005). Consumers are selective in the attention they pay to information, particularly on food labels. In the case of meat and fish, information cues, such as expiry date, species name, weight and price, receive much more attention than information related to health or production process characteristics (Verbeke & Ward 2006; Verbeke *et al* 2008). For many consumers, additional information, eg relating to animal welfare, may be just another information cue on the label or package that they will ignore or not process actively. Nevertheless, for some consumer segments, this type of information may function as a kind of heuristic or easy decision rule, that can help them decide whether to accept or reject a product.

The last issue I wish to discuss, with respect to information about animal welfare, pertains to the relative impact of negative and, the much more limited impact, of positive messages. A similar quantity of unfavourable, or negative news about, for example, abuses of animal welfare in livestock production, is likely to weigh more heavily in consumer decision-making than favourable or positive news (Mizerski 1982; Chang & Kinnucan 1991; Verbeke & Ward 2001). It is expected that consumers will place a higher value on negative information than positive stories. This links with prospect theory (Kahneman & Tversky 1979), and more specifically the endowment effect (Kahneman *et al* 1991) which describes why economic agents attach a higher value to potential losses than potential gains. Consumers evaluate the consequences of negative information about potential health risks at higher prices more than could be expected from risk neutral or beneficial information. In a study using time series analyses, following the BSE crisis, Verbeke and Ward (2001) showed that television advertising expenditures for beef would have needed to be increased about five-fold to maintain the share of beef expenditure in the presence of such a high level of negative press. Such a ratio is quite dramatic for those involved in bringing positive messages to consumers (eg messages appealing to animal welfare improvements), particularly since positive news is more expensive, works more slowly and fades away more rapidly than negative news. The message is straightforward: since it is difficult to counter negative press it is better to avoid it whenever possible. This requires preventative rather than curative strategies, in which all possible efforts are made to avoid the spreading of negative press. Adequate efforts to monitor and guarantee animal welfare, as well as a commitment, shared by all stakeholders involved in the livestock production chain, are needed in pursuing such a strategy.



## Conclusion

Studies investigating perceptions and opinions about farm animal welfare invariably indicate that stakeholders within the agro-food chain, and citizens, increasingly care about the well-being of terrestrial and aquatic animals. There seems to be a substantial consensus about the elements required to achieve an acceptable level of animal welfare, despite differences in the different parties' frames of reference, evaluation paradigms, and objectives. As a result, in many livestock production and quality assurance schemes, animal welfare standards have already become a part of a wider notion of product quality. The benefits of this to producers and suppliers include lower transaction costs, better access to markets and improved reputation and legitimacy, rather than direct price premiums. Yet, there are continued challenges in realising multi-stakeholder involvement and the recognition of the mutual benefits and incentives from further improving animal welfare in the livestock production chain.

Although citizen interest and the claimed information needs about the welfare of farm animals have reached an all-time high in opinion polls and surveys, the market share of livestock products with a distinct animal-friendly image, or an explicit animal-friendly positioning, generally remains very small. This discrepancy can, to some degree, be explained by attitudinal ambivalence, insufficient activation of attitude systems and the attitude-behaviour inconsistencies seen between citizens and consumers. Although the perceived importance of animal welfare among citizens appears relatively strong, consumers' interest in receiving and acting on information related to animal welfare is only moderate compared to other product attributes. The differentiation and satisfaction potential of increased animal welfare *per se* (or as a stand-alone product attribute) seems to be limited to particular niche market segments, although the far greater appeal of the improved welfare of farm animals might be realised through integrating this within a broader concept of quality through, for example, quality assurance or sustainability schemes.

Heterogeneous and distinct segments of preference patterns, based either on consumer perceptions or citizen attitudes, can be identified, some of which show more willingness to adopt animal-friendly products within their dietary pattern. The challenge of targeting information about animal welfare to interested segments of consumers and to activate dormant citizen attitudes is the key to increasing the marketability of improved animal welfare. Labelling is one vehicle for signalling credence quality attributes, such as animal welfare. Yet, the success of labelling information programmes is dependent on two key issues: first, an awareness of the possible risk of fuelling information overload and ignorance and, second, the trustworthiness of the information provider. Last, but not least, the worst case scenario is one in which problems relating to farm animal welfare trigger substantial negative news. To prevent this scenario from happening, adequate monitoring and assessment programmes of farm animal welfare, combined with proactive and targeted communication strategies, are key attention points for public and marketplace acceptance of contemporary livestock production systems.

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