



Consumers' perception of farm animal welfare: an Italian and European perspective

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ABSTRACT

The results of some recent European and Italian surveys on consumer perception of farm animal welfare are shown and discussed. Special attention is paid to consumers' opinions about animal welfare attributes, differences among species (and across countries) in terms of animal welfare perception, "animal-friendly" labels and willingness of purchasers to pay more for food (eggs) deriving from animals raised under higher welfare conditions.

From a general standpoint, consumers' perception and knowledge of animal welfare varies among European countries and it is mainly affected by their economic and educational level. Among animal welfare attributes, a strong preference is given to the availability of spaces, and, in the case of Italian respondents, also to the absence of movement restrictions (chains or tethers). Laying hens (44%), followed by broilers (42%) and pigs (28%) are the categories/species for which rearing conditions in the EU are judged to need the highest improvement in terms of welfare. Italian consumers appear less concerned about swine welfare (17%) than other Europeans.

It is noteworthy that 12% of EU respondents states that all farmed animals need more welfare and/or protection. With respect to labels on food packaging, claims for animal welfare often fall within wider schemes for quality assurance and, with the exception of eggs and organic goods, in many countries the possibility of identifying animal friendly products and the knowledge of the specific legislation on farm animal protection are still limited. According to the Community Action Plan on the Protection and Welfare of Animals 2006-2010, the establishment of an EU label for animal welfare, based on standardised scientific indicators, is an option to be explored which could promote the consumption of products elaborated under high welfare standards thus facilitating the choice of consumers.

The readiness of consumers to pay more for a higher animal welfare level has been investigated with respect to hen eggs. On the whole, and with deep differences among countries, results indicate that the majority of consumers (57%) are willing to pay more for eggs sourced from animal-friendly systems; however, the increase in price has, in general, a limited extent (5-10%). The perception of a link between food quality, food safety and animal welfare can favourably affect the welfare level of farmed animals.

Key words: Animal welfare, Consumer, Animal-friendly products, Europe.

RIASSUNTO

PROSPETTIVA ITALIANA ED EUROPEA SULLA PERCEZIONE
DEL BENESSERE ANIMALE DA PARTE DEL CONSUMATORE

Il lavoro esamina i risultati di alcune recenti indagini commissionate dal Directorate Europeo per la Salute e la Protezione del Consumatore sulla percezione che i consumatori europei hanno nei confronti del benessere degli animali da reddito. Sono trattati argomenti relativi agli elementi che maggiormente influiscono sul benessere animale, alle differenze in termini di percezione del benessere animale da parte del consumatore in relazione alla specie ed alla nazione di appartenenza, alla riconoscibilità degli alimenti ottenuti con metodi rispettosi del benessere animale e, infine, alla propensione degli acquirenti ad accettare un incremento di prezzo del prodotto (uova) ottenuto con standard di benessere animale elevati.

Da tali indagini emerge come l'attitudine e la conoscenza in materia di benessere animale vari notevolmente in dipendenza della nazione di origine e del grado di conoscenza diretta delle diverse realtà zootecniche da parte degli intervistati. Sebbene gli studi non forniscano una precisa definizione del concetto che il consumatore possiede di "benessere animale", l'elemento che sembra massimamente qualificarlo è costituito dalla disponibilità di adeguati spazi di allevamento. Per gli intervistati italiani anche l'assenza di mezzi di contenimento (catene o legature) assume particolare rilevanza. Le galline ovaiole (44%), seguite, nell'ordine, dai polli da carne (42%) e dai suini (28%), rappresentano le categorie zootecniche giudicate dai consumatori europei particolarmente bisognose di un miglioramento in termini di benessere. In tale contesto, gli intervistati italiani pongono un'attenzione più limitata al benessere dei suini (17%). Per un 12% dei consumatori europei, tutte le specie di interesse zootecnico meritano un miglioramento in termini di benessere e di protezione. In tutta la Comunità, con entità variabile a seconda del paese, risulta in generale difficile riconoscere i prodotti ottenuti adottando standard di benessere animale più elevati dei requisiti minimi presenti nella normativa. Nella nostra come in altre nazioni, gli elementi riguardanti il benessere animale rientrano in generale in schemi produttivi volti a garantire ed a trasmettere un più ampio ed elevato concetto di qualità della derrata. Anche la conoscenza della specifica legislazione posta a protezione degli animali negli allevamenti è piuttosto limitata.

In sintonia con il Programma d'Azione Comunitario per la Protezione ed il Benessere degli Animali 2006-2010, l'elaborazione di un'etichetta europea che indichi il livello del benessere animale, basata su indicatori scientifici standardizzati, può costituire un valido mezzo per promuovere le vendite di prodotti rispettosi del benessere animale e rendere, nel contempo, più consapevole il consumatore. Per quanto attiene alla disponibilità del consumatore a pagare un prezzo più elevato per i prodotti ottenuti con un maggior rispetto del benessere animale, l'indagine condotta rispetto alle uova ha evidenziato una propensione che, pur variando da stato a stato, è risultata nel complesso di segno positivo (57%). L'incremento di prezzo ritenuto generalmente accettabile si colloca, tuttavia, entro un intervallo contenuto (5-10%).

In considerazione del fatto che la maggioranza degli intervistati percepisce l'esistenza di un nesso fra salubrità, sicurezza e qualità dei prodotti e livello di benessere animale, si può supporre che il rafforzamento di tale vincolo possa condurre ad un miglioramento del benessere animale come tale.

Parole chiave: *Benessere animale, Consumatore, Prodotti rispettosi del benessere animale, Europa.*

Introduction

European Union policy for food safety aims, among other things, at ensuring a high level of food quality, animal health as well as animal welfare and protection. The Amsterdam Treaty officially recognises that animals are sentient beings and Member States shall pay full regard to the welfare

requirements of animals. Furthermore, in January 2006 the Commission (European Commission: EC) adopted a Community plan for animal protection and welfare for period 2006-2010 (EC, 2006a). Within these frameworks, the European Commission's Health and Consumer Protection Directorate General has recently commissioned some surveys focussed on the attitude of consumers

toward animal welfare (EC, 2005a, 2005b, 2007a, 2007b). On three occasions (EC, 2005a, 2007a, 2007b) data were collected on a representative sample of the EU population by means of face-to-face interviews in the national language of respondents (i.e. "Eurobarometer" surveys), whereas in the fourth survey (EC, 2005b), data were collected through free internet consultation.

The aim of the present paper is to summarize and discuss some of the results arising from the above-mentioned surveys with particular regard to the comparison between the European and the Italian scenarios. Special attention is paid to consumers' opinions about animal welfare attributes, on differences among species (and across countries) in terms of animal welfare perception, on "animal-friendly" labels and willingness of purchaser to pay more for food (eggs) deriving from animal raised under higher welfare conditions.

Aspects of animal welfare relevant to consumers

From a general standpoint, the importance of animal welfare is well recognized by EU citizens, who assigned, on a scale from 1 to 10, an average rating of 7.8 to the question "How important is to you that the welfare of farmed animal is protected?". This view was unrelated to social and demographic factors and only for a small group of countries (Hungary, Slovakia, Latvia, Lithuania and Spain) the level of importance was somewhat tempered (EC, 2007a).

Although most citizens believe that animal welfare standards have improved over the last ten years, the large majority of the public (77%) deems that further improvements are needed (EC, 2007a).

Despite the wide array of subjects dealt with (ranging from consumers' knowledge of animal rearing conditions, to consumers'

willingness to pay more for animal friendly products etc...), none of the cited surveys (EC, 2005a, 2005b, 2007a, 2007b) gives (or asks consumers to give) a specific definition of "animal welfare." However, according to the internet consultation (EC, 2005b), the following factors, listed in decreasing order, seem to be "very important" for animal welfare/protection: "space allowance", "humane transport", "presence of trained staff", "humane slaughtering", "access to outdoor areas" and "exposure to natural light", "absence of movement restriction by chains or tethers", "expression of natural behaviours", "absence of mutilation", "social contact" (Figure 1). Italian respondents (which accounted only for 3% of the total records) demonstrated a strong preference regarding the item "absence of movement restriction by chains and tethers" (ranked in second place as "very important factor" after the space allowance) (Figure 1).

In an earlier Italian survey, carried out by the University of Pisa (Miele and Parisi, 2001), the first attribute of animal welfare was found to be "the quality of animal's feed", followed by "the animal's access to the outside", "the amount of space the animal has to live in", "the freedom to behave normally", "the conditions of transportation" and "the conditions in which the animal is slaughtered". The priority given to the quality of feed was likely to be due to the BSE outbreak, which strongly affected consumer attitudes.

The welfare and the protection of farmed animals is judged differently for each species with significant differences among Member States (Figure 2) and this fact is probably tied to the different local farming situations (interest in fish by Greeks and for horses by Poles). Awareness of consumers with respect to animal welfare is also tied to their direct knowledge of animal rearing conditions and systems: in the Scandinavian

Figure 1. The main attributes of farm animal welfare: factors judged as “very important” (EC, 2005b)

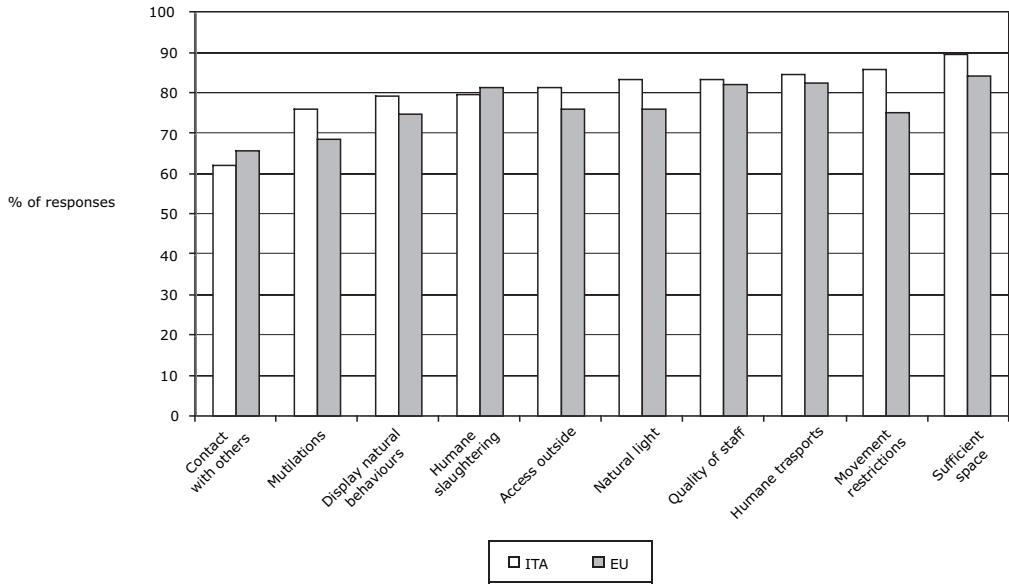
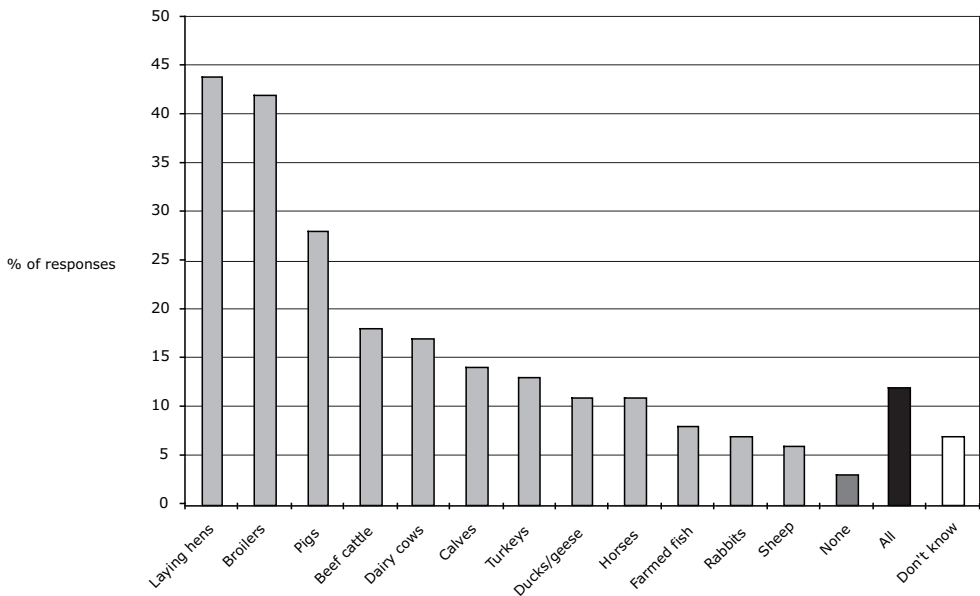


Figure 2. Species/categories to be protected as a priority in the EU25 (EC, 2005a).



countries almost 80% of respondents have visited a farm more than three times during their life, while in Mediterranean countries and Portugal this proportion remains less than 30% (EC, 2005a).

The conditions of laying hens are judged to need the highest improvement in terms of welfare/protection (44%), followed by broilers (42%) and pigs (28%). Probably due to the relatively greater attention paid to bovine conditions, answers from Italian consumers demonstrate fairly low interest in swine (17%) and avian species (33% hens and 37% broilers) when compared to the European average.

It is noteworthy that in the European survey 12% of the respondents stated that the welfare of all the mentioned species needs to be improved (EC, 2005a) (Figure 2).

Although ranks given from European citizens for welfare level of the different animal species and/or categories are consistent with those recently collected by a national postal survey carried out in the United States on the members of Animal Science faculties, overall American scientists agree on the existence of an appropriate level of animal welfare (substantial changes are asked only by a minor part of respondents; Heleski *et al.*, 2004).

Animal welfare perception across species in the EU countries

Laying hens

As stated above the majority of respondents gave a negative opinion about the welfare of laying hens (Figure 3). When people were asked to rate the welfare of laying hens, Dutch, Danish, Germans and Belgians appeared as the most critical in this respect. The percentage of people not able to rate the welfare of hens varied from one Member state to another, and it exceeded 20% in the Baltic States (EC, 2005a).

Pigs

The welfare level of pigs is characterized by contrasting opinions across the Member States (Figure 3). Within Northern countries, the majority of Finns (61%) believed that the welfare level of pigs is appropriate (very good or fairly good) whilst only 37% of Dutch and 34% of Danes shared this opinion. The Italian vision on the welfare of swine is more optimistic (i.e. welfare level is rated as "very good" by 5% and "fairly good" by 46% of the respondents) than the European average (pigs' welfare is rated as "very good" by 5% and as "fairly good" by 40% of the responders of the EU 25).

The non-response rate is very high in many countries (over 25% in Latvia, Ireland and Lithuania) (EC, 2005a).

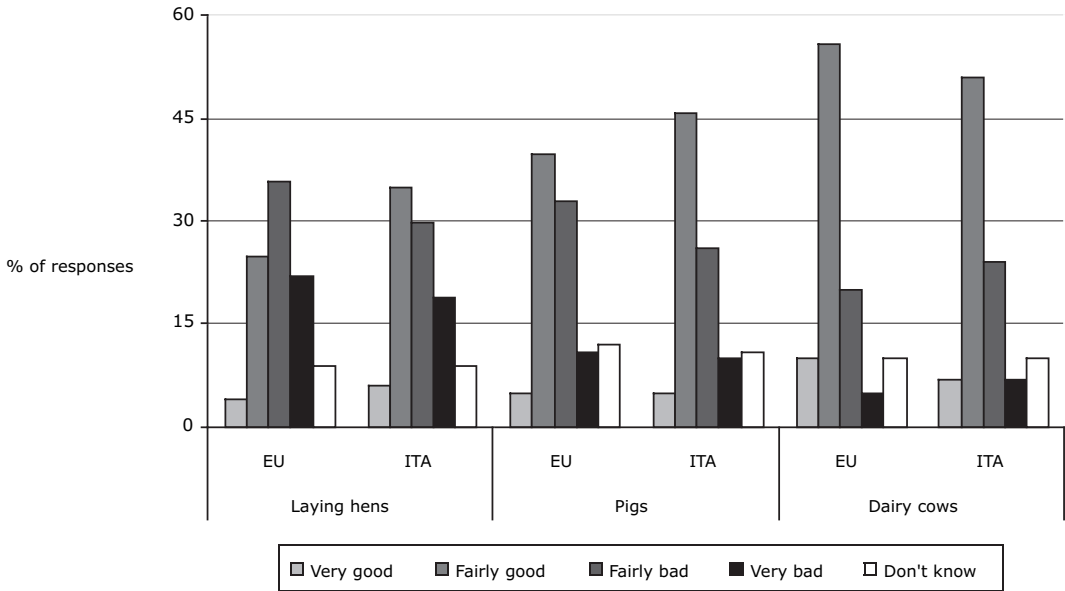
Dairy cows

In most Member states (21 of 25) the welfare of dairy cows is rated as positive (EU25) (Figure 3). However, Slovaks, Portuguese, Latvians and Greeks are less optimistic. Once more the non-response rate is above 20% for the Baltic States (EC, 2005a).

For new accessing (Bulgaria and Romania) and candidate countries (Croatia and Turkey), the non-response rate regarding welfare level perception was, with the exception of Croatia and irrespectively of the species, very high (EC, 2007b).

Responsibility for animal-friendly production seems to lie with farmers (option chosen by 40% of respondents); other stakeholders deemed to be important are veterinarians (26%), national governments (25%) and animal protection organisations (24%). Farmers and veterinarians are probably seen as those in the closest contact with animals and therefore able to make changes at the level of the animal itself. Consumers think they have a minor role in ensuring animal welfare (11%) (EC, 2007a) but they believe they are able to influence animal

Figure 3. Welfare rating of some species in EU25 and Italy (EC, 2005a).



welfare through purchasing behaviour (EC, 2005a).

Although a poor level of animal welfare is only fairly perceived by European citizens as a “food risk” (EC, 2006b; Table 1), for European and Italian consumers animal-friendly products are seen as healthier, safer and of better quality (EC, 2005b, 2007a) (Figure 4). Only a small proportion of respondents (4%) has no opinion about this aspect and in the case of The Netherlands and Sweden, emphasis is more on the well being of farmed animals rather than on consumer benefit (EC, 2007a).

Both Italian and European respondents believe that food produced under higher conditions of animal welfare is more ethically acceptable (EC, 2005b).

The possibility of identifying “animal friendly” products

With deep differences among countries, about one half of the citizens of the Euro-

pean Union (51%) state that they can very rarely or never identify animal-friendly products from labels. Such identification seems easier for Scandinavian and Germanic countries in contrast with Slovakia, Czech Republic, and Poland where the proportion of people who can never or rarely identify animal friendly products exceeds 80%. Italian consumers are in line with the average of European respondents (EC, 2005a).

According to the five main areas identified by the Community Action Plan on the Protection and Welfare of Animals 2006-2010 (EC, 2006a), options for EU labelling in terms of welfare level will be systematically explored. Furthermore, the production of reliable labels in relation to the welfare state of the animal is one of the main objectives of the European “Welfare Quality” project started on May 2004 that will take five years to complete. (www.welfarequality.net). A clear label identifying the level of welfare applied could represent an effective marketing tool

Table 1. "Worry scale" of risks associated to food intake (EC, 2006b).

| Risk | Index* |
|---|--------|
| Pesticides (fruit, vegetables) | 63 |
| New viruses like avian influenza | 62 |
| Residues of antibiotics and hormones (meat) | 62 |
| Unhygienic conditions of food handling outside home | 62 |
| Contamination by bacteria (<i>Listeria</i> and <i>Salmonella</i> in cheese and eggs) | 61 |
| Pollutants like mercury and dioxins | 59 |
| GMO | 58 |
| Additives, preservatives, flavourings (drinks) | 57 |
| The welfare of farmed animals | 55 |
| Mad cow disease (BSE) | 53 |
| Chemical substances formed during cooking | 49 |
| To put on weight | 48 |
| Having allergic reaction | 43 |
| Unhygienic conditions in food handling at home | 32 |

*The index was calculated by attributing +100 to "very worried responses", +67 to "fairly worried" responses, +33 to "not very worried" responses and 0 to "not at all worried responses".

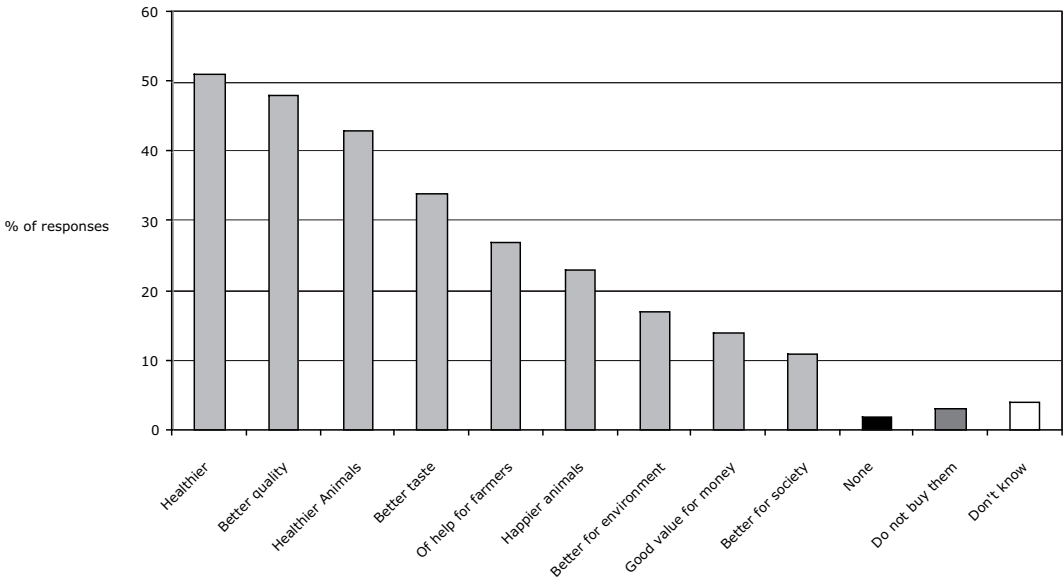
and such a system will be based on standardised scientific indicators (EC, 2006c). Labelling referring to animal welfare should be based as much as possible on measurable and replicable animal welfare indicators and not just on the production system used (European Economic and Social Committee, 2007). There is a large consensus among scientists that any animal welfare assessment should include both the so called "performance criteria" (i.e. animal-centered outcomes) and "design criteria" (measures of the system relevant for welfare such as space, climate, social features etc...). Although animal criteria should be theoretically preferable since they make it possible to measure the actual condition of the animals, design criteria are easier to audit and are therefore usually favoured in quality assurance schemes (Main *et al.*, 2001).

Many labels are currently present on the

majority of food products and they are sometimes competing or even confusing, providing information on ingredients, nutritional attributes, geographical area of production and compliance with different schemes. In some cases the food-labels present animal welfare claims which are for the most part secondary to a more general concern for communicating quality.

At a European market level the main voluntary labels based on higher animal welfare standards and clearly indicating a predominant role of animal welfare are: the RSPCA Freedom Food Scheme, Swedish Meats, Peter's Farm and Thierry Schweitzer (Roe, 2006). Such organisations/producers have detailed internet sites; in the case of Peter's Farm products (which are sold also in Italy) a link enables consumers to watch the live broadcast of veal to personally verify animal conditions.

Figure 4. Reasons for buying animal friendly products (EC, 2007a).



An effective animal-friendly label should allow consumers to easily differentiate between products obtained with basic mandatory animal welfare standards and those with higher standards. In this framework it is worth noting that, although the majority of EU citizens (55%) state that animal welfare/protection does not receive enough importance in the agricultural policies of their country, consumers' knowledge on farmed animal legislation is not sufficient: only 44% of respondents believe that legislation to promote protection of farmed animals exists. Among Europeans only one third of Italians believe that such legislation exists (EC, 2005a).

Based on the identity between "good rearing system" and "high animal welfare level," only eggs and organic products have mandatory labels clearly indicating either the conditions under which hens are raised (cages, free range etc.) or, in the case of or-

ganically-farmed animals, compliance with a rearing method that includes high animal welfare standards. It is worth noting that the egg labelling systems was originally voluntary (1995) and then became mandatory in 2004 (EC Reg. 2052/2003). This fact could indicate a positive impact of "welfare labelling" on the product market (FAWC, 2006).

With respect to the Italian market, in spite of the efforts of some large-scale retailers, welfare-related claims generally fall, as above stated, within wider schemes aimed at achieving and supporting an overall higher quality level of products (Regione Emilia Romagna, 2006).

As an example among many others, "dolphin safe tuna" or tuna from non-endangered tuna varieties, available on Italian market, are actually related to a wider scheme for sustainable fishing practices and do not necessarily refer to animal welfare-related aspects.

Italian swine breeders believe that “animal friendly” labels can be of help for pork marketing and they are generally available to participate in programmes that promote high animal welfare standards (Ferrari and Menghi, 2006).

To promote conscious purchasing of meat products, the use of labels indicating, among other things, stunning (presence or absence in ritual slaughtering) and killing methods, as well as the possibility of recognizing meat from hunting is advisable (Felicetti and Masciotta, 2003).

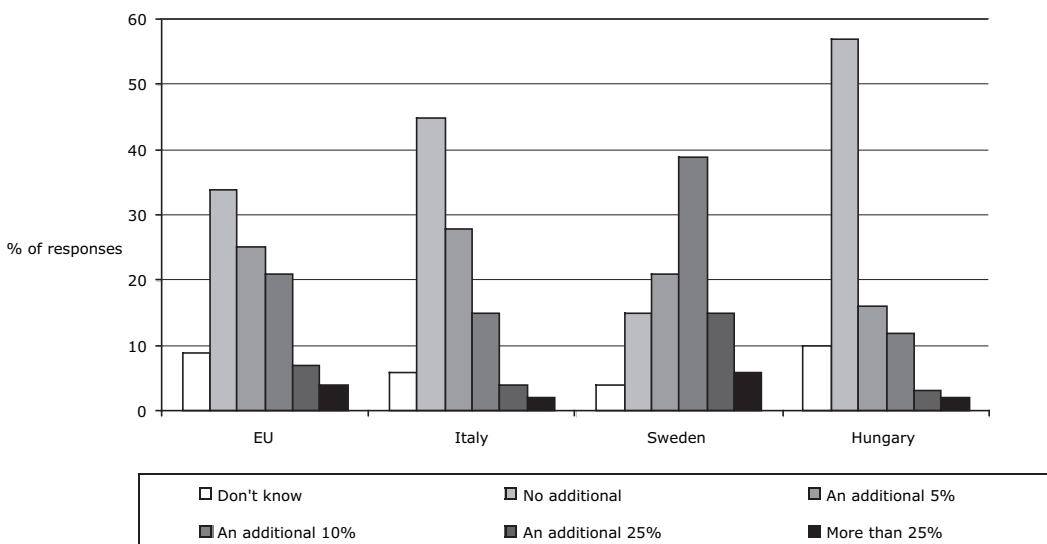
Consumer willingness to pay more for animal friendly products

In the face-to-face survey (EC, 2005a), consumers were asked about their willingness to pay an increase in price for eggs sourced from an animal welfare friendly production system. They were also asked about the extent of the price increase which they believe to be acceptable. On the whole, a majority

(57%) of citizens of the European Union state that they are willing to pay more. A quarter of respondents state that they can accept a 5% price increase, 21% an increase of 10%, and 11% are prepared to accept an increase of 25% or more (Figure 5). Deep differences exist among Member States: the majority of Scandinavians and Dutch (70%) is willing to accept a price increase while more than one half of Hungarians, Slovaks and Lithuanians is not. A price increase in eggs is acceptable for about one half of Italian purchasers (49%). In any case such increase has generally a limited extent (5-10%) depending on the standard of living of different countries. People who have never visited a farm are less prone to accept the price increase (EC, 2005a).

From a general standpoint it should be noted that eggs are a cheap animal protein source for humans and that a survey questionnaire expresses the declared preferences of consumers which might not exactly correspond to the revealed ones (i.e. real market behaviour).

Figure 5. Willingness of consumer to pay a higher price for eggs sourced from an animal friendly production system (EC, 2005a).



Although consumer willingness to pay more for food deriving from higher animal welfare standards is a crucial issue within the framework of the development of animal friendly products, an exhaustive analysis of the economic and political impact on production and market systems of such goods is beyond the scope of the present paper. For a deeper understanding of these aspects, reference can be made to Harper and Henson (2001), McInerney (2004) and Appleby (2005).

Conclusions

Although the majority of European citizens share generally similar opinions in terms of animal welfare attributes (space availability, humane transports etc...) and target species needing a higher welfare lev-

el (avian species followed by others), deep differences tied to the country of origin are present with respect to some relevant and related aspects such as the direct knowledge of animal farming conditions and the willingness of the purchaser to pay more for a improved animal welfare.

In the light of the present, and in some cases confused, scenario concerning animal friendly labelled products, a clear European label, identifying the level of welfare applied and based on a scientific approach, could represent an effective marketing tool according to EU recommendations.

Considering that consumers seem to have a good perception of a link between food quality, food safety and animal welfare as links in the same chain ("from farm to fork"), a reasonable margin of improvement of animal welfare level *per se* could be envisaged.

REFERENCES

- Appleby, M.C., 2005. The relationship between food prices and animal welfare. *J. Anim. Sci.* 83(Suppl.):E9–E12.
- European Commission, 2005a. Attitudes of consumers towards the welfare of farmed animals. Home page address: http://ec.europa.eu/food/animal/welfare/euro_barometer25_en.pdf
- European Commission, 2005b. Summary of response statistics for public internet consultation on the protection and welfare of farmed animals. Home page address: http://ec.europa.eu/food/animal/welfare/sum_response_stats_en.pdf
- European Commission, 2006a. Communication from the Commission to the European Parliament and the Council on a Community Action Plan on the Protection and Welfare of Animals 2006-2010. Home page address: http://ec.europa.eu/food/animal/welfare/actionplan/actionplan_en.htm
- European Commission, 2006b. Risk issues. Executive Summary on Food Safety. Home page address: http://www.efsa.europa.eu/cs/BlobServer/General/comm_report_eurobarometer_en2,3.pdf
- European Commission, 2006c. Commission Working Document on a Community Action Plan on the protection and Welfare of Animals 2006-2010. Home page address: http://ec.europa.eu/food/animal/welfare/work_doc_strategic_basis230106_en.pdf
- European Commission, 2007a. Attitudes of EU citizens towards Animal Welfare. Home page address: http://ec.europa.eu/food/animal/welfare/survey/sp_barometer_aw_en.pdf
- European Commission, 2007b. Attitudes of consumers towards the welfare of farmed animals. Home page address: http://ec.europa.eu/food/animal/welfare/survey/sp_barometer_fa_en.pdf
- European Economic and Social Committee, 2007. Opinion of the European Economic and Social Committee on Animal Welfare. Home page address: http://eescopinions.eesc.europa.eu/viewdoc.aspx?doc=//esppub1/esp_public/ces/nat/nat342/en/ces421-2007_ac_en.doc

- FAWC, 2006. Report on Welfare Labelling.. Home page address: <http://www.fawc.org.uk/reports/welfar/Elabel-0606.pdf>
- Felicetti, G, Masciotta, P., 2003. L'etichettatura dei prodotti di origine animale. Codici facoltativi, evoluzione delle norme ed una proposta. Comitato Bioetico Ordine dei Medici Veterinari della Provincia di Roma. La macellazione. Edizioni Medico Scientifiche, Torino, Italy.
- Ferrari, P., Menghi, A., 2006. L'opinione degli allevatori sul benessere dei suini e sulla qualità delle carni. *Large Anim. Rev.* 12:34-35.
- Harper, G.C., Henson, S.J., 2001. The level of consumer concern about animal welfare. *The Comparative Report*. Ed. University of Reading., Reading, UK.
- Helesky, C.R., Mertig, A.G., Zanella, A.J., 2004. Assessing attitudes toward farm animal welfare: A national survey of animal science faculty members. *J. Anim. Sci.* 82:2806-2814.
- Main, D.C., Webster, A.J.F., Green, L.E., 2001. Animal Welfare Assessment in Farm Assurance Schemes. *Acta Agric. Scand. A* 51(Suppl.30):108-113.
- McInerney, J., 2004. Animal welfare, economics and policy. Report prepared for DEFRA. Home page address: <http://statistics.defra.gov.uk/esg/reports/animalwelfare.pdf>
- Miele, M., Parisi, V., 2001. Consumer Concerns about Animal Welfare and Food Choice. Italian Survey Report. University of Pisa. Home page address: http://ec.europa.eu/food/animal/welfare/survey/it_fair_nat_survey_en.pdf
- Regione Emilia Romagna, 2006. Sugli scaffali della distribuzione pochi prodotti con l'etichetta. *I Supplementi di Agricoltura* 29:13-16.
- Roe, E., 2006. Quality Assurance Scheme Labels supporting welfare-claims. *Welfare Quality Summary Papers 2006*. Home page address: [http://www.welfarequality. Net/everyone/34596](http://www.welfarequality.Net/everyone/34596)

