

# CONSUMPTION OF WELFARE-FRIENDLY FOOD PRODUCTS IN GREAT BRITAIN, ITALY AND SWEDEN, AND HOW IT MAY BE INFLUENCED BY CONSUMER ATTITUDES TO, AND BEHAVIOUR TOWARDS, ANIMAL WELFARE ATTRIBUTES

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## Introduction

There is increasing concern amongst consumers regarding the quality and safety of the food that they buy. Some of this is the result of food scares such as bovine spongiform encephalopathy/variant Creutzfeldt-Jakob disease (BSE), foot and mouth disease, salmonella and, more recently, avian influenza. These phenomena, together with ethical concerns, cause consumers to reflect upon the welfare of the farm animals from which the food they consume is produced.

The issue of animal welfare is increasingly being seen as important throughout the developed world, not least within the European Union (EU). Concern about the welfare of farm animals within the EU, shown by various surveys (e.g. European Commission 2007; Kjaernes et al. 2007), has been reflected by the increasing amount of farm animal welfare legislation and policy initiatives (see, for example, CEC, 2006).

The ethical debate concerning the interrelationships between man and animals, the use of animals, and the obligations that man may have towards them, has been ongoing since at least the writings of philosophers such as Aristotle, through those such as Jeremy Bentham (1789) to those more recently in the 20<sup>th</sup> and 21<sup>st</sup> centuries such as Peter Carruthers (1992), Tom Regan (1985), Bernard Rollin (1992), Peter Singer (1975) and others. Degrazia (1999) provides a useful review of the recent debate, whilst Bennett et al. (2002) provides a very brief history within an introductory page. The debate has focused on the moral standing of animals, whether and to what extent they might have (or be accorded) rights, and whether their suffering should be taken into account within a societal value framework. A pluralistic approach, incorporating a wide range of considerations from different perspectives has emerged, including reference to animal welfare science and questions concerning animal cognition and sentience (Fraser 2000).

The principles of utilitarianism are of particular relevance in this regard. Utilitarianism comes in many forms and not just 'the greatest good to the greatest number'. It forms a basis for ethical argument used by many writers, at least since Bentham (1789) and, indeed, underpins some social science disciplines, notably economics. The famous 'equal consideration of interests' (Singer 1989) is based on

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the utilitarian ethic strengthened by the scientific work on sentience by scientists such as Rollin (1995) and Dawkins (1980 & 1998) amongst others.

Here, the utilitarian principle is considered further in relation to consumer information on animal welfare. In understanding consumer behaviour, economists have put forward a simple model whereby consumers can be thought of as trying to maximise their utility from consumption. They choose to consume food and other products on the basis of the utility that they derive (or expect to derive) from that consumption, balanced against the 'disutility' of parting with their money in order to obtain those products through the market system (e.g. Lancaster 1966; Bennett 1997). Within this model, animal welfare can be seen as an unsought 'externality' of the production and consumption of animal products (meat, milk, eggs etc.) (Bennett 1995). The form that this externality takes depends on the perceptions of consumers. Many may experience a cognitive dissonance (Reber 1984) that their consumption of animal products is associated with animal suffering, which for them may be a source of disutility and may reduce the satisfaction (net utility) that they derive from consuming animal products. Thus, their welfare is reduced. For many, this provides sufficient disincentive to the consumption of animal products that they cease such consumption altogether and become vegetarian or vegan - 5-7% of adults in the UK, 3-4% of adults in Sweden and some 8% in Italy (Vegetarian Society 2006; Szatek 2003; Miele et al. 2004).

The utilitarian argument brings into question the merits of providing greater information to consumers about animal production methods, a policy suggested by many policy makers within the EU as a means of generating 'demand pull' to improve the welfare of animals. Consumers may be blissfully unaware of the suffering of animals associated with the products they consume and derive high levels of utility from their consumption. Information on production methods may reduce consumers' utility (for the reasons discussed above) and thus their overall welfare. From a human utilitarian position this is not desirable, at least in the short run. In the longer term, the argument is that with appropriate information on animal welfare, consumers can then demand the products with the animal welfare attributes that they want and so better satisfy their preferences and improve their welfare. In addition, if animal utility also becomes part of the equation (either in its own right or as a function of human utility), this further strengthens the argument for improved consumer information on animal welfare and improved consumer choice (see Bennett 1995 for a more detailed theoretical exposition).

However, this argument assumes that (i) appropriate information on animal welfare is provided to consumers and (ii) the market mechanism works satisfactorily to service consumer preferences for animal welfare. Transaction costs theory (Coase, 1984) suggests that if the costs of sourcing animal welfare friendly food products are high (i.e. the time and travel costs involved in searching for and finding such products in food stores), then consumers will be less likely to buy them, since these costs are in addition to the cost of the products themselves.

This paper uses data collected in a Computer Assisted Telephone Interview survey of approximately 1500 consumers to further explore the above questions in each of seven European countries as part of the EU-funded Welfare Quality research project to ascertain consumer attitudes to, and behaviour regarding, the animal welfare attributes of food in three of these countries: Italy, Great Britain (GB) and Sweden (Kjaernes et al. 2007). The survey interviews, which lasted some 20 minutes, were

carried out by TNS Global between 12-27 September 2005 using Random Digit Dialling. The interviewees were selected at random from people aged 18-80 using the 'first birthday rule' for the household. For each country, the data obtained were weighted by region, sex, age, household and population size according to official national census statistics. The questionnaire, which contained no open-ended questions, was drawn up following a series of focus groups and then trialled in a pilot survey. Telephone interviews were chosen for cost and time reasons over face-to-face interviews. However, the disadvantage of telephone interviews is that they have to be fairly short and that there is little chance of spontaneity in answering (Kjaernes et al. 2007). As the response rate varied only marginally from country to country, and question to question, and the variation was too small to affect the overall results, the responses to each question are expressed in this paper on a percentage basis for comparative purposes.

To test for the statistical significance of differences between the results for the different countries, log linear models were created using the statistical package SAS, and Chi-squared tests performed, the significance of which are shown alongside the results tables, where appropriate, later in the paper. These not only tested the difference between the different countries for each question but, also, for the questions where the answers were on a sliding scale, a proportional odds version of the model was used to examine if there was any difference between the countries along the whole trend of the scale. As is usual in scientific practice, \*\*\* are listed where the difference is likely not to be by chance is less than 0.1%, \*\* where this difference is likely to be between 0.1% and 1%, and \* where this difference is likely to be between 1% and 5%.

### **Current Consumption of Livestock Products**

In order to compare and discuss the results of the survey, it is useful to examine the actual differences in consumption of livestock products across the three study countries at around the time of the survey. Table 1 illustrates these levels and changes in consumption of livestock products per capita. The first thing of note is the high overall consumption of meat in Italy with an average consumption per person per year of over 73 kg. Average consumption is next highest in the UK with 65.4 kg, followed by Sweden with 39.2 kg. However, the average consumption in Sweden has been rising considerably, thought to be due to an increase in cheaper imported meats (Pettersson and Bergman 2004). The three countries also show very different trends. In the UK, it is the consumption of poultry that is very high and this has increased substantially over the last 8 years. In Sweden, beef consumption has doubled, as a result of cheap beef imports. Consumption of meat in Italy has remained much more constant, although a slight increase in pork, and a reduction in beef is shown. Egg consumption in Italy is higher than the other two countries but, in all countries, it has been fairly static. Milk consumption has decreased in all three countries, although average per capita consumption is much higher in Sweden and the UK than in Italy.

The figures in Table 1 reflect the results from our survey, which show that the British eat poultry the most frequently (82% more than weekly) followed by the Italians (76%) and then the Swedes (51%). On the other hand, the Italians and Swedes eat pork more frequently than the British and many more Italians eat beef at least once a week compared to the other consumers.

**Table 1. Meat and livestock product consumption per capita in Sweden, Italy and GB, 1994-2002**

	Beef kg/cap	Pork kg/cap	Poultry kg/cap	Milk l/cap	Eggs kg/cap
Sweden					
1994	6.8	12.0	7.7	146.0	10.8
1996	8.2	13.3	8.1	144.3	10.9
1998	9.0	15.7	8.9	142.0	11.0
2000	10.8	15.5	11.8	138.7	10.4
2002	11.0	14.4	13.8	141.5	9.1
Italy					
1994	25.9	27.3	18.8	74.4	na
1996	23.6	28.1	19.3	76.8	13.9
1998	24.4	28.5	19.3	na	14.0
2000	24.5	30.1	18.5	64.5	13.8
2002	24.0	na	19.1	na	14.0
UK					
1994	16.7	19.9	25.2	124.7	10.9
1996	12.7	19.5	27.2	123.0	10.8
1998	15.0	20.1	28.2	120.3	10.6
2000	16.0	19.8	29.0	118.7	10.6
2002	16.7	20.0	28.7	na	12.5

Source: Bennett and Yee (2004); The Dairy Council (2002); Miele et al. (2004); Pettersson and Bergman (2004).

In all study countries, figures on how much welfare-friendly produce is purchased are difficult to source, as few products are labeled specifically with animal welfare standards. In GB, there is really only one specific animal welfare label, which is the RSPCA Freedom Foods but it does not appear to be widely recognized or available, and accounts for a very small proportion of animal product sales. The Freedom Foods Scheme supplies around 2% of the livestock product market in the UK and free-range eggs account for 15% or so of egg consumption in the UK, whilst barn/perchery eggs constitute around a further 5% (Bennett and Yee 2004; Mayfield et al. 2005). In Sweden, the main 'ecological' labels, Krav and Swedish Seal, have animal welfare components but are mainly about the environment and healthiness of the food. Similarly, in Italy, there has been an increase in the range of food with animal welfare labels but the labels do not refer specifically to animal welfare but type of production system (i.e. outdoor or extensive methods of production) (Miele et al. 2004). However, in all three countries, there has been an increase in the consumption of organic livestock products, for which animal welfare concerns may have a part to play. In Sweden, this is particularly so in the sales of organic beef, organic pork and organic eggs. In GB, it is organic eggs, organic poultry and organic dairy products and, in Italy, organic eggs, organic dairy and organic beef products. In GB, although the size of the market for organic food products is quite small, at some 1.3% of all food products sold (Soil Association 2006) there has, nevertheless, been significant growth in the aggregate value of the organic market in recent years. Within the EU, the largest current market for organic food is Germany followed by Italy and the UK (Soil Association 2006). However, these are all increases from very low levels and still only account for a few percent of the total meat and livestock produce consumed. Evidence from academic research indicates that animal welfare is only one of the reasons why people purchase organic food. For example, in Sweden, the reasons given for buying organic food rank animal welfare behind health and environmental concerns (Pettersson and Bergman 2004).

## Results

In the rest of this paper, we examine the results from our survey which looked at the attitudes and behaviour of consumers towards animal welfare.

### The importance of farm animal welfare to consumers

Table 2 shows that most consumers in each study country stated that animal welfare is very important to them. Taking those who responded with a 4 or 5 to this question together, we can see an overwhelming majority of consumers stated their belief of the importance of animal welfare.

**Table 2. How important to you in general is farm animal welfare?**

Rank	1 (Not at all)	2	3	4	5 (Very)	$\chi^2$
	%	%	%	%	%	
Italy	2	2	9	10	77	88.05***
Great Britain	4	3	20	23	50	23.33***
Sweden	1	3	13	27	56	

The chi-squared tests results indicate the level of significant difference (i.e. to what probability level there is likely to be a difference between the trends in the three countries) where one country (in this case Sweden) is taken as the benchmark. They show that the difference between Sweden and the other two countries is very significant at the \*\*\* level. Given the previous results, it is then interesting to see (Table 3), that only about one half of those who think animal welfare very important, would actually always think about farm animal welfare when they are buying meat. This provides some support to the theory mentioned above that consumers who care about animal welfare suffer cognitive dissonance from livestock product consumption and so may prefer not to think about welfare when they are buying meat.

**Table 3. How often do you think of farm animal welfare when buying meat?**

Rank	1 (Never)	2	3	4	5 (Always)	$\chi^2$
	%	%	%	%	%	
Italy	16	12	18	13	41	5.36*
Great Britain	20	13	28	16	23	42.12**
Sweden	10	11	27	28	25	

A series of questions regarding how much public benefit will be provided by improved animal welfare showed that consumers overwhelmingly believed that good animal welfare will improve the taste of meat, increase cows' milk yield, benefit the reputation of the consumers' country, improve human health and not cost more to apply than existing standards and so not put farmers out of business. Italian consumers were shown to be considerably more positive about the public benefits of good animal welfare than those in either Sweden or GB. This result provides important confirmation that animal welfare friendly products have a number of attributes (Lancaster 1966) in the minds of consumers with benefits beyond merely increasing the utility (in the utilitarian sense) of animals.

### **Attitudes of consumers to animals in general**

The questionnaire enabled the exploration of the general attitude of consumers to animals through questions regarding issues such as whether animals feel pain, and whether it is acceptable to kill animals for food. The answers show significant national differences in such attitudes, particularly with regard to hunting.

In response to the question ‘Can animals feel pain?’, almost all the respondents agreed. Most respondents also agreed that it was acceptable to kill farm animals for food, the largest majority coming from Sweden. Those who disagreed with the proposition were 6% in Italy, 6% in GB and 3% in Sweden which correlates well with the number of vegetarians and vegans in these countries. However, regarding the acceptability of hunting game animals for food, in Italy, 54% of consumers believed that this was not acceptable, and only 14% believed that it was acceptable. In GB, the result was more evenly balanced with 28% believing that the proposition was unacceptable and 26% believing the opposite. However, in Sweden, most consumers were strongly in favour of the proposition that hunting of game animals for food is acceptable (63%) with only a few (4%) opposed. This may be because in Sweden the hunting of game animals is not only a sport but is essential for food acquisition purposes. This is not the case in GB or Italy, where hunting is almost entirely carried out for sport or public health reasons. Furthermore, Sweden has large wild game animals such as elk (*Alces alces*) of which up to 100,000 are hunted and killed each year (Government Offices of Sweden 2006). These are not present in GB or Italy.

There was general agreement amongst consumers in the study countries that it is wrong to eat food from animals that have not had a ‘good life’. (What constitutes a good life for animals was not explored in any detail, but there are clear links here to utilitarian ethics.) This view found particular favour with consumers in Italy (57%) but rather less so in GB (42%) and Sweden (37%). These results, while lower in all three countries than the number of respondents answering a similar question on how important, in general, animal welfare is to consumers (Table 2), nonetheless can be seen as lending support to the underlying hypothesis that good standards of farm animal welfare are important to consumers.

Consumers were then asked whether, when eating meat, they did not like to think of it coming from a live animal. Not surprisingly perhaps, as implied by comments made elsewhere, many Swedes appeared to be not at all concerned by this factor (71%). British consumers were rather ambivalent with 40% neither strongly agreeing nor disagreeing although a significant proportion (21%) said that they did agree and disliked thinking of the meat they were eating coming from a living animal. Italian consumers were rather more polarised in their views with sizeable groups appearing to have little problem with thinking of meat as deriving from a living animal (45%) but with a large minority (28%) who were concerned. Again, this question lends a level of support to the theory that (some) consumers experience cognitive dissonance from meat consumption due to their concerns about animal welfare.

### **Consumers’ attitudes to different farming methods.**

Consumers were asked how they felt about different farming methods. The survey shows empirical evidence that consumers do distinguish between different farming

systems. One such example shows in the stated preference for free-range hen eggs. When consumers were asked about their preferred type of hen egg, most of those in GB (71%) and Sweden (65%) said that they usually chose free-range while 47% of Italian consumers stated that free-range was their first choice. These results could also be interpreted as evidence that consumer preference is for hens to spend at least part of the year outdoors or, at the least, to be able to roam free from constraint. However, it is interesting that the high proportion of those who state they usually buy free-range eggs is not reflected in the national statistics of any of these three countries of the proportion of free-range eggs actually purchased. In some cases, this may be more a reflection of what consumers feel they 'ought' to be buying although, prior to compulsory labelling of cage eggs within the EU, it was clear that many consumers thought they were buying free-range eggs when they were not and, since this labelling, the actual consumption of free-range eggs has increased substantially in the UK (by around 100% since 1998 (Defra 2007)).

The treatment of hens (Table 4) was regarded as very important by the majority of consumers in all countries, with the highest majority being in Italy (77%), followed by GB (64%) and Sweden (59%); these national differences were significant at the \*\* level.

**Table 4. How important is the treatment of hens and beef cattle?**

	Hens			$\chi^2$	Beef cattle			$\chi^2$
	Very %	Fairly %	Not %		Very %	Fairly %	Not %	
Italy	77	19	4	9.63**	79	17	4	12.51**
Great Britain	64	27	9	2.68	69	24	7	3.65
Sweden	59	34	7		71	26	3	

The treatment of the animal (see Table 4) with regards to beef cattle, was considered very important by 79% of the Italian respondents, 69% of the GB respondents and 71% of the Swedish respondents and these national differences were significant at the \*\* level. The slaughtering methods were also considered to be very important by the majority although these majorities were smaller than those considering general treatment i.e. Italians 62%, British 59% and Swedish 51%. The question as to whether it is important to raise the animals outdoors for part of the year was seen by more in Italy to be very important (78%), but less in GB (57%) and Sweden (47%).

We also asked consumers how good they considered welfare conditions to be in their own country for chickens, dairy cows and pigs (Table 5) and consumers in all three countries considered the welfare conditions of hens to be the poorest. Swedish consumers were the least negative which may be a reflection of the overall general belief and trust they have in the standards existing in their country across all farming systems. British consumers were the least positive about welfare conditions for hens. However, the results are reversed for pigs, where British consumers were more positive about pig welfare than consumers in the other countries. These results may reflect the negative influence on public opinion of animal protection campaigners (such as Compassion in World Farming) in the instance of both battery and broiler chickens and the positive influence of the sight increasingly seen of pigs raised outdoors. Italian consumers were the most negative about welfare conditions for

dairy cows and pigs. When these results were subjected to Chi-squared tests, only the opinions on the welfare of dairy cows showed any statistically significant differences between countries, with Italian and British consumers shown to be significantly more negative in their response at the \*\* level.

**Table 5. How good do you think welfare conditions are for chickens, dairy cows and pigs?**

	Chickens			Dairy cows			Pigs		
	2 (Poor) %	3 %	4 (Good) %	2 (Poor) %	3 %	4 (Good) %	2 (Poor) %	3 %	4 (Good) %
Italy	49	29	22	16	34	50	32	41	28
Great Britain	56	27	18	12	36	52	22	41	37
Sweden	40	40	20	5	23	72	15	45	41

Most consumers surveyed in Italy, GB and Sweden believed standards of animal welfare had improved in the previous 10 years, particularly Swedish consumers. As Table 6 shows, only a small percentage believed that standards had fallen during this period.

**Table 6. Do you think that farm animal welfare has improved, is about the same or got worse over the last 10 years?**

	Improved %	Same %	Worse %
Italy	59	26	15
Great Britain	55	31	14
Sweden	68	18	13

In terms of the quality of animal transport and the treatment of animals at slaughter, Swedish consumers were much more positive than those in GB and Italy. The Italians were the most negative, with 41% of responses saying they thought the methods of transportation very poor, and 33% of them thinking the treatment of animals at the slaughterhouses very poor. This compares to 21% (GB) and 6% (Sweden) for slaughtering conditions and 24% (GB) and 12% (Sweden) for transport methods. This latter result is statistically significant at the \*\*\* level (Table 7).

**Table 7. What do you think of the methods of transportation used in your country?**

	Poor %	2 %	3 %	4 %	Good %	$\chi^2$
Italy	41	23	24	7	4	23.3***
Great Britain	24	23	31	14	8	3.00
Sweden	12	22	41	21	5	

### Consumers' attitude to farm animal welfare-friendly products

Having established in a previous section that most consumers do not think about farm animal welfare when shopping, we shall now consider where consumers actually purchase their meat and livestock products. There were some big contrasts between the different countries. While most consumers in Italy and GB purchased meat from large supermarkets, more Swedish consumers split their purchases between large

supermarkets and small supermarkets or convenience stores. Very little meat in Sweden was bought from the butcher, but sizeable minorities of Italians and British did buy meat from the butcher, especially beef (48% and 25% respectively). Consumers were asked whether it was too time consuming a task to look for animal welfare-friendly products when food shopping. Opinion was fairly evenly divided with slightly more agreeing, or tending to agree, that it was too time consuming in Italy and Sweden, and with GB responding in the opposite fashion with slightly more disagreeing or tending to disagree.

Lastly in this set of questions, consumers were asked if they could easily find animal welfare-friendly products where they usually shop. Results were remarkably consistent across the three countries with almost equal numbers in each country saying they either could find animal welfare-friendly products where they shop or that they could not. However, it is clear from these responses that a substantial proportion of consumers do have trouble finding animal welfare friendly food products and do face relatively high transaction costs in sourcing them.

#### **Sources of information about animal welfare used by consumers**

Many consumers do not feel that they are yet as well informed about animal welfare issues as they would wish to be, with marginally more disagreeing with the statement that they feel sufficiently informed than agreeing (Table 8).

**Table 8. I feel sufficiently well-informed about animal welfare.**

	2 (Disagree)	3	4 (Agree)
	%	%	%
Italy	44	24	31
Great Britain	39	26	35
Sweden	45	26	29

This leads to consideration of what sources or channels of information consumers might most readily use with respect to the animal welfare attributes of the food that they purchase.? The data collected from the survey showed that in each of Italy, GB and Sweden, the vast majority of consumers would use product labels as a primary source of information (over 90% in each country) if information were made available to them in that way, and that more than 80% of consumers would make use of in-store display information (Table 9). In addition, more than some 70% of consumers would use information in the mass media of newspapers, magazines or television.

Survey results suggested that rather fewer consumers would use the modern medium of the internet and website information, in a range between 32% (Sweden) and 42% (GB). It would appear that shoppers are more likely to seek product information at the point of sale at the retail outlet, or from the visual mass media rather than undertaking what might become a protracted electronic search for a particular product or products. But, with the perceived continuing growth in on-line shopping, it might be anticipated that there will, in future, be increasing use made of electronic media by consumers actively seeking information on specific animal welfare-friendly products, producers and retailers. There is some empirical evidence for this from the parallel series of focus groups conducted in Sweden, where

comments pertaining to product research as a determinant of subsequent purchasing behaviour, were made in the groups of consumers that included vegetarians or the more politically active.

**Table 9. What source of information might you ordinarily use to discover animal welfare information?**

	Product label		In-store information		Internet or website		Mass media	
	Yes %	No %	Yes %	No %	Yes %	No %	Yes %	No %
Italy	96	4	89	11	36	64	75	25
Great Britain	92	8	85	15	42	58	77	23
Sweden	91	9	84	16	32	68	69	31

The conclusion, therefore, is that an increasing number of consumers might be inclined to use product information on the welfare-friendliness of food products should such information be made freely available to them. However, the survey found that many consumers believe that their voice counts for very little as a consumer in seeking behavioural change (such as welfare labelling of food products) in producers or retailers (Table 10), and particularly so in Italy.

**Table 10. How much do you think your voice counts as a consumer?**

	Little	2	3	4	Greatly	$\chi^2$
	%	%	%	%	%	
Italy	41	19	22	7	11	6.13**
Great Britain	34	20	26	11	9	2.32
Sweden	18	26	35	17	4	

### **What type of information would consumers find most useful?**

If the hypothesis is accepted that consumers would use product information regarding welfare attributes of food products if it were provided, the next issues to be considered are likely to be what type of information consumers would find most useful and the quantity and quality of such information. Survey respondents were asked to rank in importance a number of possible types of information that might usefully be included on product labels. This information had to be ranked as either: 'very important'; 'fairly important'; or 'not important'. The types of information were: a simple welfare assurance mark; a welfare grading system; information on where the animal was kept and information on what the animal was given to eat.

### **Information on specific farming methods**

Consumers were questioned as to whether they considered it important to include information on where animals are kept. Most respondents, particularly those in Italy (80%), stated that it was very important and, in GB and Sweden where the majority was smaller (55% and 50%), a significant number of respondents considered it fairly important (32% and 39%). The number of respondents who thought it not important was consequently low. Similar results were seen in response to the question regarding the importance of what farm animals are fed except, perhaps, for Sweden where the

number of very important responses was lower and the not important responses slightly higher. The Swedish result can be explained, perhaps, by reference again to the previously discussed comments regarding the confidence Swedish consumers have in the welfare-friendly systems already employed by their farmers generally.

### **Welfare grading systems and food assurance marks**

The confidence of Swedish consumers in the quality and safety of food produced in their own country appears to be given further credence if the responses of surveyed consumers to questions regarding the inclusion of a simple welfare assurance mark and/or a welfare grading system on the product label, are considered (Table 11).

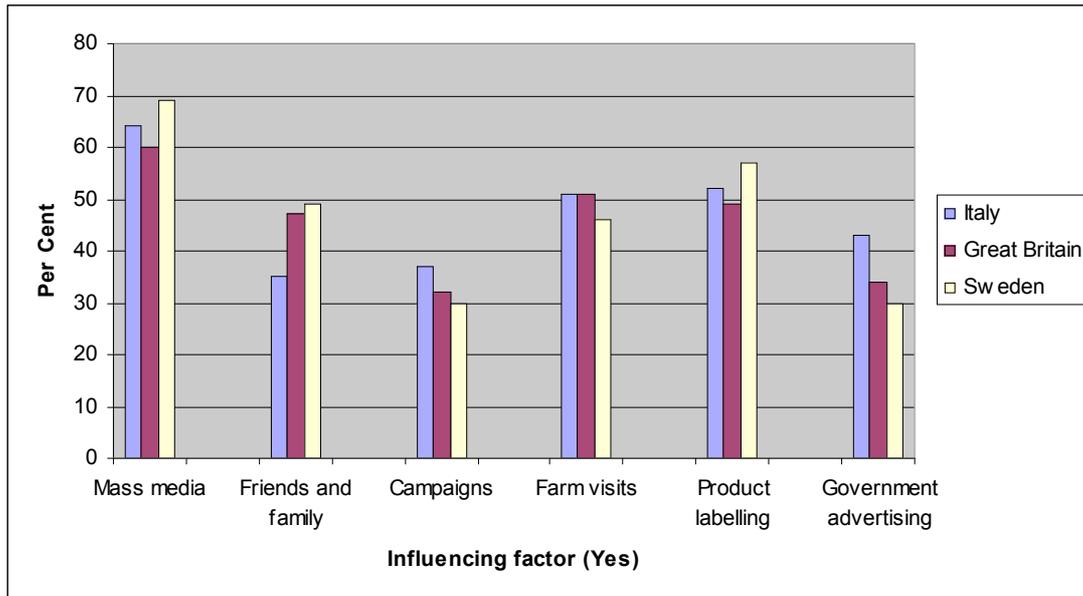
*Table 11. Consumer desire for welfare marks and grading systems.*

	Assurance mark			$\chi^2$	Grading system			$\chi^2$
	Importance (%)				Importance (%)			
	Very	Fairly	Not		Very	Fairly	Not	
Italy	72	21	7	21.59***	72	22	5	22.83***
Great Britain	63	28	9	11.71***	55	35	11	4.93*
Sweden	36	46	15		39	44	17	

Only 36% of Swedish respondents considered an assurance mark to be ‘very important’ with a further 39% believing a grading system to be ‘very important’. The number who stated that they believed these devices to be ‘not important’ were relatively large at 15% and 17% when compared to consumers in GB (9% and 11%) and particularly so when compared to Italian consumers (7% and 5%). Both the Italian and British consumers responses are significantly different to those from Sweden (at the \*\*\* level for both for the assurance mark, and the \*\*\* level for Italy and \* level for GB for the grading system). It would seem that consumers in Italy would prefer more assurance in the animal welfare-friendliness of the products they purchase through the adoption of welfare assurance and grading schemes than do either Swedish or British consumers. On the other hand, the Swedish results might be described as revealing a degree of complacency on the part of consumers or, at best, an over reliance and over confidence in the efficacy of existing production methods in Sweden.

### **Consumers and opinion influencing factors**

The survey discussed above sought to determine the factors that may influence consumers in forming or shaping their opinions and views on animal welfare issues. It might be anticipated that, with increasing urbanisation and its corollary of people’s decreasing direct involvement with farming and food production, consumers may be increasingly influenced by specific animal protectionist campaigns and interest groups. The survey presented the sample of consumers with a series of dichotomous choice questions to establish whether in recent years their views had been modified or influenced by the opinions and views expounded by: the mass media; friends and family; animal protectionist campaigners; farmers themselves (by way of farm visiting); product labelling and information; and government advertising or information campaigns. The responses received to the six questions are shown graphically in Figure 1.

**Figure 1. Animal welfare and consumer influencing factors**

The results may be interpreted overall as a measure of how trusting, or otherwise, consumers in the three countries were of the various influencing information sources. It can be seen that Italian and British consumers are, perhaps, marginally more trusting of the arguments of animal protectionist campaigners and of their governments than are Swedish consumers. Additionally, British and Italian consumers appear to be slightly more amenable and positively influenced by the evidence presented to them by farmers when making farm visits. In contrast, Italian and British consumers are less trusting of the opinions broadcast by the mass media, by product labelling and, surprisingly, by their family and friends than are Swedish consumers.

There was general agreement amongst consumers in the three countries that consumers should be prepared to pay higher prices for food if that is necessary to ensure the improved standards of animal welfare in farming. A number of recent studies have found that most consumers have a willingness to pay for higher welfare friendly food products (e.g. Bennett & Blaney 2003).

## Discussion and Conclusions

The findings of the survey show that nearly all consumers in GB, Italy and Sweden are concerned about animal welfare. These relate to specific concerns such as where animals are kept and what they are fed, how they are transported and how they are treated at slaughter. Hen welfare was considered of particular importance.

Many consumers do not think about animal welfare when going food shopping and do not like to think that meat came from a live animal. This finding is consistent with the theory of cognitive dissonance and its effect on consumer utility applied to consumers purchasing livestock products and their concerns about animal welfare. A substantial proportion of consumers tried to buy welfare-friendly food products but many found sourcing such products difficult and felt they lacked appropriate information. This suggests that there is a variable, but generally low, availability of products in food stores that have clear animal welfare attributes and that associated

high transaction costs are a deterrent to the purchase of such products in the three study countries.

Consumers are generally in favour of welfare product labelling with an assurance scheme to signify the animal welfare provenance of meat and other animal products. Swedish consumers do not feel that this was as important as their GB and Italian counterparts, probably because they appeared to have more trust in their own farming systems. A significant proportion of consumers is also in favour of a welfare grading scheme. Most consumers had a positive willingness to pay for higher welfare friendly food products. These findings are generally consistent with those of a recent Eurobarometer survey of attitudes of EU citizens towards Animal Welfare (European Commission 2007).

The policy implications of these findings are clear. First, the market is failing to provide the choice of products that consumers want in terms of animal welfare attributes. Second, consumers do not have adequate information on which they can base their purchasing decisions to satisfy their preferences concerning the animal welfare provenance of the food they eat. There is a strong case, therefore, to be made in support of an animal welfare labelling scheme for food products within the EU (and possibly applied to third countries - although this could be challenged under current trade agreements through the World Trade Organisation). Such a scheme could greatly reduce the transaction costs associated with sourcing welfare-friendly products and allow consumers to better satisfy their preferences for food, not only increasing consumer welfare by thus doing, but also potentially improving producer returns (since consumers are willing to pay more for such products). This would enable the market to exert a demand pull that improves the welfare of farmed animals throughout the EU and in third countries (since informed consumers will seek out products with the relevant welfare labelling that they require). Policy makers within the EU are currently considering a unified animal welfare labelling scheme for the EU (CEC, 2006). It is important that such a scheme is appropriately designed and that social science-based studies, such as the one presented here, are used to inform it.

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