

Consumer perception of pig meat production

Animal welfare is an increasingly important factor in the purchasing decisions of consumers (Napolitano et al., 2010), sustained despite the prevailing recession (IGD, 2011). Recent surveys indicated almost half of UK consumers surveyed rated animal welfare as either 'very important' or 'extremely important' (IGD, 2011), whilst 76% (Defra, 2011) and 85% (Clonan et al., 2010) rated welfare as 'an important' issue. In fact, farm animal welfare was rated the single most important sustainability related food issue for British consumers (IGD, 2011; Defra, 2011), above health or safety concerns. Over 70% of U.S citizens surveyed also reported 'concern' for farm animal welfare (Norwood and Lusk, 2011a). Pigs were identified amongst the three animal systems most in need of animal welfare improvements by EU citizens (European Commission, 2005).

A previous study assessing public attitudes towards pig welfare in the UK (Holloway et al., 1999), showed a general lack of knowledge of pig production, with predominant and concurrent attitudes around efficiency of production and pig welfare. Eighty percent of respondents were prepared to pay more for bacon from alternative systems (indoor straw-court / outdoor bred / outdoor bred and fattened), equating to 30.5% of the price of a pack of bacon at that time. More recently, the RSPCA (2010) reported an increased spend of 64% on Freedom Food pre-packed pork products, compared with the previous year, reflecting increasing consumer demand. At the start of 2012, 80% of French survey respondents declared their concern with the way pigs are farmed in intensive systems and 21% were prepared to pay more for higher welfare pig meat (Ifop, 2012).

Consumer attitudes to housing conditions

Animal living conditions, particularly free-range systems and outdoor access, were valued 'very highly' by consumers (Norwood and Lusk, 2011b; Lagerkvist et al., 2006 and Verbeke et al., 2010). A survey by Norwood and Lusk (2011b) specifically designed to result in 'rational formation of preference'; indicated U.S. consumers were willing to pay almost twice as much for their meat when pigs were reared in open barns, pasture and organic systems. The negative impact of outdoor rearing on piglet survival was considered to be outweighed by the benefits of pasture access for piglets and sows (Norwood and Lusk, 2011b).

Outdoor access and litter bedding were more highly valued by consumers than any quality or health attributes of the meat (Verbeke et al., 2010). Units with fewer than 100 sows were viewed positively whilst units with more than 800 sows were viewed negatively; fully slatted flooring resulted in the strongest negative evaluation of pork production (Verbeke et al., 2010).

Swedish consumers were 'strongly opposed' to the 'fixation' (confinement) of sows (Lagerkvist et al., 2006), whilst more space and group housing were preferred over confinement and individual penning (Meuwissen et al., 2007). EU legislation enforcing the partial ban on the use of sow stalls (gestation crates) will come into force in 2013, whilst increasing global consumer awareness of the negative welfare impact of sow stalls is advancing their phase-out. The Australian pig industry is implementing a voluntary phase out of the system by 2017 (Australian Pork, 2010), whilst in the U.S, the largest pork producer Smithfield Food (supplying McDonalds and several retailers), is also phasing out sow stalls (Van Sickle, 2011) and several states have voted to ban the practice altogether (Tonsor et al., 2009; Prickett et al., 2010).

Consumer attitudes to mutilations

Castration of male pigs is used to mitigate the negative effects of boar taint. Consumers expressed concern over the pain and stress of surgical castration and overall favour the use of immunocastration in a 'willingness to pay' exercise (Lagerkvist et al 2006). Immunocastration did not present itself as a problem for Belgian consumer acceptance (Vanhonacker et al., 2009). The quality of meat from immunocastrates was no different to that of meat from either females or castrated males (Gispert et al., 2010; Morales et al., 2010) and there was better consumer acceptance of meat from immunocastrates than entire males (Font i Furnols et al., 2008). Consumers were also concerned about the practice of tail docking, but also about tail biting where tails were left intact

(Largerkvist et al, 2010), demonstrating the need for appropriate housing, environmental conditions and suitable contingency plans for tail biting, where tail docking is not practiced.

Quality, safety and animal welfare

Organic and free-range logos increase consumer expectation of quality and healthiness (Bredahl and Scholderer, 2004; Scholderer et al., 2004) and consumers often perceive meat produced in outdoor systems as safer and more nutritious (Edwards, 2005). Eighty five percent of German pork consumers said they considered organic production to be an important indicator of product safety (Becker et al., 2000), whilst extensive free-range production systems were also considered to positively affect meat quality when compared to intensive production; factors such as confinement, lower space allowances and poor treatment of the live pigs were thought to negatively influence quality (Bredahl and Poulsen, 2002).

References

- Australian Pork (2010) *World First for Australian Pork Producers*, Press Release, 17th November 2010, <http://www.australianpork.com.au/pages/images/World%20First%20for%20Australian%20Pork%20Producers.pdf>
- Becker, T., Benner, E. and Glitsch, K. (2000) Consumer Perception of Fresh Meat Quality in Germany, *British Food Journal*, **102**: 246-266
- Bredahl, L. and Poulsen, C. S. (2002) Perceptions of pork and modern pig breeding among Danish consumers, Project Paper no 01/02 ISSN 09072101, <https://pure.au.dk/ws/files/32302745/pp0102.pdf> (accessed 06/01/12)
- Bredahl, L. and Scholderer, J. (2004) *Marketing possibilities of new pork qualities*, In Proceedings of the European workshop of the EU 5th FP Action, Copenhagen, 2004, p205-215
- Clonan, A., Holdsworth, M. Swift, J. and Wilson, P. (2010) *UK Consumers Priorities for Sustainable Food Purchases*, paper presented to The 84th Annual Conference of the Agricultural Economics Society, Edinburgh, March, 2011
- DEFRA (2011) Attitudes and Behaviours around Sustainable Food Purchasing, Report SERP 1011/10, <http://www.defra.gov.uk/statistics/foodfarm/food/>
- Edwards, S. A. (2005) Product quality attributes associated with outdoor pig production, *Livestock Production Science*, **94**: 5-14
- European Commission (2005) Attitudes of Consumers Towards the Welfare of Farmed Animals, *Special Eurobarometer 229*, http://ec.europa.eu/food/animal/welfare/euro_barometer25_en.pdf
- Font i Furnols, M., Gispert, M., Guerro, L., Velarde, A., Tibau, J., Soler, J., Hortós, M., Garcia-Regueiro, J. A., Pérez, J., Suarez, P. and Oliver, M. A. (2008) Consumers' sensory acceptability of pork from immunocastrated male pigs, *Meat Science*, **80**: 1031-1018
- Gispert, M., Oliver, M. A., Velarde, A., Suarez, P., Pérez, J and Font i Furnols, M. (2010) Carcass and meat quality characteristics of immunocastrated male, surgically castrated male, entire male and female pigs, *Meat Science*, **85**: 664-670
- Holloway, L., Waran, N., and Austin, E.J. (1999) Assessing public attitudes towards pig welfare in the UK. *The Pig Journal* **44**: 38-51
- IFOP (2012) Sondage Ifop réalisé du 17 au 19 janvier 2012 sur un échantillon de 1002 personnes représentatif de la population française âgée de 18 ans et plus. La sensibilité des Français aux conditions d'élevage des animaux. Commissioned by Compassion in World Farming
- IGD (2011) *Shopper Attitudes to Animal welfare A Report for Freedom Food by IGD*, http://www.freedomfoodpublishing.co.uk/fairerlife/downloads/Shopper_Attitudes_Animal_Welfare_Report.pdf (accessed 07/12/11)
- Largerkvist, C. J., Carlsson, F. and Viske, D. (2006) Swedish Consumer Preferences for Animal Welfare and Biotech: A Choice Experiment, *AgBio Forum*, **9**: 51-58
- Meuwissen, M. P. M., Van Der Lans, A. A. and Huirne, R. B. M. (2007) Consumer preference for pork supply chain attributes, *Wageningen Journal of Life Sciences*, **54**: 293-312
- Morales, J., Gispert, M., Hortos, M., Perez, J., Suarez, P. and Pineiro, C. (2010) Evaluation of production performance and carcass quality characteristics of boars immunised against gonadotropin-releasing hormone (GnRH) compared with physically castrated male, entire male and female pigs, *Spanish Journal of Agricultural Research*, **8**: 599-606
- Napolitano, F., Girolami, A. and Braghieri, A. (2010) Consumer liking and willingness to pay for high welfare animal-based products, *Trends in Food Science and Technology*, **21**: 537-543
- Norwood, F. B. and Lusk, J. L. (2011a) *Compassion by the Pound: How Economics Can Inform The Farm Animal Welfare Debate*, Oxford: Oxford University Press
- Norwood, F. B. and Lusk, J. L. (2011b) A calibrated auction-conjoint valuation method: valuing pork and eggs produced under differing animal welfare conditions, *Journal of environmental Economics and Management*, **62**: 80-94
- Prickett, R. W., Norwood, F. B. and Lusk, J. L. (2010) Consumer preferences for farm animal welfare: results from a telephone survey of US households, *Animal Welfare*, **19**: 335-347
- RSPCA (2010) Record Sales of Freedom Food Pork, http://www.rspca.org.uk/freedomfood/newsandevents/newsarchive/-/article/FF_PR_SalesFFPork (Accessed 19/01/12)
- Scholderer, J., Bredahl, L. and Magnusson, M. (2004) Consumer expectations of the quality of pork produced in sustainable outdoor systems, Project Paper no. 03/04 ISSN 09072101, <https://pure.au.dk/portal/files/32304880/pp0304.pdf> (accessed 06/01/12)
- Tonsor, G. T., Olynk, N. and Wolf, C. (2009) Consumer Preferences for Animal Welfare Attributes: The Case of Gestration Crates, *Journal of Agriculture and Applied Economics*, **41**: 713-730
- Vanhonacker, F. Verbeke, W. and Tuytens, F. A. M. (2009) Belgian consumers' attitudes towards surgical castration and immunocastration of piglets, *Animal Welfare*, **18**: 371-380
- Van Sickle, J. (2011) *Smithfield Announces Gestration Crate Phase-Out*, National Hog Farmer, 9th December 2011, <http://nationalhogfarmer.com/animal-well-being/smithfield-announces-gestation-crate-phase-out>
- Verbeke, W., Pérez-Cueto, F. J. A., de Barcellos, M. D., Krystallis, A. and Grunert, K. G. (2010) European citizen and consumer attitudes and preferences regarding beef and pork, *Meat Science*, **84**: 284-292