

Consumer perception of broiler 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 indicate almost half of UK consumers surveyed rated animal welfare as either 'very important' or 'extremely important' (IGD, 2011), whilst 76% (Defra, 2011) and 85% (Conan 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 US citizens surveyed also reported 'concern' for farm animal welfare (Norwood and Lusk, 2011). Broilers were identified amongst the three animal systems most in need of animal welfare improvements by EU citizens (European Commission, 2005).

Consumer attitudes to broiler welfare

Space to move around and comfortable stocking densities were considered important for broiler welfare (Hall and Sandilands, 2007) with 40% of consumers willing to pay more¹ for sufficient space to allow for natural behaviours (IGD, 2011). Consumers associated space provision with lowered stress, improved cleanliness and ability to access food and water (Hall and Sandilands, 2007). One in six consumers surveyed was motivated by assurances such as natural light, slower growth rates (IGD, 2011) and good ventilation for enabling good welfare (Hall and Sandilands, 2007). However, most consumers had little prior knowledge of how broilers were reared and described their shock at discovering the reality (Hall and Sandilands, 2007).

A German study of chicken consumers found 59% expressed an interest in buying chicken from higher welfare systems with a further 82% of these willing to pay more for it (Makdisi and Marggraf, 2011a). In the UK, 46% of consumers claimed to buy free-range poultry 'always' or 'often' (Clonan et al., 2010).

Apparent willingness-to-pay for high welfare chicken meat does not always translate (Castellini et al., 2008) unlike for eggs, which are more expensive and may be double the price of standard produced chicken. Price differential is a major barrier to purchasing high welfare chicken meat with consumers primarily choosing on sell by date and appearance as a mark of quality and freshness (Hall and Sandilands, 2007). For consistent pro-welfare purchasing, price is often substituted for reduced quantity and there is a strong connection between bird welfare, human health, and product taste and quality (Vanhonacker and Verbeke, 2009); such consumers also believe they can make a difference to welfare through their purchasing choices. Most consumers believe better education of the issues and more informative labelling would make a positive impact on purchasing choices (Hall and Sandilands, 2007; Vanhonacker and Verbeke, 2009).

Quality, safety and welfare

Consumers strongly associate animal welfare with human health, product taste and quality (Harper and Henson, 2001; Grunert, 2005; Pasillé and Rushen, 2005; Vanhonacker and Verbeke, 2009). In one German study, 90% of those surveyed considered 'free-range' was an important indicator of meat safety (Becker et al., 2000). Trained panels were able to differentiate between standard, free range, corn-fed and organic chicken mostly on appearance and texture rather than odour and flavour (Lawlor et al., 2003; Jahan et al., 2005).

¹ The authors suggest that this apparently low number may stem from a consumer belief that this should happen anyway and that they should not incur an extra cost for such a provision

Slow growth strains have higher protein content in the muscle (Berri et al., 2005; Fanatico et al., 2007; Mikulski et al., 2011b). There is reduced water holding capacity however so greater drip loss (Castellini et al. 2008; Berri et al., 2005, Fanatico et al., 2007), which makes these strains better suited to the whole carcass than the portioned market (Berri et al., 2005).

Access outdoors increased protein and reduced fat in the breast of both fast and slow growing strains (Fanatico et al., 2007; Mikulski et al., 2011), whilst additional clover intake outdoors significantly increased the n3 polyunsaturated fatty acids, which play a large role in human and bird health (Ponte et al., 2008a). Overall acceptability (by a trained panel) of clover fed birds was raised compared to standard birds (Ponte et al., 2008b).

References

- Becker, T., Benner, E. and Glitsch, K. (2000) Consumer perception of fresh meat quality in Germany, *British Food Journal*, 3: 246-266
- Berri, C., Le Bihan-Duval, E., Baézaa, E., Chartrina, P., Picgirardb, L., Jehlc, N., Quentina, M., Picarda, M. and Duclosa, M.J. (2005) Further processing characteristics of breast and leg meat from fast-, medium- and slow-growing commercial chickens. *Animal Research* 54, 123–134.
- Castellini, C., Berri, C., Le Bien-Duval, E. and Martino, G. (2008) Qualitative attributes and consumer perception of organic and free-range poultry meat, *World's Poultry Science Journal*, 64: 500-512
- 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/>
- 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
- Fanatico, A.C., Pillai, P.B., Emmert, J.L. and Owens, C.M. (2007) Meat Quality of Slow- and Fast-Growing Chicken Genotypes Fed Low-Nutrient or Standard Diets and Raised Indoors or with Outdoor Access. *Poultry Science* 86, 2245–2255.
- Grunert, K. G. (2005) Food Quality and safety: consumer perception and demand, *European Review of Agricultural Economics*, 32: 369-391
- Hall, C. and Sandilands, V. (2007) Public attitudes to the welfare of broiler chickens, *Animal Welfare*, 16: 499-512
- Harper, G. C. and Henson, S. J. (2001) Consumer Concerns about Animal Welfare and the Impact on Food Choice – The Final Report, The University of Reading, United Kingdom. EU FAIR CT98-3678
- 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)
- Jahan, K., Paterson, A. and Piggott, J.R. (2005) Sensory quality in retailed organic, free range and corn-fed chicken breast. *Food Research International* 38, 495–503.
- Lawlor, J.B., Sheehan, E.M., Delahunty, C.M., Kerry, J.P. and Morrissey, P.A. (2003) Sensory characteristics and consumer preference for cooked chicken breasts from organic, corn-fed, free-range and conventionally reared animals. *International Journal of Poultry Science* 2(6), 409-416.
- Makdisi, F. and Marggraf, R. (2011) Consumer willingness to pay for farm animal welfare in Germany – the case of the broiler, paper presented to GEWISOLA 2011, Halle, September 2011
- Mikulski, D., Celej, J., Jankowski, J., Majewska, T. and Mikulska, M. (2011) Growth Performance, Carcass Traits and Meat Quality of Slower-growing and Fast-growing Chickens Raised with and without Outdoor Access, *Asian-Australasian Journal of Animal Science*, 24: 1407-1416
- 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. (2011) *Compassion by the Pound: How Economics Can Inform The Farm Animal Welfare Debate*, Oxford: Oxford University Press
- Pasillé, A. M. and Rushen, J. (2005) Food safety and environmental issues in animal welfare, *Rev. Sci. Tech. Off. Int. Epiz.* 24:757-766
- Ponte, P.I.P., Prates, J.A.M., Crespo, J.P., Crespo, D.G., Mourão, J.L., Alves, S.P., Bessa, R.J.B., Chaveiro-Soares, M.A., Gama, L.T., Ferreira, L.M.A. and Fontes, C.M.G.A. (2008a) Restricting the Intake of a Cereal-Based Feed in Free-Range-Pastured Poultry: Effects on Performance and Meat Quality. *Poultry Science* 87, 2032–2042.
- Ponte, P.I.P., Rosado, C.M.C., Crespo, J.P., Crespo, D.G., Moura, J.L., Chaveiro-Soares, M.A., Bra's, J.L.A., Mendes, I., Gama, L.T., Prates, J.A.M., Ferreira, L.M.A. and Fontes, C.M.G.A. (2008b) Pasture Intake Improves the Performance and Meat Sensory Attributes of Free-Range Broilers. *Poultry Science* 87, 71–79