

BIOLOGY TEXTS

Short Written Texts (Journals)

Morris, M.C. 'The Ethics and Politics of Animal Welfare in New Zealand: Broiler Chicken Production as a Case Study'. *Journal of Agricultural & Environmental Ethics*, Volume 22, Issue 1 (2009). Extracts from pp. 15-30.



THE ETHICS AND POLITICS OF ANIMAL WELFARE IN NEW ZEALAND: Broiler Chicken Production as a Case Study

Abstract

The cause of poor welfare in broilers is multifactorial, but genotype is a major contributor. Modern broilers have been bred for rapid growth, and this leads to increases in lameness and ascites as the legs and hearts of the heavier birds find it difficult to cope with the extra demands placed on them. Visible lameness indicative of pain is more common in New Zealand than in Europe. The government, however, insists that New Zealand welfare standards are higher than Europe. The government also appears to have a strong antipathy to those demanding better welfare for broilers. Reasons for this antipathy and disparities between government statements and research results are discussed. Government publications reveal that animal welfare is seen as a question of image for market access and that there is little concern with animal welfare as an ethical imperative for its own sake. The Animal Welfare Act in theory makes it an offence to ill-treat an animal, but in practice allows exemptions for industrial agriculture. The interests of animals may be better protected by an independent animal welfare advisory service.

This study aims to summarize welfare issues relevant to broiler chicken production, and relate these to the process of code development in New Zealand.

In particular, I wish to explore whether the process followed the stipulations of the Animal Welfare Act, and whether government regulators took into consideration the welfare needs of the animals, the concerns of the members of public and all interest groups who they are governing. It recognizes the descriptive ethic, held by most westerners, that animals are sentient beings, and should not be subjected to unnecessary suffering, even when being farmed for the table (Rollin 1981). It recognizes a prescriptive ethic for leaders in a democracy to provide a fair hearing for all stakeholders. It also concerns the duty of government agents to tell the truth and evaluate scientific evidence impartially, even when the evidence points to conclusions that they do not want to hear.

Welfare in broiler chickens

Until very recently, welfare issues concerning broiler chickens have been underreported and not considered to be at the front of consumers' minds. Duncan (2004) points out that whereas welfare of other farm animals has improved considerably, the welfare of broiler chickens may actually be worse than 40 years ago. A 2005 survey revealed that most participants did not know much about broiler welfare and confused broiler and layer production (Hall and Sandilands 2007).

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Leg weakness shows up as lameness in broiler houses, including breeders (Mench 2004). The measurement of lameness in Europe and in other countries has been quantified using a gait scoring system that has consistently given the same result when used by different observers (Kestin et al. 1992; Butterworth et al. 2007). This means that the degree of lameness and the associated suffering can be directly compared in different flocks and countries. Kestin et al. (1992) divided walking ability into 6 categories, with a score of 0 indicating no detectable walking abnormality, and 5 indicating the bird “was incapable of sustained walking on its feet.” A gait score of 3 was described as a state whereby the bird had “an obvious gait defect.”

Kestin et al. (1992) argued that birds with a gait score of 3 or more were in pain. The basis for this was the argument from analogy. The authors compared the condition of the birds with a dairy cow suffering in a similar way. Such a cow, the authors argue, would require veterinary attention, and if it could not be cured, would be euthanized.

Two later experiments provided more direct evidence that a lameness score of 3 or more is painful. McGeown et al. (1999) found that lame birds with a gait score of 3 were slower at negotiating obstacles than healthy birds, but this difference decreased when the lame birds were given analgesics. Danbury et al. (2000) found that lame birds with a gait score of 3 self selected food treated with analgesics, and that birds given analgesics improved their gait score.

The proportion of birds with severe enough lameness to be in continuous pain is likely to be high. A survey of UK broiler flocks found that 3% had a lameness score of 3 or above (SCAHAW 2000). However, other figures in the literature for Europe report visible lameness ranging between 14 and

30% (Kestin et al. 1992; Sanotra et al. 2003). Dawkins et al. (2004) did not use the Kestin et al (1992) scoring criteria, but in their survey of British and Danish broiler houses they record a mean visible lameness of 26.4%.

The pain associated with lameness, its high incidence in broiler houses, and the sheer numbers of broiler chickens when compared with other intensively farmed animals, mean that lameness in broilers is arguably the most important welfare consideration in modern farming. In his comparative study of animal welfare in different farming systems, Webster (1994) states how the issue of lameness in poultry must be “in both magnitude and severity, the single most severe, systematic example of man’s inhumanity to another sentient animal.”

Haslam and Kestin (2004) list mortality as a major indicator of poor welfare. Mortality can be indicative of Sudden Death Syndrome (SDS) or of death from ascites. SDS is not considered a welfare concern as loss of consciousness is quick (Julian 2004).⁵

Ascites are however a welfare issue, as it is a painful condition. It is caused by fluid build up as a result of the heart overworking to pump blood into heavier birds. High mortality rates can indicate high levels of ascites (Haslam and Kestin 2004).

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Indicators for poor welfare

Most expert reviews emphasize the role of genotype in welfare problems (Bessei 2006, Duncan 2004, Mench 2004). Kestin et al. (1992) monitored lameness in commercial chicken breeds and in a strain that had been allowed to breed with no selection pressure for 11 generations. This wild type bird had no lameness, compared with scores of 2-27% in the commercial lines.

Ascites and other metabolic disorders are also associated with the faster growing genotypes, as the heart has to pump harder in the heavier strains (Maxwell and Robertson 1997, Julian 2004). The SCAHAW (2000) compared the mortality of standard commercial broilers with the slower growing "label rouge" strain, which has a lower mortality. An increase in stocking density from 34 to 40 kg per sq. m was found to affect mortality in an experimental set up within a single commercial operation (Hall 2001). However, when compared across different companies other husbandry factors within the company had a far greater effect (Dawkins et al. 2004).

Keeping commercial breeds under free range conditions reduced, but did not eliminate lameness, though selective breeding for slower growth reduced lameness almost to zero (Kestin et al. 1992).

This demonstrates the importance of genotype as a predictor for lameness. Slow growing strains reared in the same conditions as conventional breeds also showed more active behavior, fewer heart abnormalities, less tendon degeneration (Bokkers 2003), lower mortality, lower culling rate and fewer ascites (Castellini et al 2002). Substituting commercial breeds for slower growing strains should therefore be a priority for any legislature that is seriously committed to improving broiler welfare.

The process of Code formulation in New Zealand

While many of the conclusions reached by Bagshaw and Matthews (2001, unpublished) mirror those of the SCAHAW (2000) report in agreeing that genotype is the main causal factor for poor welfare, the style of writing and the language used reflects a lower sensitivity to the pain of non-human animals and a reluctance to even acknowledge that animals feel pain. So for example, Bagshaw and Matthews (2001) discuss previous experiments showing that lame chickens and turkeys perform better when given or offered feed containing analgesics (McGeown et al. 1999; Hocking et al. 1999; Danbury et al. 2000). Bagshaw and Matthews (2001, unpublished) then conclude that these studies show "some indirect" evidence that poultry feel pain or discomfort when lame.

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Bagshaw and Matthews (2001, unpublished) agree with the PIANZ (2001, unpublished) that lameness would likely be rarer in New Zealand because some notifiable infectious diseases like Infectious Bursal Disease are not present. In this, they are likely to have exaggerated the importance of infectious agents. For example, the SCAHAW (2000) lists dyschondroplasia as the most common lesion seen in broilers, accounting for most lameness, and provides evidence for a strong genetic link. Butterworth (1999) describes how infectious agents can cause small numbers of birds to become profoundly lame, and this can be contrasted with skeletal abnormalities that cause larger number of birds to be moderately disabled (Pattison 1992). As discussed earlier, even moderate lameness (a score of 3 or more on the Kestin et al. (1992) scale) can cause pain, so it is unlikely that an absence of infectious agents would have much effect on painful lameness.

A survey of broiler operations in New Zealand commissioned by MAF policy (Bagshaw et al. 2006, unpublished) is therefore an important development, and it is instructive to determine the results and the way these were interpreted.

The study involved flying in experts from Bristol University to train observers in the Kestin et al. (1992) gait scoring system. After training, observers showed good consistency with each other and with a reference standard, validating the technique (Butterworth et al. 2007). The gait scoring system was then used on birds in New Zealand, and clearly showed that more than 40% of older birds had a lameness score of 3 or more. This is higher than the scores of 3-30% for European birds (SCAHAW 2000; Sanotra et al. 2003; Dawkins et al. 2004), and contradicts earlier assumptions by Bagshaw and Matthews (2001, unpublished) that New Zealand's disease free status would result in fewer lame birds.

Table 1. A summary of welfare issues, causal factors and indicators for poor welfare in commercially reared broiler chickens

Welfare issue	Causal factors	Indicator	References
Pain from leg weakness	Genotype – fast growing strains Stocking density (Direct and indirect effects)	Lameness	Kestin et al. 1992; McGeown et al. 1999; Danbury et al. 2000; SCAHAW 2000; Mench et al. 2001; Sanotra et al. 2001; Sanotra et al. 2003; Dawkins et al. 2004; Jones et al. 2005
Pain from ascites	Genotype – fast growing strains	Mortality	Maxwell and Robertson 1997; SCAHAW 2000; Castellini et al. 2002; Julian 2004; Haslam and Kestin 2004
Pain from contact dermatitis, footburn and hockburn	Litter management Stocking density Temperature and humidity	Visible lesions	SCAHAW 2000; Berg 2004; Jones et al. 2005; Bessei 2006
Lack of enrichment	Stocking density Substrate	Activity Aggression Leg strength	Mench et al 2001; Shields et al. 2004; Bessei 2006