

The poultry beak-trimming ban: Another welfare dilemma

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Ever since the Brambell Committee's seminal report of 1965, UK policy on the welfare of farm animals has ostensibly been constructed around the "five freedoms", including "freedom from injury", "freedom from fear", and "freedom to express most natural behaviours". In that context, it may at first appear surprising that we are now, in 2009, discussing whether DEFRA should further delay the prohibition of the beak-trimming of poultry chicks.

The practice of beak-trimming (or 'de-beaking') involves the removal of up to a third of a bird's beak using machinery, without anaesthetic. Although poultry producers have in the past argued that a chick's beak was as insensitive as the tip of a fingernail, that assertion has since been refuted by extensive scientific research. Between the layer of horn covering the beak and the bony structure of the beak itself, there is a thin layer of highly sensitive soft tissue, resembling the quick of the human nail. The hot knife blade typically used to carry out the beak-trimming procedure cuts through this complex of horn, bone and sensitive tissue causing severe pain. Thus, as the Brambell Committee concluded, "there is no physiological basis for the assertion

that the operation is similar to the clipping of human fingernails." On the contrary, de-beaked birds suffer acute pain at the time when the procedure is performed, and have also been shown to suffer chronic pain long after the de beaking procedure, including in the form of phantom limb pain. In addition, machine operators are often careless, causing the chicks' eyes to be seared, and blisters in the mouth.

The loss of the beak also results in behavioural changes, since the beak is a primary means by which a bird interacts with its environment. The beak is a complex sensory organ that performs a variety of functions, including grasping and manipulating food particles, while also being integral to nesting behavior, exploration, drinking, preening and defensive or aggressive encounters. Researchers who compared the behavior of de-beaked and normal hens found that "partial beak amputation produced a number of significant alterations to the behavior of the birds." The hens pecked less at their environment after de-beaking and demonstrated less head shaking and beak swiping. They also dozed more and often lapsed into general inactivity: behaviour that is associated with long-term chronic pain and depression.

Facially, therefore, it is difficult to see how beak trimming can be compatible with "freedom from injury", "freedom from fear", or "freedom to express most natural behaviours". Indeed, the Brambell Committee recommended that "beak-trimming should be stopped immediately in caged birds and within two years for non-caged birds." Why, then, almost 45 years later, is there still a raging debate as to whether the practice should be banned?

The answer lies in the fact that the five freedoms are not absolute, but are pursued on the assumption that intensive and semi-intensive systems of husbandry will continue to be used. While it would be going too far to describe the "five freedoms" as mere 'window-dressing' for intensive farming practices, it is fair to observe that those freedoms are pursued not as minimum standards, but as guiding principles the pursuance of which will often involve difficult trade-offs between competing welfare objectives and the means used to pursue them.

Beak-trimming is a good example of this. Although the practice can reasonably be said to directly violate the "five freedoms", it can

also be said to be carried out in pursuance of those principles. That is because beak-trimming reduces the risk of injurious pecking amongst hens – a risk that is particularly pronounced where hens are confined in circumstances where they lack outlets for their normal foraging, dustbathing, and

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exploratory activities. If unchecked, pecking can lead to cannibalism, including vent picking, feather pulling, toe picking, and head picking, resulting in significant feather and skin damage and even death. In laying hens with untrimmed beaks, the onset of injurious pecking can be sudden and unpredictable, causing significant pain, distress, suffering and death to a substantial proportion of birds.

The practice of beak-trimming started in around 1940 when a San Diego poultry farmer discovered that if he burned off the upper beaks of his chickens with a blowtorch, they were unable to pick and pull at one another's feathers. His neighbor adopted the idea but used a modified soldering iron instead, giving it a chisel edge that enabled operators to apply downward pressure on the bird's upper beak to sear and cauterize it. A few years later a local company began to manufacture 'The Debeaker', a machine that sliced off the ends of birds' beaks with a hot blade.

The 'modern' method used for trimming the beaks of commercial laying hens still involves essentially the same 'hot blade' mechanical technique as was used by 'The Debeaker', and is typically performed on chicks within 7 days of hatching. It is unsurprising, therefore, that the continued use of the practice has attracted strong criticism. Within the legal context, beak trimming qualifies as a "mutilation" under the Animal Welfare Act 2006, which defines a mutilation as "...a procedure which involves interference with the sensitive tissues or bone structure of the animal, otherwise than for the purposes of medical treatment." EU Directive 99/74/EC lays down minimum standards for the protection of laying hens and bans all mutilation, with the caveat that Member States can authorize beak trimming to prevent feather pecking and cannibalism, and only if it is performed by a qualified person on chicks less than 10 days old. English implementing regulations for this Directive specify a complete ban on beak-trimming, to take effect from 1 January 2011. It therefore appeared that the end of beak-trimming was in sight, notwithstanding that some poultry keepers continued to argue that the ban would give rise to a net detriment to the welfare of laying hens.

The debate has, however, been re-opened by the development by a US company of a new beak-trimming technique involving infra-red technology. This technology is designed to be used on day-old chicks in the hatchery and involves focusing a high intensity infra-red beam at the tip of the beak, which penetrates the hard outer horn, damaging a clearly demarcated zone of the underlying dermis and sub-dermal tissues. One

to three weeks later, the tissue behind the damaged area heals and the beak tip is lost. During the infra-red procedure, the chick's head is firmly retained in a rubber holder that prevents movement and is said by the manufacturer to facilitate precision and reliability.

The Farm Animal Welfare Council ("FAWC"), an independent expert body funded by the UK Government, has reported that the infra-red technique offers distinct advantages over manual hot blade methods, including the absence of an open wound with its potential for secondary bacterial infection, as well as quicker recovery by the chicks. FAWC also claims that there is little evidence of subsequent stress, pain or lasting effects among the de-beaked birds.

In its latest advice to the Government, FAWC has advised that the ban that was to come into force in 2011 be deferred until further research has been undertaken. In FAWC's view, there is evidence that the adverse effects of beak trimming are "clearly outweighed by the reduction in cannibalism," and that applying the method to younger birds appears to avoid long-term chronic pain in the stump of the beak. In that regard, while FAWC accepts that the benefits of beak-trimming must be weighed

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against the trauma to the bird during the process, as well as any chronic pain or discomfort and the loss by the bird of an important sensory tool, FAWC concludes that beak-trimming can on balance be a justifiable mutilation. In FAWC's view, unless and until other techniques can be shown to consistently reduce the likelihood of injurious pecking among laying hens, beak-trimming will continue to be a necessary evil for allowing large numbers of laying hens to be kept on a commercial scale. FAWC therefore welcomes the new infra-red technique as a way of carrying out that 'necessary' procedure in a more humane way.

Animal welfare groups like Compassion in World Farming (CIWF) are not convinced. CIWF is concerned that the studies relied on by the FAWC have not included any, or any adequate, analysis of the extent to which beak-trimming (whether carried out by the new infra-red, or by the traditional, method) causes pain in the first 10 weeks of a bird's life. In that regard, CIWF points out that other scientific studies have shown that beak trimming results in acute pain, whether performed with the hot-blade or infra-red procedures. Accordingly, even if beak-trimming using the infra-red technique leads to a lower incidence of chronic pain in adult life, the practice may still involve causing acute pain at the time, and in the days after, it is performed. Further, the infra-red technique will do little to change the effects of beak-trimming in preventing and restricting hens' natural behaviours.

In 2002, when the Department for Environment Food and Rural Affairs (DEFRA) decided to ban beak-trimming from 2011, it accepted the

scientific argument that the most appropriate way to prevent feather pecking and cannibalism was not



beak-trimming, but to keep laying hens in good conditions where they have appropriate feed and opportunities to forage. CIWF and many other groups are keen to see the focus remain on improving birds' *welfare by improving their living conditions*, rather than by finding arguably more humane ways to carry out mutilations such as beak-trimming. Genetic selection for reduced pecking tendencies also has a part to play. Reports from Switzerland – where both cages and beak trimming have been banned since 1992 – suggest that the practice can be made unnecessary through certain factors such as farm type or size, bird type, and husbandry.

It remains to be seen whose arguments will succeed with DEFRA, as the decision whether to maintain the ban has yet to be taken. Clearly the decision should be based on the best available scientific evidence, based on a holistic view of welfare that takes account of pain, suffering and restriction on natural behaviours, throughout a bird's life.

The debate highlights once again, however, the way that the attractions of the "five freedoms" as laudable

concepts can obscure from politicians and the public the reality of the difficult trade-offs made necessary by intensive, and even semi-intensive, farming. In that regard, it should be kept in mind that beak-trimming has not been confined to 'battery cage' systems of egg production, but is also common in barn and some free range systems. While high welfare free range and organic systems, which enable birds to have constant access to foraging opportunities and ample space, may remove the welfare difficulties that are said to require use of beak-trimming, such systems still represent a minority segment of egg production, both in the UK and across the EU.

While voters and consumers have turned strongly against caged production, it remains to be seen whether they can develop the sophistication, not just to side with the "five freedoms" as comforting concepts, but to face up to the extent to which cage-free production methods still involve uncomfortable trade-offs between different forms of animal suffering. Only if voters and consumers are willing to engage with the complexities of modern farm animal husbandry will they be in a position to make the economic and political choices that may lead to some trade-offs being eliminated altogether.