

POULTRY WELFARE STANDARDS AND GUIDELINES – BEAK TRIMMING

SUPPORTING PAPER PUBLIC CONSULTATION VERSION

Prepared by the Poultry Standards and Guidelines Drafting Group, Oct 2016

ISSUE

Should beak trimming be carried out on poultry and what are acceptable procedures.

RATIONALE

Feather pecking, peck injury and peck mortality (cannibalism) in poultry occurs at variable rates and may unpredictably become severe and cause high rates of distress, injury and death in a flock (American Veterinary Medical Association, 2010). It occurs in all production systems.

Advantages of beak trimming may include 'reduced pecking, reduced feather pulling, reduced cannibalism, better feather condition, less fearfulness, less nervousness, less chronic stress and decreased mortality. Welfare disadvantages may include reduced ability to feed following beak trimming/treatment, short-term pain, perhaps chronic pain, and acute stress' (United Egg Producers, 2014).

RECOMMENDATIONS

The drafting group considered current scientific knowledge and practice and agreed that standards were required to underpin poultry welfare for beak trimming.

ANIMAL HEALTH AND WELFARE CONSIDERATIONS

Birds may experience acute pain during the procedures of beak trimming due to the presence of nociceptors (pain receptors) in the tip of the beak. Neuroma formation in the beak as a result of beak trimming may also be associated with chronic pain. Beak trimming younger birds (less than one week of age) appears to avoid the long-term chronic pain that can occur in the stump of the beak when older birds are trimmed (Lunam et al., 1996).

There are currently two routine beak trimming procedures, either infrared beak trimming of chicks at the hatchery, or hot blade trimming at 10 days old or younger. A second trim is sometimes performed out at 8-12 weeks of age to prevent the beak growing back enough to cause pecking damage. Therapeutic beak trimming is occasionally carried out on older birds to control an outbreak of pecking behaviour.

Infrared beak trimming (IRBT) does not create an open wound as hot blade trimming does. After use of infrared, the beak remains intact until 10-14 days of age, after which the treated portion separates from the beak. A guide is used to regulate how much of the beak is trimmed.

McKeegan and Philbey (2012) found that IRBT does not result in chronic adverse consequences for sensory function, nor does it demonstrate evidence of chronic pain when carried out on day old chicks. Beak measurements at day-old in this study demonstrated that application of the IRBT at day old affected on average 36% of beak area (using

area forward of the nostrils as a basis for comparison). Detailed beak measurement data indicated that the IRBT treatment had resulted in a 40% reduction in overall beak length when compared with control birds by 4 weeks of age. Looking at the long-term effects of IRBT on birds up to the age of 50 weeks, they found that re-innervation and scarring was visible, but no neuromas or abnormal proliferations of nerve fibres were observed at any age.

It is essential that beak trimming is carried out by trained operators. When beak trimming is not done correctly, birds can suffer from a reduced ability to eat and drink as well as acute and chronic stress (Glatz, 2000). Lunam et al. (1996) studied hot blade trimming with treatments varying with the amount of beak trimmed and the length of cauterization time. They found that all treatments resulted in neuromas at 10 weeks of age, but those in the less severely trimmed group regressed and were not found at 70 weeks of age. Severely trimmed birds also had more deformed beaks. They concluded that a lighter trim allows neuromas to resolve, but made no specific recommendations regarding the amount that should be removed. The authors pointed out that the presence of anatomical neuromas is not necessarily associated with chronic pain.

It is possible to breed more docile birds to minimize the need for beak trimming, however, under some management conditions such as exposure to high intensity natural lighting, and with some genetic stocks, beak trimming may be required (United Egg Producers, 2014). In addition, a number of nutritional, management and environmental strategies are being promoted as an alternative to beak trimming (Jendral and Robinson, 2004; Poultry CRC, 2016). The alternatives have some potential to be effective in various management situations, but there is no guarantee that cannibalism and feather pecking will be prevented (Glatz and Hinch, 2008).

Jongman et al. (2008) found that there was no difference in pecking behaviour at 20 weeks between control pullets, those trimmed at hatch only and those re-trimmed at 14 weeks of age, suggesting that the re-trimmed birds were not subject to severe chronic pain. These birds were trimmed with a hot blade.

Widowski (2013) in a review of scientific research on priority issues in layers noted that when performed properly neither hot-blade trimming nor infrared treatment of beaks results in long term pain but the majority of scientific literature suggests that the infrared technique is more precise, reduces the development of abnormal beaks, and causes less pain or discomfort after application. Although not all studies have shown a reduction in cannibalistic mortality, it is important to understand that this behaviour does not occur in every flock but rather is sporadic in nature (Widowski, 2013). Table 1 shows examples of mortality difference between untrimmed flocks and those trimmed using hot blade technology.

Source	Housing System	Trimmed	Untrimmed
Hartini et al. (2002)	Conventional Cages	0.14%	13.4%
Guesdon et al. (2006)	Conventional Cage	4% to 5%	50% to 51%
	Furnished Cage	4% to 8%	40% to 43%
Mertens et al. (2009)	Aviary Systems	1.6% & 2.6%	21.5 & 25.8%

Table 1. Mortality reduction with hot blade trimming (Widowski, 2013).

Weeks et al. (2016) found there was some evidence that cumulative mortality was reduced in beak trimmed flocks kept in free range housing systems, the only housing system for which a number of beak trimmed and intact beak

flocks were represented in their data sets. Predicted means levels of cumulative mortality may be 27% higher in an intact beak flock at 40 weeks of age.

Hartcher et al. (2015) investigated the effect of beak trimming and environmental enrichment (consisting of pecking strings, whole oats in litter, and greater litter depth) during the rearing period on later behaviour. They found that beak-trimming was associated with an improvement in plumage condition, but that provision of these types of environmental enrichment during rearing had no effect on plumage damage later in life. They also observed that higher rates of severe feather pecking during rearing may be predictive of plumage damage later in life. The birds in this study were trimmed using infrared at one day of age but required a light trim using a hot blade at 11 weeks of age due to subsequent regrowth of the beak.

Injurious pecking is a serious issue in the turkey industry (Dalton et al., 2013). Causes are multi-factorial, involving interactions between turkey genetics, environment and nutrition. At this stage factors associated with injurious pecking in turkeys are not well understood, and more research is required to better understand the causes more clearly so that interventions may be devised that do not involve beak trimming. Many turkey operations are on a small-scale and these producers do not have access to IRBT. Allinson et al. (2013) evaluated the effect of beak trimming on turkeys. They found that beak trimming had no significant effect on the performance of the turkeys. Beak trimmed turkeys recorded higher feed intake, protein intake and feed conversion ratio than turkeys with intact beaks. The severity of damage was higher in untrimmed turkeys than the turkeys that had been beak trimmed. They suggested that one quarter of the beak should be removed at the sixth and fourteenth weeks.

Injurious pecking can be a serious issue for duck producers. Causes are not well understood, but are likely to be multi-factorial, involving interactions between genetics, environment and nutrition. If ducks' bills are trimmed, the tip of the bill is removed at day old by either IRBT or hot blade trimmer. Bill trimming is not a common practice among the larger duck producers in Australia. For smaller scale duck producers that do practise bill trimming, hot blade trimming may be necessary, as they do not have access to IRBT.

There is no reference material to describe the incidence and prevalence on injurious pecking in ducks in Australia. However, access to bill trimming technologies is still required, and strategies to reduce the reliance on the bill trimming will need to be developed.

REVIEW OF NATIONAL POLICIES AND POSITIONS

Beak trimming is currently permitted in all Australian jurisdictions.

The current Australian **Model Code of Practice for Poultry** 4th edition (2001) states:

12.5 Should an outbreak of feather picking or cannibalism occur, or an outbreak appear imminent, environmental factors that may aggravate it should be examined and if appropriate, adjustments made, such as reducing the stocking density, light intensity, temperature, humidity or disturbances to the pecking order, removing injured birds, removing birds observed to be instigating pecking, or eliminating shafts of bright sunlight. If these measures fail to control the problem then appropriate beak trimming of the birds should be considered in consultation with an expert in animal welfare to prevent further injury or mortality in the flock.

13 MANAGEMENT PRACTICES

13.2 Beak trimming

13.2.1 Every effort should be made to avoid beak trimming by selecting chickens for reduced feather pecking and cannibalism. The use of housing systems and lighting levels which reduce the tendency for these traits to arise should also be used.

13.2.2 Beak trimming must be performed only by an accredited operator or under the supervision of an accredited trainer as part of an accreditation training program and must be performed only in accordance with agreed accredited training standards.

APPENDIX 3

Turkeys

A3.3.1 Beak Trimming

Every effort should be made to avoid beak trimming by the appropriate selection of birds and the provision of conditions which reduce the tendency for adverse traits, such as cannibalism, to occur.

Beak trimming should be performed only by an experienced operator or under the direct supervision of an experienced operator. The development of an accreditation training program for the industry is strongly encouraged.

Not more than one-third of the top beak measured from the tip towards the entrance of the nostrils may be removed.

APPENDIX 4

Ducks

A4.2.1 Bill trimming

Every effort should be made to avoid bill trimming by the appropriate selection of birds and the provision of conditions which reduce the tendency for adverse traits, such as cannibalism, to occur.

It should be carried out only when it is essential to reduce damage and suffering in the flock. It must be carried out only by a skilled operator and only the rim at the front of the upper bill should be removed. The procedure should be carried out before the birds leave the brooder or rearing accommodation.

The development of an accreditation training program for the industry is strongly encouraged.

APPENDIX 6

Pheasants

A6.2 Beak trimming

Every effort should be made to avoid beak trimming by the appropriate selection of birds and the provision of conditions which reduce the tendency for adverse traits, such as cannibalism, to occur.

Beak trimming should be performed only by an experienced operator or under the direct supervision of an experienced operator. The development of an accreditation training program for the industry is strongly encouraged.

A maximum of one-third of the upper beak may be removed at 4 and 8 weeks of age.

APPENDIX 8

Partridge

A8.2 *Every effort should be made to avoid beak trimming by the appropriate selection of birds and the provision of conditions which reduce the tendency for adverse traits, such as cannibalism, to occur.*

Beak trimming should be performed only by an experienced operator or under the direct supervision of an experienced operator. The development of an accreditation training program for the industry is strongly encouraged.

To prevent cannibalism up to one-third of the upper beak may be removed within 72 hours of hatching.

APPENDIX 10

Pigeons

A10.4 *Every effort should be made to avoid beak trimming by the appropriate selection of birds and the provision of conditions which reduce the tendency for adverse traits, such as cannibalism, to occur.*

Beak trimming should be performed only by an experienced operator or under the direct supervision of an experienced operator. The development of an accreditation training program for the industry is strongly encouraged.

The tip of the cock bird's beak may need to be trimmed to prevent injury to a timid hen.

The **RSPCA Australia** approved farming scheme standards for layer hens permit beak trimming under the following circumstances:

8.13 *Where beak trimmed birds are sourced, the procedure must be:*

- a. performed on day-old birds at the hatchery by a competent operator using an infrared technique and appropriately calibrated equipment*
- b. limited to tipping of the beak only*
- c. even, rounded and consistent across the flock.*

8.15 *Beak trimming procedures not specified in these Standards must not be performed unless prior approval has been obtained from RSPCA Australia.*

The **Australian Veterinary Association (AVA)** endorses beak trimming when it is needed to reduce the incidence of pecking and cannibalism that is unable to be controlled by other means. Where experience dictates that feather pecking or cannibalism may be expected, routine beak trimming is recognised as a management option. The AVA promotes the adoption of new methods of beak trimming such as the use of infrared technology.

REVIEW OF INTERNATIONAL POLICIES AND POSITIONS

This section is included to provide a brief international context, while acknowledging that Australia's poultry production systems may vary from production systems, poultry breeds and climatic conditions in other countries.

The **American Veterinary Medical Association (2010)** states:

Beak-trimming is currently considered to be a necessary management practice for poultry. Although younger birds that are beak trimmed experience less neuroma formation and have relatively normal oral behaviors, all methods of beak-trimming induce pain and physiologic stress in birds. Pain and physiological stress resulting from beak-trimming should be minimized to provide for the overall welfare of the animal. Although there are obstacles to reducing feather-pecking by use of genetic selection, research results suggest that the prospects are good and further research should be pursued.

The **Canadian Agri-food Research Council** recommends:

2.2 Beak Trimming

Outbreaks of feather pecking and/or cannibalism may occur among layers or older pullets in any type of housing system, representing a significant welfare and production problem. Beak trimming reduces injuries and deaths resulting from such outbreaks. In the future, passive strains of layers may be developed which do not require beak trimming. Farmers will be encouraged to seek out and use these strains. In addition, new beak trimming technologies which enhance bird wellbeing should be adopted.

2.2.1 Beak trimming should be carried out only by highly competent, trained individuals. Particular attention must be paid to selection and adjustment of the equipment and to its maintenance.

2.2.2 Beak trimming should ideally take place prior to 14 days of age. This recommendation is based on research indicating minimum trauma and rapid recovery when the operation is carried out at or before this age. This must be weighed against practical experience which demonstrates that if trimming is not done properly at this age, a further trim will be required later in life. When correctly done early, beak trimming provides permanent protection from feather pecking damage. Beak trimming is not recommended after eight weeks of age.

2.2.3 Approximately two to three days before and two to three days after beak trimming, an electrolyte solution containing vitamins, particularly vitamin K, should be added to the water to facilitate blood clotting, to alleviate stress and reduce dehydration.

2.2.4 After trimming, feed and water consumption should be monitored carefully until beaks are healed. Feed levels should be raised and water pressure may have to be lowered or waterers manually triggered for several days following trimming. Follow breeder recommendations for changes in feed to minimize weight loss.

While the **European Union** has not banned beak trimming, it is under pressure from **Germany** to ban the procedure in line with that country's commitment to ban it from 2017. Currently, German farmers are restricted to beak trimming using infrared at one-day old.

In the face of failures to control outbreaks of injurious pecking, the **United Kingdom** rescinded a ban on beak trimming, but restricted it to the use of infrared only. The UK was aiming to ban the procedure from 2016 but deferred it in November 2015 on the grounds that 'on the basis of practical experience and available research, it could be detrimental to overall welfare in an unacceptable number of laying hens' (BTAG 2015).

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