Beak Tipping:
The right (and only decision) please

As long ago as in 2000, worries about the thought that flocks of hens may have to have untrimmed beaks had already emerged. As a result of this, an enterprising egg producer agreed to see how hens would cope on a commercial farm when their beaks had not been trimmed. The results of this 'trial' were presented as a Poster Presentation at a conference of the Worlds Poultry Science Association in 2003. As well as the verbal presentation and the Posters, the results of this trial were summarised in 'handouts'. These said:

On an organic farm, three houses of a similar size and construction contained 3,000 laying hens / house, each flock with a different commercial breed, all reared by the same firm but on different farms. None were beak-trimmed. The nutrition was the same in all houses on the laying farm viz. a commercially available organic feed. The stocking density was 6 hens / m². There was close liaison with vets and the RSPCA both during the planning and throughout the 'trial'.

Behaviour and performance of the hens differed markedly:

House 1 / Breed A

The flock was depopulated early (when 67 weeks old), for welfare reasons.

Feather pecking was extremely severe, leading quickly to 'bald' hens and then cannibalism.

Feed intake was very high (144 g/hen/day).

Hen Housed egg production was depressed (245 eggs/HH).

Mortality was very high indeed (16.5%).
Egg quality was poor (pale shelled eggs) (12.7% seconds).

Financial margin over feed cost: 78% lower than Breed C.

House 2 / Breed B

The flock was depopulated early (when 65 weeks old) for welfare reasons. Well feathered hens started cannibalising at an early age and feather pecked.

In an effort to stem cannibalism, ▸▸

they were beak-trimmed (hot blade) when 29 weeks old (with vet approval). Beak trimming seemed to have no adverse effects on their short term performance.

Cannibalism quickly resumed, (albeit being exacerbated by a fright) leading to high mortality (14.2%).

Hen Housed egg production was depressed (240 eggs/HH).

Financial margin over feed cost: 61% lower than Breed C.

House 3 / Breed C
Performance and welfare (feathering and cannibalism) were exemplary with no problems whatsoever.
To 72 weeks:

306 eggs/HH: 128 g/hen/day feed consumption: 4.8% mortality: Good financial margin.

This farm scale 'trial' showed that the performance and behaviour of non-beak-trimmed hens could be unpredictable. Where the hens' behaviour was adversely affected, financial margins were disastrously reduced. Feather pecked hens were unable to continue to lay eggs whilst trying to re-grow feathers. The hens showed only a short-term interest in 'toys'. Feather loss was predominantly due to what seemed to be an aggressive type of pecking, with very frequent sounds of vocal distress. The mortality was predominantly from cannibalism and peritonitis and from vent pecking. Once started, these vices and peritonitis became unstoppable. Surprisingly, beak trimming (hot blade) Breed B when 29 weeks old appeared not to have been stressful.

The following table summarised the performance of the three flocks / breeds:

Performance of non beak trimmed hens

	BREED A To 67 weeks	BREED B To 65 Weeks	BREED C To 72 Weeks
Eggs Hen Housed	245	240	306
Feed Intake (cum. g/hen)	144	131	128
Very Large + Large (%)	64.5	58.8	64.3
Total Seconds (%)	12.7**	14.0**	9.7
Cumulative Egg Weight (g)	66.2	64.4	65.7
Mortality (%)	16.5	14.2*	4.8
Margin over feed cost	78% LOWER than Breed C	61% LOWER than Breed C	GOOD

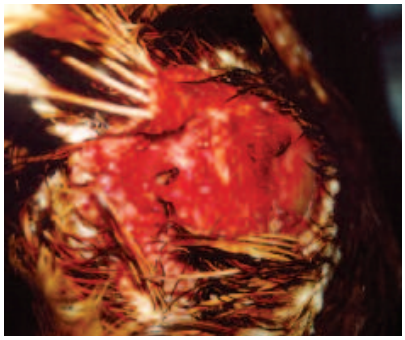
* Beak trimmed at 29 weeks but cannibalism and feather pecking continued
** Total Seconds increased by very poor feathering

On this farm and on this occasion, there were clear differences in behaviour (feather pecking and cannibalism). However, because of the multi-factorial aetiology of these vices, further investigations are warranted in trying to establish whether there are indeed differences in the behaviour of non beak-trimmed commercially available brown egg laying hybrids.

This 'trial' was done in 2002/2003, so why I am drawing it to your attention now?

The reason is that feather pecking and cannibalism are still occurring at times on some free range farms. There are still problem flocks. Look what happened when the beaks had not been trimmed: ▸▸

Two examples of cannibalism in free range hens. You can even see tomorrow's unlaid egg in the one on the right.



How appalling! This is a pullet aged 23 weeks

There are several important points to make:

a) Politics

This is a 'crunch' year in which decisions have to be made. If a decision is made that hens hence forth must not be beak trimmed, it is essential that the evidence that is used is fully comprehensive.

The results of this 'trial' that was presented to the public in 2003 are still totally relevant in 2015. Actually in my view, they are even more important now than they were; because there is a possibility that a decision could soon be made that could lead to carnage in some flocks on free range laying farms.

I make no apology for including photos of hens in this article which were taken during this 'trial'. Some of them are horrendous!!

Those poor hens - how can anyone contemplate putting their flocks at such a hazardous risk? Infra Red beak trimming MUST be retained.

b) Flock size

I think that there is a risk that some people are likely to say "Well what do you expect? If you keep hens in large houses with large flock sizes, of course you are asking for trouble". **WRONG!**

There is ample evidence that feather pecking and cannibalism can occur in smaller flocks too. You will have noticed that houses containing flocks of 3000 hens were used in the above 'trial'.

These were not large flocks. In addition, there is evidence that many flocks with less than 2000 hens have had serious troubles, whether they are beak trimmed or not. Yes, cannibalism and feather pecking can happen in flock sizes ranging from small to large. It is wrong to assume that small is beautiful and big is bad. It all depends! Depends on what? We will come to that later.

c) Breeds

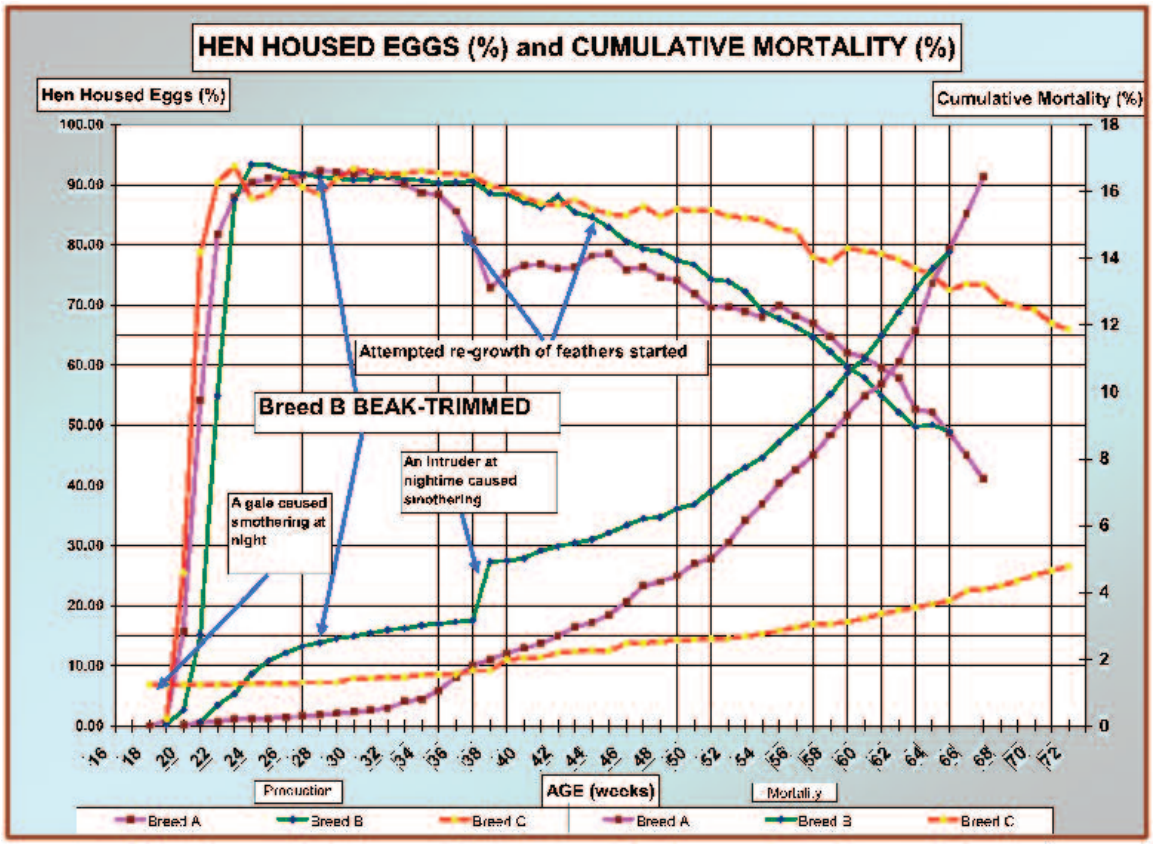
Three different breeds were used in the 'trial'. The performance of two of the breeds was nothing short of a disaster. Not only was the welfare appalling but the financial results were too. Many farms would not stay in business if this is what can happen with non beak-trimmed hens.

"Ah" you are saying, "all you have got to do is to use a breed that is docile and therefore less likely to peck. Just look at Breed C in the trial. They must have looked beautiful and didn't they perform and behave impeccably. You can tell that by their excellent egg production and low mortality. So the answer is simple - use Breed C". **WRONG!** That is how that one flock of Breed C hens behaved. In a subsequent flock of that breed, undesirable behaviour resulted from the hens having a fright one night.

Their subsequent performance and welfare was not as impeccable as in the 'trial' flock. Mortality was more than ▸▸

"We are cold and extra hungry and we lay pale shelled eggs"

Hens can peck out the intestines of living hens and then continue the attack after they have died.



twice as high, even though they had been beak trimmed. There are no surprises there, because although it is desirable to have a genetically 'placid' breed, all the major stressors have to be minimal. Therefore it is a laudable aim for the breeding companies to try to induce breeds that are relatively docile but this does not guarantee that their performance and welfare on the laying farm will always be reliable.

In addition, some people worry that such a breed may become 'lazy' and not explore the nest boxes, so as to learn where they should be laying. I don't envy the geneticists in trying to get the optimal balance for these diametrically opposite traits.

d) Implications

What became crystal clear in this 'trial' was that if feather pecking and cannibalism start, they can become unstoppable. We know that already. This 'trial' just endorsed what has been seen in countless flocks for decades. Even back in the 1960s, I had this identical problem with some (but not all) flocks of 400 hens on the Deep Litter system. The house layout for this system of production was virtually identical to the flat deck system that many use today.

So quite rightly, the emphasis of researchers and scientists is focused on trying to prevent vices happening. In this 'trial' various things were tried in an effort to stop the hens from misbehaving. Things were used such as bale twine dangling for them to peck at; added straw bales in the litter area; blocks for them to peck with the aim of blunting their beaks etc. etc..

These efforts proved to be futile for two of the three flocks. The hens showed short term interest and like children playing with new toys, they soon seemed to become bored with them. Even though on this site the litter conditions were very good and the manager must rank as one of the most caring ones in the free range industry, her efforts could not stop the carnage. The hens decided that feathers (high in protein) and blood and flesh (high in some essential amino acids) were much more interesting than 'toys'!

There is a graph on this page in which you can see some interesting things:

i) After an unfortunate start with a gale at night time causing Breed C to smother when only 18 weeks old (1.23% smothered), their mortality was excellent. So discounting the losses from the smother, their cumulative mortality was only 3.5%. This was typical of the mortality of many flocks on this farm. So for this flock and on this occasion, a single stress didn't ▸▸

create a welfare problem. That can happen. Just one stressor need not necessarily always lead to a problem.

ii) After Breed B had been beak trimmed when 29 weeks old, their mortality rate was relatively acceptable until an intruder breaking into the house at night time spooked the hens. Some of them smothered (1.8% loss) and thereafter the mortality escalated uncontrollably with up to 0.7% dying each week, mostly from peritonitis and cannibalism. Yes, frights and stress are very often major triggers of feather pecking and cannibalism.

There are problems when hens feather peck such as falling egg production in the period where some of them try to re-grow their feathers. This can be seen in the production of Breeds A & B. The manager on this farm became very distressed at the sight of her hens that were trying to re-grow their feathers but came under attack from other hens who fancied a succulent meal of juicy feather buds / stubs. Their pathetic squawks were upsetting to all that heard them. It is totally clear that both the egg production and shell quality of poorly feathered hens is adversely affected.

DEFRA

On 18 April 2011 DEFRA published two well written booklets for the use of those who keep free range hens. In the Welfare of Hens in Free Range systems there is the following:

Beak Trimming

Feather pecking can be a problem in alternative systems. Left unchecked, it can lead to more aggressive pecking and ultimately, to cannibalism. The likelihood of feather pecking during lay can be reduced by making strenuous efforts to remove all forms of stress. Nevertheless birds destined to be housed in alternative systems may need to have their beaks trimmed during rearing.

Beak trimming must be done by a suitably trained operator, and it should be performed when the chicks are less than 10 days old.

In 2015, these pertinent stipulations by DEFRA remain still totally relevant.

Furthermore on the same date in 2011, DEFRA published an extremely helpful publication viz.

A guide to the practical management of feather pecking and cannibalism in free range laying hens. Ref: PB10596

This booklet should be obligatory reading for all those involved with free range hens. Welfarists should note that the topic of feather pecking and cannibalism is an extremely complicated and diverse one. These vices are invariably not due to just a single factor. To use the jargon used by scientists when they can not put their fingers on a single cause of a problem, we are dealing here with a 'multi-factorial problem'! Yes, it is true. There are many potential causes of feather pecking and cannibalism and almost certainly, their effects are additive. For example, if the hens have had a fright, they may cope with it. However if that fright (possibly a hot air balloon?) coincided with for example, a diet change at a time when litter quality was poor, vices are more likely to start. The list of these interacting factors in the DEFRA booklet is:

Matching housing conditions in rear and in lay; Good quality pullets; Bird temperament; Maximising the use of the range area; Pullet transfer and transportation; Good management; Good house design and layout of equipment and perches; Good litter quality; Changes when moving pullets from rearing farm to the laying farm; Changes in feed; Changes in environment; Unevenness of the flock; Poor pullet quality; Disease and pest challenges; Red mite and vermin; Lighting variations; Sub-optimal nutritional intake; Birds coming into lay too early.

Phew! What a long list! So the aim is that all of those factors all of the time have to be under control to avoid the hens being stressed and starting to feather peck. What an unrealistic challenge for free range producers. Life isn't like that. Unexpected and unplanned things do occur. It is highly unlikely that all UK flocks will not encounter unexpected factors from time to time. For example, the Ministry of Defence have compensated some free range egg producers for the stress caused by low flying helicopters; or maybe the neighbours saw the New Year in with fireworks etc. etc. The possibilities are endless.

SUMMARY

Well done DEFRA! I think that you got things right in 2011. So you are now in a position where you should take note of your own very sound and realistic advice. You admitted that the aetiology of feather pecking and cannibalism is diverse and complicated. It still is.

Despite the laudable aims of the recent research that has been done (albeit on only a very minute part of the free range industry) it would be completely stupid to stop beak trimming at the moment. For some (but not all) flocks, feather pecking and cannibalism will continue to occur. If there are problems in some flocks at the moment for beak trimmed flocks (and there are), it seems inevitable that, if these flocks had not been beak trimmed, the feather pecking and cannibalism ▸▸

would be much more serious. We must not be in denial mode. For these flocks it is totally clear cut that if the hens' beaks have not been blunted, the risks of carnage would be greater. So please listen all you politicians and welfarists and agree that this is not the moment to put unsuspecting hens at the risk of being bald and dead.

We all want healthy and 'happy' flocks that look as beautifully contented and well feathered as the beak trimmed ones below. These are enjoying the evening sun in the area just outside their house, whilst inspecting the newly laid wood chips that can be used instead of stones in this location.

There is absolutely no suggestion that they have found being beak trimmed stressful.

So - no beating about the bush.

The infra red beak trimming of pullets that are destined for free range farms must still be retained.

Trevor Bray ■