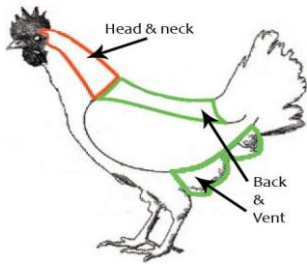


## Appendix 6 Feather Loss Monitoring and Intervention Relating to Standards H1.1, H1.11 & H1.12

### 1. Feather Loss Assessment

Assess your flock according to Standard H1.11. This will give you separate scores for the back & vent (B&V) and the head & neck (H&N) regions. These must be converted into a total feather loss percentage for each body region (see section 3 below).



**B&V = 1, H&N = 1**

**B&V = 0, H&N = 0**



**B&V = 2, H&N = 0**



**B&V = 1, H&N = 0**



**B&V = 2, H&N = 0**



- Score 0**    **No / minimal feather loss:** No bare skin visible; no or slight wear; only single feathers missing
- Score 1**    **Slight feather loss:** Moderate wear; damaged feathers or 2 or more adjacent feathers missing; up to 5cm bare skin visible
- Score 2**    **Moderate / severe feather loss:** 5cm or more bare skin visible

### 2. Threshold Values (relating to standard H1.12)

Age of flock (weeks)		16-40	41-44	45-48	49-52	53-56	57-60	61-64	65-68	69+
Total % feather loss threshold values	B&V	0*	0*	2	6	12	16	29	30	24
	H&N	0*	6	7	10	14	14	20	26	20

Where the total % feather loss for a body region exceeds the threshold value shown in the table above for the age of your flock, action must be taken to alleviate the feather loss problem.

\*Where the threshold value is 0, any feather loss observed in your flock should trigger action to prevent further damage or loss.

These threshold values are taken from 5 years' of welfare assessment data from around 3000 visits to Freedom Food farms. Data is also presented in the benchmarking graphs in Appendix 7.

25% of Freedom Food producers' flocks have feather loss below these levels.

### 3. Example

Date: <i>01/08/17</i> Flock age: <i>63</i>		Feather Loss				Action Required?	
	No. Birds	Score	No. Birds	Score	Total Score (score 1+2)	Total % (Total Score x2)	
	1		2				
<b>B&amp;V</b>	<i>11</i>		<i>4</i>		<i>15</i>	<i>30</i>	<b>Y</b> <b>N</b>
<b>H&amp;N</b>	<i>2</i>		<i>1</i>		<i>3</i>	<i>6</i>	<b>Y</b> <b>N</b>

In the example given above, the total % feather loss for the back and vent (B&V) region exceeds the threshold value for birds at 63 weeks (29%). Action is required to try and alleviate the feather loss problem observed for the B&V region.

The total % feather loss for the head and neck region (H&N) is lower than the threshold value and therefore further action may not be required. Producers should remain vigilant for any deterioration in feather cover and take action as appropriate.

## 4. Actions to Alleviate Feather Loss

A wide range of strategies can be employed to reduce the risk of injurious pecking. Research suggests that increasing the number of intervention strategies used on farm reduces the risk of injurious pecking further. It is therefore recommended that as many strategies to reduce the risk of injurious pecking should be included in each flock's action plan as possible. These include, but are not exclusive to:

### Litter quality and availability:

**Capped** or wet litter and insufficient dust bathing and foraging opportunities are strongly associated with increased risk of injurious pecking. Wet litter can increase the risk of disease incidence. Litter should be carefully managed and stocking densities should be considered to ensure sufficient dust bathing and foraging opportunities and good litter maintenance.

### Environmental enrichment:

Providing a variety of enrichment items encourages greater bird activity to help reduce or avoid injurious pecking. Items such as brassicas (e.g. cabbage, cauliflower, sprouts and broccoli), alfalfa blocks, suspended haynets filled with suitable foraging materials and straw bales can be effective. Monitoring bird use of enrichment items can help to identify any underutilised items, which should be replaced with alternatives.

### Matching rear and lay:

**Matched** conditions at rear and lay can reduce the stress associated with transfer. Liaise with your rearer to match as much as possible the conditions in the rearing and laying sheds, including: lighting programmes and illuminance (lighting) levels, drinker and feeder type, feed timings and composition, litter type, enrichment provisions and type and positions of slats and perches.

### Ranging & range management:

Improved ranging is associated with reduced injurious pecking and feather loss. A well designed and well managed range will encourage ranging and prevent build up of parasites and disease, which can increase the risk of injurious pecking.

### Lighting:

Lighting type or source, illuminance (light level), and schedule are all important. Fluorescent lights deteriorate with age and can flicker even at high frequencies, which can be a significant stressor. Shafts of light, dark areas and large contrasts in light levels should be avoided. Consider inviting a lighting consultant to advise on the best lighting for your house.

### Diet and feeding:

Feed form, number of feed runs per day and diet changes can all have an effect on injurious pecking. Feed mash rather than pellets, limit diet **changes** as far as possible and reduce the impact of changes by mixing the new feed with existing feed at changes. Addition of fibre to the diet has been linked to reduced injurious pecking.

### Health:

**Hens** with health problems are more likely to experience stress and are at an increased risk of injurious pecking; carefully consider vaccination programmes based on your farm situation and geographic poultry density, improve bio-security protocols and ensure effective cleaning out between flocks.

### Indoor climate:

Sudden changes in temperature, humidity and air quality in the house can trigger stress and injurious pecking. High levels of ammonia can make hens more susceptible to certain illnesses. Ensure good ventilation and monitoring programmes. Verandas can help to maintain indoor conditions in free-range systems.

### Human animal relationship:

More fearful flocks are more likely to experience injurious pecking; get birds used to low levels of disturbance by frequent walking of the sheds with varied routines.

### 5. Feather loss monitoring and intervention record sheet

Date flock placed:						Possible causes of feather loss; Details of intervention / Reason for no intervention							
1	<b>Date:</b>					Action required?							
	<b>Feather loss:</b>												
		Score 1	Score 2	Total	Total%								
	B&V					Y	N						
H&N					Y	N							
2	<b>Date:</b>					Action required?							
	<b>Feather loss:</b>												
		Score 1	Score 2	Total	Total%								
	B&V					Y	N						
H&N					Y	N							
3	<b>Date:</b>					Action required?							
	<b>Feather loss:</b>												
		Score 1	Score 2	Total	Total%								
	B&V					Y	N						
H&N					Y	N							
4	<b>Date:</b>					Action required?							
	<b>Feather loss:</b>												
		Score 1	Score 2	Total	Total%								
	B&V					Y	N						
H&N					Y	N							
5	<b>Date:</b>					Action required?							
	<b>Feather loss:</b>												
		Score 1	Score 2	Total	Total%								
	B&V					Y	N						
H&N					Y	N							
6	<b>Date:</b>					Action required?							
	<b>Feather loss:</b>												
		Score 1	Score 2	Total	Total%								
	B&V					Y	N						
H&N					Y	N							
7	<b>Date:</b>					Action required?							
	<b>Feather loss:</b>												
		Score 1	Score 2	Total	Total%								
	B&V					Y	N						
H&N					Y	N							
8	<b>Date:</b>					Action required?							
	<b>Feather loss:</b>												
		Score 1	Score 2	Total	Total%								
	B&V					Y	N						
H&N					Y	N							

9	<b>Date:</b>					Action required?	
	<b>Feather loss:</b>						
		Score 1	Score 2	Total	Total%		
	B&V						
					Y	N	
10	<b>Date:</b>					Action required?	
	<b>Feather loss:</b>						
		Score 1	Score 2	Total	Total%		
	B&V						
					Y	N	
11	<b>Date:</b>					Action required?	
	<b>Feather loss:</b>						
		Score 1	Score 2	Total	Total%		
	B&V						
					Y	N	
12	<b>Date:</b>					Action required?	
	<b>Feather loss:</b>						
		Score 1	Score 2	Total	Total%		
	B&V						
					Y	N	
13	<b>Date:</b>					Action required?	
	<b>Feather loss:</b>						
		Score 1	Score 2	Total	Total%		
	B&V						
					Y	N	
14	<b>Date:</b>					Action required?	
	<b>Feather loss:</b>						
		Score 1	Score 2	Total	Total%		
	B&V						
					Y	N	
15	<b>Date:</b>					Action required?	
	<b>Feather loss:</b>						
		Score 1	Score 2	Total	Total%		
	B&V						
					Y	N	

**End of flock review**

What actions to alleviate feather loss worked well? What actions will you carry through to your next flock?

How did flock performance, including feather cover, mortality and production, compare with previous flocks?