Providing a complete poultry veterinary service

www.stdavids-poultryteam.co.uk
Foot Pad Dermatitis (Podo)

CONOR SHEEHY
Animal welfare defined

Origin: Well + Fare
Welfare = state of faring well

• The ability of an animal to cope with its environment
  - Coping = sustaining physical and mental fitness
  - Environment includes:
    I. Physical conditions (heat, cold, water, housing etc.)
    II. Other animals (conspecifics and predators)
    III. Parasites and disease challenge
“Welfare can vary between very poor and very good. In order to use the concept of welfare in a scientific way it is necessary always to specify the level of an animal’s welfare and not simply to reserve the word to indicate that the animal has, or does not have, problems” (Broom and Johnson, 1993)

Poor production can be considered an indicator of poor welfare but good production does not necessarily indicate good welfare.

Welfare should be assessed as a holistic measure incorporating indicators of both positive and negative welfare.
Why is welfare important?

• Economics
• Legal responsibilities
• Moral responsibility
• Customer concern
• Consumer demand
• Animal welfare/rights organisations
Economics

Where high standards of welfare are met, there can be

– Reduced needs for medication
– Reduced cost of veterinary attention
– Reduced number of bird casualties
– Reduced incidences of abnormal behaviours
– Increased potential for production
Legal Responsibilities

ANIMAL HEALTH AND WELFARE ACT 2013


Doesn’t just prevent cruelty, but that owners must meet welfare needs

Proactive rather than reactive

Not a List of Do’s and Don’ts.

Trained welfare officer can assess if animals are suffering – 5 Freedoms

Codes of Practice not law but if animals are seen to suffer “Why did you not follow “Code of Practice”?
Legal Responsibilities

Broiler Welfare Directive

• Council Directive 2007/43/EC. Is a list of Do’s and Don’t’s
• Stockmen/women are trained
• Light intensity and photoperiod regulated
• Air quality regulated
• Space allowance: 39 kg/m²
• Monitoring at slaughter house
  1. Mortality Records
  2. Foot pad quality
Moral Responsibility

Ethics and emotions

• Ethics are a set of moral principles

  Morals: accepted standards of human behaviour

• Animal welfare is based around the assumption that people have ethical duties towards animals

‘The question is not, “Can they think?” nor “Can they talk?” but “Can they suffer?” ’

(An Introduction to the Principles of Morals and Legislation by Jeremy Bentham 1780)
Three essentials of Stockmangship

• Knowledge of Animal Husbandry
• Skills in Animal Husbandry
• Personal Qualities
  - Affinity and empathy with animals, dedication and patience

The first of the three essentials can be taught. If someone does not have the personal qualities of the third essential it is probable that welfare will suffer regardless of training.

But: Tight Margins, Older Houses, Lack of control over all inputs......
Customer Concern

Many retailers now have own auditors overseeing bird welfare
• Marketing?
• Concern for image?
• Department are not the only ones monitoring FPD
Animal welfare/rights organisations

– RSPCA (Royal Society for the Prevention of Cruelty to Animals; Freedom Food Standards) http://www.rspca.org.uk/home

– SSPCA (Scottish Society for the Prevention of Cruelty to Animals) http://www.scottishspca.org/

– UFAW (Universities Federation for Animal Welfare) http://www.ufaw.org.uk/

– CIWF (Compassion in World Farming) http://www.ciwf.org.uk/

– Humane Slaughter Association http://www.hsa.org.uk/

– OneKind http://www.onekind.org/

– FAWN (Farm Animal Welfare Network, formerly Chickens Lib) http://www.fawn.org.uk/

– Animal Aid http://www.animalaid.org.uk/

– Animal Health Trust www.aht.org.uk/
The Five Freedoms

• Five essential criteria to ensure that an animal experiences good welfare

• **Freedom from:**
  – Thirst, hunger and malnutrition
  – Discomfort (thermal and physical)
  – Pain, injury and disease
  – Fear and distress

• **Freedom to:**
  – Express normal behaviours
Freedom to Express Normal Behaviours

Chickens descend from Jungle Fowl – South East Asia

All behavioural traits/social structures derived from wild behaviours

E.g. 70% of time spent foraging in small mixed sexed groups with one dominant male

Feral birds quickly develop wild behaviours
Freedom from Disease

• Good Husbandry. Few diseases are caused by primary pathogens. (No dysbacteriosi/poor gut health bug)

• Good vaccination

• Good biosecurity:
  I. Location
  II. Structure
  III. Operational

  • Operational biosecurity is the day to day practices on farm

  • Operational biosecurity is most likely to be compromised if farmers do not have a mind-set that biosecurity is important
Freedom from Pain & Injury

• Pododermatitis
• Scratches
• Injurious Pecking
• Tibial dyschondroplasia (TD)
• Osteomyelitis
Pododermatitis

*Wet and sticky litter is the major cause of footpad dermatitis (pododermatitis)*

Broilers spend entire life in contact with litter

If litter is sub-optimal or wet pododermatitis may result
Pododermatitis

All birds must have continuous access to dry friable litter. Broiler Welfare Directive

Dry friable litter, as well as protecting footpads, will facilitate dustbathing.

Not enough just to prevent podo. Auditor will want to see normal behaviors.
Pododermatitis

Initially a dirty mark/thickening of skin of footpad

Ulcers develop with increased severity of case

Ulcers cause pain, reluctance to move, reduced feed and water consumption and reduced weight gain

Wet litter also causes breast blister/hockburn = downgrades

Ulcers can facilitate bacterial invasion leading to secondary infections/further downgrades/reduced profitability
Pododermatitis

Used as a welfare indicator in most European countries

May trigger
• Reduced stocking density
• Financial penalties

Penalty is decided by each member state

Assessed at slaughterhouse
Pododermatitis

Causes

• Litter management
• Light
• Water supply and water management
• Ventilation and Heating
• Feed
• Stocking density
• Breed and disease
Pododermatitis

**Litter management**

Refers to litter material and litter depth

Thinner layers of litter allow:

- increased pecking, scratching and turning = improved aeration
- air stream penetrates throughout litter helping drying

With thinner layers of litter fully pre-warming concrete is essential

- prevents condensation at cold floor leading to poor litter

If floor temperature of minimum 28 degrees C (30 degrees preferable) cannot be guaranteed it is better to use a thicker layer of bedding
Pododermatitis

Effect of bedding depth on incidence of pododermatitis

- 2.0 kg/m²
- 1.5 kg/m²

0% 20% 40% 60% 80% 100%

Score 0
Score 1
Score 2
Score 3
Pododermatitis

Litter material

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<tr>
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<th>Score 0</th>
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<tbody>
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<td>Straw</td>
<td>40%</td>
<td>60%</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Wood shavings</td>
<td>40%</td>
<td>60%</td>
<td>10%</td>
<td></td>
</tr>
</tbody>
</table>
CH = Chopped Straw. CS = Straw Chip. SC = Straw Crumb. WS = Wood Shavings.
Pododermatitis

Effect of water pressure on pododermatitis

![Bar chart showing footpad score over age in days for different water pressures.](chart.png)
Pododermatitis

Correct drinker height
Day old at Eye level
Angle of 75° by day 10

From 10 days head should be tilted up while activating nipple. This helps water to flow and not through beak. Birds should reach to their limit for drinker without their heels losing contact with ground.
Pododermatitis

Other factors affecting litter quality:

• Stocking Density
• Lights
• Ventilation
• Heating System
• Disease-Coccidiosis, IB etc.
• Feed
Ventilation

Minimum ventilation rates/age

Rate/Kg goes down as birds age. Reduced metabolic rate. But Kgs go up quickly.

<table>
<thead>
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<tr>
<td>35</td>
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</table>
Reasons to be hopeful

Greater emphasis on Robustness by Breed Companies
New Protein Sources
Quicker/Cheaper Mycotoxin Testing
Move to Slow Growth/Lower Stocking Density
Renewable Heat Incentive
Good business.Margins allow for investment. Demand still high.
Potential Challenges

No Antibiotic Ever

Does this include anti-coccidials? U.S.A. , Norway.

Vaccination for cocci is good at controlling cocci but you lose beneficial effects of ionophores in altering microbiome.

More Dysbacteriosis/necrotic enteritis. Average 1.5 days longer.

Other species-Vaccination is not an option.
Responsible Use of Medicine in Agriculture

Antimicrobial (antibiotic) Resistance (AMR) is projected to be the single biggest cause of death in humans in 2050.

AMR is caused by the injudicious use of antibiotics in medicine or agriculture.

AMR should be reduced by only ever using antibiotics prescribed by a vet for that case. Antibiotics will always be necessary in agriculture but judicious use will protect their efficacy.

A vet will advise on usage of the right antibiotic, for the right animal, at the right dose, and at the right time.

A vet should prescribe under the principle of “as little as possible but as much as necessary.”
Responsible Use of Medicine in Agriculture

Antibiotic usage can be reduced through good husbandry

• Good Biosecurity
• Good Hygiene
• Good Nutrition
• Minimise Stress

Husbandry measures which reduce antibiotic usage will also optimise production and welfare of the birds

If you have to use antibiotics repeatedly it is often to overcome husbandry deficiencies. In this case you have already compromised performance or welfare