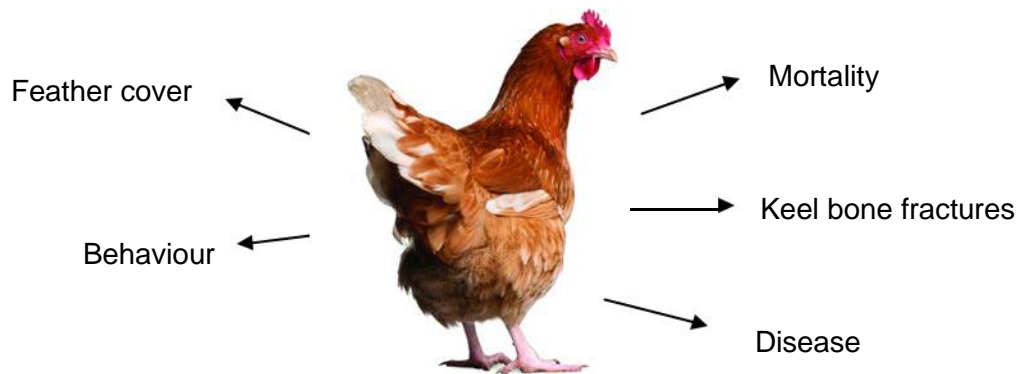


# LAYING HEN

## Welfare Outcomes



Welfare outcomes are an animal-based method of assessing an animal's physical wellbeing, but also increasingly their mental wellbeing and behavioural expression. Whilst the provision of certain resources (inputs) in the environment is necessary to increase the welfare potential of a system, measuring animal-based outcomes indicates whether that potential has been met by how it affects an animals' welfare status. Regularly scoring appropriate outcome measures can identify welfare problems and be used to set targets or benchmark for improvements through an active review programme. Below is a selection of the main welfare measures recommended for laying hens:

### DISEASE INCIDENCE

**WHAT:** Record the incidence of sick or injured birds in the flock and the type of illness

**WHY:** Sick and injured birds need additional attention; early recognition, treatment or culling is key to reducing suffering and suboptimal performance.

**HOW:** *AssureWel* protocol for birds needing further care:

<http://www.assurewel.org/layinghens/birdsneedingfurthercare.html>

❖ Laying hens can become ill from viral diseases, bacterial infections, and parasites. Foot pad dermatitis, bumble foot, hyperkeratosis, and excessive claw growth are the most common foot problems. Osteoporosis is a major cause of mortality.

**TARGET:** Mortality <3% at the end of lay

### KEEL BONE FRACTURES

**WHAT:** Record the prevalence of keel (breast) bone fractures

**WHY:** Keel bone fractures, particularly when moderate to severe, are painful and restrict bird movement. Prevalence can be high in free-range flocks indicating poor housing design, particularly perches, and lack of aerial experience at an early age, which can lead to hens falling and colliding when moving around the system.

**HOW:** *LayWel* keel protocol (p.16): <https://www.laywel.eu/web/pdf/deliverable%2072%20manual-2.pdf> Photo guide available at (p.66): <http://edepot.wur.nl/233471>

❖ Feel along the hen's keel for distortion/ lumpiness indicating old breaks and assign a score of 4 (normal), 3 (slightly damaged), 2 (moderately damaged), or 1 (severely lumpy/distorted)

**TARGET:** Average incidence of <5% old fractures (score 3 and above)

## FEATHER COVER

**WHAT:** Assess the prevalence and severity of feather loss caused by injurious or aggressive pecking behaviour at various stages of production

**WHY:** Injurious feather pecking is a major welfare issue largely resulting from redirected foraging behaviour; it can lead to suboptimal thermal control, reduced productivity, injury, cannibalism, and even death. Managing this behaviour is essential to operating a successful good welfare system with non-beak trimmed flocks. A guide to preventing feather pecking: [https://www.featherwel.org/Portals/3/Documents/advice\\_guide\\_V1.2-May-2013.pdf](https://www.featherwel.org/Portals/3/Documents/advice_guide_V1.2-May-2013.pdf)

**HOW:** *AssureWel* feather loss protocol: <http://www.assurewel.org/layinghens/featherloss.html>

❖ Assign score of 0 (none/minimal) to 2 (moderate/severe) & record body region affected

**TARGET:** In the green zone (top 25% of farms) using the *AssureWel* industry benchmarking tool: <http://www.assurewel.org/layinghens/howisyourfeatherlossmeasuringup.html>

## MORTALITY

**WHAT:** Record the number of birds found dead or culled and the causes

**WHY:** Mortality may be due to chronic injury, disease, suboptimal management or environmental conditions, and indicates pain, suffering, suboptimal performance, and loss to the business.

**HOW:** *AssureWel* mortality protocol: <http://www.assurewel.org/layinghens/mortality.html>

**TARGET:** < 3% of the flock at end of lay.

## FLOCK BEHAVIOUR

**WHAT:** Record the flock's reaction to people

**WHY:** Flighty birds have a high fear level, indicating poor stockmanship, suboptimal environments, or predator activity. Fearful flocks can be alarmed and smother each other.

**HOW:** *AssureWel* flightiness protocol: <http://www.assurewel.org/layinghens/flightiness.html>

❖ Observe the birds' behaviour as you approach & assign a score of calm, cautious, or flighty

**TARGET:** A calm flock, with birds that can be approached by the stockperson

**OTHER MEASURES:** Feather cleanliness: <http://www.assurewel.org/layinghens/birddirtiness.html>, foot pad dermatitis: p.67-68, <https://edepot.wur.nl/233471>, beak trimming: <http://www.assurewel.org/layinghens/beaktrimming.html>

HEN SIGNALS	
Positive Behaviour	Negative Behaviour
Dust-bathing	Aggressive pecking* - aimed at the head or neck
Ranging outdoors	Injurious pecking* - aimed at the feathers and skin, wounds, or vent
Approaching the stockperson and allowing the stockperson to approach	Aggression towards other birds - chasing or fighting
Perching	Smothering behaviour
Foraging – walking; pecking and scratching at the ground, food items, and enrichments	
Positive social interaction – such as foraging or using enrichment with other birds	

\*p.2, [https://www.featherwel.org/Portals/3/Documents/advice\\_guide\\_V1.2-May-2013.pdf](https://www.featherwel.org/Portals/3/Documents/advice_guide_V1.2-May-2013.pdf)

**PROCESS:** Measure outcomes > identify risk factors (causes of poor outcomes) > assess performance (benchmark against other farms or suppliers) > adjust management practices (to improve welfare outcomes, using incentives or penalties for compliance with targets).