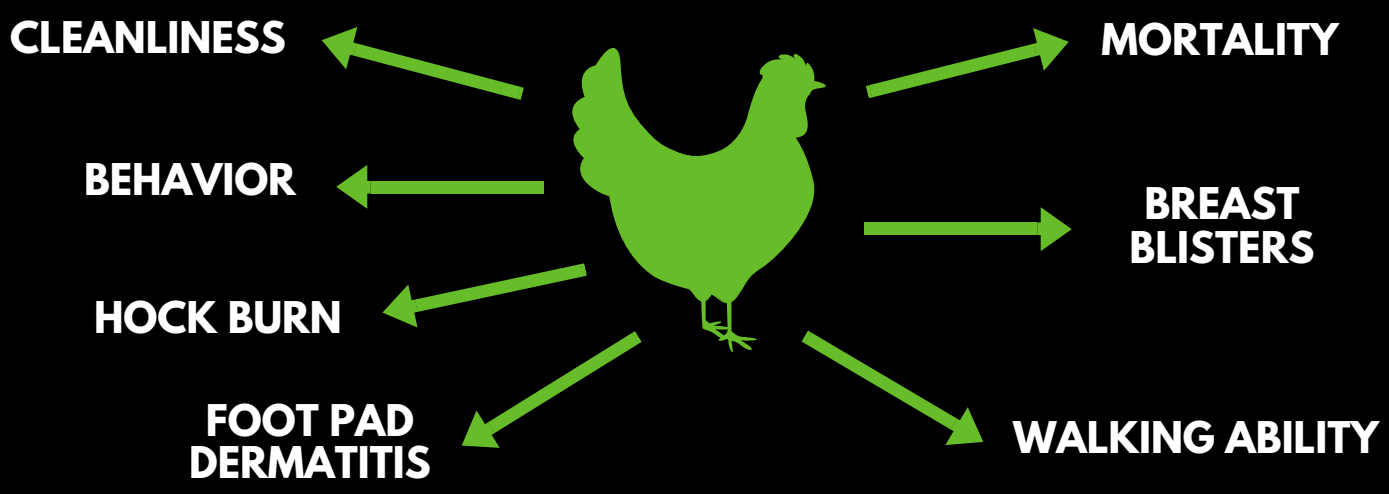
COMPASSION in world farming

BROILER WELFARE OUTCOMES FOR HIGHER WELFARE BREEDS



Welfare outcomes are an animal-based method of assessing factors that contribute to an animal's quality of welfare. The provision of essential resources (inputs) in the environment and a shift to genetics with improved welfare outcomes are both necessary to increase the welfare potential of a system. With these resources in place, animal-based outcomes can then be used to assess, monitor, and improve welfare. Regularly scoring appropriate outcome measures can help identify welfare problems and set targets or benchmarks for improvements through an active program. Below is a selection of recommended outcome measures, with targets adjusted for higher welfare breeds.

WALKING ABILITY

WHAT: Assess the walking ability of the flock.
WHY: Poor walking ability indicates potential pain and behavioral restriction. Causes are multi-factorial, but primary risk factors are high growth rate (breed) and poor environmental control.
HOW: Gait score 50 birds from 5 random points in the house, close to maximum stocking density / depopulation. Using a 5 point scale (Bristol scale), assign a score of 0 (bird walks with ease, has regular and even strides and is well balanced) to 5 (bird is reluctant to move, and is unable to walk many strides before sitting down).
TARGET: ≥ 90% score 0-1, ≤ 5% score 2, ≤ 1% score 3 (ideally none), no scores of 4-5.

MORTALITY

WHAT: Record the number of birds dead or culled on farm and the major causes.
WHY: Mortality is largely due to poor walking ability, metabolic disorders (e.g. ascites, cardio-vascular distress), lack of flock uniformity, or disease, and is related to pain, suffering and sub-optimal performance.
HOW: Record according to common causes: dead, leg culls, other culls, small birds.
TARGET: ≤ 3-5% throughout the production period.

FOOT PAD DERMATITIS & HOCK BURN

WHAT: Record incidence and severity of foot pad dermatitis and hock burn of the flock.
WHY: Wet litter, genetic susceptibility, and micro-nutrient deficiencies are primary causes of foot pad dermatitis, which can be painful, lead to bacterial infection and affect walking ability. Fast growth rate strains are more susceptible to hock burn due to increased inactivity and contact with the litter.
HOW: Can be measured on-farm (50 birds per house) or more typically at slaughter house (100 per flock). See Welfare Quality photo guides (p.27-27): **http://edepot.wur.nl/233471**

Foot Pads: Assign score of 0 (no lesions) to 2 (>75% of the pad covered with a lesion).
Hocks: Assign score of 0 (no discoloration or lesions present) to 2 (>75% of the hock covered with a lesion).

TARGET: ≥ 95% of birds with scores 0, 1 (at least 80% of those score 0), ≤ 1% score 2.

BREAST BLISTERS

WHAT: Record incidence and severity of breast blisters.
WHY: Breast blisters / skin irritation are caused by prolonged contact with wet and dirty litter; other factors including health, diet, and perch material also play a role. Since breast blisters can be more common in slower growing strains with a sharp keel, they should be closely monitored and managed through good husbandry and adequate environmental provisions.
HOW: Measured at slaughterhouse. See (p.7): **http://edepot.wur.nl/196648**

Assign score of 0 (no breast blister) or 1 (breast blister or irritation present).

TARGET: ≥ 90-95% of birds with score 0.

FEATHER CLEANLINESS

WHAT: Assess the level of dirt coverage on the feathers of individuals in the flock.
WHY: Feather cleanliness is a positive indicator of environmental conditions in the house and indicates that birds are not spending excessive periods resting due to inactivity.
HOW: Can be measured on-farm or more typically at slaughter house. See **http://www.rspca.uk/ImageLocator/LocateAsset?asset=document&assetId=1232733616006&mode=prd**

Assign score from 0 (breast plumage is clean) to 2 (breast plumage is very dirty).

TARGET: ≥80% of birds score 0; ≤ 20% score 1; few scoring 2.

FLOCK BEHAVIOR

WHAT: Activity levels, behavioral signals (see below), movement patterns, flock distribution, and space usage.
WHY: Broilers can spend more than 80% of their time lying inactive by 39 days, largely caused by physiological restrictions associated with fast growth and a non-stimulating environment. Low activity is associated with poor walking ability and indicates a lack of behavioral expression.
HOW: Automated monitoring of optic flow movement and distribution provides an early warning system for flocks with higher mortality, hockburn and poorer gait, and issues with feeders, drinkers, heating and ventilation. Scan sampling (from at least 5 random points per house) or transect walks can be used for regular assessment and monitoring of activity in the flock. Using either of these methods, birds are classified as "active" (standing, perching, walking, running, foraging, and social and comfort behaviors) or "inactive" (sitting or lying, including eating while in these positions).
TARGET: Target: ≥ 40% birds active.

OTHER MEASURES: Angular leg deviations (valgus/varus; rotation), crooked toes.

CHICKEN BEHAVIOR SIGNALS

Positive behavior	Negative behavior
General activity - walking, running, wing flapping, dustbathing, perching	Inactivity – prolonged lying and resting (daytime); jostling (interrupting neighbors)
Foraging - pecking ground, food items or enrichment substrates	Non-uniform walking ability, birds not wanting to move more than a few steps
Social interaction and maintenance behaviors, such as grooming	Inappropriate pecking at vent, head, neck
Even distribution of birds throughout the house	Persistent panting (too hot) or huddling (too cold)

PROCESS

1. Measure outcomes
2. Identify risk factors (causes of poor outcomes)
3. Assess performance (benchmark against other farms or suppliers)
4. Adjust management practices (to improve welfare outcomes, using incentives or penalties for compliance with targets).

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