Animal-Based Methods for Evaluating Welfare in Broiler Chickens

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Description

Animal-based welfare assessments focus on direct observations and measurements of the animals themselves, as opposed to resource-based methods, which evaluate the environment in which the animals are kept (such as space allowance, lighting and ventilation). While resource-based measures are important, they do not always capture the full picture of an animal's welfare. For example, chickens can have access to plenty of space and food but still suffer from pain, discomfort, or stress. Animal-based methods, on the other hand, provide insights into the actual state of the chickens by assessing their physical condition, behaviour and psychological state.

These indicators can be used to assess the chickens' health, behaviour and emotional states, thereby helping producers and welfare auditors make more informed decisions about management practices. The push toward animal-based welfare assessments is supported by scientific studies, consumer preferences for ethically produced meat and legislative frameworks that prioritize animal welfare.

Physical health indicators

One of the primary ways to assess broiler chicken welfare is through physical health indicators. These are often the easiest and most objective measures to obtain, as they involve observable conditions that can be quantified. The article discusses several key physical health indicators used in broiler welfare assessments, including leg health, feather condition, footpad dermatitis and mortality rates.

Leg health is a critical welfare issue in broilers due to their rapid growth rate. Modern broiler chickens have been selectively bred to grow at an accelerated pace, often resulting in leg disorders such as lameness, joint inflammation and skeletal deformities. Monitoring leg health is therefore need in evaluating welfare, as chickens with compromised mobility may experience pain, difficulty accessing food and water and reduced quality of life. The article highlights how gait scoring systems-where chickens are assessed based on their ability to walk-are commonly used to evaluate leg health.

Feather condition is another important welfare indicator. Poor feathering can result from overcrowding, excessive pecking, or poor nutrition. Feather loss can expose the skin to injury and infection, leading to discomfort and an increased risk of disease.

By regularly monitoring feather condition, producers can identify underlying welfare issues such as poor environmental conditions or inadequate diet.

Footpad dermatitis-an inflammatory condition affecting the skin on the underside of the feet-provides insight into the quality of litter and overall barn management. Wet or soiled litter is a common cause of footpad dermatitis, which can lead to pain, infection and reduced mobility. The article emphasizes that footpad dermatitis is a key welfare concern in broiler chickens and is often used as a benchmark for assessing the quality of housing conditions.

Mortality and culling rates are also used as direct measures of welfare. High mortality rates may indicate poor management, inadequate nutrition, or the presence of disease, while high culling rates suggest issues with animal health that could have been prevented through better welfare practices. While mortality and culling rates are relatively easy to track, they are not always the best indicators of welfare on their own. A comprehensive welfare assessment should also include indicators of morbidity, as chickens may suffer from poor welfare without necessarily dying or being culled.

Animal welfare

Behavioural indicators are an important component of animal-based welfare assessments because they offer insights into the emotional and psychological well-being of broiler chickens. The article highlights several key behaviours that can be used to evaluate welfare, including activity levels, social behaviour and abnormal behaviours such as feather pecking or aggression.

One of the most commonly assessed behavioural indicators is activity level. Healthy, well-managed chickens should exhibit a range of natural behaviours, including foraging, dustbathing and walking. In contrast, chickens that are in pain or discomfort, or that are kept in poor environmental conditions, may become lethargic and less active. Monitoring activity levels can help producers identify problems with leg health, environmental enrichment, or overall flock management.

Social behaviour is another important welfare indicator. Broiler chickens are social animals that naturally live in groups. Observing how they interact with one another can provide valuable information about their well-being. For example,

aggressive behaviours such as feather pecking or cannibalism may indicate that the chickens are stressed or experiencing frustration. The article points out that providing adequate space, environmental enrichment and access to natural light can reduce the occurrence of these aggressive behaviours.

Abnormal behaviours such as repetitive movements, feather pecking, or stereotypic behaviour (repetitive, purposeless actions) are signs of poor welfare and should be carefully monitored. These behaviours are often associated with environmental stressors, such as overcrowding, lack of stimulation, or inadequate diet. The article suggests that behavioural observations can provide early warning signs of welfare problems, allowing producers to make adjustments before the issues escalate.