

Practical health and welfare assessment protocol for pullets and laying hens in cage-free systems

Problem

Farmers have difficulties anticipating emerging welfare and health issues before these affect the productive performance of pullets and laying hens in cage-free systems. This situation can be worsened during the transition phase from cages to cage-free housing systems.

Solution

A practical health and welfare assessment protocol for pullets and laying hens housed in cage-free systems. The protocol is based on the transect method to maximize the assessment reliability and time efficiency.

Benefits

A systematic flock welfare assessment can help farmers to detect early signs of emerging health and welfare problems when they can still be corrected and before they have an impact on hen welfare and farm economic results.

Practical recommendations

Go to the assessment protocol for information on which indicators to assess and how they are assessed. Define the number of transects (wall and central) according to house dimensions. Once defined, number the transects (left to right), taking the house entrance door as the reference (Figure 1). Always assess 2 transects/house (one wall and one central transect), avoiding neighbouring transects (example of evaluation in Figure 1: T1 and T3, T4 or T5; T6 and T4, T3 or T2). Intercalate transects between consecutive assessments. In houses with a covered veranda and in free-range and organic systems, assessment should be done in the early morning before releasing the birds in the free-range/veranda. Assessment of the free range should be done once the hen/pullet flux through the pop holes has stabilized after opening the pop holes. Move slowly through the flock to minimize disturbance of the birds during the assessment.

APPLICABILITY BOX

Theme: Animal husbandry

Keywords

Hen, pullet, welfare assessment, transect, on-farm

Context

Transition to and operating cage-free housing systems for laying hens

Application time

Recommendation: once/week and minimum once/month

Required time: 45 min/flock

Period of impact: Immediately after beginning the assessments, farmers can already detect early signs of welfare problems from the first day when they can still be easily addressed.

Equipment: Laser meter or measuring tape; excel software or paper and pencil; free smartphone applications available in the Google Store to measure light intensity.

Best in

All cage-free housing systems (barn, free-range and organic production) for both pullets and hens.

Target audience: Farmers, farm advisors

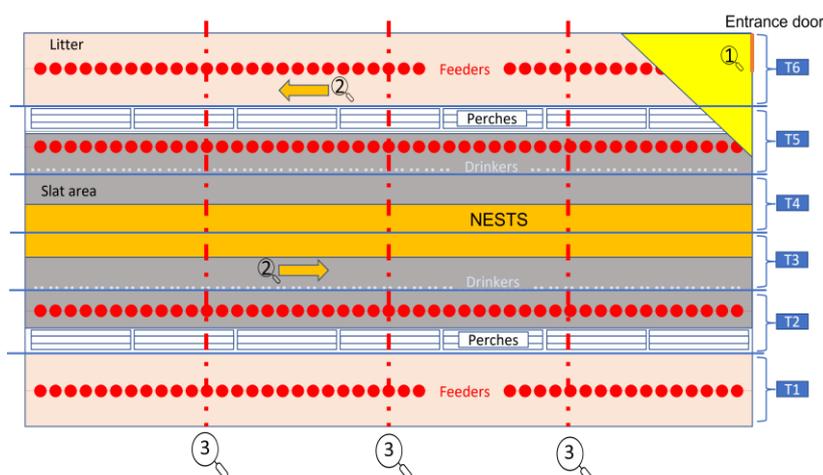


Figure 1: Example of a single-tier (T=transect 1 to 6) – Orange arrows within each figure indicate the sense of the farmer’s movement on each transect to collect information during walks; magnifying glasses indicate the places where data should be sampled, and the number inside indicates the group of indicators to be collected at each location. Group 2 (table 1) indicators must be collected along the whole transect walk. (Source: Neiker; modified from Vasdal et al., 2022).

On-farm application

System approach

Group	Indicators
1: Indicators evaluated when entering the house	Panic reactions, panting/wings open, huddling
2: Indicators evaluated during transect walks	Inappropriate beak trimming, feather loss on head, back, breast, and tail; wounds on head, back, and tail; pariah birds, sick, <i>prolapse*</i> , trapped hens
3: Indicators evaluated during routine check walks	Red mites, light intensity, litter quality, feathers on the floor
4: Indicators evaluated in free range and organic systems	Range use, range homogeneous use
5: Production traits evaluated through written records and in the egg packing room	<i>Produced, dirty, pale, broken, floor, and other problem eggs*</i> ; on-farm mortality, on-farm culls.

Table 1. Health and welfare indicators assessed in hens and pullets. *: not assessed in pullets

Evaluation

- Indicators from groups 2 and 5 are assessed as the number of observed birds, and data are presented as percentages (quantitative data).
- Indicators of groups 1, 3 (except for light intensity), and 4 are assessed based on different qualitative scales.

Further reading

Protocol for practical pullets and laying hens welfare and health assessment: coming soon

About this practice abstract and Best Practice Hens

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Best Practice Hens: To support egg production in non-cage systems and improve animal welfare, a consortium consisting of 7 partners will develop Best Practices for Non-cage Egg Production Systems as a European Commission, DG SANTE pilot project. These Best Practices will provide practical support to egg producers to encourage them to convert from cage to non-cage systems, including organic production.

Project website: www.bestpracticehens.eu/

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