ASSESSING THE WELFARE OF LAYING HENS

EBENE®

› Who is it for?

Poultry farmers, farm technicians and veterinarians working in laying hen production.

› Which animal species?

Laying hens.

› Which housing system?

Floor housing or aviary systems, with or without outdoor access.

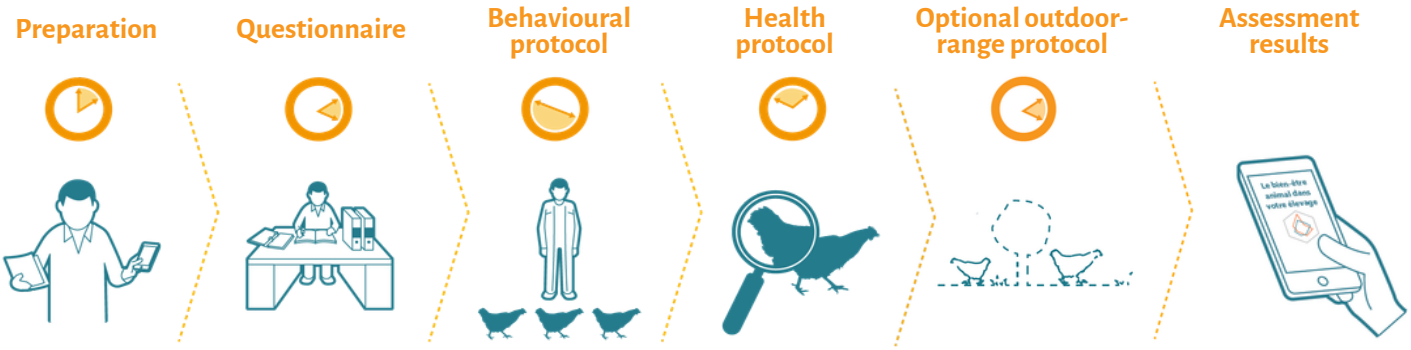
› When should the assessment be carried out?

From 25 weeks of age and after 55 weeks of age.



Three protocols in one

The indicators (measurements collected on the farm) are recorded at three stages: the questionnaire, the behavioural assessment protocol and the health assessment protocol.
Preparation time is required to gather the relevant documents and review the observation protocols.
If an outdoor range is available, an additional assessment can be carried out using the optional outdoor range protocol (see the information sheet Outdoor Access).



Implementation of the assessment protocol for laying hens.

Sampling

The sample must be representative of the entire flock, without requiring every bird to be observed. This keeps the time needed to complete the assessment within reasonable limits.
Numerous scientific studies have been used to validate the methods and sample sizes, ensuring that the results reflect the actual situation as closely as possible while reducing assessment time.
Sampling is a crucial stage and must be carried out rigorously and carefully.

Avoid unintentionally influencing the results

Sampling bias occurs when results are influenced in a non-random manner. Human psychology often plays a role: consciously or unconsciously, we may want to influence the results.

For example, it is important not to deliberately seek out injured birds or, conversely, birds that approach humans. Be vigilant!

Weather conditions, lighting and the time of day can also affect bird behaviour. Record all these factors in the comments.

10 min.



1. Assessment Using a Questionnaire

The questionnaire covers all resource-based indicators, which are related to the animal's environment. These include:

› **Feeder availability** (available feeder length per bird).

› **Drinker availability** (available drinker length per bird).

› **Perch availability** (available perch length or surface area per bird).

› **Space allowance** (available space per bird).

› **Mortality rate** (cumulative mortality rate, expressed as a percentage).

› **Killing method** (manual cervical dislocation, mechanical cervical dislocation using pliers, penetrating captive bolt device, etc.).

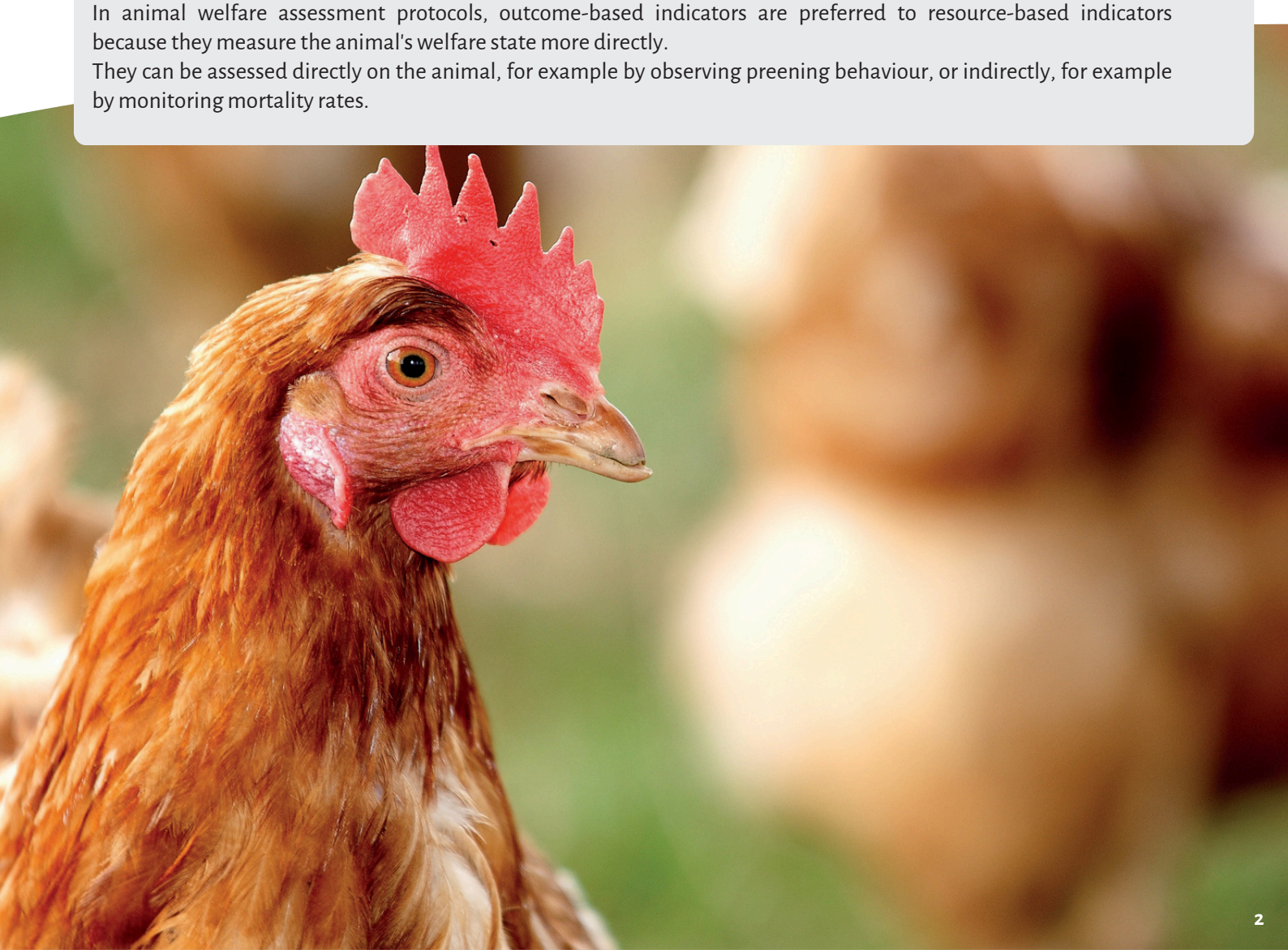
› **Other interventions** (beak trimming, wing trimming, claw trimming, etc.).

› **Environmental enrichment** (whether enrichment, such as music, is provided).

› **Stockperson practices** (measures taken to prevent birds from being disturbed when entering the poultry house, such as switching on the radio or knocking on the door).

Resource-based indicators and outcome-based indicators

In animal welfare assessment protocols, outcome-based indicators are preferred to resource-based indicators because they measure the animal's welfare state more directly.
They can be assessed directly on the animal, for example by observing preening behaviour, or indirectly, for example by monitoring mortality rates.





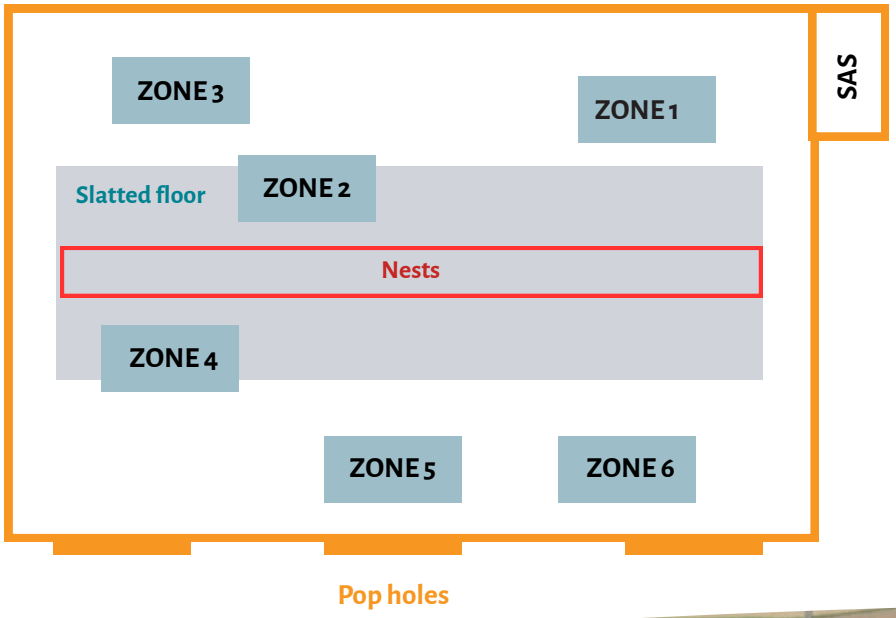
2. Assessment of Bird Behaviour

To assess poultry welfare, direct observation of the birds is essential. This is why behavioural observations are so important.

Training in behavioural observation using a specific scientific protocol ensures the validity of the results.

How should sampling be carried out?

The assessor must select 6 observation points within the poultry house, sufficiently far apart to avoid observing the same birds twice and to obtain a representative sample of the house.
Each observation area should cover approximately 2 m² and should be delineated by the assessor using fixed visual markers wherever possible.
If there are bonuses designed to encourage exploration, observe no more than two areas that contain them.
Of the 6 observation areas, two must be located on the slatted floor.





A few precautions

Before starting the observations, feel free to select a larger area if too few birds are visible. The aim is to observe all the birds within your field of vision.
Also ensure that lighting is sufficient during the assessment.
If a sudden event affects the birds' behaviour (thunder, an aircraft, etc.), stop the observations and resume them after a certain period of time, allowing the birds to return to normal activity.

Starting the assessment

To start the assessment, stand at the entrance to the poultry house, or in the entrance lobby if a window is present, and observe:

› **Bird distribution** (this is classified as either 1. homogeneous, i.e. with no more than three small areas without birds; 2. moderately homogeneous, with a few empty spaces, but of small size; or 3. heterogeneous, with one or more large areas without birds).

For each observation area, estimate the number of birds present.

Then, over a period of 2 minutes, record each occurrence of the following behaviours:



› **Dust bathing**
(The bird lies on the ground and moves the litter with its wings and claws to coat its feathers with dust.)



› **Environmental exploration**
(The bird pecks at the litter or another item, excluding feed, and/or scratches the litter with its claws.)



› **Preening**
(The bird cleans its own feathers with its beak.)



› **Leg and wing stretching or wing flapping**
(The bird calmly extends one or both wings while remaining in place, or extends one leg and flaps its wings.)



› **Interaction with other birds**
(Mutual preening, non-aggressive pecking, sparring.)

› **Aggression towards other birds**
(Aggressive pecking directed at one or more other birds, particularly towards the head and neck.)

Once the 2 minutes have elapsed, count the number of birds present in the observation area again.

Then, for each area, record the percentage of birds that:

› **Are moving**: standing, walking or running.

› **Are panting**: breathing rapidly with the beak open.

Next, for each observation area, indicate whether enrichment items and/or perches are present and whether they were used by the birds during the 2-minute behavioural observation period.

Also record whether aggressive behaviours were observed specifically around feeders or drinkers.

At the end of the assessment of each area, assess:

› **The birds' response to human presence** (at approximately 1 m from the assessor, with or without physical contact with the assessor).

Bird handling (optional)

› **Handle 2 hens and record whether they have keel bone deviations or fractures**. To do this, palpate the keel bone of each hen and record any deviation from its original shape or any fracture.

Be careful to distinguish aggressive pecking from interaction.
Sparring between birds does not necessarily indicate aggression.

30 min.



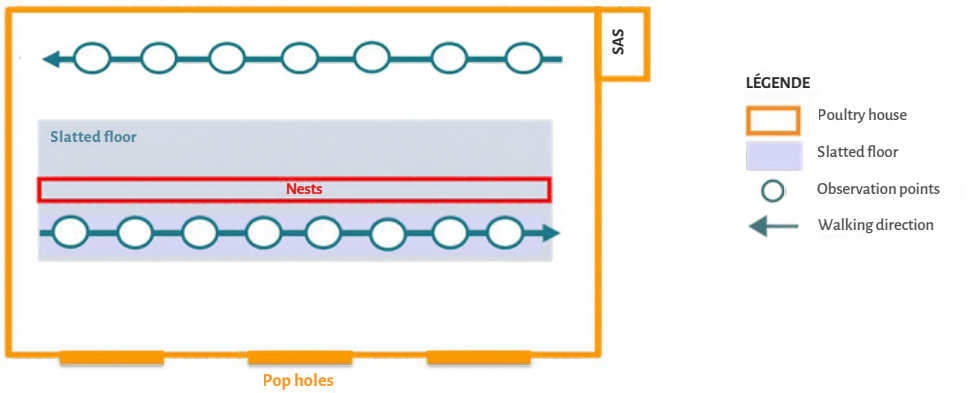
3. Assessment of Health Indicators

Health information complements the behavioural observations of the birds in order to obtain the most comprehensive possible assessment of poultry welfare.

How should sampling be carried out?

Carry out two passes, following the instructions below:

1. Walk slowly.
2. Distribute the stopping points along the length of the poultry house and across the different floor areas (litter floor / slatted floor / aviary).
3. At each stop, randomly select 3 hens and observe the indicators presented below.



Record each occurrence of a bird displaying one of the following indicators:

› **Plumage condition**

(Very good condition; a few damaged or missing feathers; at least 5 cm of bare skin.)

› **Main area of feather loss**

(Back, tail, cloaca / neck, head / wings.)

› **Injured**

(A lesion at least 1 cm in size, healed or fresh, on the head, back or tail.)

› **Beak trimming quality**

(Beak not trimmed; normally trimmed; trimmed with minor abnormalities; trimmed with major abnormalities.)

› **Small**

(Approximately half the average size of the flock.)

Be careful not to overestimate the number of birds classified as "small": they must be half the size of the other birds on average.

› **Other abnormality**

(A bird with feather loss, for example.)

At the end of each transect, assess:

› **Litter quality**: either dry and friable, friable but slightly damp, pasty, or completely caked.

At the end of the assessment, assess:

› **The occurrence of flock movement or panic during the assessment.**

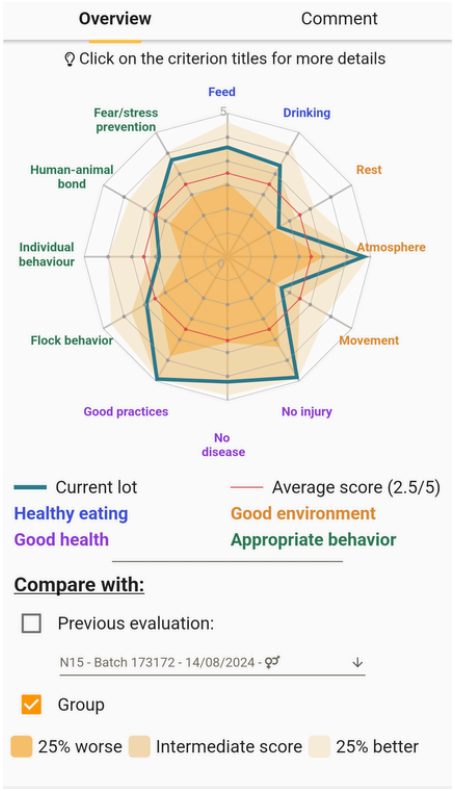
› **The birds' level of nervousness** at the time of the assessment.

To limit sampling bias, observe the first hen in front of you, then the two hens to her left. This prevents you from focusing on birds displaying any particular abnormalities.

Assessment results



The results are available immediately after the assessment through the EBENE® application.
They are presented graphically and make it possible to identify strengths and areas for improvement.
The assessor can also consult the details of each indicator measured.



What next?

This tool supports the continuous improvement of animal welfare.
The results help identify strengths and areas for improvement.
Depending on the results, it is possible to:

› Discuss the results with the farm technician or veterinarian.
› Implement appropriate corrective measures.

A new assessment can then be carried out to measure the effectiveness of the actions implemented.

The smartphone application

The EBENE® application makes animal welfare assessment easier.
It allows users to:

› Collect data.
› Automatically analyse the data.
› Display the results.
› Access explanations to help understand the results.

Presentation of animal welfare assessment results using the EBENE® method and the smartphone application.
Each colour represents the results for the group of farms for each farmer tertile (brown indicates the lowest results and the lighter colour the highest). The highest scores are represented at the outer edge of the chart, while the centre represents the lowest scores.

Mini-tutorials and training courses are available to support users.



Do not litter. Photos: www.oiseaux.net / Françoise Foucher / AVIPOLE/ CNPO

Find out more about the approach

A tool for improving animal welfare in the poultry and rabbit production sectors.
EBENE® method: Animal Welfare Assessment.

For more information: https://www.itavi.asso.fr

Contact person: Laura Warin / Joanna Litt
Email: contact_EBENE@itavi.asso.fr

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