

## On farm assessment of Feather Cleanliness



### What is feather cleanliness?

The welfare indicator 'feather cleanliness' involves an assessment of the plumage on the breast of chickens, which should be clean with no patches of dirt.

### Welfare consequences

Wet or soiled feathers may lose their protective properties, having negative effects on animal welfare including discomfort and eventually cold stress. When animals access to outdoor, chickens are exposed to variable weather conditions and thus an intact plumage, which is essential for thermoregulation, is particularly important.

The main factors impacting feather cleanliness is the quality of the litter, indeed a wet and/or dirty litter will alter the cleanliness of birds. Feather cleanliness is improved by good litter quality (dry and friable) and possibility to perform dustbathing to ensure good plumage condition.



Dustbathing chicken in a dry and friable litter (courtesy of Itavi).







Dustbathing chicken video (courtesy of Itavi).

### What does feather cleanliness indicate?

Feather cleanliness is indicative of the environmental conditions and level of management to which the birds are exposed. Feather cleanliness is mainly linked with litter quality. The litter can be wet because of sub-optimal management (e.g. poor ventilation regulation, temperature too low, inappropriate litter, liking in water system) or to diseases leading to watery feces (e.g. coccidiosis, colibacillosis). Insufficient cleanliness can be due to different factors linked to different legal requirement, but it gives a good overview of welfare level (since it is correlated with other animal-based indicators) then it is a good iceberg indicator. In addition, feather cleanliness is associated with a range of welfare indicators, including hock burns, footpad dermatitis and condemnations at slaughter. Feather cleanliness can be assessed as part of on-farm inspections, prior to or at the time of harvesting.

### Method of assessment

A method of assessment has been developed, based on the scoring system described in the **WelfareQuality® protocol** (2009). The assessor is recommended to:

-  **Walk slowly** inside the house;
-  **Catch** 10 birds one by one, in 10 different location, i.e. 100 in total;
-  **Examine the breast** of each bird according to the following classification;
-  **Report** the results using a recording sheet.

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### Method of assessment

Score and descriptions for cleanliness of breast feathers:

0 = Plumage is clean

1 = Slightly dirty plumage

2 = Moderate patches of dirty plumage on breast

3 = Large patches of dirty plumage on breast/breast is completely covered in dirty plumage



Breast cleanliness scores from the WelfareQuality® protocol (2009).



Breast cleanliness scores.

Feather cleanliness scoring can provide a general picture of the welfare status of a broiler flock, as it reflects several welfare issues in an integrative manner.

High feather cleanliness scores must be addressed as soon as possible in order to identify the possible causal factors and resolve the problem.

#### Centre's recommendations:

-  Make sure that you randomly select the birds in different areas in the barn (resting area, watering areas, in the middle and close to walls), training of the operator is essential to guarantee the validity and repeatability of the results.