

## **DELIVERABLE**

### **D.3.1.1. – IDENTIFICATION OF THE MOST CRITICAL “OPEN NORMS”**

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## **1. Introduction**

During 2020, possible ‘open norms’ regarding: Broilers welfare on farm, Laying hens welfare in alternative housing systems, and State of consciousness after waterbath stunning of broilers and turkeys were identified and discussed. The information has been retrieved from questionnaires sent to the Competent Authorities (CAs) or from workshops that had taken place during a meeting between EURCAW-Poultry-SFA and CAs in September 2020 in Nice (France).

### **Definitions**

**Open-norms:** requirement in the EU legislation which does not unambiguously translate into qualitative or quantitative criteria that can be used to check/verify compliance.

Example: dust level

**Gap of knowledge:** lack of technical and scientific information about the validity, reliability or feasibility of the indicators or its method.

Example: absence of knowledge about how to assess the rate of dust in a barn.

## **2. Identification of the most critical “open norms” regarding the three priority areas”**

### **Broilers welfare on farm**

DIRECTIVE 2007/43/EC is the first animal welfare norm to introduce the use of Animal Based Indicators (ABIs). These are however mainly assessed at slaughter while there is a lack of ABIs for on farm animal welfare assessment. Several ABIs, to use on farm, have been described in literature but feasibility is often a concern due to timing and disturbance to the birds. Among these, feather cleanliness is considered as a reliable ABI, indicative of environmental conditions in which the animals are kept. However, feather cleanliness assessed at slaughter may be affected by transport conditions and cannot therefore be considered strictly correlated to farm environment. On the other hand, feather cleanliness assessed on farm (Welfare Quality®, 2009) is disturbing and time consuming. Technological solutions transposed by other sectors to the area of welfare assessment could be promising. For the next working period, the EURCAW-Poultry-SFA will investigate the possibility to evaluate flock feather cleanliness based on the use of instruments developed for the measurement of whiteness index. This is the measure which correlates the visual ratings of whiteness for certain white and near-white surfaces. A review of the subject and available instruments will be performed. Based on the results of which, instrumental assessments will be carried out on farm in comparison with the feather cleanliness assessment described in Welfare Quality® (2009). The objective is to propose a method for an easy use of feather whiteness as an iceberg indicator in broiler production.

### **Laying hens welfare in alternative housing systems**

During 2021-2022, the EURCAW-Poultry-SFA will work on dust assessment method. Currently, when dust is assessed, the methods used are not completely valid and/or reliable. The EURCAW-Poultry-SFA proposal is to investigate low-cost sensors, as it is already been used (Yasmeen *et al.*, 2019), and to compare with known methods like dust sheet test (Welfare Quality®, 2009) or devices to measure dust that request to be on-site for hours.

## **State of consciousness after waterbath stunning of broilers and turkeys**

In 2021, the EURCAW-Poultry-SFA will address the inter-observer repeatability of some ABIs for the state of consciousness after waterbath stunning before (*i.e.*, tonic seizure, breathing, spontaneous blinking and vocalisations) and after bleeding (*i.e.*, wing flapping, breathing, spontaneous swallowing and head shaking) and the effectiveness of stunning depending on the electrical parameters applied.

### **References**

WELFAREQUALITY® 2009. Welfare Quality® assessment protocol for poultry (broilers, laying hens). Welfare Quality® Consortium, Lelystad, Netherlands.

YASMEEN, R., ALI, Z., TYRREL, S. & NASIR, Z. A. 2019. Estimation of particulate matter and gaseous concentrations using low-cost sensors from broiler houses. *Environmental Monitoring and Assessment*, 191.