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# **Flock uniformity: a poultry welfare indicator to be used at the slaughterhouse?**

Cândido Saraiva, Madalena Vieira-Pinto

University of Trás-os-Montes e Alto Douro- Portugal

# Introduction

Directive 2007/43/CE establishes the system for assessing the welfare of poultry at the slaughterhouse level.

Animal Welfare indicators:

- Mortality percentage on the farm;
- Mortality percentage in transport to the slaughterhouse;
- Post mortem inspection results;
- Count of footpad dermatitis (FPD).



FPD score 2

The increasing importance of this topics, leads to a dynamic search for novel welfare indicators, like flock uniformity – iceberg indicator - Reduced animal welfare can be indicated by a poor flock uniformity due to either general housing, management, or bird health problems.

# Objectif:

The aim of this study was to investigate the usefulness of the parameter “flock uniformity “ as an indicator of animal welfare to be used during poultry post mortem inspection at the slaughterhouse.



# Material and Methods

During the post-mortem inspection at one Portuguese slaughterhouse, 26 randomly broiler batches were analysed.

To study the uniformity, the following scores were created based on dialogue and opinion with poultry veterinarians.

- **score 1:** [0 -2,5%[ of small animals (high uniformity);
- **score 2:** [2,5-5%[ of small animals (normal uniformity);
- **score 3:** [5-7,5%[ of small animals (bad uniformity);
- **score 4:**  $\geq 7,5\%$  of small animals (no uniformity).

This score classification was applied to the first 10% of each batch observed after stunning.



# Results

Variables	Score 2	Score 3	Score 4	<i>p</i>
	M±SD	M±SD	M±SD	
% DOA	0.051±0.038	0.189±0.363	0.061±0.077	0.452
% TC	0.111±0.058 <sup>a</sup>	0.267±0.114 <sup>a</sup>	0.654±0.482 <sup>b</sup>	0.002
% TC by disease or condition	0.071±0.047 <sup>a</sup>	0.193±0.115 <sup>a</sup>	0.368±0.174 <sup>b</sup>	0.001
% TC by technopathies	0.039±0.049	0.074±0.056	0.286±0.398	0.070

<sup>a-c</sup> Values within a row lacking a common superscript differ ( $p < 0.05$ ). DOA: Dead-on-arrival; TC: Total Condemnation

Flock uniformity it seems that is an indicator of animal health profile.

# Conclusion

The results showed the potential of “flock uniformity” as a poultry welfare indicator and as a criteria to be used under a risk-based meat inspection approach: The worse the flock uniformity, the more time must be dedicated to the post-mortem inspection on that batch.

More studies must be done to validate this parameter as a potential animal welfare indicator.

**Final Remark:** “flock uniformity” can also be seen at the farm level and this output could be introduced in the food chain information in order to apply ,at the slaughterhouse level, to a logistic slaughter and a risk-based meat inspection.



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**Thanks for all your  
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