

Facilitation of assessment of technical measures and its potential for implementation of the Broiler Directive (2007/43/EC)

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European annual production is approximately 6 billion birds, with an average consumption of poultry of about 23 kilos per capita per year (EU, 2014). The European poultry industry employs 300,000 people across Europe and has an annual turnover of 30 billion Euros (AVEC, Association of Poultry Producers and Poultry Trade in the EU, 2014).



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Animal



Resource
(environmental conditions)



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The Broiler Directive (2007/43/EC) is unique amongst current EUDirectives

- a) It uses outcome data, collected at abattoirs and on farm to monitor on farm broiler welfare.
- b) To - vary the maximum permitted stocking density on farm.



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REQUIREMENTS APPLICABLE TO HOLDINGS

In addition to the relevant provisions of other relevant Community legislation, the following requirements shall apply:

Light

6. All buildings shall have lighting with an intensity of at least 20 lux during the lighting periods, measured at bird eye level and illuminating at least 80 % of the useable area. A temporary reduction in the lighting level may be allowed when necessary following veterinary advice.



COUNCIL DIRECTIVE 2007/43/EC of 28
June 2007 laying down minimum rules for the
protection of chickens kept for meat
production

ANNEX I

REQUIREMENTS APPLICABLE TO HOLDINGS

In addition to the relevant provisions of other
relevant Community legislation, the following
requirements shall apply:

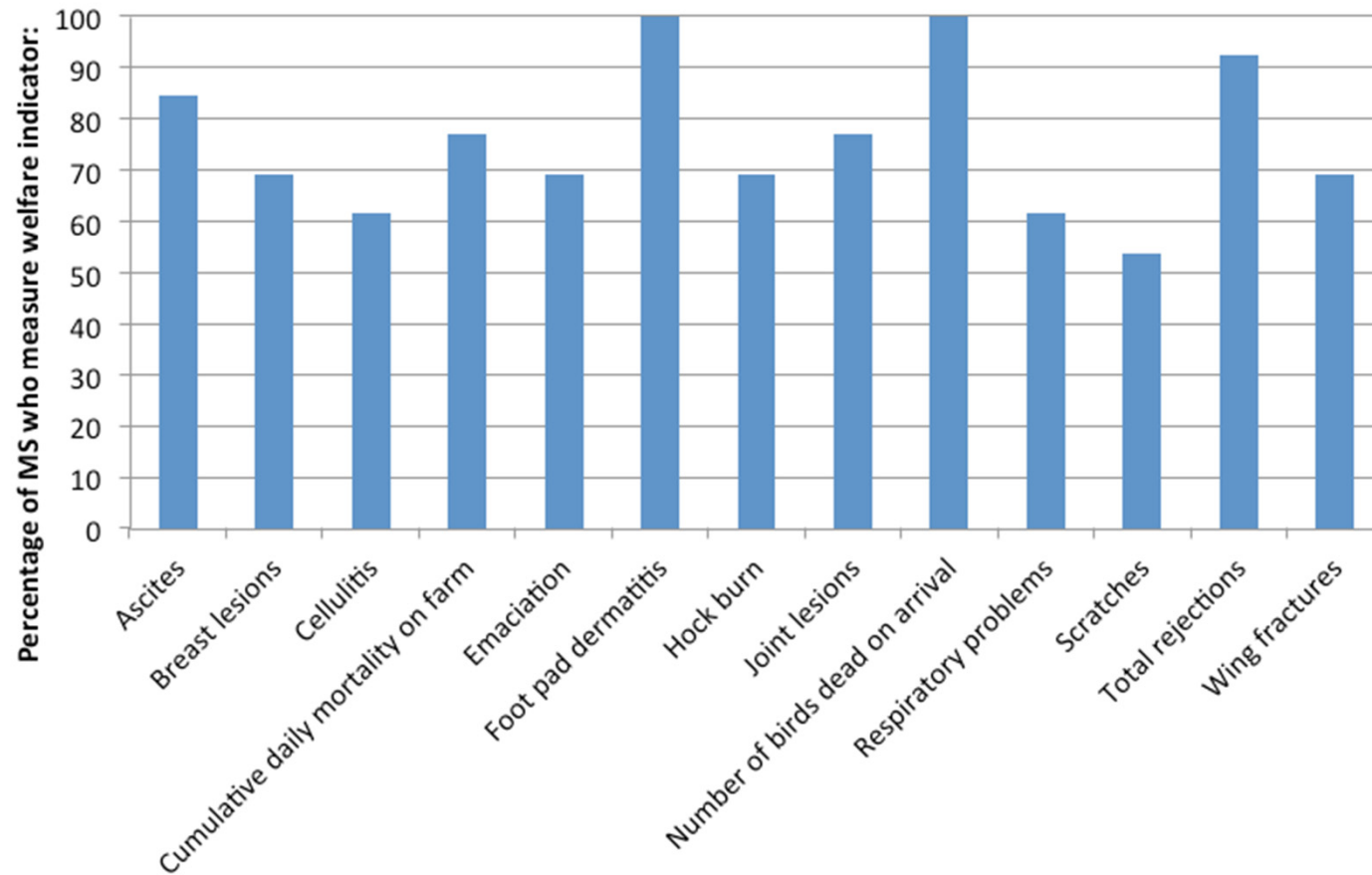
Drinkers

1. Drinkers shall be positioned and maintained in
such a way that spillage is minimised.

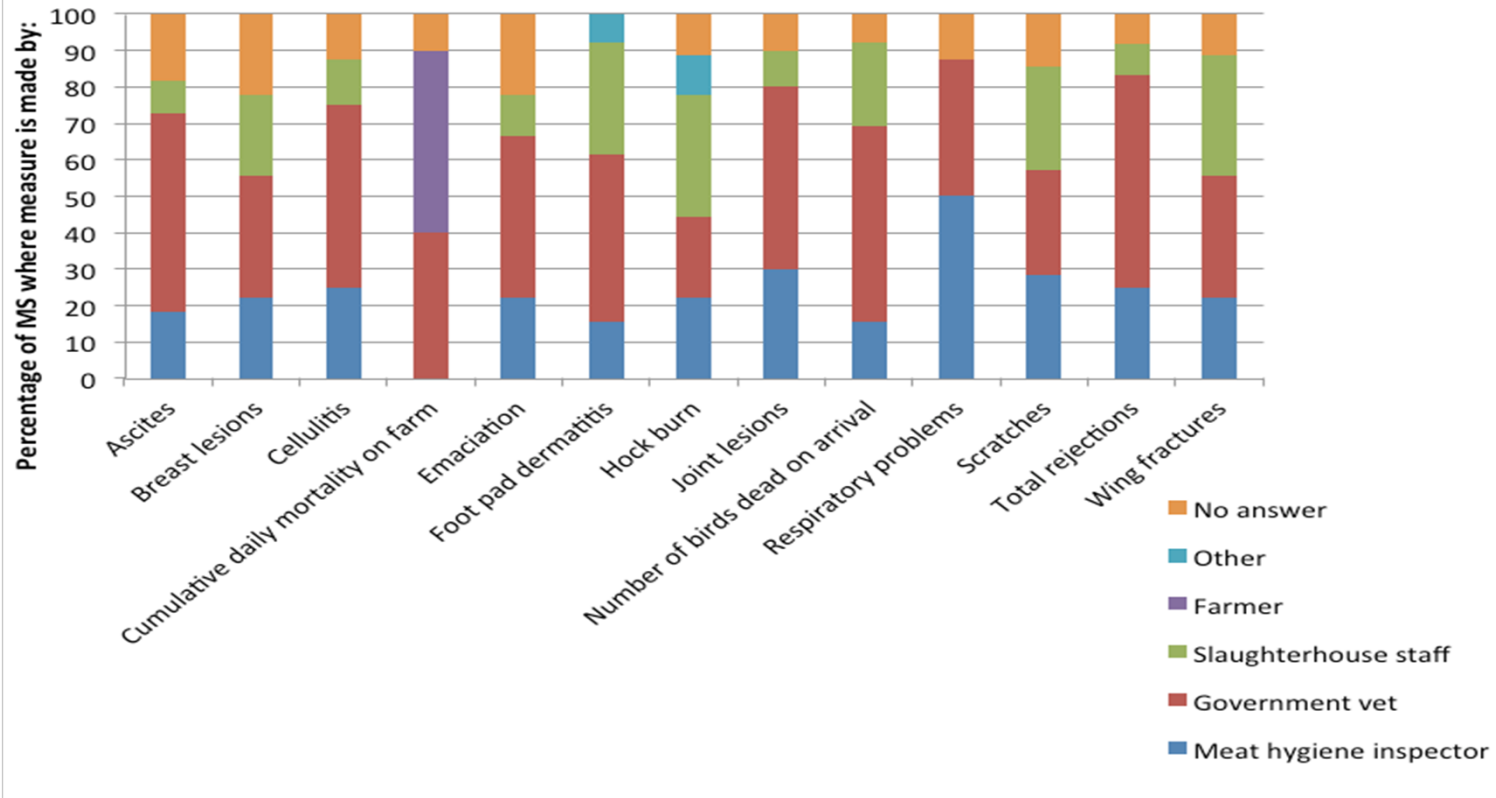




Proportion of MS where welfare indicators are measured



Who actually makes the measure?

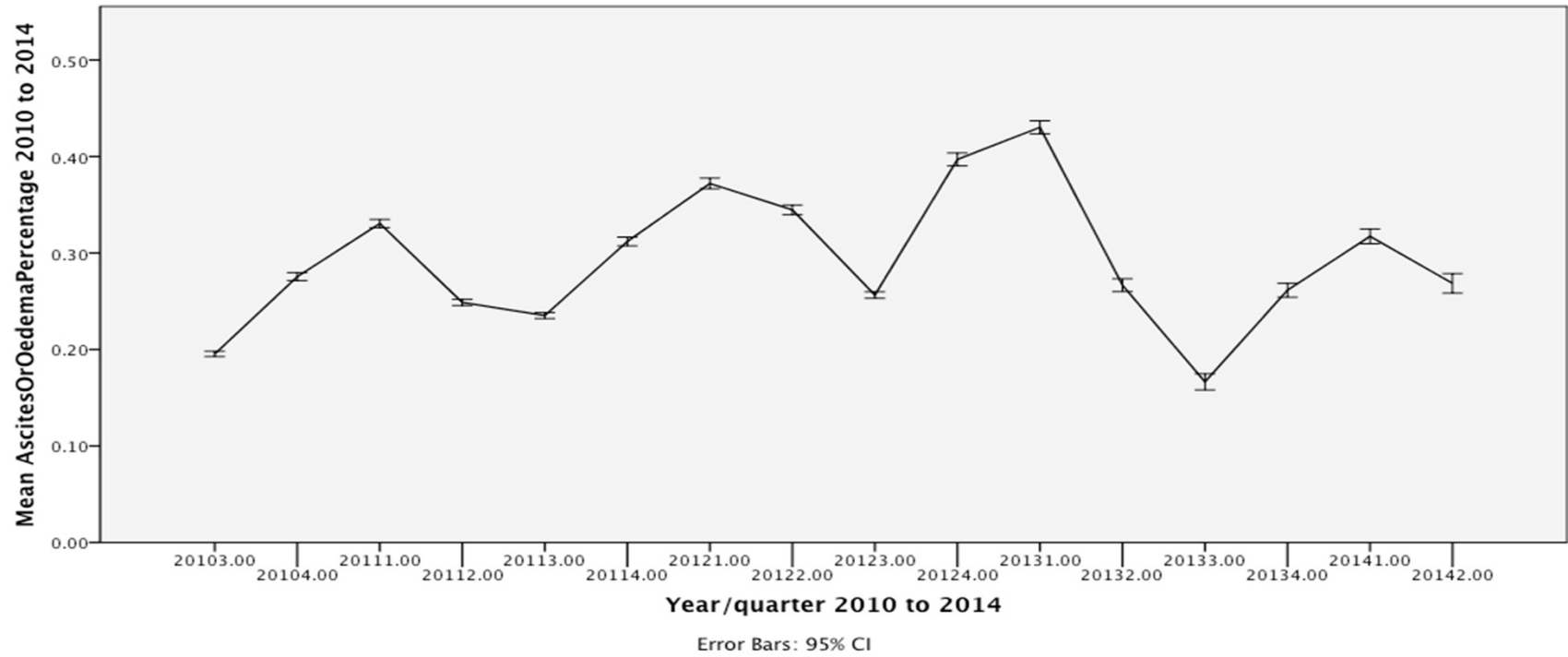


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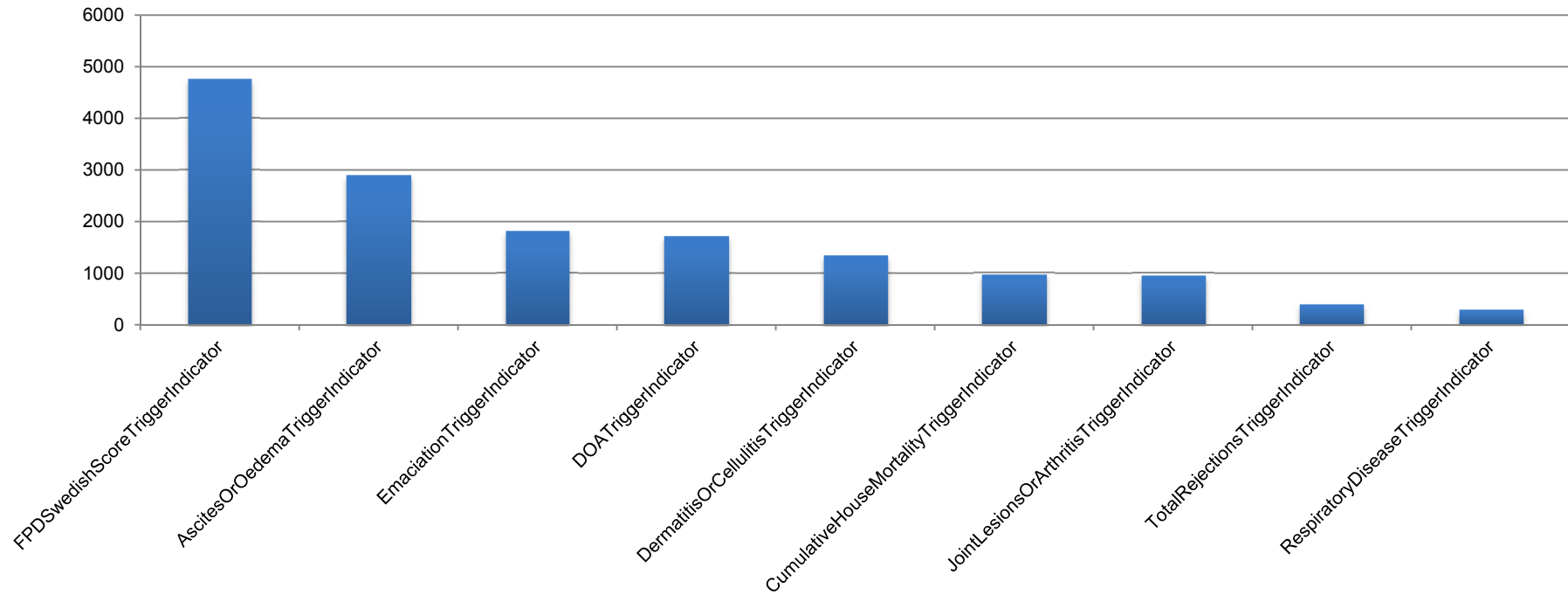
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Ventilation
Litter **Quality** **Disinfection**
Diet **Transport** **Heat Stress** **Heating** **Vaccination**
Antibiotics **Post Mortem Required (disease)** **Culling** **Retrain Staff** **Runting** **Stunting** **Catching**
Cleaning **Drinkers** **CO2 Monitoring**
 Lighting periods, Weather, House Structure, Stocking, General Monitoring, Absorbents



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Measures	Degree of harmonisation between MS	Variability in reference and guidance material to MS	Training and KT priority
Foot pad dermatitis, Hick burn, Dead on Arrival, Total rejections	High	Some variability	Medium to low (quite well accepted technical methods by MS)
Ascites, Cumulative daily mortality	Medium	Significant variability in methods used to assess and professional judgements	Medium
Breast lesions, Cellulitis, Emaciation, Joint lesions, Respiratory problems, Scratches, Wing fractures	Low	Very variable methods and guidance on data collection	High
Environmental measures	Low		High

Manually assessed animal outcome measures for broiler chickens have started to be used alongside the use automated on farm measurements of climate, feed intake, animal growth and camera and sound based automated precision livestock (PLF) farming methods (eYeNamic) in our pilot studies

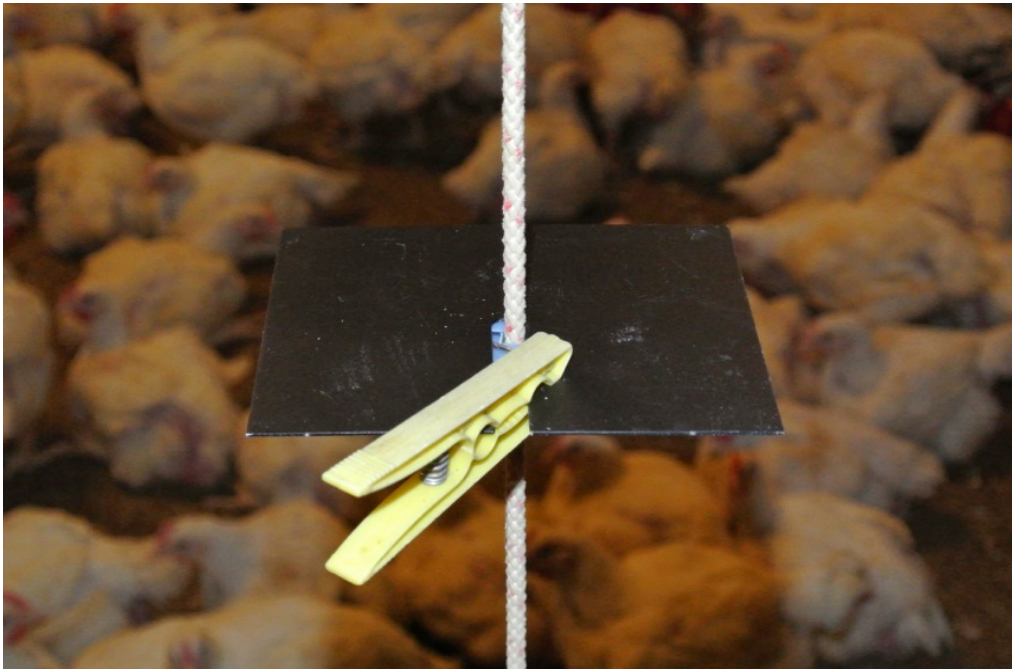


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Manual Assessment



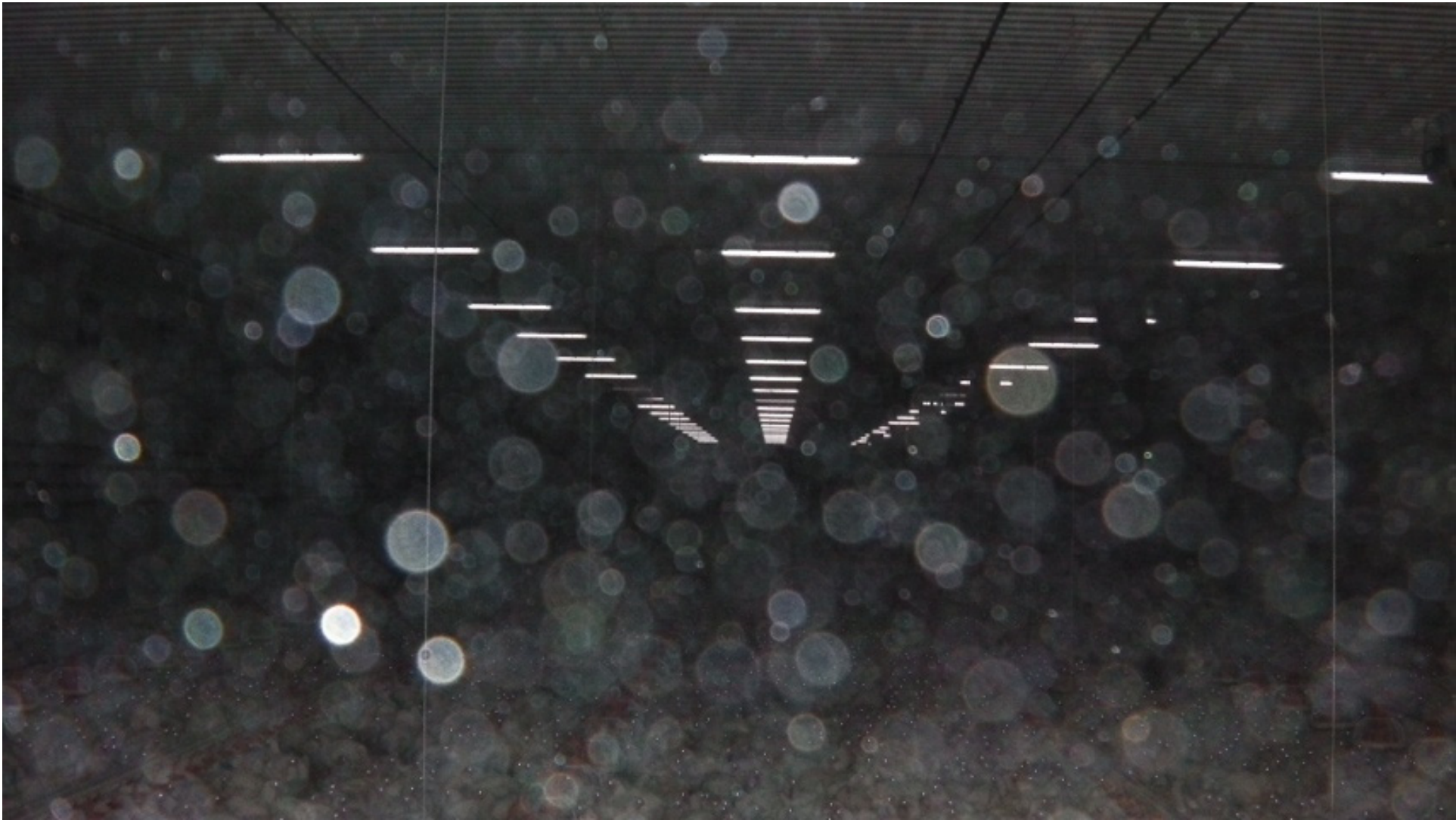
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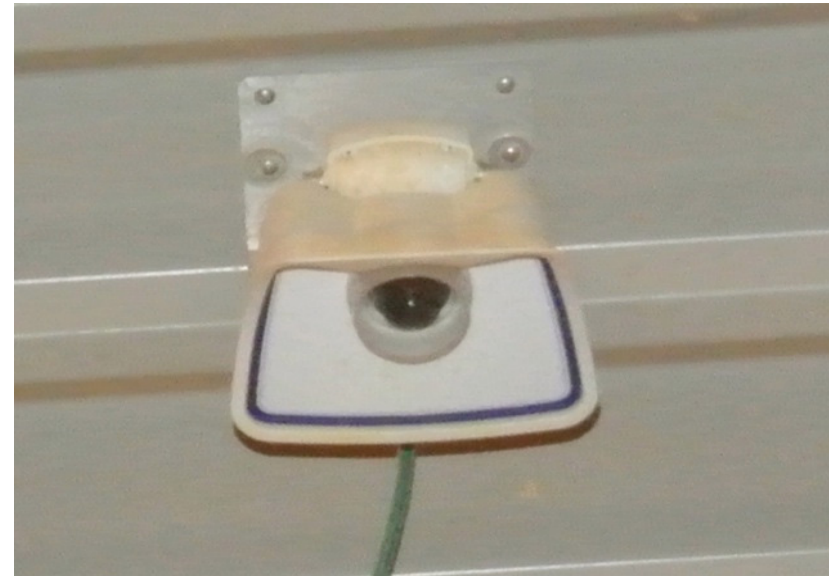


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PLF

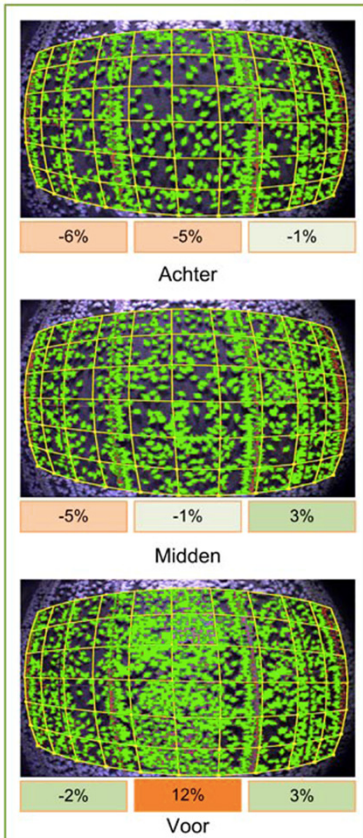


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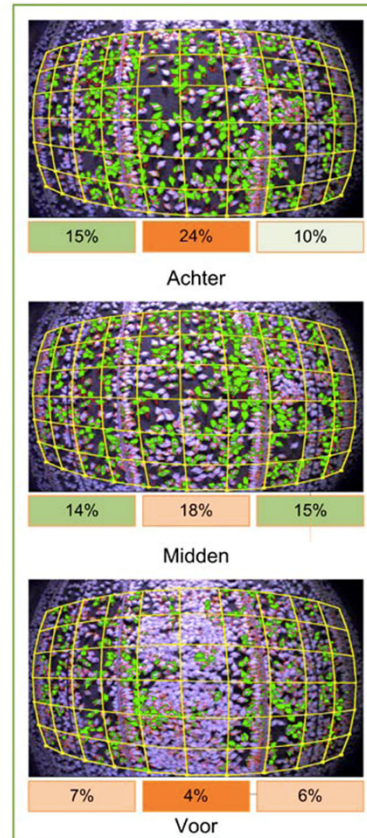


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Verdeling



Activiteit



Precision Livestock Farming (PLF) represents the potential for use of continuously automated measurements made directly on the animal or of its environment. PLF data may be translated into key indicators for animal welfare, animal health, productivity and environmental impact, thus allowing the farmer to better manage his farm process.



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Overviews

Welfare

[Category chart](#)

[Value chart](#)

[Flock chart](#)

[Criteria graphs](#)

[Score graphs](#)

[Comparing graphs](#)

[Combination graphs](#)

Entry

Basic info

Settings

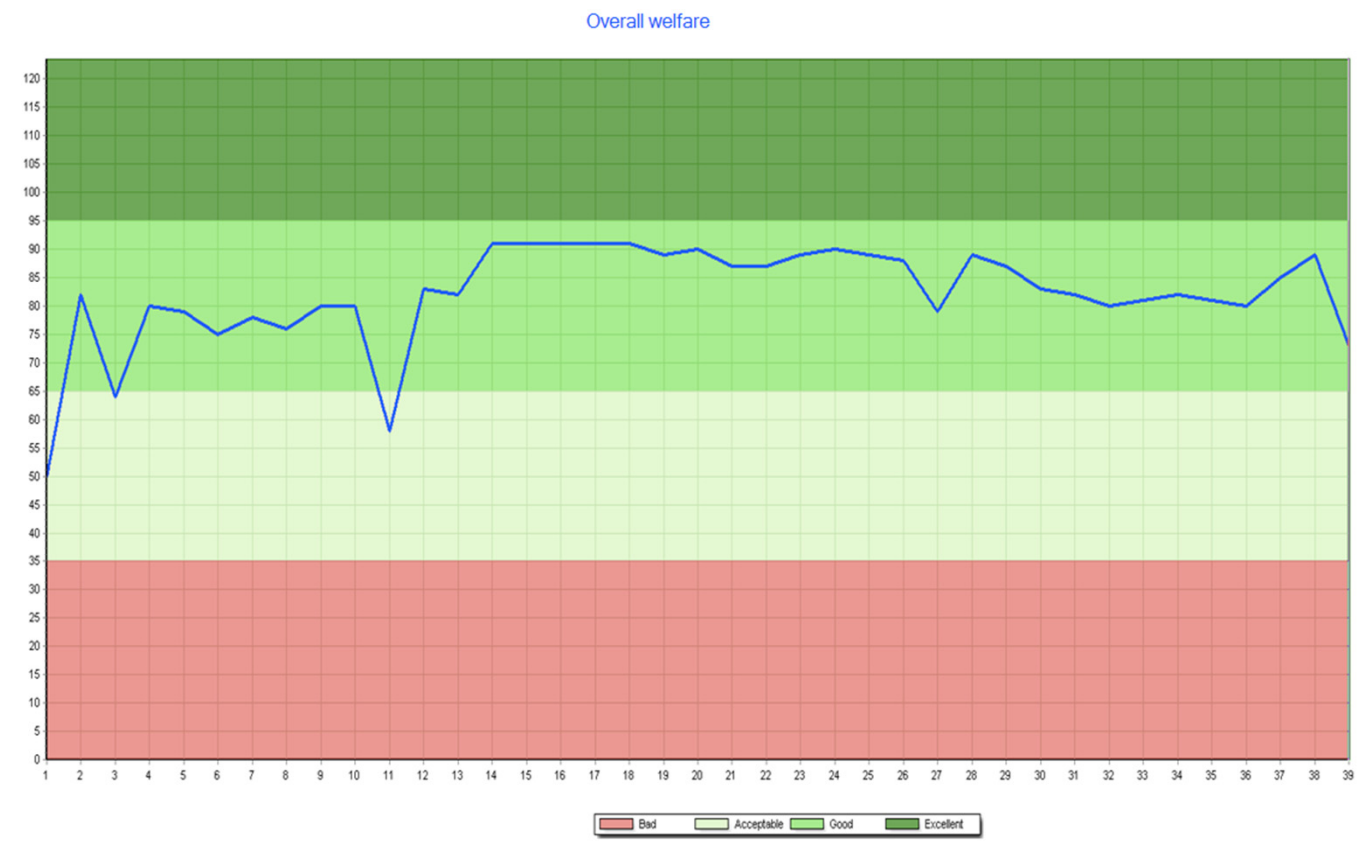
Active
 Selected

Flock

Shed 1 - 2012-01-01
Shed 2 - 2011-09-01
Shed 3 - 2012-02-01
Shed 4 - 2012-01-01

Multiple graphs

- Overall welfare
- Feed
- Water
- Total darkness
- Longest darkness period
- Temperature
- Humidity
- CO2 concentration
- Stocking density
- Distribution index
- Activity index
- Daily mortality





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REQUIREMENTS APPLICABLE TO HOLDINGS

In addition to the relevant provisions of other relevant Community legislation, the following requirements shall apply:

Litter

3. All chickens shall have permanent access to litter which is dry and friable on the surface.





Wet and sticky

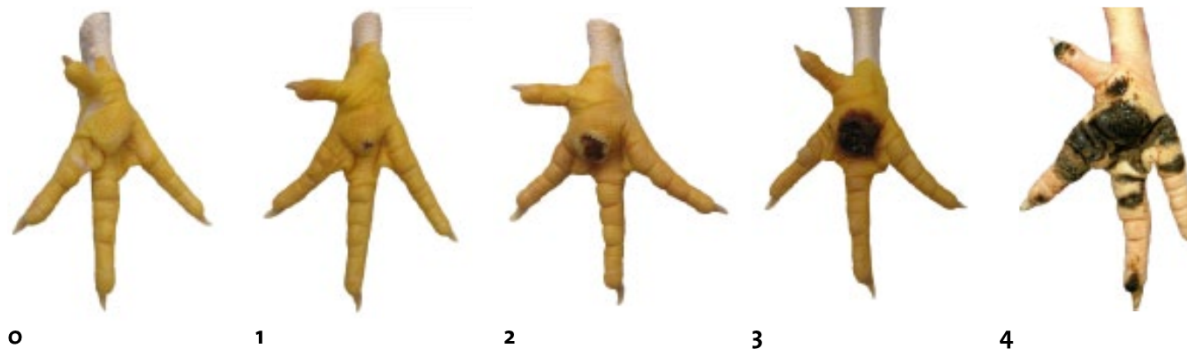








Title	Foot pad dermatitis
Scope	Animal-based measure: Broiler chicken
Sample size	Sample size according to § 5.1A.5
Method description	Foot pad dermatitis is a contact dermatitis found on the skin of the foot, most commonly on the central pad, but sometimes also on the toes. The skin is turned dark by contact with litter and consequently deep skin lesions can result. The scoring scale allows an assessment of the severity of these lesions (see photographic reference). Assess the presence of hock burns with regard to the severity scale, scoring categories 0/1/2/3/4 as photographic illustration. Assess the number of animals in each scoring category and combine the categories for classification.
Classification	<p>Individual level:</p> <p>a – No evidence of foot pad dermatitis (score ‘0’)</p> <p>b – Minimal evidence of foot pad dermatitis (score ‘1’ and ‘2’)</p> <p>c – Evidence of foot pad dermatitis (score ‘3’ and ‘4’)</p>



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Disease Card and Key Facts

CAUSE	A number of factors have been shown to influence the occurrence of FPD such as litter type and quality, litter depth, water drinker type, bird age, ventilation and drinker management, feed source and its quality, rearing system, and breed (genotype) used among others. Enteric disease may be a predisposing factor.
AFFECTS	All poultry species are affected by FPD although the scoring system below relates specifically to meat chickens
GEOGRAPHICAL LOCATION	Worldwide, this condition appears in all poultry rearing systems with higher prevalence when outdoor access is supplied.
SURVEILLANCE	The interaction of the two following areas is to be taken into account when assessing FPD. Prevalence: Percentage of birds in the flock that show evidence of FPD Severity: Focuses on the seriousness of the FPD lesions.

LESIONS

Area affected:

- None or very small.

Lesion description:

- very small superficial lesions (1-2 mm)
- slight discolouration in a limited area
- mild hyperkeratosis
- completely healed scar



Healthy Foot

SCORE 0

Area affected:

- Does not extend over entire plantar pad.

Lesion description:

- substantial discolouration of the foot pad
- superficial lesion, no ulceration
- dark papillae with no ulceration



Mild Lesion

SCORE 1

Area affected:

- Greater surface of plantar pad usually affected, sometimes with lesions on toes.

Lesion description:

- deeper lesions with ulceration, sometimes haemorrhage
- scabs of significant size
- severely swollen foot pad



Severe Lesion

SCORE 2

Scoring is broadly based on the size of the lesion but any lesions with deep ulceration will be scored 2 regardless of the size. Feet from a minimum of 100 birds should be scored and the number of feet in each category 0, 1 and 2 should be recorded.





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Footpads

Start | Main | Camera | Grading | Setup | Recipes | Logout | Close

Total	15
Not Scored	0
Total Scored	15

Score 0	3	20.00
Score 1	3	20.00
Score 2	9	60.00

Flock Score (1.0 - 2.0) **140**

Reset

meyn
Poultry Processing Solutions

Flandrex | Meyn | 11:48:20



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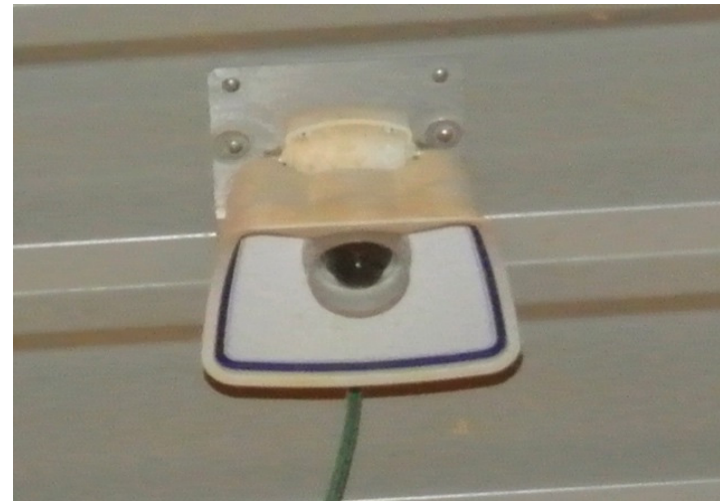


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Manual Assessment



PLF



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- Some measures are already required to be collected by the competent authority to comply with the requirements of the Broiler Directive (2007/43/EC) - and at the farm, it is apparent from that automated (PLF) measures are potentially highly applicable;
- On farm measurement of; **Space Allowance**
- At slaughter measurement of; **Ascites, Oedema, Cellulitis, Dermatitis, Dead on Arrival, Emaciation, Joint Lesions, Respiratory Disease, Foot Pad Dermatitis.**



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PLF measures may be 'partially' applicable in other areas that are required as part of the Broiler Directive;

- On farm measurement of; **Litter Quality, Bird Thermal Behaviours, Bird Cleanliness, Water use.**



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It is apparent that PLF measures may be highly applicable in other areas that are not (currently) required as part of the Broiler Directive;

- On farm measurement of; **Walking ability (gait score), Resting Behaviour, General Activity Levels, Human Animal Interaction, Growth/Performance, Body Condition.**



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Foot Note



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