



# WELFARE OF LAYING HENS ON FARM

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# WHO IS WHO

The **European Commission** requested EFSA to give an independent view on the protection of domestic fowl (species *Gallus gallus*) related to:

the production of **eggs** including the different phases of the production cycle:



Laying hen breeders



Chicks and pullets before they become laying hens



Laying hens during the production of eggs

# GENERAL TERMS OF REFERENCE (TOR)

ToR 1

Describe the current **husbandry systems**

ToR 2

Describe the relevant **welfare consequences**

ToR 3

Define **qualitative or quantitative measures** to assess the welfare consequences (**animal based measures (ABMs)**)

ToR 4

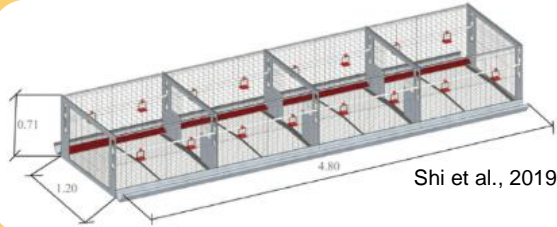
Identify the **hazards** leading to these welfare consequences

ToR 5

Provide **recommendations to prevent, mitigate or correct the welfare consequences**

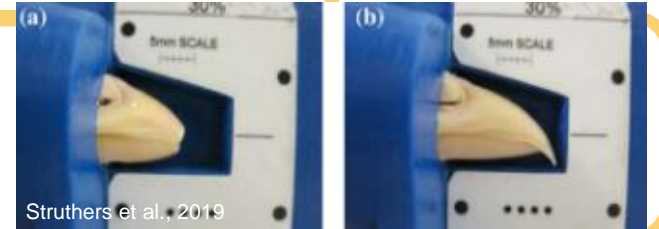


# SPECIFIC SCENARIOS



**Specific scenario 1.** The welfare of hens in cage system compared to alternative systems (organic, free range and barn)

**Specific scenario 2.** Beak trimming and risks associated with rearing of animals non beak trimmed



**Specific scenario 3.** ABMs collected in slaughterhouses to monitor the level of welfare on laying hen farms

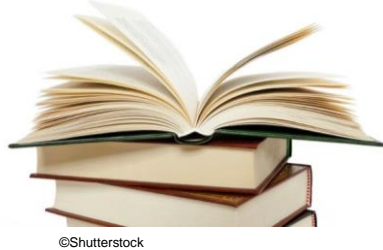


The welfare of male chicks of the layer breed

EFSA to propose

- Detailed, qualitative and quantitative ABMs
- and preventive and corrective measures

# DATA AND METHODOLOGY



Literature review

Questionnaire to the European Forum of Farm Animal Breeders (EFFAB)



Methodologies for space allowance and stocking densities

Expert Knowledge Elicitation (EKE)



Behavioural space model

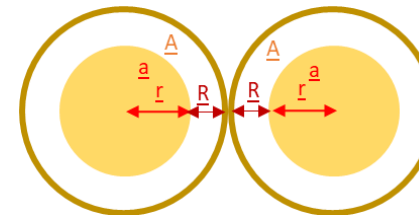


Figure 1. The space occupied by two laying hens in the model

Uncertainty analysis

Quantitative assessment	Certainty range		
	> 50- 100%	66-100%	90-100%
Qualitative translation	More likely than not	From likely to almost certain	From very likely to almost certain



# RESULTS: MAIN HOUSING SYSTEMS DESCRIPTION (TOR 1)

Housing systems for three animal categories: **laying hens, chicks/pullets, breeders**

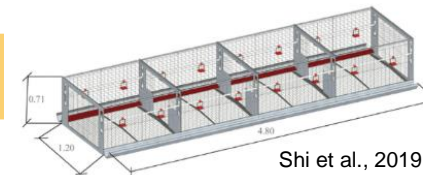
Floor systems with maximum one tier



Floor systems with multi-tier



Collective cages



Individual cages



Systems with exposure to outdoor conditions

Systems with access to covered veranda



Systems with outdoor range



Mobile housing



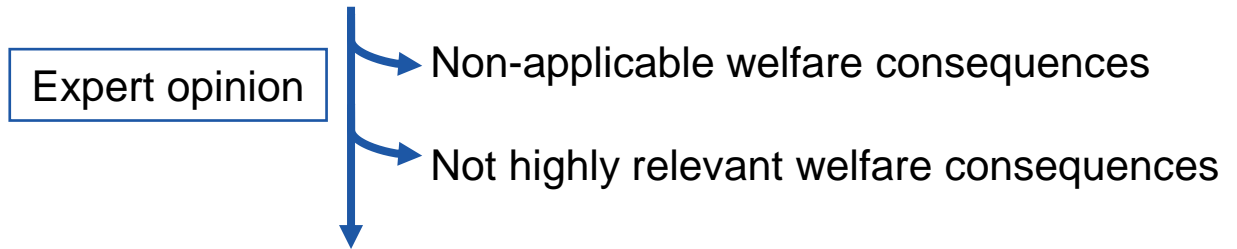
See Section 3.2 of the Scientific opinion for more details



# RESULTS: WELFARE CONSEQUENCES (TOR 2)

Welfare consequences
Bone lesions (incl. fractures and dislocations)
Group stress
Inability to avoid unwanted sexual behaviour
Inability to perform exploratory or foraging behaviour
Inability to perform comfort behaviour
Isolation stress
Predation stress
Restriction of movement
Resting problems
Skin disorders (other than soft tissue lesions and integument damage)
Soft tissue lesions and integument damage

## 33 welfare consequences



**11 welfare consequences** were identified as **highly relevant** for laying hens, pullets or layer breeders.

- ABMs (e.g., 'Locomotory behaviours')
- Hazards (e.g., insufficient space allowance per bird)
- Preventive measures (e.g., avoid cage systems)



# RESULTS: HIGHLY RELEVANT WELFARE CONSEQUENCES PER HOUSING SYSTEM (TOR 2)

	Laying hens				Pullets					Breeder				
	Furnished cage	Floor system with single-tier	Floor system with multi-tier	Mobile housing	Collective cage	Floor system without elevated structure	Floor system with maximum one tier	Floor system with multi-tier	Mobile housing	Individual cage	Collective cage	Floor system with single-tier	Floor system with single tier slatted floor	Floor system with multi-tier
Bone lesions (keel bone fracture)	X	X	X	X							X	X		X
Group stress	X	X	X		X	X	X	X			X	X	X	X
Inability to avoid unwanted sexual behaviour											X	X	X	X
Inability to perform comfort behaviour	X				X					X	X			
Inability to perform exploratory or foraging behaviour	X				X					X	X			
Isolation stress										X				
Predation stress				X					X					
Resting problems					X	X					X	X	X	
Restriction of movement	X				X					X	X			
Skin disorders (other than soft tissue lesions and integument damage)	X	X	X	X										
Soft tissue lesions and integument damage	X	X	X	X							X	X	X	X





# SPECIFIC SCENARIO 1: COMPARISON CAGE VS NON-CAGE SYSTEMS IN LAYING HENS

Cage systems



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VS.



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Non-cage systems

With covered veranda or outdoor range area

**More highly relevant welfare consequences** in cage systems:

- inability to perform comfort behaviour
- inability to perform exploratory or foraging behaviour
- restriction of movement

**Facilitate the performance of some behavioural needs**

- comfort behaviour
- exploratory and foraging behaviour

## Recommendations

- ✓ House all birds in **non-cage systems**
- ✓ Provide a **covered veranda for all birds**



# SPECIFIC SCENARIO 2: REARING NON-BEAK TRIMMED BIRDS

Injurious pecking leads to

- Soft tissue lesions and integument damage
- Group stress

Beak trimming leads to

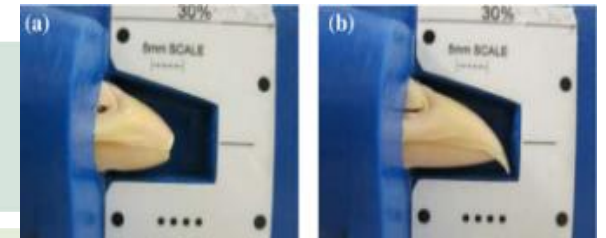
- Soft tissue lesions and integument damage

Risks associated if no beak trimming

- Non-beak trimmed birds worsen the situation of injurious pecking if present
- Injurious pecking occurs at a similar level in all types of housing systems, with great variation in prevalence between flocks.

Main preventive measures

- Cage-free systems with elevated structures
- Providing substrate, pecking blocks and enrichment
- Genetic strategies



Struthers et al., 2019



# SPECIFIC SCENARIO 3: ABMS AT SLAUGHTER

11 ABMs identified by EFSA network

**Criterion 1:** Technology readiness?

**Criterion 3:** Importance according to the National Contact Points Network?

**Criterion 2:** Relevance for welfare?

**Criterion 4:** Already measured at slaughter?

5 ABMs selected



Total mortality on farm

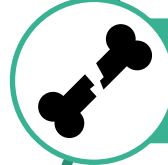


Plumage damage



Wounds

Broilers  
©Anja Riber



Keel bone fracture



Carcass condemnation

Broilers  
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# WELFARE OF MALE CHICKS OF THE LAYER BREED DURING REARING



© Sonja Hillemacher

## Behaviours

- More active than broiler chickens and eager to sit on elevated structures
- More aggressive than their sisters from 10 weeks on

## Conclusions

- Behaviour and requirements comparable to pullets
- Provision of elevated structures especially important to escape from aggressive encounters

## Recommendation

- More research needed about current conditions of rearing of these birds and needs of male chicks



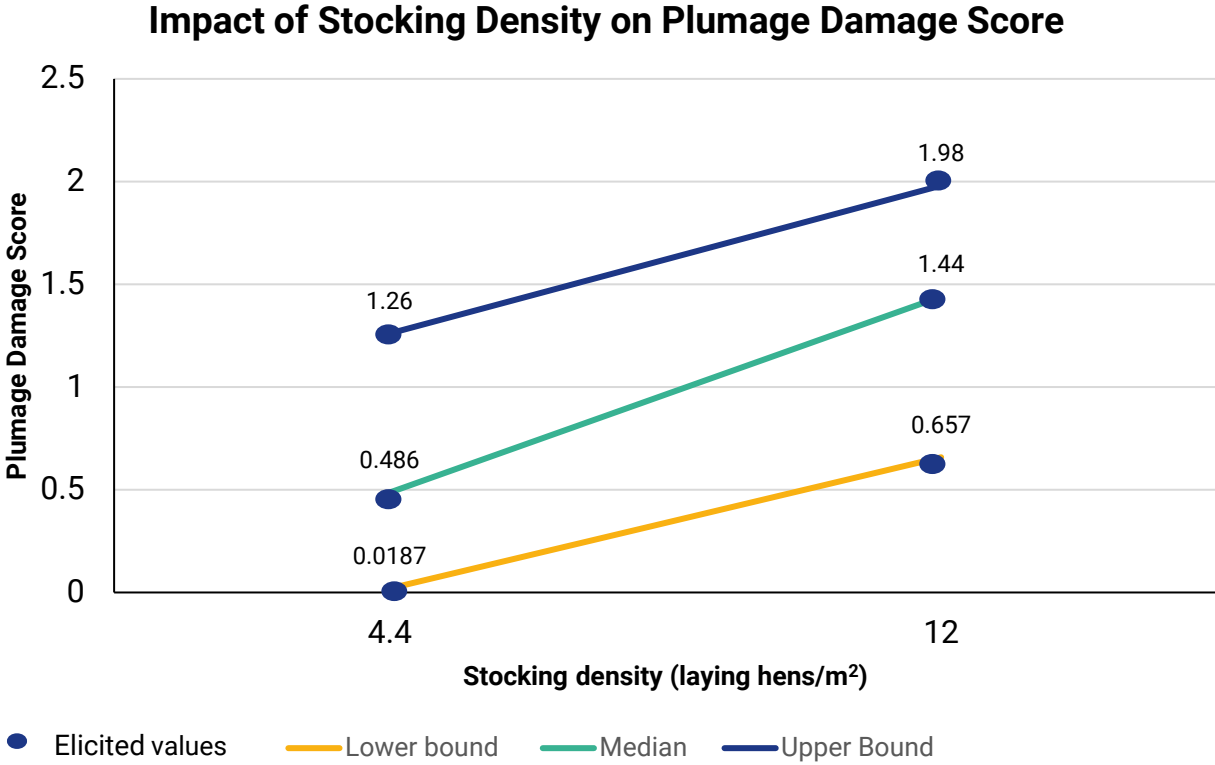
# MINIMUM ENCLOSURE CHARACTERISTICS

- Group size
  - Min size of the area
  - **Max stocking density**
  - Elevated structures
  - Enrichment/ foraging opportunities
  - Nests
  - Feeders and drinkers
  - Noise
  - Light
  - Air quality
- Minimum characteristics for
    - Covered veranda
    - Outdoor range



# MINIMUM ENCLOSURE CHARACTERISTICS: MAXIMUM STOCKING DENSITY EXPERT KNOWLEDGE ELICITATION

Results of the Expert Knowledge elicitation



See Section 2.2.2.1 and Appendix B of the Scientific opinion for more details

# MINIMUM ENCLOSURE CHARACTERISTICS: MAXIMUM DENSITY BEHAVIOURAL MODEL

N= 9 behaviours taken into account

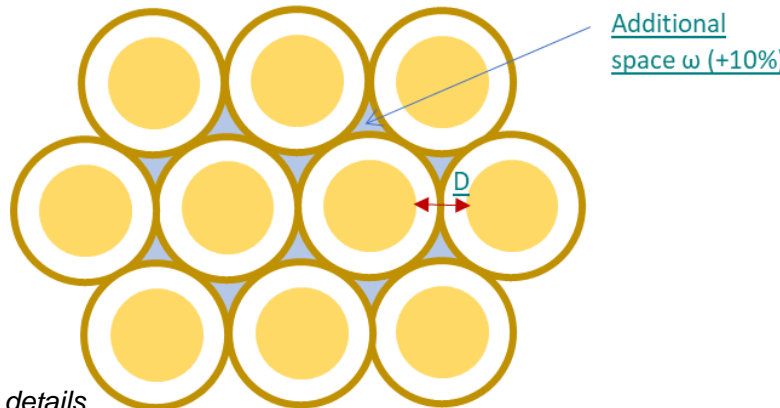
- Standing
- Sitting/Resting
- Walking
- Foraging
- Dustbathing
- Preening
- Wing/Leg stretching
- Wing flapping
- Drinking/eating

Model taking into account for each behaviour:

- The space needed to perform the behaviour (including inter-individual space and additional space)
- The proportion of animal performing the behaviour in an improved environment

Number of hens/m<sup>2</sup>

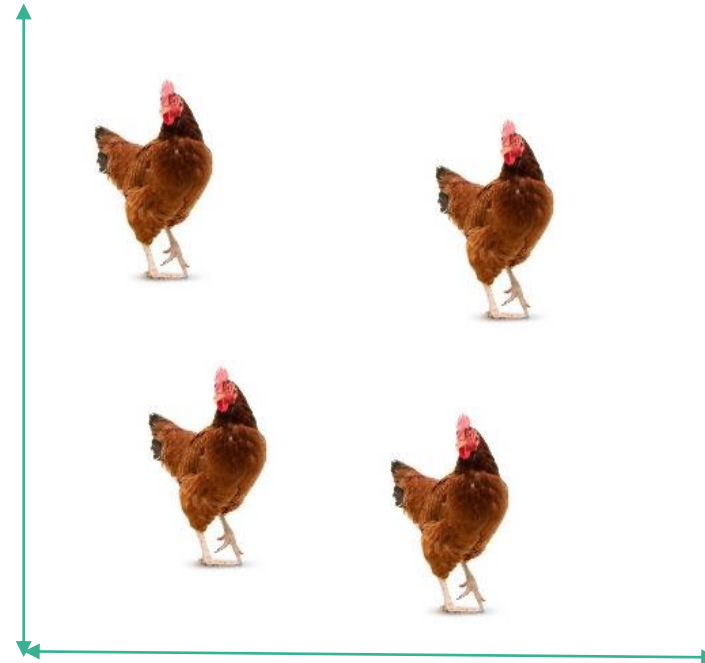
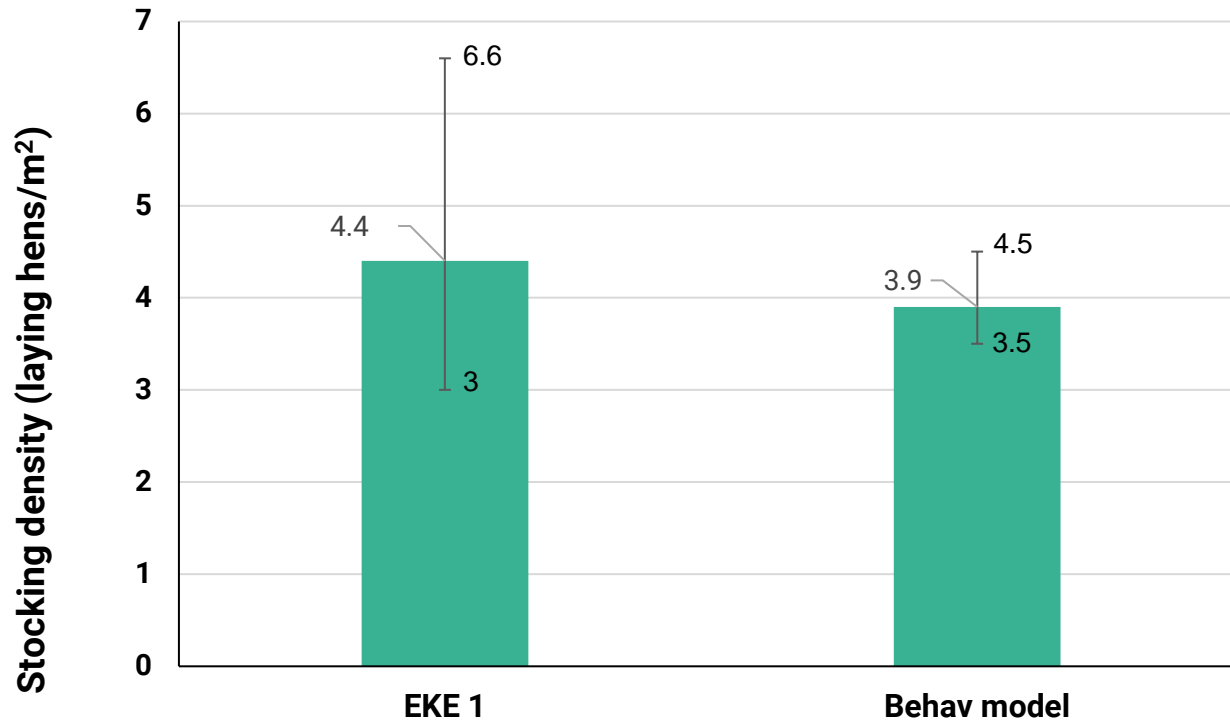
**3.9 hens/m<sup>2</sup>**



# MINIMUM ENCLOSURE CHARACTERISTICS: MAXIMUM DENSITY

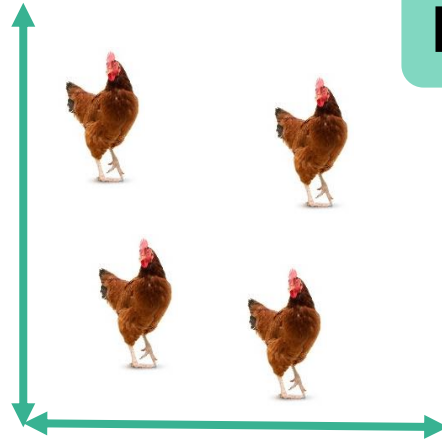
## Max stocking density

- EKE results
- Model results





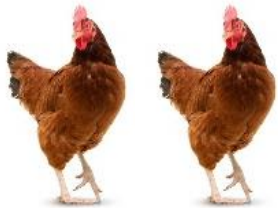
# MINIMUM ENCLOSURE CHARACTERISTICS: ENVIRONMENT



## Max stocking density

4 laying hens or layer breeder/m<sup>2</sup>

## Minimum group size



2 birds

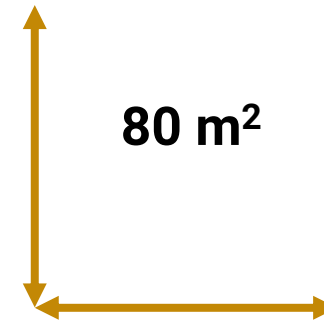
## Minimum area

For group <30 birds



25 m<sup>2</sup>

For group >30 birds



80 m<sup>2</sup>



# MINIMUM ENCLOSURE CHARACTERISTICS: EQUIPMENT

## Elevated platforms and perches

Fulfil the behavioural need for night roosting

Elevated platforms available from 3 weeks of age

Should be non-slippery

Ensure accessibility with ramps angle below 40 °

Minimum 18 cm/hen or breeder and 14 cm/pullet of perches

Diameter between 3 and 6 cm



# MINIMUM ENCLOSURE CHARACTERISTICS: EQUIPMENT

## Litter

## Enrichment and foraging material

**Reduce the welfare consequences** inability to perform comfort, exploration and foraging behaviours and others



Should **always** be available



At least **1/3** of the useable area

**Dry and friable litter**

Enrichment additional to the litter **for dustbathing**

**Edible enrichment materials**



# MINIMUM ENCLOSURE CHARACTERISTICS: EQUIPMENT

## Covered veranda

**Facilitate the performance of some behavioural needs**  
(e.g., comfort behaviour, exploratory and foraging behaviour)

Give access to different climatic and light conditions which **provide new opportunities** for foraging and exploring

Appropriately dimensioned pop-holes (1m linear for 1000 birds, at maximum height of 25 cm)



At least 20% of the usable area

## Outdoor range



At least 50% covered by natural vegetation



20



# MAIN RECOMMENDATIONS



- ✓ House all birds in **non-cage systems**



- ✓ House flocks with **easily accessible, elevated platforms and/or perches.**



- ✓ Provide **dry and friable litter, available at all times**, supplemented by other enrichments



- ✓ Provide a **covered veranda for all birds.**



- ✓ Implement all **preventive measures against injurious pecking** to facilitate a phasing out of beak trimming.



# MAIN RECOMMENDATIONS



## REDUCE MALE AGRESSION

- ✓ In layer breeders: reduce **male aggression** to females e.g., by **reducing proportion of males included in flocks** (below 1:10)



## PROTOCOL FOR GENETIC SELECTION

- ✓ Implement **protocols to define welfare trait information**



## DARK BROODER

- ✓ Rear pullets with **dark brooders**



## HARMONISED ASSESSMENT METHODS

- ✓ Implement harmonised **assessment methods and scoring systems for monitoring** welfare level across farms in Europe



- [Welfare of laying hens on farm | EFSA \(europa.eu\)](#)
- More details in the Scientific Opinion

**SCIENTIFIC OPINION**

ADOPTED: 14 December 2022  
doi: 10.2903/j.efsa.2023.7789

**Welfare of laying hens on farm**

EFSA Panel on Animal Health and Animal Welfare (AHAW),  
Søren Saxmose Nielsen, Julio Alvarez, Dominique Joseph Bicout, Paolo Calistri,  
Elisabetta Canali, Julian Ashley Drewe, Bruno Garin-Bastuji, Jose Luis Gonzales Rojas,  
Christian Gortázar Schmidt, Mette Herskin, Miguel Ángel Miranda Chueca, Barbara Padalino,  
Paolo Pasquali, Helen Clare Roberts, Hans Spoolder, Karl Stahl, Antonio Velarde, Arvo Viltrop,  
Christoph Winckler, Inmaculada Estevez, Maryse Guinebretière, Bas Rodenburg,  
Lars Schrader, Inga Tiemann, Thea Van Niekerk, Michele Ardizzone, Sean Ashe,  
Michaela Hemen, Olaf Mosbach-Schulz, Cristina Rojo Gimeno, Yves Van der Stede,  
Marika Vitali and Virginie Michel

**Abstract**

This scientific opinion focuses on the welfare of laying hens, pullets and layer breeders on farm. The most relevant husbandry systems used in Europe are described. For each system, highly relevant welfare consequences were identified, as well as related animal-based measures (ABMs), and hazards





# WELFARE OF BROILER CHICKENS ON FARM

Virginie Michel, Chair of the EFSA Welfare  
of broilers on farm working group

ANSES, France



# WHO IS WHO

The **European Commission** requested EFSA to give an independent view on the protection of domestic fowl (species *Gallus gallus*) related to:

the production of **broiler chicken meat** including the different phases of the production cycle:



Day-old chicks



Broiler chickens kept for meat production



Broiler breeders



# GENERAL TERMS OF REFERENCE

## ToR 1

Describe, based on existing literature and reports, the current **husbandry systems** and practices of keeping them;

## ToR 2

Describe the relevant **welfare consequences**. Relevance will not need to be based on a comprehensive risk assessment, but on EFSA's expert opinion regarding the severity, duration and occurrence of each welfare consequence;

## ToR 3

Define **qualitative or quantitative measures** to assess the welfare consequences (**animal-based measures (ABMs)**);

## ToR 4

Identify the **hazards** leading to these welfare consequences;

## ToR 5

Provide **recommendations** to prevent, mitigate or correct the welfare consequences.



# SPECIFIC SCENARIOS



**Specific scenario 1.** The welfare of fast growing chickens in barns:

- a) air and floor temperature,
- b) access to feed and water,
- c) space allowance,
- d) air quality

**Specific scenario 3.** The welfare of broiler breeders:

- a) housing in (individual) cages,
- b) the practice of routine mutilation,
- c) feed restriction



**Specific scenario 2.**

ABMs collected in slaughterhouses to monitor the level of welfare on broiler farms

**Specific scenario 4.** The welfare of day-old chicks:

- a) hatchery conditions
- b) transport conditions



**EFSA to propose**

- **Detailed, qualitative and quantitative ABMs**
- and **preventive and corrective measures**

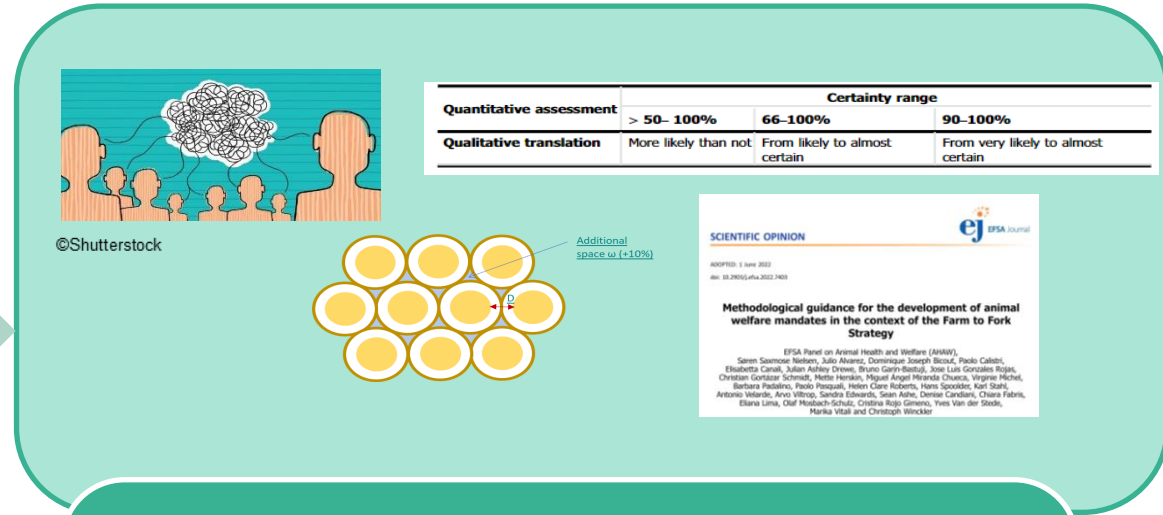
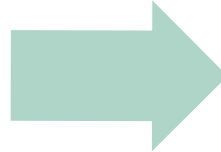
# DATA AND METHODOLOGY



This section illustrates the data sources used in the study. It features three icons: an open book representing a literature review, a network diagram with people icons representing EFSA NCP and AHAW networks, and a laptop with a checklist representing a questionnaire to the European Forum of Farm Animal Breeders (EFFAB). Each icon is accompanied by a '©Shutterstock' watermark.


## Data

- Literature review
- EFSA NCP and AHAW networks
- Questionnaire to the European Forum of Farm Animal Breeders (EFFAB)



This section illustrates the methodology used. It features three icons: a group of people with a brain icon representing expert knowledge elicitation, a cluster of yellow circles representing the behavioural space model, and a document icon representing the EFSA methodological guidance. Each icon is accompanied by a '©Shutterstock' watermark.

	Certainty range		
Quantitative assessment	> 50- 100%	66-100%	90-100%
Qualitative translation	More likely than not	From likely to almost certain	From very likely to almost certain



SCIENTIFIC OPINION  
efsa journal  
ADOPTED: 1 June 2023  
doi: 10.29061/efsa.2022.7403  
**Methodological guidance for the development of animal welfare mandates in the context of the Farm to Fork Strategy**  
EFSA Panel on Animal Health and Welfare (AHAW),  
Søren Samuelsen, Julia Alvarez, Dominique Joseph Bouché, Paolo Calzini, Elisabetta Canali, Julian Ashley Drewe, Bruno Garin-Bastou, Jose Luis Gonzalez Rojas, Christophe Gottarod Schneider, Helene Henkens, Miguel Angel Hernandez Chumbe, Virginia Michel, Barbara Padalino, Paolo Pasquali, Helen Clare Roberts, Hans Spoelken, Karl Stahl, Antonio Valverde, Arno Viltrop, Sandra Edwards, Sean Aislinn, Denise Candiani, Chiara Fabrizi, Ekana Lima, Olaf Hübner-Schütz, Cristina Rojas Gamero, Yvett Van der Steede, Marka Vilić and Christoph Winckler

## Methodology

- EFSA Methodological guidance for the development of animal welfare mandates in the context of the Farm to Fork Strategy
- Expert Knowledge Elicitation
- Behavioural space model
- Uncertainty assessment



# HUSBANDRY SYSTEMS (TOR 1)

Day-old chicks

Hatched in hatchery



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Hatched on farm



© Anja Riber

Broiler chickens

Floor systems



© Ingrid de Jong

Floor systems with covered veranda



© Wageningen Livestock Research

Floor systems with outdoor range



©Shutterstock

Mobile houses



© Virginie Michel

Broiler breeders

Floor systems



© Ingrid de Jong

Individual cages



©Shutterstock

Collective cages

Multi-tier systems



# WELFARE CONSEQUENCES (TOR 2)

## 19 Welfare consequences

- Bone lesions
- Cold stress
- Inability to perform comfort behaviour
- Inability to perform exploratory or foraging behaviour
- Isolation stress
- Gastro-enteric disorders
- Prolonged thirst
- Heat stress
- Prolonged hunger
- Handling stress
- Locomotor disorders
- Predation stress
- Restriction of movement
- Resting problems
- Group stress
- Soft tissue and integument damage
- Umbilical disorders
- Inability to avoid unwanted sexual behaviour
- Sensory under- and overstimulation

## 33 welfare consequences

Expert opinion

Non-applicable welfare consequences

Not highly relevant welfare consequences

## 19 welfare consequences

were identified as **highly relevant** for broiler chicken, day-old chicks and broiler breeders

ABMs (e.g., 'Leg deformation')

Hazards (e.g., poor litter quality)

Preventive measures (e.g., maintaining good quality litter)



# HIGHLY RELEVANT WELFARE CONSEQUENCES PER HUSBANDRY SYSTEM AND BIRD CATEGORY (TOR 2)

Welfare consequence/ bird category	Day-old chicks		Chickens for meat production				Broiler breeders			
	Hatched hatchery	Hatched farm	Floor indoor	Floor veranda	Floor free range	Mobile house	Indiv. cages	Collective cages	Floor single tier	Floor multi tier
Bone lesions										
Cold stress										
Inability to perform comfort behaviour										
Inability to perform exploratory or foraging behaviour										
Isolation stress										
Gastro-enteric disorders										
Prolonged thirst										
Heat stress										
Prolonged hunger										
Handling stress										
Locomotorily disorders										
Predation stress										
Restriction of movement										
Resting problems										
Group stress										
Soft tissue and integument damage										
Umbilical disorders										
Inability to avoid unwanted sexual behaviour										
Sensory under- and overstimulation										

See Section 3.4.2 of the Scientific opinion for more details



# ASSESSMENT: MINIMUM ENCLOSURE REQUIREMENTS



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- Maximum stocking density (Specific ToR 1c)
- Minimum height
- Group size
- Minimum size of the usable area
- Light
- Temperature (Specific ToR 1b)
- Air quality (Specific ToR 1d)
- Covered veranda
- Outdoor range



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- Elevated structures (perches/platforms)
- Enrichment
- Nests for breeders
- Feeders
- Drinkers
- Litter

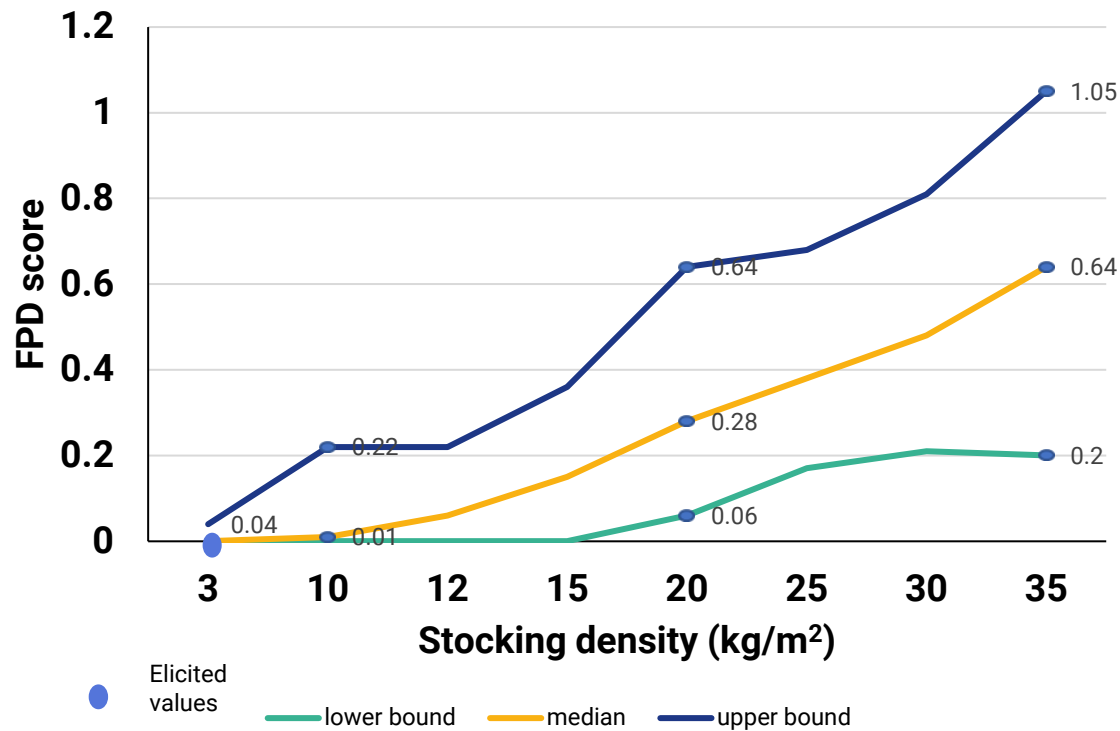
See Section 3.4.2 of the Scientific opinion for more details



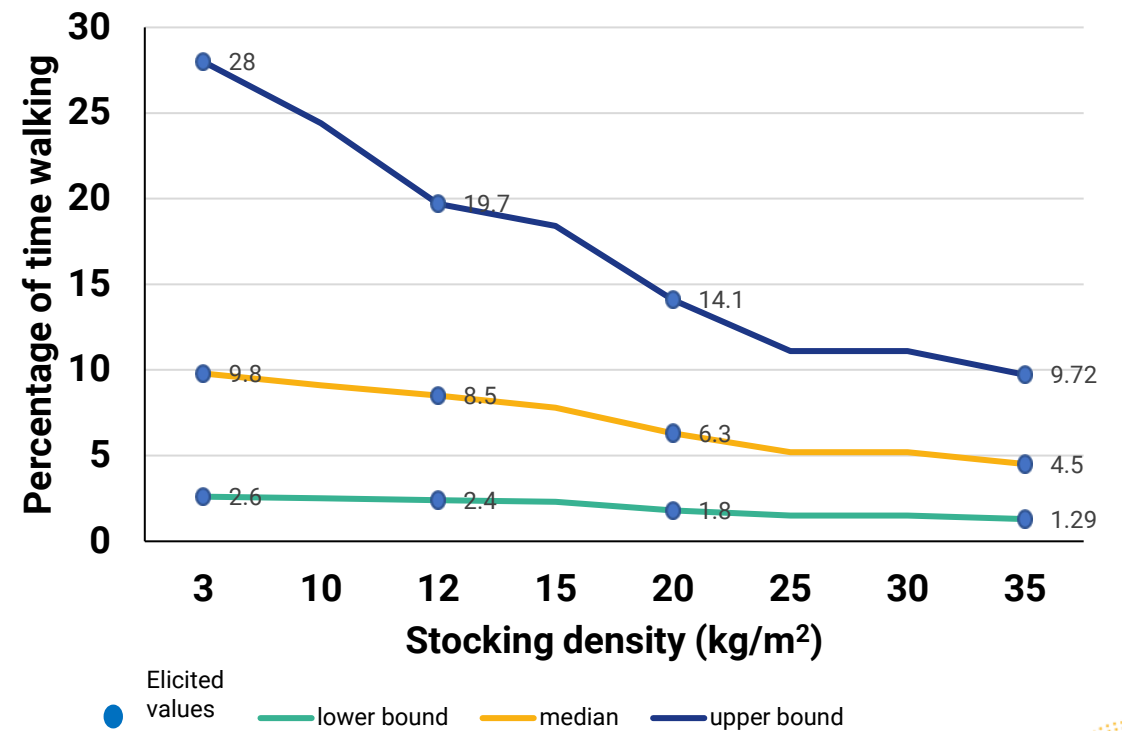


# ASSESSMENT: EXPERT KNOWLEDGE ELICITATION RESULTS ON THE EFFECT STOCKING DENSITY FPD AND PERCENTAGE OF TIME WALKING

## Impact of stocking density on Foot pad dermatitis



## Impact of stocking density on the Percentage of time walking



# ASSESSMENT: STOCKING DENSITY BASED ON THE RESULTS OF THE BEHAVIOURAL MODEL

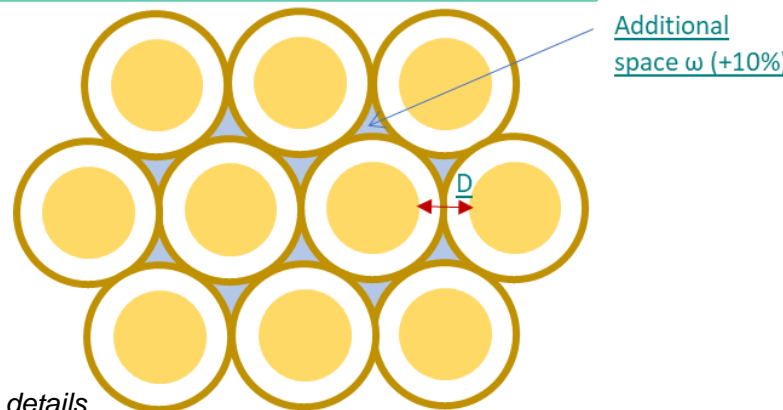
N= 9 behaviours taken into account

- Standing
- Sitting/Resting
- Walking
- Foraging
- Dustbathing
- Preening
- Wing/Leg stretching
- Wing flapping
- Drinking/eating

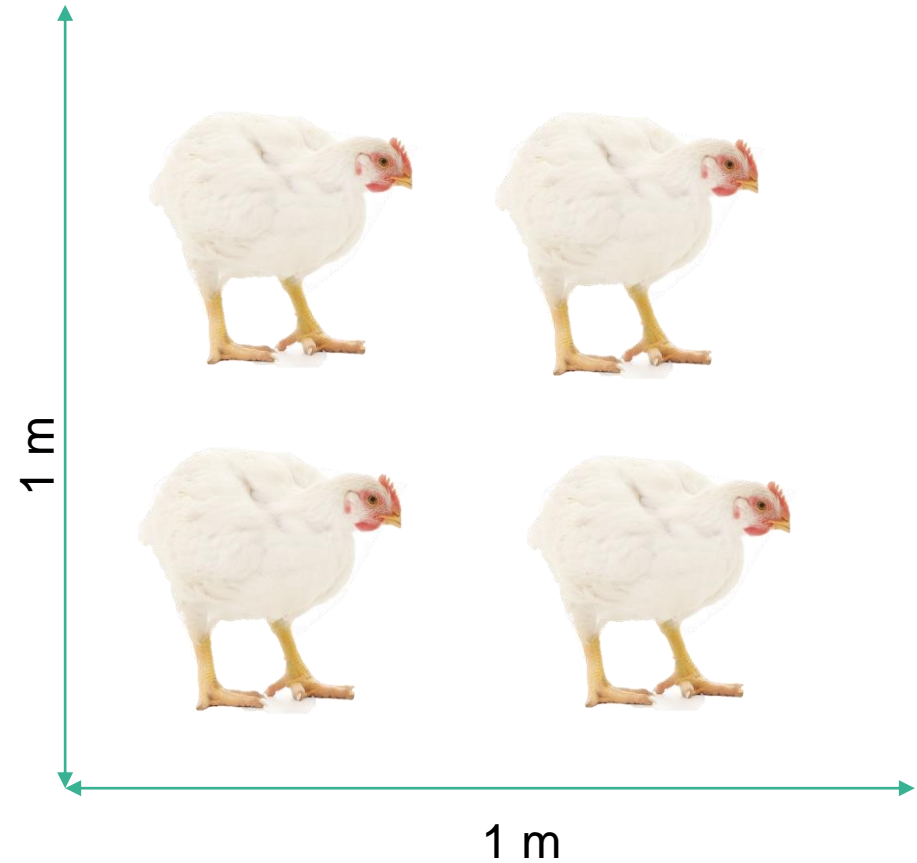
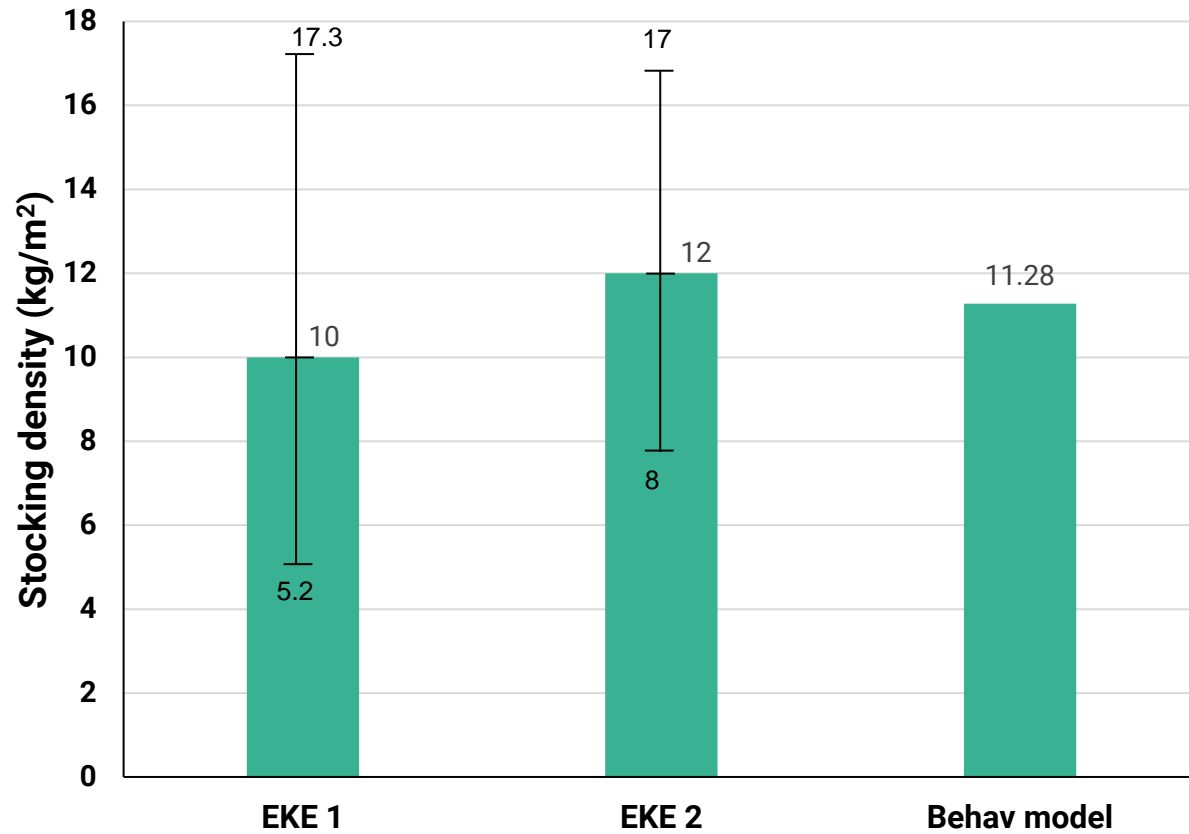
Model taking into account for each behaviour:

- The space needed to perform the behaviour (including inter-individual space and additional space)
- The proportion of animal performing the behaviour in an improved environment

Stocking density (kg/m <sup>2</sup> )	<b>11.28 kg/m<sup>2</sup></b>
Number of broilers/m <sup>2</sup>	<b>4.12 broilers/m<sup>2</sup></b>



# ASSESSMENT: MAXIMUM STOCKING DENSITY



# ASSESSMENT: TEMPERATURE (SPECIFIC SCENARIO 1A)



## Day old chicks

- Floor temperature of 28-30°C
- Air temperature 30-35°C
- Barn preheated 48h before placement
- Spot brooding 32-35°C



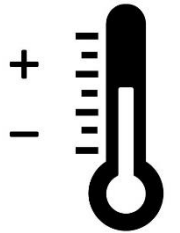
## Broiler chickens

- 17-21°C for chickens of 28 days
- Depends on:
  - breed,
  - humidity,
  - air speed,
  - stocking density,
  - degree of adaptation and duration of exposure



## Broiler breeders

- The same as for broiler chickens



# ASSESSMENT: AIR QUALITY (SPECIFIC SCENARIO 1D)



## CO2

- 3,000 ppm in the Directive
- No evidence was found to propose a change



## AMMONIAC

- Current directive 20 ppm
- Most recent research showed birds shook their head above 15 ppm



## DUST

- No particular values are given in the directive
- No evidence was found to identify maximum levels of dust



# ASSESSMENT: LITTER AND ENRICHMENT

## Litter

## Enrichment and foraging material

**Reduce the welfare consequences** inability to perform comfort, exploration and foraging behaviours and others



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Should **always** be available

**Dry and friable litter**

**100% of the floor** should be covered

**New litter weekly**

**Good ventilation system**



Enrichment additional to the litter **for dustbathing**

**Edible enrichment materials**



# ASSESSMENT: COVERED VERANDA AND OUTDOOR RANGE

## Covered veranda

Facilitate the performance of some behavioural needs  
(e.g., comfort behaviour, exploratory and foraging behaviour)

Give access to different climatic and light conditions which  
**provide new opportunities** for foraging and exploring



Appropriately dimensioned pop-holes (1m linear for 1000 birds, at maximum height of 25 cm with ramps)

At least 20% of the usable area

Accessible from 14 days of age

Enrichment material

## Outdoor range



At least 50% covered  
by natural vegetation



# ASSESSMENT: ELEVATED PLATFORMS AND PERCHES

## Elevated platforms and perches

Encourage locomotion

Reduce the risk of predation stress

Prevent resting problems

Ensure accessibility with ramps 25 °

A minimum of 15 cm/breeder

10% of the floor space covered with platforms will reduce resting problems and restriction of movement





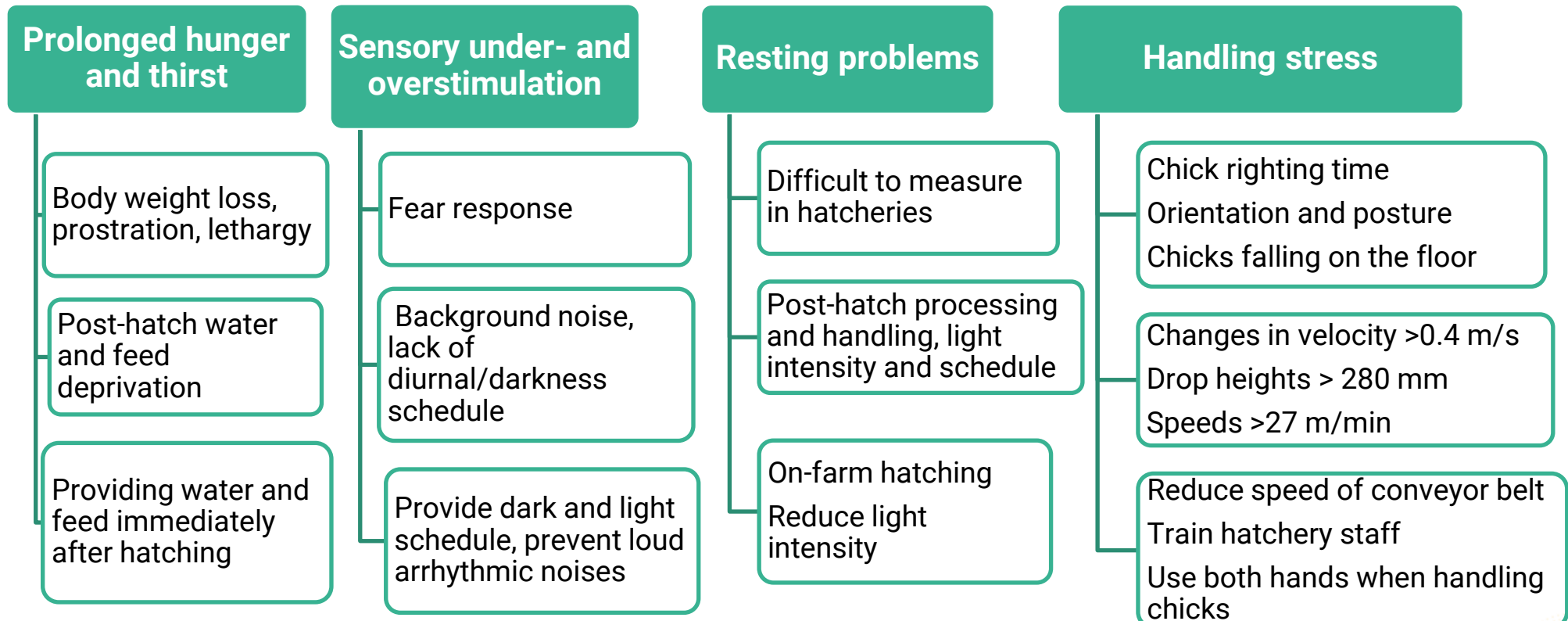
# ASSESSMENT: THE HATCHERY CONDITIONS IN DAY OLD CHICKENS (SPECIFIC TOR 4A)



ABM

Hazards

Preventive and corrective measures



# ASSESSMENT: THE USE OF (INDIVIDUAL) CAGES IN BROILER BREEDERS (SPECIFIC TOR 3A)



- Individual cages are used to control breeding and measure traits of individual broiler breeders
- Usually barren without litter, perches nor nests



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Individual cages lead to

Inability to perform comfort behaviour

Inability to perform exploratory and foraging behaviour

Isolation stress

Resting problems

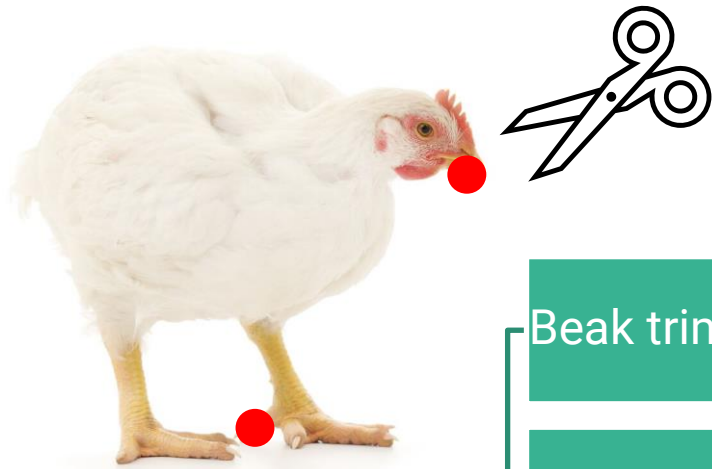
Restriction of movement

Handling stress

See Section 3.9 of the Scientific opinion for more details



# ASSESSMENT: THE PRACTICE OF MUTILATIONS IN BROILER BREEDERS (SPECIFIC TOR 3B)



## Mutilations

Beak trimming



Could affect exploratory, feeding and preening behaviours

Toe clipping and despurring



Could affect scratching, walking, perching behaviours

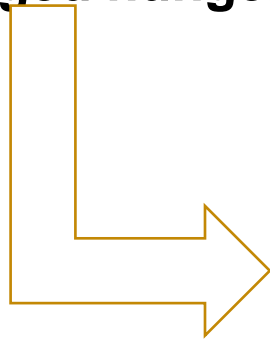
Causes acute and chronic pain

It leads to welfare consequences in the short, medium and long term



# ASSESSMENT: THE PRACTICE OF FEED RESTRICTION TO BROILER BREEDERS (SPECIFIC TOR 3C)

All broiler breeders are feed restricted routinely and leads to prolonged hunger



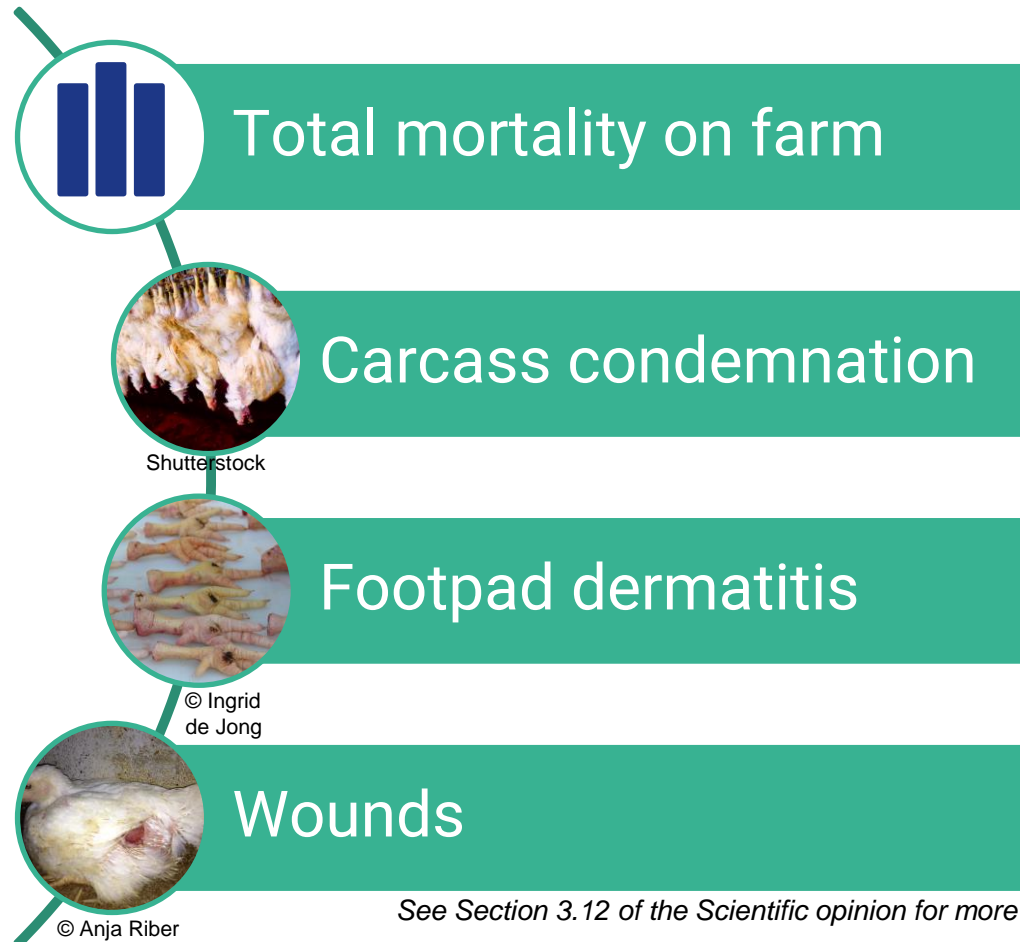
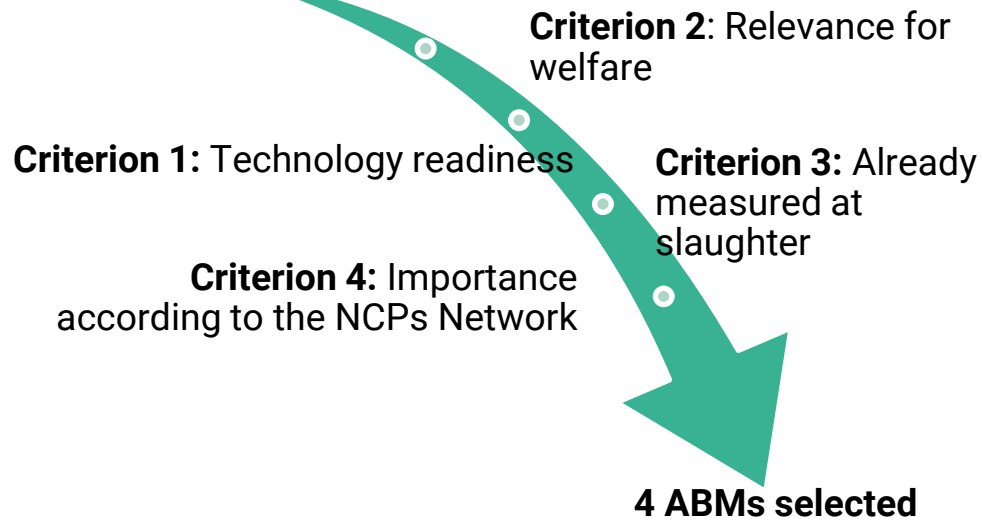
Measures to decrease the prolonged hunger:

- Adapting feed intake individually
- Increasing the time feeding
- Decrease appetite
- Skip a day
- Qualitative change in the feed
- Relaxing feed restriction
- Genetic selection



# ASSESSMENT: ABMS AT SLAUGHTER TO MEASURE BROILER WELFARE ON FARM (SPECIFIC TOR2)

16 ABMs identified by NCP EFSA network



See Section 3.12 of the Scientific opinion for more details



# MAIN RECOMMENDATIONS



- ✓ **Avoid the use of cages** for broiler breeders



- ✓ **Avoid feed restriction** in broiler breeders



- ✓ **Avoid mutilations** for broiler breeders



- ✓ **Limit daily weight growth** to **50g/day**



# MAIN RECOMMENDATIONS



- ✓ Provide **dry and friable litter** substrate from the first day of production; re-scatter new litter if needed



- ✓ Provide a **covered veranda** for broilers and broiler breeders



- ✓ Substantially reduce the stocking density of broiler



- ✓ Provide **elevated platforms, perches** and brooders for broilers and broiler breeders



## HARMONISED ASSESSMENT METHODS

- ✓ Implement harmonised **assessment methods and scoring systems at the slaughterhouse for monitoring** welfare level across farms in Europe



# MORE DETAILS IN THE SCIENTIFIC OPINION

- [Welfare of broilers on farm | EFSA \(europa.eu\)](https://www.efsa.europa.eu/en/scientific-opinion/welfare-of-broilers-on-farm)

**SCIENTIFIC OPINION**

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**Welfare of broilers on farm**

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**Abstract**

This Scientific Opinion considers the welfare of domestic fowl (*Gallus gallus*) related to the production of meat (broilers) and includes the keeping of day-old chicks, broiler breeders, and broiler chickens.





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**Thank you for your  
participation in this  
Infosession**

