

WELFARE OF DUCKS, GEESE AND QUAIL ON FARM

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MANDATE OVERVIEW



For each species and category of animals

- ToR-1: Describe, the main **husbandry systems** with a focus on housing systems currently used in the EU for keeping these animals;
- ToR-2: Describing the relevant **welfare consequences** concerning restriction of movement, injuries, group stress and inability to perform comfort behaviour related to these husbandry systems;
- ToR-3: Provide recommendations on **qualitative or quantitative criteria** to prevent the negative welfare consequences listed above in relation to **space allowance (3D), size of the group, floor quality, nesting facilities, enrichment** provided.



DATA AND METHODOLOGY

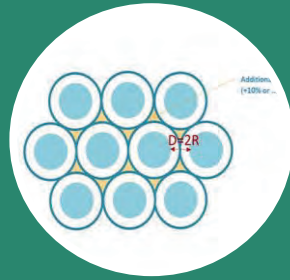


Literature review



Joint EFSA/EC
questionnaire to the
MSs

A second EFSA
questionnaire to
Stakeholder
umbrella
organizations



Behavioural space
model



Expert opinion

- Exercise
- Group discussion



Uncertainty analysis

- > 50-100% = Most likely than not
- 66-100% = From likely to almost certain
- 90-100% = Very likely to almost certain









ToR-1: IDENTIFICATION AND DESCRIPTION OF THE HUSBANDRY SYSTEMS

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RESULTS: DESCRIPTION OF THE MAIN HUSBANDRY SYSTEMS (ToR-1)

		Individual cages	Couple cages	Collective cages	Indoor floor systems	Floor systems with outdoor access	Outdoor systems	Elevated collective cages indoor	Elevated pen systems indoor	Floor pen systems indoor
 Domestic duck	Breeders	x			x					
	Meat production				x	x	x			
 Muscovy and Mule ducks	Breeders	x			x					
	Meat and foie gras				x	x	x			
	Foie gras (overfeeding)							x	x	x
 Domestic geese	Breeders				x	x				
	Meat and foie gras				x	x	x			
	Foie gras (overfeeding)								x	x
 Japanese quail	Breeders		x	x	x					
	Broiler quail				x					
	Layers quail			x	x					



HUSBANDRY SYSTEMS (Examples)

Indoor floor systems with outdoor access for ducks



(© IRTA, Spain)

Systems during overfeeding phase in foie gras production for Mule ducks

Elevated collective cages



Floor collective pens



Indoor floor systems for quail



(© IRTA, Spain)

Elevated collective pens



(© Litt, ITAVI, France)





ToR-2: DESCRIPTION OF THE RELEVANT WELFARE CONSEQUENCES

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RELEVANCE OF THE WELFARE CONSEQUENCES IN THE HUSBANDRY SYSTEMS

- 1. Restriction of movement
- 2. Bone lesions (including fractures and dislocations)
- 3. Soft tissue lesion and integument damage
- 4. Locomotory disorders (including lameness)
- 5. Group stress
- 6. Inability to perform comfort behavior
- 7. Inability to perform exploratory or foraging behavior
- 8. Inability to express pre-laying and nesting (maternal) behaviors

Welfare consequences

Hazards

Three steps approach:

1. Identification of relevant hazards for the different welfare consequences.
2. Elicitation of the **prevalence of these relevant hazards in relation to each husbandry system.**
3. Relevance of the welfare consequences in the husbandry system based on the estimated prevalence of the relevant hazards

Assessment of the husbandry systems in relation to the relevant welfare consequences

Husbandry systems



RECOMMENDATIONS ToR-2



- 1) **The systems called cages** (individual, couple or collective) **and the systems currently used during the overfeeding phase** for foie gras production **as described in this SO**, lead to high risk of occurrence of the welfare consequences and should be avoided.
- 2) **All these systems should be improved according to the recommendations of ToR-3**
- 3) **Further research is recommended** on the welfare consequences of rearing practices (e.g. overfeeding) which are not covered from the current mandate.





ToR-3: RECOMMENDATIONS TO PREVENT THE NEGATIVE WELFARE CONSEQUENCES

- 1) Space allowance
- 2) Minimum height of the enclosure
- 3) Floor quality
- 4) Nesting facilities
- 5) Enrichment provided

1) SPACE ALLOWANCE– Behavioural space model

Which space allowance would support the birds to perform their behavioural needs?



Behavioural space model was based on a bird weight of :



3 kg (before slaughtering)



4.4. kg (before slaughtering or before entering in the overfeeding phase for Mule ducks)



6.7 kg (before slaughtering or before entering in the overfeeding phase)



0.3 kg (sexually mature layers and broilers before slaughtering)



1) SPACE ALLOWANCE– Behavioural space model

Which space allowance would support the birds to perform their behavioural needs?

- **Stationary** behaviours
- **Dynamic** behaviours
- **Comfort** behaviours (included bathing behaviours)



Four scenarios were proposed based on different possibilities to express behavioural categories

Scenario 1: **Only stationary behaviours**

Scenario 2: **Dynamic + other comfort behaviours**

Scenario 3: **All of them considering functional areas**

Scenario 4: **All of them all the time**



1) SPACE ALLOWANCE - Recommendations

Minimum space allowance to be provided to prevent restriction of movement, inability to perform comfort behaviour and inability to perform exploratory or foraging behavior

	Domestic duck	Muscovy and mule duck	Domestic geese	Japanese quail	
Scenario 2 →	Space allowance (on dry land)	4,139 cm²/bird (2.4 birds/m ²)	4,061 cm²/bird (2.5 birds/m ²)	7,776 cm²/bird (1.3 birds/m ²)	581 cm²/bird (17.2 birds/m ²)
Scenario 3 {	+ Space for exhibit complete water bathing	219 cm²/bird (or in any case not less than 10,188 cm ² per enclosure)	187 cm²/bird (or in any case not less than 12,010 cm ² per enclosure)	1,166 cm²/bird (or in any case not less than 24,728 cm ² per enclosure)	Included functional area for dustbathing with preferred material 32 cm²/bird (or in any case not less than 1,155 cm ² per enclosure).



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2) MINIMUM HEIGHT OF THE ENCLOSURE - Conclusions

- To prevent the welfare of the animals, a **normal standing posture** should be maintained.
- This height should be **at least 150 cm** **from the surface of the enclosure**.
 - ✓ from the surface of the enclosure
 - ✓ in the case of Muscovy ducks, the lower part of the enclosure should be **at least 35 cm** high.

a bird to adopt a

depth over time

which is provided, to



Total height that allow humans to enter the enclosure and inspect the animals

66 cm



35 cm



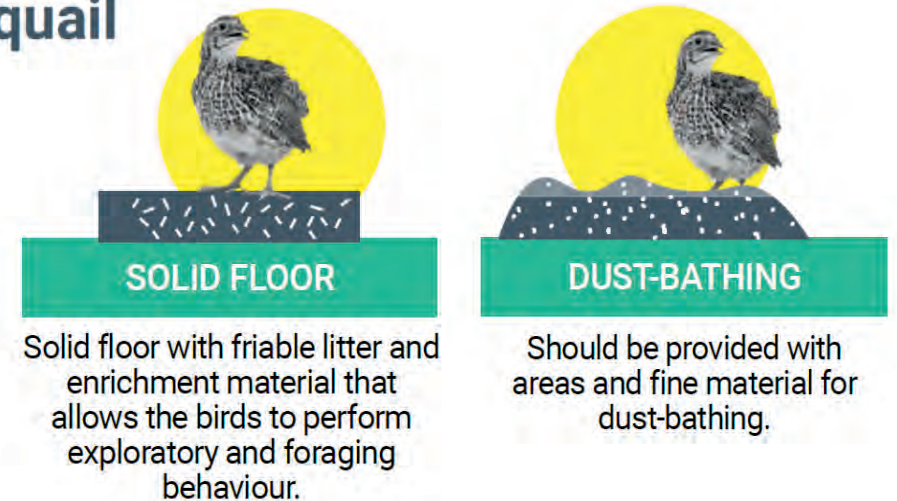
150 cm



3) FLOOR QUALITY - Recommendations



Japanese quail

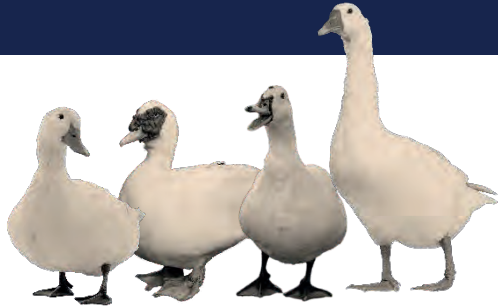


Litter management:

1. The **quantity and replenishment frequency** of new litter should ensure **dry and friable condition**, and presence of **uncontaminated bedding material** that facilitates foraging, exploratory and comfort behaviours.
2. **More research** is needed on how to optimise different types of litter management in duck and goose barns.



4) NESTING FACILITIES - Recommendations



1. Any enclosure where adult female breeders are kept should contain one or more separate areas destined for egg laying.
2. The floor should not be of wire mesh, and it should contain **manipulable material deep enough for nest building**. Nests should be **dimensioned** to allow a single bird to show nesting behaviour.
3. A nest with **sides, back and opaque top protection is recommended for ducks**.
4. For Domestic geese the **nest should not be placed under direct sunlight**.
5. Further research is suggested to **optimise nest design and nest ratio** (nest: female) for Domestic and Muscovy ducks, and Domestic geese.



1. Nests providing **cover**, should be available for **all laying quail** and quail breeders, and should contain **dry and friable material** which is attractive for the species of interest.
2. **Further research** is necessary to optimise nest design for Japanese quail.



5) ENRICHMENT PROVIDED – Recommendations on material for water bathe



(Küster, 2007)



(© Ute Knierim)



Waterfowl

- Open water facilities that allow **at least head dipping**, but preferably **full body contact** with the water surface, should be provided throughout the birds' life.
- These water facilities should be placed on **well-drained areas** and deterioration of water quality should be prevented.
- Separate drinkers should be provided in addition to bathing water.
- **Minimum space requirements** at water facilities to allow the bird to exhibit water bathing should be as reported in space allowance.



5) ENRICHMENT PROVIDED – Recommendations on structural equipment and foraging-related enrichment



Structural equipment

- For **Muscovy ducks**, provision of **structures that allow perching**, as well as resting under or adjacent to cover, are recommended, but further research should be carried out to understand their necessary characteristics, including height and length per bird.



- For **Japanese quail**, **horizontal structures providing cover** for the birds should be made available, but further research should be carried out to determine their necessary characteristics and space needed per bird.



Foraging- related enrichment

- In **all species**, **permanent access to manipulable enrichment** should be provided not only in the form of dry, friable litter on at least part of the floor, but also in the form of additional, preferably edible, material (such as silage, fresh fodder or pecking blocks) suitable to stimulate foraging and further exploration.



5) ENRICHMENT PROVIDED – Recommendations on outdoor access



- **Outdoor** provided
- For this mainly Areas should muddy
- If circum risk, provided



should be
on the
of veranda
commercial
be carried

(Farm for Education and Research, Ruthe
© Gieseke, University of Kassel, Germany)



ACKNOWLEDGMENTS

- **EFSA WORKING GROUP EXPERTS**

Charlotte Berg, Sandra Edwards, Daniel Guémené, Ute Knierim, Joanna Litt, Virginie Michel, Anja Riber, Attila Salamon, Inga Tiemann, Antonio Velarde

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<https://efsa.onlinelibrary.wiley.com/doi/epdf/10.2903/j.efsa.2023.7992>

SCIENTIFIC OPINION



ADOPTED: 29 March 2023

doi: 10.2903/j.efsa.2023.7992

Welfare of ducks, geese and quail on farm

EFSA Panel on Animal Health and Animal Welfare (AHAW Panel),
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Barbara Padalino, Helen Clare Roberts, Hans Spoolder, Karl Stahl, Arvo Viltrop,
Christoph Winckler, Charlotte Berg, Sandra Edwards, Ute Knierim, Anja Riber, Attila Salamon,
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