EURCAW *Poultry SFA*

European Union Reference Centre for Animal Welfare *Poultry SFA*




Fifth EURCAW-Poultry-SFA & EU MSs Competent Authorities network meeting

—

Online, October 01-02, 2024

Co-funded by the European Union

anses

IRTA Institute of Agrifood Research and Technology

AARHUS UNIVERSITY

IZSLER

Welcome

Virginie Michel - EURCAW-Poultry-SFA

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Agenda: Tuesday, 01 October

09:00	09:05	Welcome *(V. Michel)*
09:05	09:15	Welcome *(DG SANTE)*
09:15	09:20	Introduction *(V. Michel)*
09:20	09:50	**Results of the survey conducted on the EURCAW-Poultry-SFA's activities (activity 1)** *(E. Nehlig)*
09:50	10:30	**Update on the Centre's actual work (activity 1)** *(E. Nehlig, A. Riber, M. Guinebretière, V. Michel)*
10:40	12:00	**Update on the Centre's actual work (activity 2 and 3)** *(F. Mocz, A. Contreras, A. Riber)*
11:00	11:20	*Break*
12:00	12:55	**Topics of discussion proposed by Member States** *(V. Michel, A. Xercavins, A. Riber, A. Velarde)*
13:00		Closure of first session *(V. Michel)*

Agenda: Wednesday, 02 October

09:00	09:05	Welcome *(V. Michel)*
09:05	09:25	**Update on the Centre's actual work on training (activity 4)** *(A. Xercavins)*
09:25	09:45	**Update of the Centre's actual work on Dissemination (activity 5)** *(E. Nehlig)*
09:45	10:45	**Participative session: males chicks culling banishment in Europe:** *(B. Favier (FR) S. Schreiber (DE), K. Eder (AT), Antonio Ferraro (IT))*
10:45	11:05	Break
11:05	12:25	**Interactive discussion on the next period: 2025-2027** •Work Programme proposal *(V. Michel, A. Riber, F. Mocz, A. Velarde, A. Xercavins)* •EURCAW-Poultry-SFA Roadshows *(A. Velarde)* •EURCAW-Poultry-SFA Community of Practice (CoP) (*V. Michel)* •EURCAWs Common work *(A. Velarde, E. Nehlig)*
12:25	12:30	Wrap up second morning *(V. Michel)*
12:30		Closure of the meeting *(DG SANTE, V. Michel)*

Welcome

DG SANTE G5

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Introduction to EURCAW-Poultry-SFA

Virginie Michel - EURCAW-Poultry-SFA

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EU Reference Centers for Animal Welfare

Art. 95 of **'The Official Controls Regulation'**:

"The Commission shall, by means of implementing acts, designate European Union reference centers for animal welfare that shall support the activities of the Commission and of the Member States"

EURCAW Pigs
Since October 2018

EURCAW Poultry SFA
Since February 2020

EURCAW Ruminants & Equines
Since June 2021

EURCAWaqua
Since May 2024

5 Activities

1. COORDINATED ASSISTANCE
2. ANIMAL WELFARE INDICATORS
3. SCIENTIFIC AND TECHNICAL STUDIES
4. TRAINING COURSES
5. DISSEMINATING RESEARCH AND INNOVATIONS

EURCAW-Poultry-SFA has 5 Priority areas

1. Broiler chickens on farm
2. Laying hens in alternative housing systems
3. Stunning and killing
4. Rabbits on farm, with a focus on alternative housing systems
5. Turkeys on farm and during transport




EURCAW-Poultry-SFA team

Virginie MICHEL

Maryse GUINEBRETIERE

Louise KREMER

Antonio VELARDE

Aranzazu VARVARÓ

Aida XERCAVINS

Frédérique MOCZ

Emilie NEHLIG

Alexandra CONTRERAS-JODAR

Xènia MOLES

Leonardo J. VINCO

Antonio LAVAZZA

Anja B. RIBER

Steen H. MØLLER

Emily LEISHMAN

Francesca FUSI

Clara TOLINI

Stefano PERNA

Salvatore PODDA

Questions?

Results of the survey conducted on the EURCAW-Poultry-SFA's activities (activity 1)

Chaired by Virginie Michel

EURCAW-Poultry-SFA

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Results of the survey conducted on the EURCAW-Poultry-SFA's activities (activity 1)

The survey was launched end of May 2024

Objectives:

→Collect the EU Member State's (MS) feedback on:

- how the Centre interact throughout the year with you
- what is functioning,
- what could be improved,
- your needs
- suggestions

✓ **23 EU MSs answered.**

2 countries provided 2 feedbacks

→ 25 respondent

Results of the survey conducted on the EURCAW-Poultry-SFA's activities (activity 1)

Activity 1

- 24 respondent on 25 **are satisfied with the email interaction** they have with the Centre

- 24 respondent on 25 are **sufficiently informed about the events organized by the Centre during the year**:

→ always: 15, most of the time: 9

- For 24 respondent on 25, **EURCAW-Poultry-SFA meets their expectation**

→ output not always useful or easily accessible for inspectors as mainly in English

- All the respondent are **satisfied with the outputs produced by the Centre**

Activity 1

According to the respondent, the **less useful output for official inspectors** produced by the EURCAW-Poultry-SFA are:

The newsletters, the reports, the national languages translated factsheets, the reviews, and the Q2E answers.

- According to the respondent, **the most useful outputs for official inspectors** produced by the EURCAW-Poultry-SFA are:

The practical workshops, the good practices factsheets, webinars, factsheets, and the Q2E answers.

- According to respondent, the **most disseminated outputs to official** inspectors produced by the EURCAW-Poultry-SFA are:

The good practices factsheets, the webinars, thematic factsheets, the practical workshops, and the indicators factsheets.

Activity 1

- According to respondent, the **less useful or applicable outputs for the Competent Authorities**' activity, produced by the EURCAW-Poultry-SFA are:

The newsletters, the reviews, the national languages translated factsheets, and the reports.

- According to respondent, the **most useful or applicable outputs for the Competent Authorities' activity**, produced by the EURCAW-Poultry-SFA are:

The webinars, the thematic factsheets, the good practices factsheets, the Q2E answers and practical workshops.

Activity 1:

Least interesting

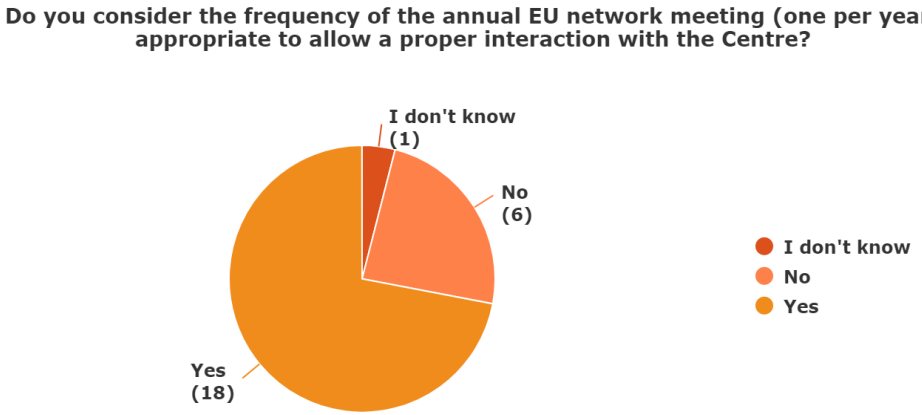
Please highlight here if there is anything in particular that you Consider the least interesting:	**N**
About all the questions, and regarding the documents (and webinairs), the **most important** is not the "format", but **the subjet**. For us, the newsltter is not a "output·", is a tool for the communication. **The less used is the scientific publications.**	1
I haven't answer for this question	1
It can sometimes be difficult to find where the information is placed on the website and I usually have to look in every link to remind myself what is where. This is not a problem at the moment but when/if more information is provided, this may be difficult! It **would be useful if there were farm videos available to show examples, also a repository of photographs and videos for training purposes**. **Training material would also be useful so that we can use it very easily, e.g. powerpoint slides pictures, quizzes etc.!**	1
national language translated factsheets	1
reviews	1
TOTAL	**5**

Activity 1:

Especially like

Please highlight here if there is anything in particular that you especially like/use about the outputs that we create:	N
webinars	2
Depopulation methods in case of outbreaks AI	1
The **answers to the Q2E's** have all been excellent and very useful!	1
The **outputs are always very clear and well presented with concise information**. The **factsheets are excellent and easy to use.** The **webinars are also excellent** and more would be very useful. The formatting of the factsheets and photographs are very good, and the sheets are very easy to read and understand. The Questions section containing detailed responses are excellent.	1
The **webinars and pratical workshops**	1
Thematic factsheets : Because our inspectors are very specialized	1
We like the "outputs" in spanish, and the ones dealing with issues not much developped (e.g rabbits, turkeys). But above all, **we like to know that there is one place to address questions, to get informations and, generally speaking, to help us to do our work.**	1
TOTAL	**8**

Activity 1 Meeting frequency

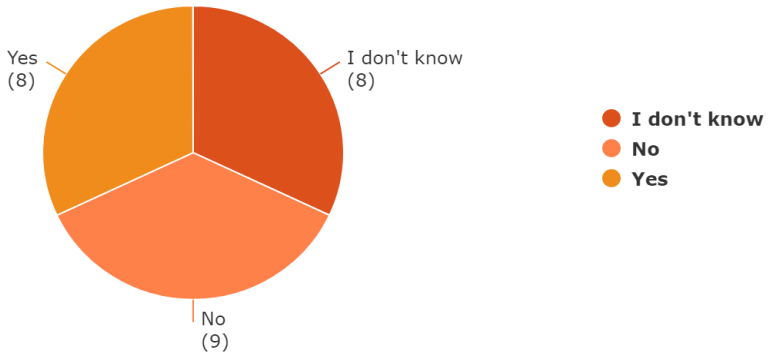


- **Most of the respondent** are considering the frequency of the annual EU network meeting **appropriate to allow a proper interaction with the Centre**

- **6 respondents would like have two meetings per year.**

Activity 1 Meeting frequency

Would you like to have another annual online meeting throughout the year?



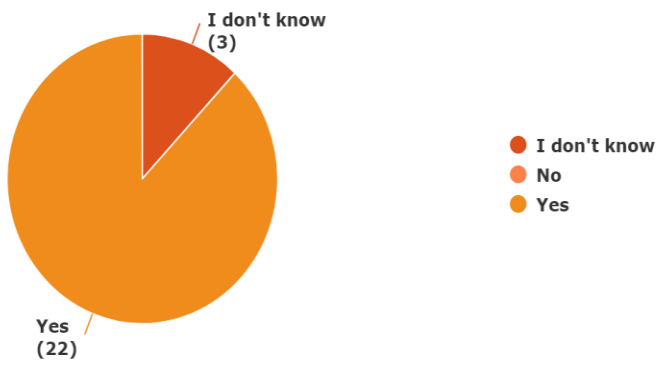
Respondents have mixed views on the need for a second annual meeting.

→ According to the respondents, having a second meeting would:

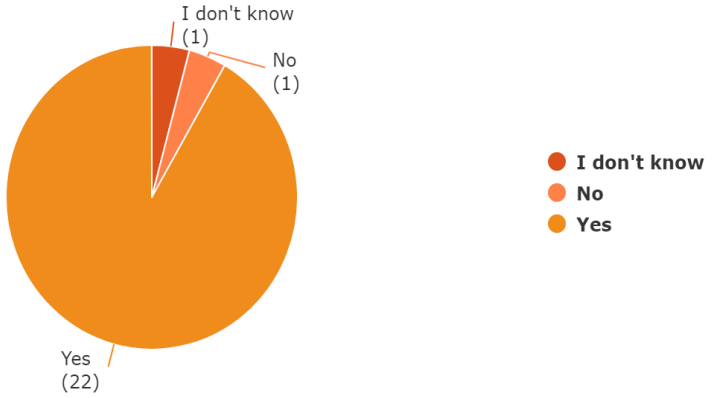
- Give more opportunities to change views and practices
- Be useful as the area of discussion is toot extensive
- Help to better focus the goals of the Centre
- Permit better presentations, no time pressure, more frequent information for updates, news, changes, amendments….
- Permit to attend if the respondent are not available for the other one

Activity 2: Animal welfare indicators and methods

Are the indicators factsheets useful for the inspection activities?



Do you disseminate the indicators factsheets among the official inspectors?



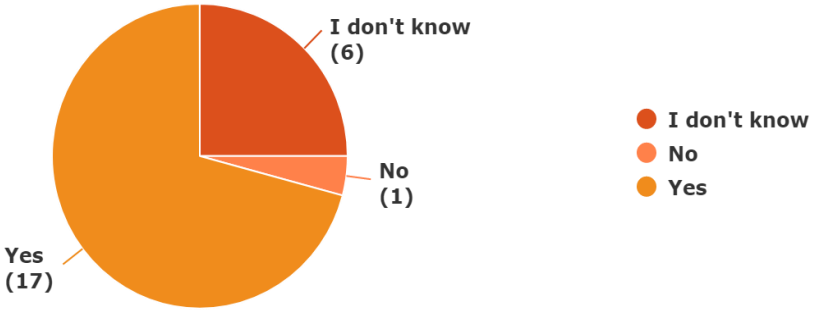
For most of the respondent :

- The indicators factsheets are useful for the inspection activities

- The indicators factsheets are disseminated to official inspectors

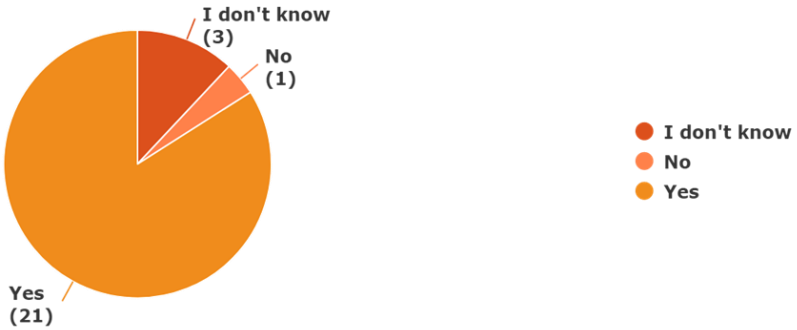
- Iceberg indicators factsheets are useful for the official inspectors to check compliance with the legislation

Are iceberg indicators factsheets useful for the official inspectors to check compliance with the legislation?



Activity 3: Scientific and technical studies

Are the outputs of the scientific studies performed by the Centre useful for the Competent Authority's work?



If not please say why.

	N
It's very "row" material. One tree doesn't make a forest, one article is just one article. There are hundress of references in the EFSA reports, if we want one, we can alway search there.	1
TOTAL	**1**

→ Most of the respondent think that the outputs arising from the scientific studies performed by the EURCAW-Poultry-SFA are useful for their work

Activity 3: Scientific and technical studies

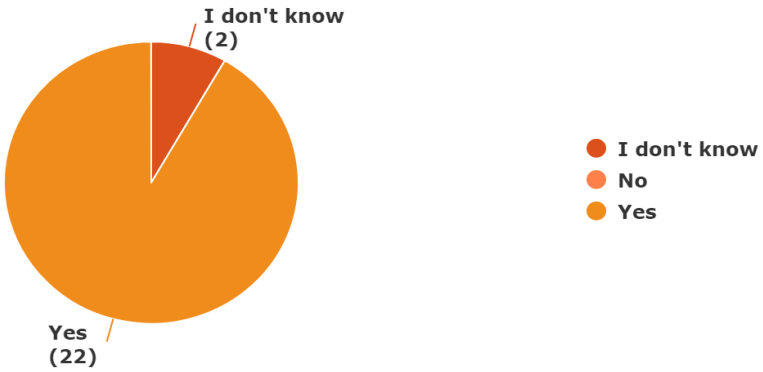
- **Thematic factsheets are useful for most of the respondent (24/25)**
- **Good practices factsheet are useful for the Competent Authority for most of the respondent (24/25), and for the inspectors (18/24), 5 do not know and 1 thinks not**
- **Most of the respondents would prefer both good practice factsheet to improve animal welfare and for official controls**

Would your Member State prefers factsheet about?

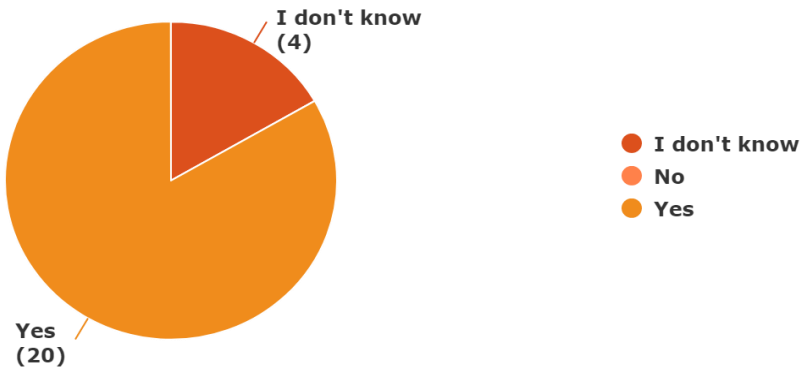
	N
good practice to improve animal welfare (on farm, transport, slaughter)	3
good practices for official controls	0
both	22
TOTAL	25

Activity 4: training courses

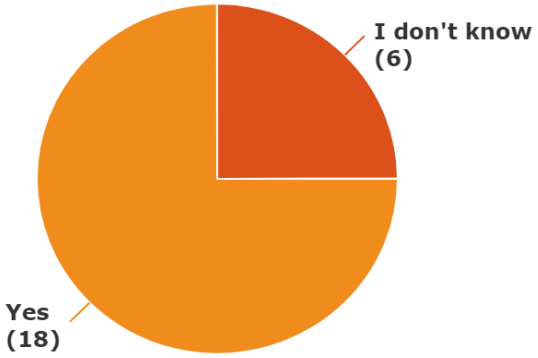
In general, are you satisfied with the webinars proposed by the EURCAW-Poultry-SFA?



For your Member State, are webinars useful?



For your Member State, are webinars applicable?



Most of the respondents:

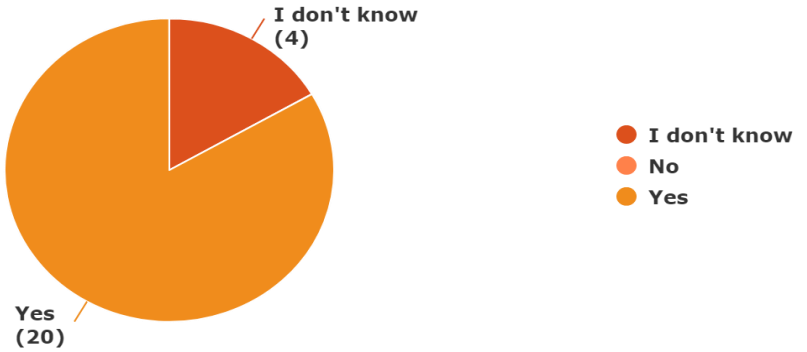
- Are satisfied with the webinars

- Find them useful and applicable

Activity 4: training courses

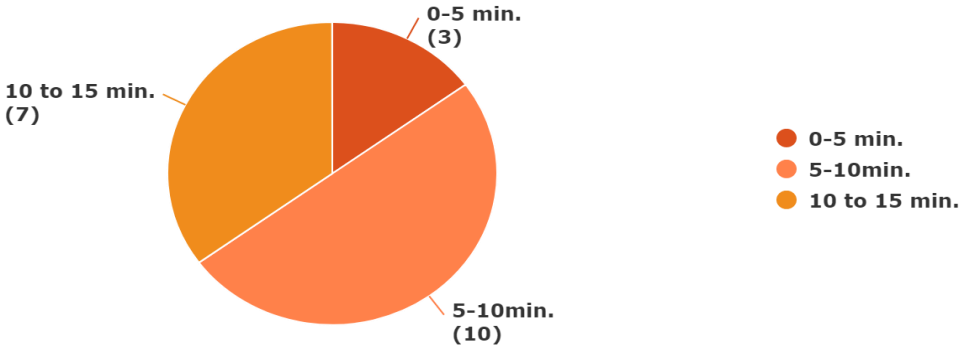
- Most of the respondents are interested by the knowledge pills

Would you be interested in online "knowledge pills"?

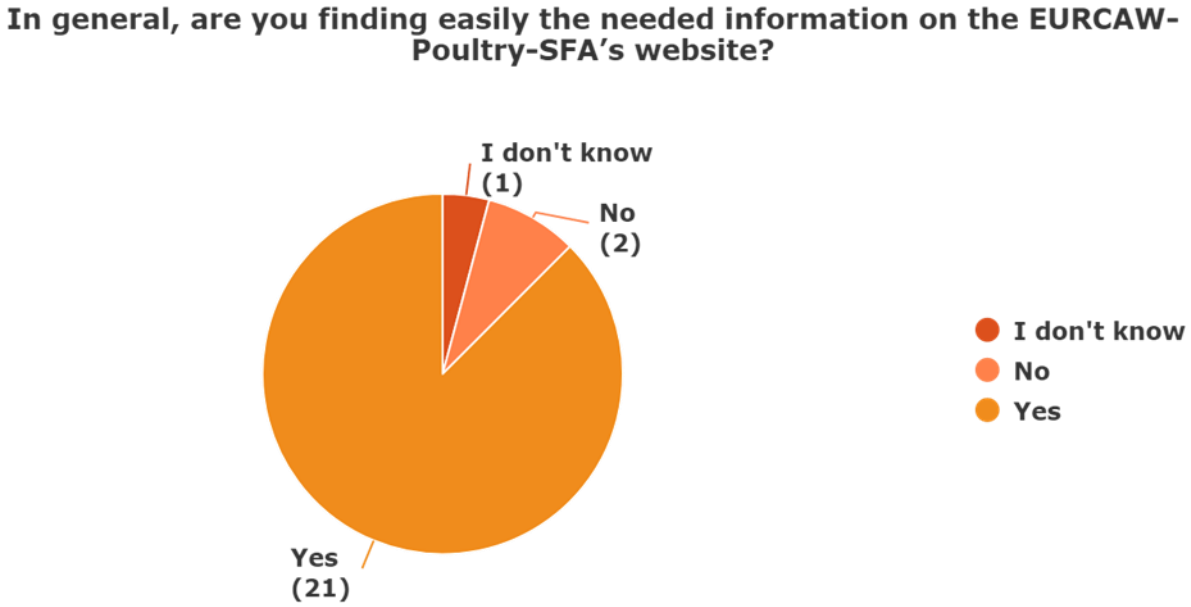


- Half of the respondent consider 5 to 10 min as appropriate duration

If yes, which duration would you consider appropriate?



Activity 5



In general most of the respondents are easily finding the needed information on our website.

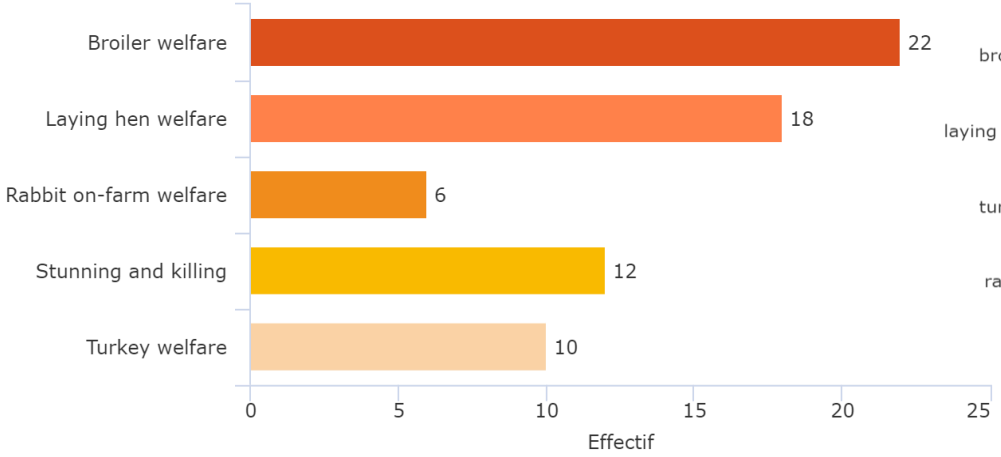
But for 2 respondents it can be difficult sometimes to find documents.

→ As the amount of information is not excessive it's manageable for the moment.

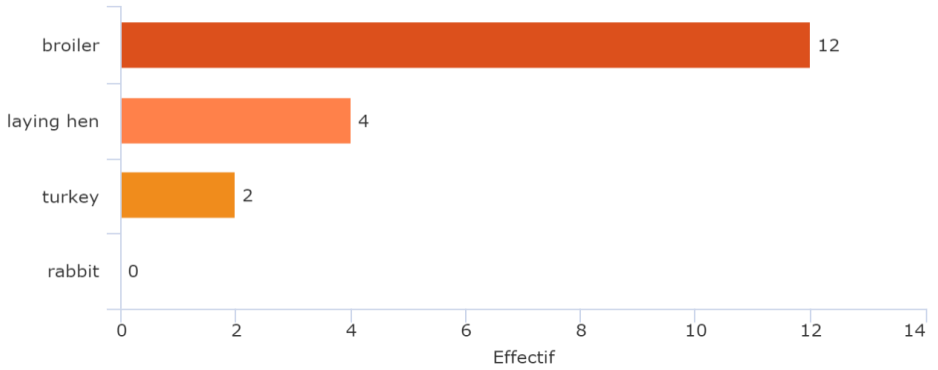
Results of the survey conducted on the EURCAW-Poultry-SFA's activities (activity 1)

Activity 5

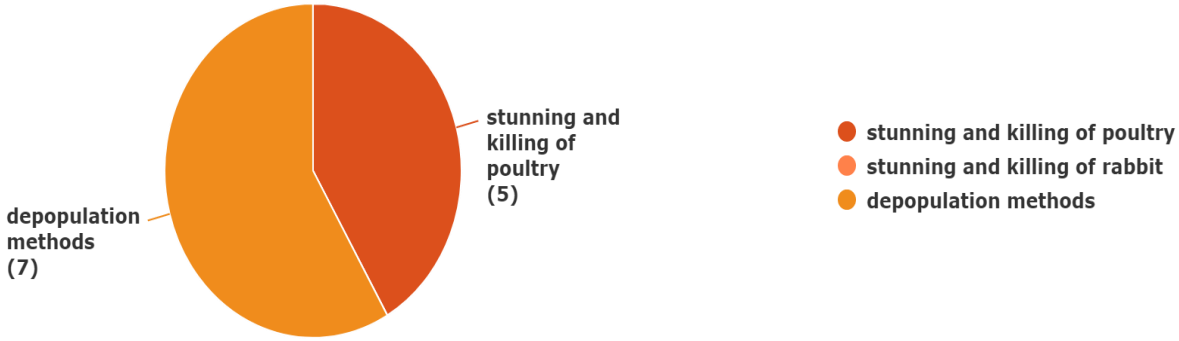
Which 'topics' sub-page are you visiting the most?



If 'good practices' is chosen: Which 'Good practices' sub-page are you visiting the most?



If 'stunning and killing' is chosen: Which '; stunning and killing' sub-page are you visiting the most?



Results of the survey conducted on the EURCAW-Poultry-SFA's activities (activity 1)

Open comments	N
EURCAW is very usful RC for us. You **provide very interesting information**. My view is that for the **Official veterinarians on the spot it is very useful.**	1
I believe that the **main outputs of the Centre should be concice and useful to Offcial Controls provinding simple tools to support on field inspections**	1
I could answer the last 2 questions from the point of view of the competent authority - yes, but the member state does not mean only the competent authority, so the answer is - I don't know	1
I don't understand the question "Could someone from your Member State proofread translated factsheets in your country's national language?" (I reply "no" just to continue). **Inspector don't use your output directly to do the controls, the controls are done using national PNT.** Have a nice August.	1
It's sometimes difficult to share with our official inspectors the informations because, it's sometime a little different from our regulations, for sample the enrichment in rabbits, or turkeys productions are not yet included in our regulations.	1
Overall, the EURCAW activities are really excellent and the resources are very useful on a day to day basis to the CCA. It is excellent to have a go to centre where our more challenging questions can be answered. More information on ventilation systems in poultry houses would be very useful at some stage as this is an area challenging to inspectors. Thank you very much for your excellent work!	1
Thank you for the **great work** you are doing and I am looking forward to the next couple of years when a lot of interesting things are planned. I also look forward to the next physical meeting. Sometimes I feel a little sorry for you at the webinars where most people are very quiet- I think the **language is a barrier for many in the large group in a digital meeting.** Maybe you can **try dividing people in smaller groups in chat rooms during the meeting and see if that works better for discussing things.**	1
TOTAL	7

Questions?

Update of the Centre's actual work (activity 1, 2, and 3)

Chaired by Virginie Michel

EURCAW-Poultry-SFA

Co-funded by the European Union

Questions to EURCAW-Poultry-SFA (activity 1)

How to send a query?

→ https://www.eurcaw-poultry-sfa.eu/en/minisite/sfawc/query-webform

or

https://survey.anses.fr/SurveyServer/s/DSL/QuerywebformIQ3/questionnaire.htm

You can download here the webform in PDF to prepare your Q2E submission.

Start

Questions to EURCAW-Poultry-SFA (activity 1)

Where to find Q2E ?

https://www.eurcaw-poultry-sfa.eu/en/minisite/sfawc/question-eurcaw-q2e

QUESTIONS TO EURCAW (Q2E)

Scientific and technical assistance

The centre has been created of the regulation 2017/625 about official controls (art. 95) to support the European Commission and member states in the applications of legislation regarding poultry and other small farm animals' welfare.

The Centre offers scientific and technical assistance to Competent Authorities (CA), National Reference Centre (NRC), other Supporting Bodies (SB), from the EU Member States and the European Commission, regarding all aspects of welfare legislation implementation. The Centre is covering hatchery, farming, transportation and killing outside of risk assessment and risk management areas.

SLAUGHTER AND KILLING

2020-2024

Q2E-Poultry-SFA-2020-001 How captive bolt is used in Europe for the on-farm killing of small animals and how they addressed the issue of noise for other animals and security for the users?

1.2 Technical assistance, query service

- **4** eligible queries in 2020
- **2** eligible queries in 2021
- **6** eligible queries in 2022
- **10** eligible queries in 2023
- **6** eligible queries in 2024

→ **With 3** under preparation

- **4 queries from 2023 answered in 2024**

Q2E-Poultry-SFA-2023-007 Catching of turkeys in a loose house

Q2E-Poultry-SFA-2023-009 Ad libitum access to water for broiler breeders.

Q2E-Poultry-SFA-2023-010 Indicators of consciousness after electrical stunning in rabbits.

Q2E-Poultry-SFA-2023-011 Pullets rearing in the first weeks in aviary.

1.2 Technical assistance, query service

3 Answered in 2024:

- Q2E-Poultry-SFA-2024-001 How to assess the effectiveness of broiler chicken house ventilation system?
- Q2E-Poultry-SFA-2024-003 Pullet lighting improvement
- Q2E-Poultry-SFA-2024-004 Broiler lighting improvement

1.2 Technical assistance, query service

- **3 Q2E answers** under preparation

Ongoing in 2024:

Q2E-Poultry-SFA-2024-002: Killing of unhatched chicks

Q2E-Poultry-SFA-2024-005:Broiler optimum feeding frequency

Q2E-Poultry-SFA-2024-006:Emergency and alarm system to guarantee animal welfare

Questions to EURCAW-Poultry-SFA (activity 1)

4 Q2E examples:

Q2E-Poultry-SFA-2023-009: Ad libitum access to water for broiler breeders

Q2E-Poultry-SFA-2023-011 Pullets rearing in the first weeks in aviary

Q2E-Poultry-SFA-2024-003 Pullet lighting improvement

&

Q2E-Poultry-SFA-2024-004 Broiler lighting improvement

Q2E-Poultry-SFA-2023-007 Catching of turkeys in a loose house

Q2E-Poultry-SFA-2023-009

Ad libitum access to water for broiler breeders

Question

- What are the potential welfare consequences of allowing broiler breeders ad libitum access to water as compared to restricted access to water?

Q2E-Poultry-SFA-2023-009

Ad libitum access to water for broiler breeders

Background

- Broiler breeders are feed restricted, particularly during rearing.
  - Hunger
    - Development of abnormal behaviour, including polydipsia and water spillage
    - Restricted access to water is a common practice:
      - e.g., a few times per day for a limited period and always during the period of feeding.
      - may be applied from 7–10 days of age and may continue until the end of life.
      - at a level that allows consumption of at least the minimum amount of water necessary for sustaining life, growth and production.

Q2E-Poultry-SFA-2023-009

Ad libitum access to water for broiler breeders

Welfare consequences of water restriction

- Water restriction may cause thirst.
  - Thirst = a negative motivational state which may arise to drive water seeking behavior (Mellor, 2017) if access to water is limited or restricted (Jensen and Vestergaard, 2021).
  - Freedom from thirst is one of the 'Five Freedoms', implying that thirst is considered highly detrimental to animal welfare.
  - Water restricted broiler breeders show behaviour indicative of a high motivation to drink (Ross et al., 1981).

Q2E-Poultry-SFA-2023-009

Ad libitum access to water for broiler breeders

For animal welfare reasons, restriction of water for consumption should never be practised in any husbandry system.

Q2E-Poultry-SFA-2023-009

Ad libitum access to water for broiler breeders

Welfare consequences of ad libitum access water

- Ad libitum access to water may cause welfare problems
  - Polydipsia results in watery droppings.
  - Stereotypic pecking at the water nipples (without consumption of the water) may cause water spillage.
  - Moist droppings and water spillage:
    - footpad dermatitis, hock burns and breast burns.
    - soiled plumage -> uncomfortable and posing a risk of cold stress as the plumage loses its insulating capacity.
    - compromised resting, particularly during rearing (no elevated structures) are often not provided.
    - poor quality litter, which is suboptimal for important basic behaviours such as foraging, exploration and dustbathing.

Q2E-Poultry-SFA-2023-009

Ad libitum access to water for broiler breeders

Solutions - preferably to be used in combination

- Choosing genotypes tolerating ad libitum access to feed implies that water restriction can be omitted.
- Reduce the sensation of hunger by offering more fibre-rich diets as this allows for a bulkier meal at the same energy level.
- Slats underneath the drinkers allow draining of water spillage and therefore reduce the risk of wet litter.
- Use of water nipples specifically designed for broiler breeders in a way such that the flow of water from the nipples is slow.
- High ventilation efficiency and good quality litter will reduce the risk of wet litter.

Q2E-Poultry-SFA-2023-011: Pullets rearing in the first weeks in aviary

Usual practice in aviary systems for pullets :

Pullets locked on the tiers during the first 3 to 5 weeks of age

To ensure good access to drinkers and feeders,

To encourage animals to explore the system environment.

Consequences :

Absence of litter in early life	High stocking density
• No proper development of the dustbathing sequence • Birds may view feathers as an acceptable material -> long-term impacts on the development of feather pecking behaviours and plumage damage. • Sham dustbathing does not fulfil behavioural and functional needs, experience negative affective states or other welfare issues	• In the first 2 weeks : it enables to keep warm, without consequences in the plumage condition • But the longer the duration locked, the smaller the remaining space due to pullet's body increasing. • Risk factor for developing feather pecking - plumage damage during rearing + laying periods

Mitigation for absence of litter : Paper substrate

Paper substrate or other solid substrates are placed on the grids - Food usually sprinkled on the paper until feeding behaviour is established

Advantages	Disadvantages for animals
• Prevents direct contact of the pullets with the grid, prevents the legs from falling through the wire • Rustling and tapping noises produced by walking and pecking stimulates feeding -> Improves survival (better access to food and water) • Allows provision of some foraging substrate (paper + faeces, dust, spilled food accumulation) • Reduces fearfulness in adult hens (in absence of enrichment as adults) • Provides the required faecal contact for a successful coccidiosis vaccination	• Paper substrate disintegrates in few days • Poorer litter quality than using straw, wood shavings or other suitable substrates. Insufficient quantity for foraging behaviours • Increases the risk of diseases if not managed correctly

Mitigation for absence of litter : Providing enrichment

Advantages for animals
May increase the performance of natural behaviours
Reduces incidence of abnormal and damaging behaviours, & negative emotional states
Improve physical health
Can improve plumage in the laying period
Can help maximise the pullets' physical, sensory and behavioural development potential

Effective enrichments

Ramps, perches or elevated platforms	Small bricks of straw or hay bales
Novel food for pecking	Pecking stones or blocks
Pecking objects (like textile strings)	Dustbathing boxes

- Adequation rearing / laying periods
- Any items which are not well used by the birds should be replaced by alternatives.

Questions to EURCAW-Poultry-SFA (activity 1)

Conclusion

Pullets locked on the grids (3 to 5 weeks of age) = denying access to both litter and a substantial amount of space. Detrimental for the welfare of the animals

Recommandations

To limit this practice for the lowest time possible and avoid direct contact of chicks legs with wire mesh :

Rear chicks directly on the floor - if	•Suitable litter •Easy access to feed and water for all birds from the floor •Encourage birds to explore the complex environment (ramps and adequate luminosity)

If not possible

Always provide paper substrate	•Check hygiene and presence of the paper •When paper disappeared, provide either access to litter or other alternatives to express foraging, dust-bathing and pecking behaviours.
Provide enrichments	•Adapted to the future laying environment •Changed if the animals do not use them.
Stocking density	•Should be appropriate as pullets grow. •Max. 40 pullets/m2 from 3-6 weeks of age

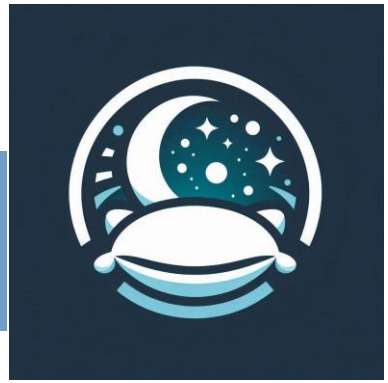
Q2E-Poultry-SFA-2024-003:Pullet + Q2E-Poultry-SFA-2024-004: Broiler lighting improvement in the context of organic production

Organic production systems for pullets and broilers chicken

- Young animals should have continuous daytime open air access from as early as practically possible and whenever physiological and physical conditions allow.
- Natural light may be supplemented by artificial means to provide a max. 16 hours light/day, with a continuous nocturnal rest period without artificial light of at least 8 hours.

EU regulation for poultry (2018/848/EC, Annex II, Part II, 1.9.4.4. (l))

Needs for Sleep and Rest



Rest *: prolonged period of inactivity ≠ foraging, walking or preening.*

Sleep*: specific state of rest with altered consciousness, reduced responsiveness to external stimuli and homeostatic regulation.*

- **Importance of rest and sleep**
  - **Highly motivated behaviour**, disturbances of such behaviours could lead to frustration and stress.
  - **Vital function** : tissue restoration and growth, energy conservation, neurobehavioral and neurocognitive performance, memory processing and learning, waste clearance in the brain
- **Particularly important for the young animals**
  - During development: learning about environment and how to interact with other individuals
  - Young domestic fowl 12-16 h sleeping or resting post-hatch vs. 7-8 h by adult birds.
- Sleep and rest disruption may affect **synchronising daily rhythms** of physiological and behavioural processes, reducing feed intake, body weight gain, and immunity

Factors affecting Sleep and Rest quality

- **Internal factors : Hunger, thirst, hormonal rhythms**
- **Social factors**
  - Stocking density, large group sizes increase disturbances - even more with continuous lighting.
  - Absence of mother hen to induce rest and provide conditions for undisturbed rest for the young chicks
- **Barren area (no specific resting places)**
- **Ambiance : Temperature, Photoperiod, Sudden loud noises, Light**

Duration of the dark period

- **Continuous or near-continuous light => sleep deprivation.**
  - can adversely affects growth performance
  - negatively impacts poultry welfare:
    - Higher fear response of laying hens and broilers
    - Poorer feather condition (broilers)
    - Poorer leg quality (gait problems, leg problems, less activity, skeletal abnormalities) (broilers)
- **Dark periods in early days of life are essential**
  - production of melatonin: metabolic and immune regulations
  - better bone development (broilers)
  - better synchronisation of resting behaviour => less physical disturbances which improves the quality of resting
  - better production performance
  - less fearful reaction

Light Intensity

- High light intensity (200 lux) preferred by layers and broilers [between 2 and 6 weeks of age]
- After, pullets preferred different light intensities depending on their activities

(i.e: dimmest environment (<10 lux) associated with resting and perching)

- Preference for contrasting intensity between photophase and scotophase (>20-lux):
  - promote + distinct behavioural rhythms
  - avoid even dispersal of active and inactive behaviours

Light: Intermittent programs (i.e. 4h dark x2 vs. 8h continuous dark)

in broilers

- May increase feed intake and body weight
- May decrease leg issues and contact dermatitis
- Reduced fear levels
- Reduced blood indicators of short and long-term stress.

in pullets/ laying hens

- heavier at the end of the rearing period (persisting until the end of the laying period) - positively influences the feed conversion ratio
- may be more adaptable to the changing outdoor environment (hens)
- better feather coverage (hens)

Dark brooders

Artificial replacements of a mother hen, which can be used as a source of heating and resting opportunities


Forslind et al. 2022

For pullets and laying hens:
- prevents development of severe feather pecking
- reduces fearfulness

3 studies on broiler chickens (inconsistent results):
- enhance positive social interactions,
- potentially improve cognitive abilities,
- reduces disturbances, without completely eliminating them.

Dark brooders provide also a source of heat providing optimal temperature conditions for rest.

Early access to natural light for pullets

(presence inside the barn of sunlight trough windows) (0-6 weeks)

Potential negative effects

- feather pecking in case of excessive light intensity
- piling behaviour in case of sunshine spots (few literature)

Positive effects

- Pullets and adult hens seem to prefer natural light or a mimicking alternative light, rather than the standard indoor lighting
- reduced stress and fear
- improved locomotor activity and exploratory behaviours.

Early exposure to natural light influences the later preference of the pullets for light type

Conclusion

Young domestic fowl do indeed have an increased requirement for sleep compared with adults.

Continuous (or almost) light for the first 3-5 days	Intermittent lighting	Dark brooders	Natural light for pullets (0-6 weeks)
• could disrupt the natural behaviour regarding sleep • negative effects on fearfulness • impacts negatively the leg health and behaviours of broilers	• In broilers, may increase feed intake and body weight • May have positive impact on welfare • Need for scientific consolidation for young animals	• Benefits for hens /pullets welfare • Need for scientific consolidation in broilers welfare	• Beneficial for welfare • Especially important for pullets who will have access to an outdoor range later in life. • Even distribution of indirect sunlight can be provided from the first day of life of pullets.

Q2E-Poultry-SFA-2023-007:

Catching of turkeys in a loose house system

Question:

- What are the optimal methods of corralling and catching turkeys in a loose house that minimize stress and injury to the birds?

- What are the best practices for manual handling and carrying an individual turkey for:
  I. placement into a cage for onward transport,
  II. for placement into a containerized gassing unit and
  III. for placement into a cone for captive bolt euthanasia?

- What are the best/optimum turkey restraint devices available for the purposes of captive bolt euthanasia?

Q2E-Poultry-SFA-2023-007: Catching of turkeys in a loose house

Question: What are the optimal methods of corralling and catching turkeys in a loose house that minimize stress and injury to the birds?

- As best practice to mitigate the effects of handling stress, birds should be herded quietly and carefully (in loose-housing systems, EFSA, 2022)

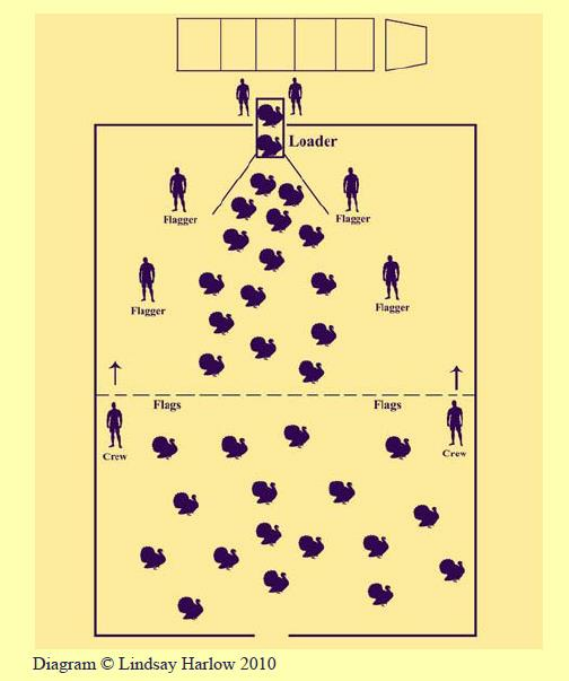


Diagram © Lindsay Harlow 2010

Q2E-Poultry-SFA-2023-007: Catching of turkeys in a loose house

Question: What are the best practices for manual handling and carrying an individual turkey for:

i) placement into a cage for onward transport,
ii) for placement into a containerized unit for gassing and
iii) for placement into a cone for captive bolt euthanasia?

- In the case of **manual catching**, heavy turkeys are grasped with one hand by the two legs, from behind and lowered onto their breast. With the other hand, the shoulder of the wing furthest away is grasped to lift and carry the bird (EFSA 2022).

- For **crating**, birds are grasped by the base of the wings, with one hand and the contralateral leg (or both legs) with the other hand and pushed into the crate sliding the keel bone on the floor of the crate with the bird's head facing forward.

Q2E-Poultry-SFA-2023-007: Catching of turkeys in a loose house

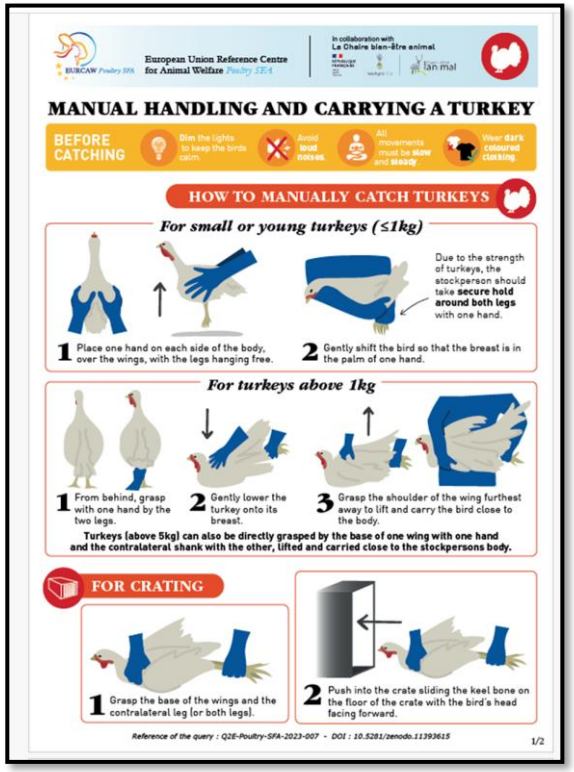
Question: What are the best/optimum turkey restraint devices available for the purposes of captive bolt euthanasia?

- When using a cone, the turkey should be placed head-down inside the cone to contain wing flapping, It is good practice to keep the head still by holding its beak.
- Alternatively, the birds can be restrained in a plastic bin, It must be placed upside down, over top of the body of the bird to contain wing flapping and leg movements. The turkey should be placed on the floor in a sternal recumbent position with its keel on a solid and flat surface.

Q2E infographic: *: Manual handling and carrying a turkey*

- In collaboration with La Chaire bien-être animal, the Centre developed an infographic issued from the Q2E answer: *Catching of turkeys in a loose house*.

- A graphic tool for operators in the field for improved turkey welfare !



Questions?

Injurious Pecking in Turkeys

2023

Content of the factsheet:

- ❑ How to distinguish between **injurious pecking** and gentle feather pecking
- ❑ **Body parts targeted** depending on the type of pecking
- ❑ Method of assessment: **Transect method**
- ❑ Type of injuries to note during transect walk

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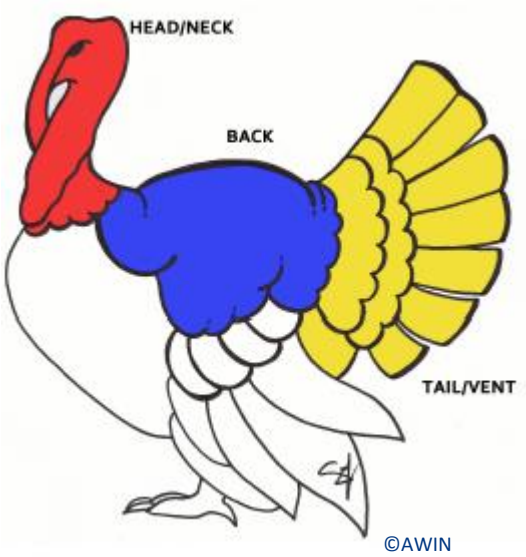

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Update on the Centre's actual work (activity 2)

EURCAW Poultry SFA

European Union Reference Centre for Animal Welfare Poultry SFA

Indicator Factsheet

Injurious pecking in turkeys

What is injurious pecking?

In contrast to gentle feather pecking which is a social and investigatory preening of a turkey to another turkey, typically directed at debris on the plumage (Savory, 1995; Dalton et al. 2018), injurious pecking can cause tissue damage and mortality (e.g. Dalton et al. 2013; Duggan et al. 2014, Dalton et al. 2018). In fattening turkeys, injurious pecking is one of the main welfare and health issues (e.g. Bartels et al. 2020). It includes head pecking - an aggressive act targeted at the head, neck and snood of another turkey (e.g. Savory, 1995)- and severe feather pecking – repeated, forceful pecking and pulling of the plumage and/or skin of another turkey, with or without feather removal. Injurious pecking often results in plumage and tissue damage to the victim (Savory, 1995). Whereas head pecking is considered an act of aggression, the causes of severe feather pecking are multi-factorial (stocking density, group size, light conditions, diet…) although it is mainly re-directed highly motivated ground foraging behaviour in a barren environment lacking appropriate stimuli (e.g. Sherwin et al. 1999; Dixon et al. 2008; Dalton et al. 2018). Depending on the type of pecking, the body area targeted will differ. Aggressive pecking will target the head and neck area, whereas severe feather pecking will target the back and tail area (Leishman et al. 2022).

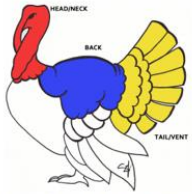

Figure 1: Body areas targeted by conspecifics in case of injurious pecking in turkeys (AWIN, 2015)

Legislation

There is no specific law protecting turkeys welfare. Their protection is therefore subject to the general indications dictated by the **Council Directive 98/58/EC**, which defines the minimum generic requirements for the protection of animals kept for farming purposes. **Council Directive 98/58/EC** sets down general standards. **Article 3** states that:

> **"Member States shall make provision to ensure that the owners or keepers take all reasonable steps to ensure the welfare of animals under their care and to ensure that those animals are not caused any unnecessary pain, suffering or injury."**

Method of assessment

The number of turkeys victims of injurious pecking in a flock could be assessed with the transect method. The birds are visually observed while the inspector slowly walks through the barn along longitudinal predetermined bands (transects) of equal width according to the house width (AWIN, 2015; Marchewka et al. 2015). The number of turkeys observed showing pecking injuries is then converted into a percentage of the flock. Vigilance is required with contiguous transects to avoid double counting the same birds.

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Indicator Factsheet

Injurious pecking in turkeys

Aggressive pecking can be assessed by counting the number of turkeys with head and neck pecking injuries (figure 2); severe feather pecking can be assessed by counting the number of turkeys with back and tail pecking injuries (figures 3 and 4). The inspector may also count all the birds gathering both types of injurious pecking. The prevalence of turkeys suffering injurious pecking will be calculated as follow: number of birds showing one or more lesions described divided by the total number of birds on the day of the visit.

Figure 2:
Head and neck wounds: visible signs of injuries on the head area related to fresh or older wounds, including the head, beak, snood and neck (in red on Figure 1) (AWIN, 2015; Marchewka et al. 2015).

Figure 3:
Back wounds: visible fresh or older wounds, including bleeding wounds, between the end of the neck and the beginning of the tail (in blue on Figure 1) (AWIN, 2015). Wings' wounds can also be included (Marchewka et al. 2015).

Figure 4:
Tail wounds: visible fresh, older or bleeding wounds on the tail area, or on its sides, the vent is included when it is visible (in yellow on Figure 1) (AWIN, 2015; Marchewka et al. 2015).

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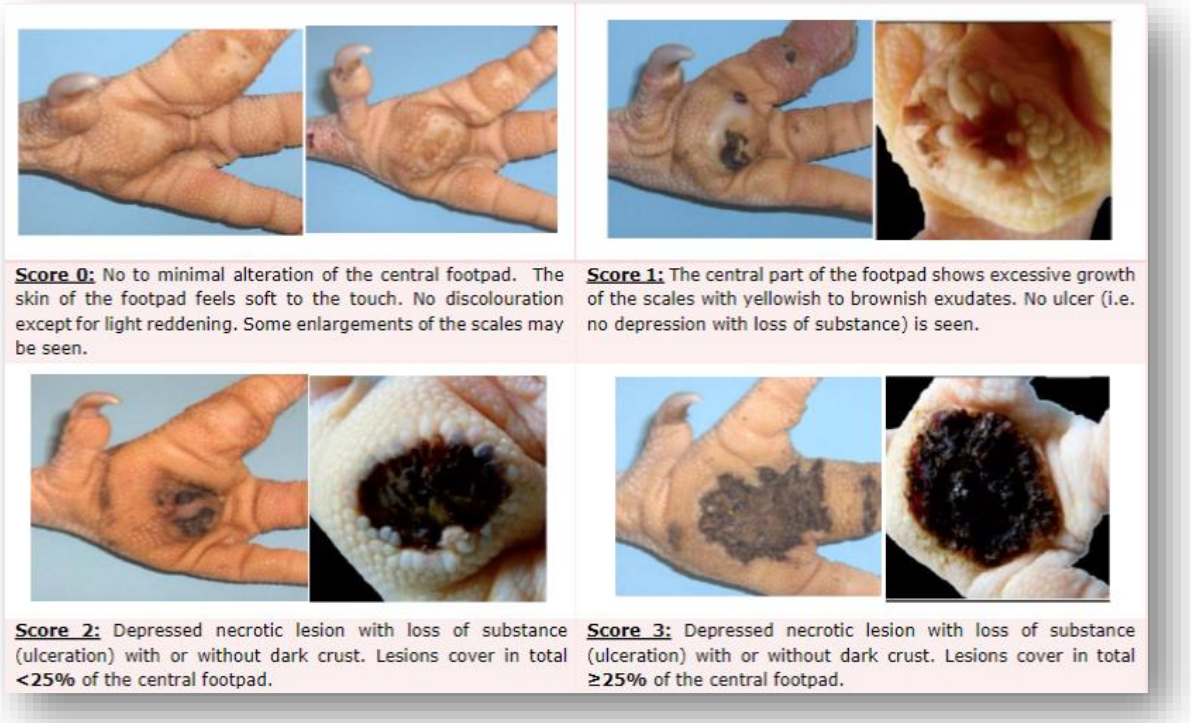
Footpad dermatitis in Turkeys

2024

Content of the factsheet:

- ❑ Definition of FPD and **main risk factors**
- ❑ **New scoring system** developed by EURCAW-Poultry-SFA



Score 0: No to minimal alteration of the central footpad. The skin of the footpad feels soft to the touch. No discolouration except for light reddening. Some enlargements of the scales may be seen.

Score 1: The central part of the footpad shows excessive growth of the scales with yellowish to brownish exudates. No ulcer (i.e. no depression with loss of substance) is seen.

Score 2: Depressed necrotic lesion with loss of substance (ulceration) with or without dark crust. Lesions cover in total **<25%** of the central footpad.

Score 3: Depressed necrotic lesion with loss of substance (ulceration) with or without dark crust. Lesions cover in total **≥25%** of the central footpad.

Update on the Centre's actual work (activity 2)

IFS-Poultry-SFA-2024-01-EN
Version 1 – August 2024
https://doi.org/

On-farm assessment of footpad dermatitis in turkeys

Definition and risk factors

Footpad dermatitis (FPD) is a contact dermatitis of the plantar surface of birds' feet which can affect the skin but also subjacent tissue and show different severity grades (Stracke et al. 2021) (Figure 1). FPD is associated with abnormalities of the footpad, such as redness, swelling, hyperkeratosis, tissue necrosis, or ulcers. Painful to the birds and with a high prevalence in flocks, footpad dermatitis is a common welfare issue in commercially reared turkeys (Allain et al. 2013; Weber Wyneken et al., 2015).

There are several factors linked with FPD such as the age, sex as well as environmental and management factors. Wet, soiled litter is the main risk factor for FPD (Mayne et al., 2007; Krautwald-Junghanns et al., 2011; Wu and Hocking, 2011; Weber Wyneken et al., 2015). Hence, the litter moisture control is a main way to decrease the severity and prevalence of FPD in turkeys flocks. Attention should be paid to drinker design and maintenance (in order to avoid leaking), the choice of (absorbent) litter materials, and the management of litter quality (removal of soiled litter, addition of fresh dry litter), as well as to relative air humidity and ventilation efficiency. Regarding the age of the birds, although the severity of skin lesions is higher in older birds, notably due to the more degraded litter quality as the birds grow, a significant number of turkeys may show footpad surface alterations as early as 6 weeks of age (Krautwald-Junghanns et al., 2011). Mayne et al. (2006) even showed histopathological changes associated with FPD on footpads that show no visible skin alterations, from three weeks of age. Turkey hens may experience more footpad injuries and with greater severity compared to turkey toms (Krautwald-Junghanns et al., 2011). This may be due to the higher density of hens per unit area (hens being lighter, their numbers are higher than those of toms on the same surface) and the amount of faeces being more numerous and downgrading the litter.

Figure 1: Footpad dermatitis in a turkey.

Methods of assessment

Several FPD scoring systems exist in turkeys, based on the surface of the foot affected and the nature of the lesions (Mayne et al., 2006; Mayne et al., 2007; Hocking et al., 2008; Allain et al., 2013). To perform the scoring of FPD in turkeys on farm, each assessed turkey should be caught (EURCAW-Poultry-SFA, 2024), gently held and the surface of the footpad examined. The adhering litter and excreta should be removed carefully, if necessary, with the help of water and a soft brush, not to confuse faecal staining with necrotic areas. Both bird feet should be scored and the most affected foot kept for final evaluation of each individual (Toppel et al., 2019). The scoring of each footpad is done according to the description in Figure 2, which is a scoring system developed by EURCAW-Poultry-SFA and adapted from Hocking et al. (2008), Michel et al. (2012), Allain et al. (2013) and Stracke et al. (2021).

Indicator Factsheet

On-farm assessment of footpad dermatitis in turkeys

The first stage of FPD is the hyperkeratosis (excessive growth of the scales on the footpad) corresponding to the score 1. The necrosis of the skin leads to a depression in the skin (ulceration) which is painful to the birds. This corresponds to scores 2 and 3. The dark coloration of the skin is due to necrosis and/or adherent crust (Michel et al. 2012; Allain et al. 2013).

Score 0: No to minimal alteration of the central footpad. The skin of the footpad feels soft to the touch. No discolouration except for light reddening. Some enlargements of the scales may be seen.

Score 1: The central part of the footpad shows excessive growth of the scales with yellowish to brownish exudates. No ulcer (i.e. no depression with loss of substance) is seen.

Score 2: Depressed necrotic lesion with loss of substance (ulceration) with or without dark crust. Lesions cover in total **<25%** of the central footpad.

Score 3: Depressed necrotic lesion with loss of substance (ulceration) with or without dark crust. Lesions cover in total **≥25%** of the central footpad.

Figure 2: Scoring system for footpad dermatitis in turkeys adapted from Hocking et al. (2008), Michel et al. (2012), Allain et al (2013) and Stracke et al. (2021). Photos from Michel et al. (2012) and Allain et al. (2013).

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The assessment of plumage damage and emaciation at slaughterhouse in laying hens

2024

Content of the factsheet:

- Two animal-based indicators allowing to **monitor on-farm welfare** of laying hens even when assessed at slaughterhouse
- Definition and welfare impact of **plumage damage** and **emaciation**
- Two methods of assessment on the slaughterline:
  - Emaciation = Keel bone prominence: **ventral view**
  - Plumage damage: **dorsal view** before scalding

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Update on the Centre's actual work (activity 3)

The assessment of plumage damage and emaciation at slaughterhouse in laying hens

Definitions and welfare impact

Several animal-based indicators can be collected in slaughterhouses to monitor the level of welfare of laying hens on farm (EFSA, 2023). Among those cited in the EFSA report (2023) are plumage damage and emaciation which described very well the body condition of end of lay hens. The emaciation (extreme thinness, insufficient body condition) is an indicator of decrease of welfare due to prolonged hunger, disease or exhaustion. Emaciation is one of the reasons that will lead to carcasses condemnations at slaughterhouse. Emaciation can be assessed by estimating keel bone prominence (Welfare Quality, 2019). Whereas it is normal for lean types of birds, such as laying hens, to have some keel bone prominence and some visible breast muscles, emaciated birds have a very pronounced and prominent keel bone with almost no remaining muscle tissue.

The plumage damage is defined as the presence of areas with feather loss (denuded) and/or damage (EFSA, 2023). Plumage damage can be related to inadequate facilities (environment elements hurting or in contact with the bird) or from severe feather pecking from conspecifics. Severe feather pecking and its damages are a general welfare problem in laying hen flocks because the removal of feathers is painful and stressful for the animals (EURCAW-Poultry-SFA, 2022). It also increases the risk of poor thermoregulation, skin injuries and secondary infections, diseases, and eventually mortality. Severe feather pecking increase when birds are in living conditions where they have difficulty coping with the environmental stressors (related to feeding and lack of opportunities for foraging behaviour (Rodenburg et al., 2013)). Damages to the feathers on the back and rump usually indicate feather pecking and even if feather loss to the belly can be seen

The assessment of plumage damage a… slaughterhouse in laying hens

Methods of assessment – Emaciation

While plumage damage can be assessed from a dorsal view of the birds, evaluatin… ventral view on the slaughter line.

The Welfare Quality Protocol (2019) includes the assessment of keel bone promi… been validated in slaughterhouse conditions since for now it is mainly used in obse… Thus, this method of assessement still need to be tested and validated at slau… randomly assessed on the slaughter line, in **ventral view**, before or after scalding,

0 = normal (smooth to moderate breath muscle contour with keel)

1 = slightly to moderate prominent keel, but does not feel sharp, flat breast muscl…

2 = severely prominent keel, depressed contour to breast muscle

Brown hens

Score: 0 1 1

White hens

Score: 0 1 2

© brown hens: Bristol University; white hens: van Niekerk, WUR

Figure 2: Notation scores of keel bone prominence in brown and white hens accord… (2019)

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The assessment of plumage dama… slaughterhouse in laying hens

Methods of assessment – Plumage damage

Although well used during on farm assessment, plumage damage could… the slaughter line **before scalding**, from a **dorsal view** of the birds (F… plumage damage at slaughter, thus this method of assessement still ne… be carried out based on on-farm assessment protocols, such as the … protocol developed to assessed several indicators on farm including feat… separately scored. However, to adapt this notation scale to the slaughte… together in one notation. The vent could also be scored if visible. The fe… difference in feathering (EFSA, 2023). This scoring scale could be used …

0: No/minimal feather loss. No bare skin visible, no or slight wear, only…

1: Slight feather loss. Moderate wear, damaged feathers or 2 or more … cm maximum dimension.

2: Moderate/severe feather loss. Bare skin visible ≥ 5 cm maximum di…

Figure 3: Layins hens with feather loss scored 2 on the slaughter line h… *ROCHAS)*

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Iceberg Indicator Factsheet

The assessment of plumage damage and emaciation at slaughterhouse in laying hens

Methods of assessment – Plumage damage

Score 0 Score 1 Score 2 Score 2

Figure 4: Scores of feather loss according to the Assurewel Protocol (Main et al. 2012) (©IRTA)

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Designated by the EU Commission anses IRTA AARHUS UNIVERSITY IZSLER

www.eurcaw-poultry-sfa.eu 2023-2024 WP2, D2.5, D13 – 4/4

https://zenodo.org/records/11091655

Scientific study on the validity, reliability and repeatability of two visual scoring methods of assessment of the litter quality

2. Update on the Centre's actual work (activity 2 and 3)

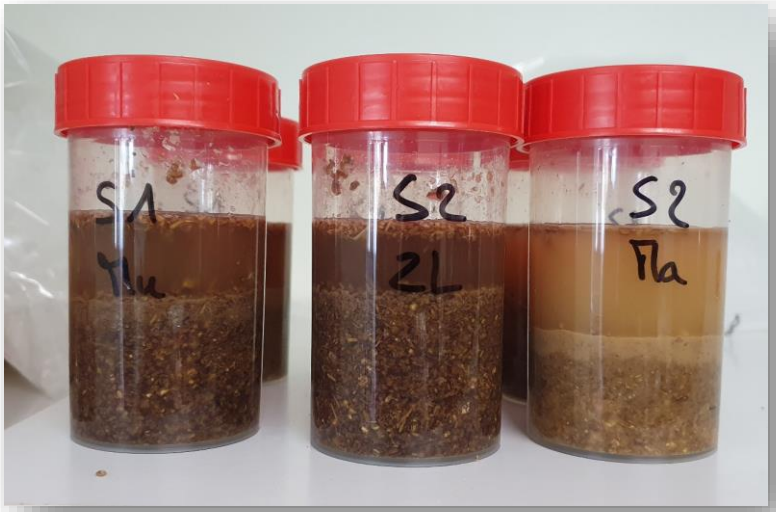
- Validation of the *Welfare Quality©* and the *Classyfarm* (Vinco et al. 2020) litter assessment protocols and their reliability and repeatability

Score	Friability Description	Wetness Description
1	Completely caked	Wet litter, water is appearing by pressure on the litter of the total area
2	80-90 % area caked	Wet litter, water is appearing by pressure on the litter beneath drinkers
3	70-80 % area caked	Wet litter, no water is appearing by pressure on the litter
4	60-70 % area caked	Wet litter dark coloured. Litter can be pressed into ball-shape
5	50-60 % area caked	Wet litter, dark coloured. Larger ridges*** beneath drinkers
6	40 % area caked	Almost dry litter, small ridges** beneath drinkers. Litter between drinkers and feeders is still friable
7	30 % area caked	Almost dry litter, dark coloured beneath drinkers and in other areas light coloured. ridge formation just started* beneath drinkers
8	10 % area caked	Almost dry litter, light coloured, no ridges beneath drinkers
9	Friable litter, small caked areas	Dry litter, light coloured
10	Friable litter, no caked areas	Very dry litter (only observed at start)

Title	**Litter quality**
Scope	Resource- and management-based measure: Broiler chicken
Sample size	Sample size according to § 5.1A.5
Method description	Assess the quality of the bedding in the house according to the parameters described below. Poor litter quality may indicate difficulties in managing the litter which may reflect in skin and foot lesions related to poor litter quality. General comment on sampling and litter thickness: Look at a number of locations in the house (minimum 4, maximum 6) (i.e. under drinkers and feeders, along the edges of the house and close to the doorways) to check whether there is a big variation in litter thickness across the house. If so, can you detect areas of litter which differ in appearance, or is the litter very uniform? If areas are different, then ensure that you sample using the method described from these areas of differing litter to reflect overall variability in the house.
Classification	**0** – Completely dry and flaky, i.e. moves easily with the foot **1** – Dry but not easy to move with foot **2** – Leaves imprint of foot and will form a ball if compacted, but ball does not stay together well **3** – Sticks to boots and sticks readily in a ball if compacted **4** – Sticks to boots once the cap or compacted crust is broken

2. Update on the Centre's actual work (activity 2 and 3)

- Same litter samples were visually assessed two times in a row in broilers pens by several assessors* and, then, collected to assess the dry matter (twice, one week apart)



@ANSES

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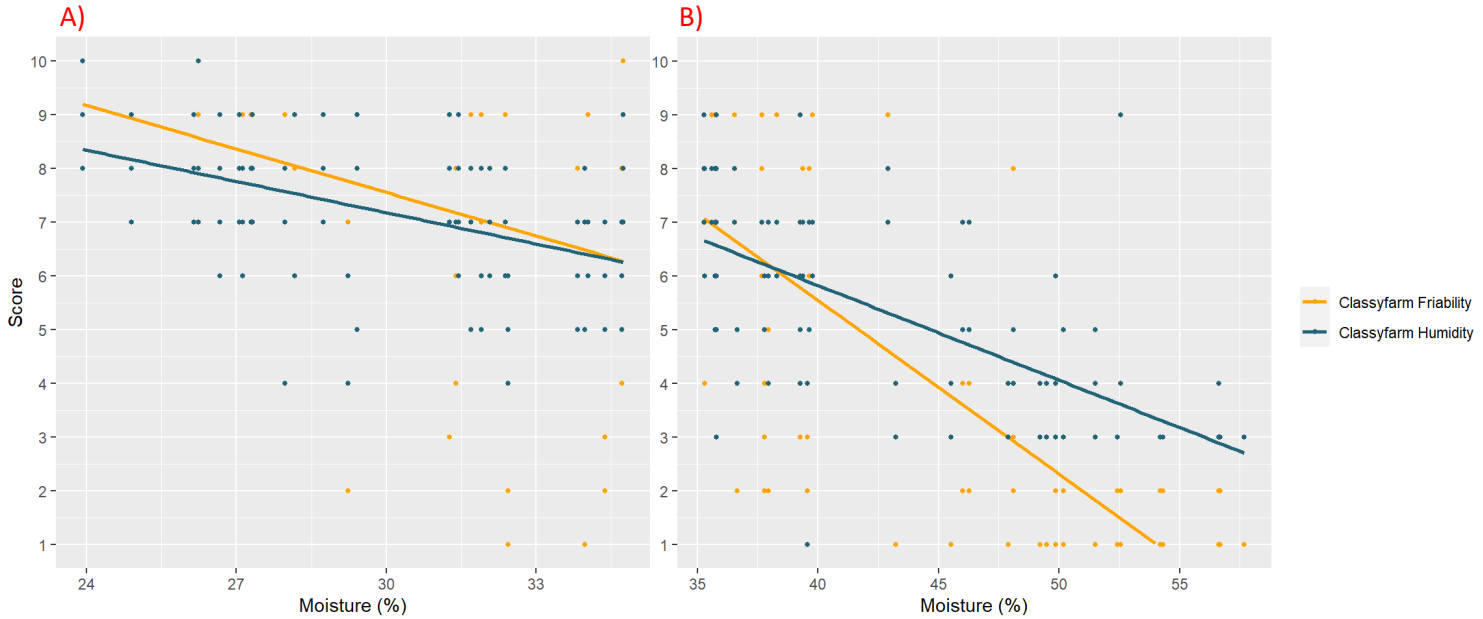
*4 assessors present during both weeks + 1 assessor present the first week + 2 assessors present the second week

- Correlations between dry matter and visual scoring → **validation** of the indicators (visual assessment)
- Comparison between assessors → **reliability**
- Comparison of the assessments of the same assessor → **repeatability**
- Variability of results below and above 35% of litter moisture → **results analysed according to the level of moisture**

Validity: correlations between scoring scales and litter moisture

- Moderate correlations between scoring scales and litter moisture below 35% of litter moisture
- Strong correlations above 35% of litter moisture



Scatter plot and correlations between Classyfarm scoring scales and litter moisture when the litter moisture is ***below 35% (A) and above 35% (B)*** *(all 4 assessors considered). Classyfarm ranges from 1 to 10, 10 being very dry litter.*

Validity: correlations between scoring scales and litter moisture

- Moderate correlations between scoring scales and litter moisture below 35% of litter moisture
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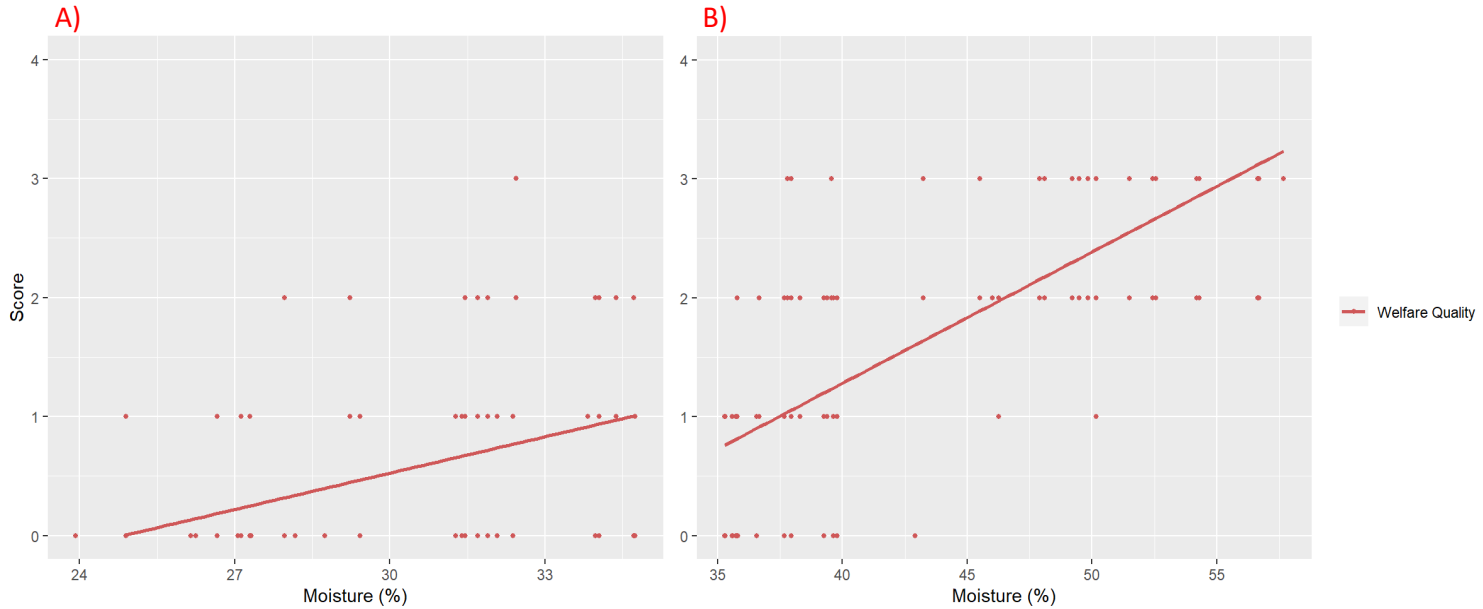

*Scatter plot and correlations between Welfare Quality scoring scale and litter moisture when the litter moisture is **below 35% (A) and above 35% (B)** (all 4 assessors considered) Welfare Qualty scoring ranges from 0 to 4, 0 being very dry litter.*

Reliability of the scoring scales

The inter-assessor reliability among assessors for each scoring scales was assessed using the Intra-Class Correlations (ICC). The ICC is a widely used **reliability index in inter-rater reliability analysis** (Koo and Li, 2016). Following Koo and Li guideline (2016), the ICC value can be interpreted as follows: **poor reliability**: <0.50; **moderate reliability**: 0.50 to 0.75; **good reliability**: 0.75 to 0.90; **excellent reliability**: >0.90.

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- Below 35% of litter moisture:
  - **Good reliability** between assessors for the **Classyfarm Friability** score
  - **Moderate reliability** for the **Classyfarm Humidity** and the **Welfare Quality** scores

LITTER MOISTURE	SCORE	INTRA-CLASS CORRELATION	95% CONFIDENCE INTERVAL		P-VALUE
			LOWER BOUND	*UPPER BOUND*	
LOWER (<35%)	Classyfarm Friability	**0.83**	0.70	0.92	<0.001
	Classyfarm Humidity	**0.71**	0.49	0.85	<0.001
	Welfare Quality	**0.72**	0.42	0.87	<0.001
HIGHER (>35%)	Classyfarm Friability	**0.96**	0.93	0.98	<0.001
	Classyfarm Humidity	**0.90**	0.83	0.94	<0.001
	Welfare Quality	**0.91**	0.84	0.95	<0.001

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- Above 35% of litter moisture:
  - **Excellent reliability** between assessors for the **Classyfarm Friability** and the **Welfare Quality** scores
  - **Good reliability** for the **Classyfarm Humidity score**

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Repeatability of the scoring scales

Intra-assessor repeatability of the three scores was assessed using the Cohen's weighted Kappa (κ)for two raters. This is an **index of interrater agreement between two assessors** on ordinal data. In the present study, it was not used to assess the interrater agreement but the **agreement between two assessments of a same assessor**. The widely accepted conventional interpretation of the Cohen's Kappa within the scientific community: **poor** when $\kappa<0$; **slight** when $0<\kappa>0.20$, **fair** when $0.21<\kappa>0.40$; **moderate** when $0.41<\kappa>0.60$; **substantial** when $0.61<\kappa>0.80$ and, **almost perfect** when $0.81<\kappa>1$ (Landis, 1977).

- As for validity and reliability results, better repeatability when higher litter moisture

Repeatability of the scoring scales

- Below 35% moisture:
  - Majority of assessors with **substantial to almost perfect repeatability** with the **Classyfarm Friability and Welfare Quality scores**
  - Majority of assessors with **moderate repeatability** with the **Classyfarm Humidity score**

Kappa value	Classyfarm Friability		Classyfarm Humidity		Welfare Quality	
	<35% moisture	>35% moisture	<35% moisture	>35% moisture	<35% moisture	>35% moisture
Almost perfect (0.81-1)	1/4	3/4		2/4		3/4
Substantial (0.61-0.80)	2/4	1/4		1/4	3/4	1/4
Moderate (0.41-0.60)	1/4		3/4	1/4	1/4	
Fair (0.21-0.40)						
Slight (0-0.20)						
Poor (<0)						
NS			1/4			

Repeatability of the scoring scales

- Above 35% moisture:
  - Majority of assessors with **almost perfect repeatability** with the **Classyfarm Friability and Welfare Quality scores**
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Moderate (0.41-0.60)	1/4		3/4	1/4	1/4	
Fair (0.21-0.40)						
Slight (0-0.20)						
Poor (<0)						
NS			1/4			

Conclusions

- Visual scoring systems are best suited for assessing litter with a **moisture level above 35%**
- All three scoring scales exhibited **moderate validity at moisture levels below 35%** and **strong validity above 35%**
- The **Classyfarm Friability** score was the **most reliable** scoring scale regardless of litter moisture
- Regarding **intra-assessor repeatability**, the **Classyfarm Friability and Welfare Quality scores** outperformed the **Classyfarm Humidity** score

Recommendations:

- **Prioritize the use of the Classyfarm Friability score, particularly when comparing scores from multiple assessors**
- **Exercise caution when visually assessing lightly degraded litter**

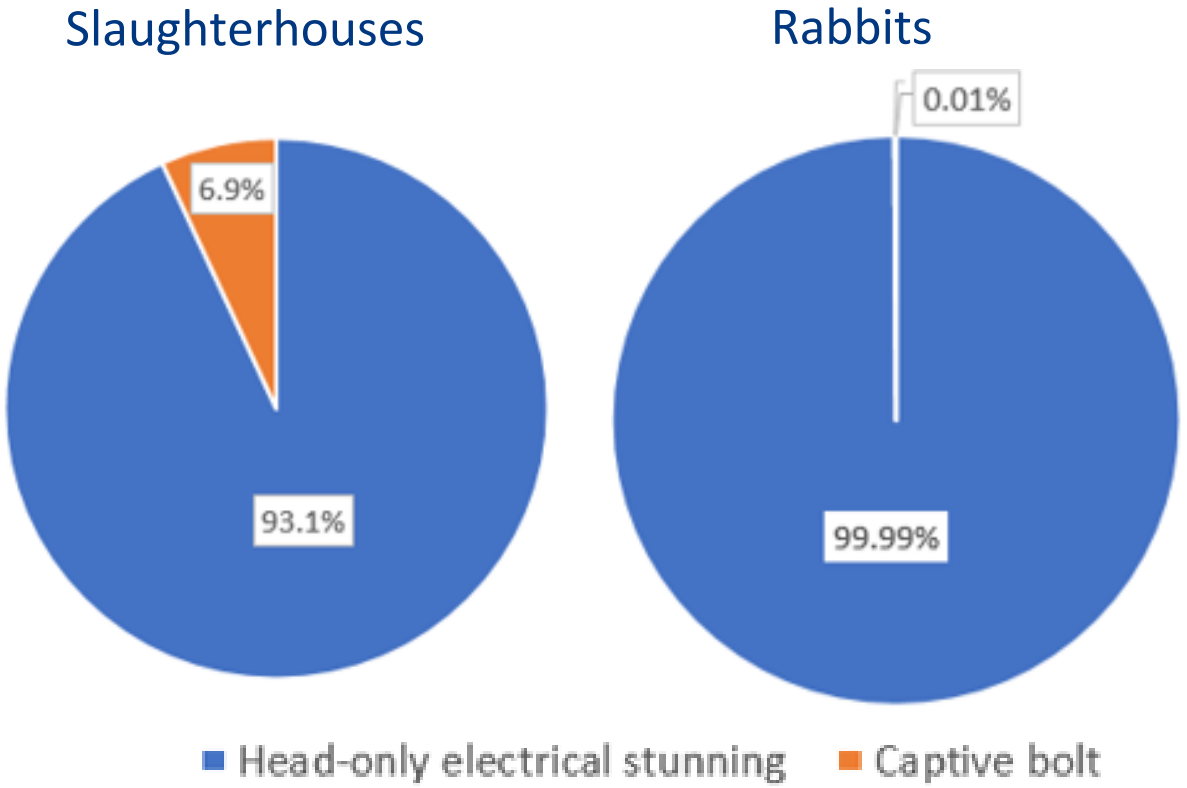
Questions?

Scientific study in commercial slaughterhouses of rabbits

Stunning methods

From the review:

1. Among the authorised stunning methods for rabbits, **only head-only electrical** stunning and **captive bolt** are currently **in use** in EU.



- 62 million rabbits
- 233 declared list of rabbit SHs

Head-only electrical stunning

2. **62 million** were slaughtered in the EU in 2022 of which **Spain, France and Italy** accounted for **88% of the total**

3. **Legislation** did not lay down **minimum key parameters** for rabbits (current, frequency, voltage, exposure time, stun-to-stick interval)

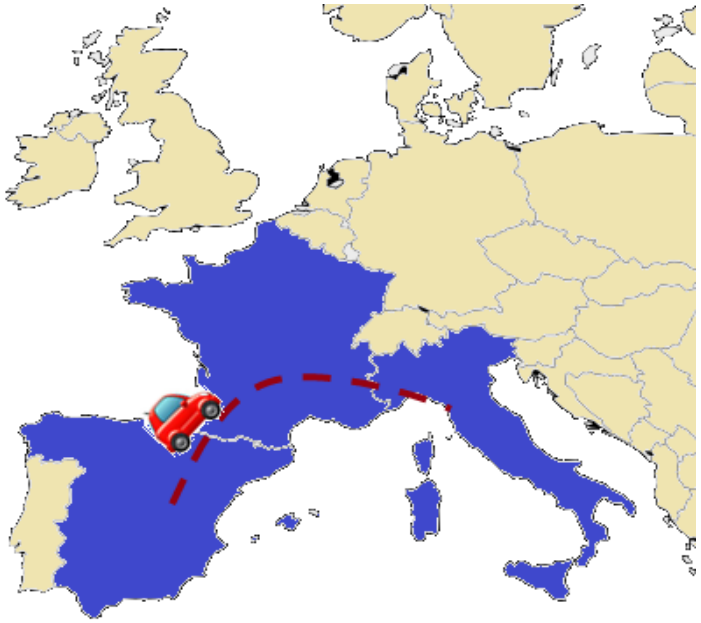
4. **Wide variability on the recommended key parameters** found in national guidelines

5. **Heterogeneity in the indicators chosen** by OVs to assess the state of consciousness in rabbits

Scientific study

The Team:

Rabbit slaughterhouses (SHs):



16 different SHs from the three main rabbit producer countries in the EU

Scientific study: Objectives

General:

Identify a refined list of indicators that can be used to assess the state of consciousness of head-only electrical stunned rabbits in commercial slaughterhouses to ensure consistency of controls and to evaluate the efficiency of induction of unconsciousness

Specific:

1. Assess the **inter-observer repeatability** of the most valid and feasible indicators of consciousness according to the EFSA (2020)
2. Elucidate the **association** among the indicators
3. Assess **efficiency of stunning**
4. Find **key factors** that contribute to effective stunning

Characteristics of the slaughterhouses

SH	Speed, rabbits/h	Wetting heads	Stunners, n	Stun-to-stick interval(s), s	Bleeding method	Bleeding cut	Operators bleeding, n
1	800	No	2	10 and NA	M	Lateral	1
2	1500	NA	2	11 and NA	M	NA	2
3	1600	No	1	22	M	Lateral	1
4	2600	No	3	15, 10 and 8	M	Lateral	1
5	2100	No	4	36, 30, 24 and 19	M	Ventral	2
6	700	No	1	15	M	Ventral	1
7	700	Yes	1	2	M	Lateral	1
8	600	No	1	3	M	Lateral	1
9	1850	Yes	3	18, 12 and 7	M	Ventral	1
10	1400	Yes	3	<1	A	Ventral	1
11	700	NA	1	3	M	Ventral	1
12	800	Yes	1	16	M	Lateral	1
13	1,700	No	3	25, 19 and 6	M	Ventral	1
14	1,920	Yes	3	33, 24 and 17	M	NA	1
15	3200	Yes	4	22, 20, 18 and 13	M	Lateral	2
16	3600	No	3	20, 13 and 5	M	Ventral	2

*Bleeding method: M (manually); A (automatically); SH: slaughterhouse; NA: data not available

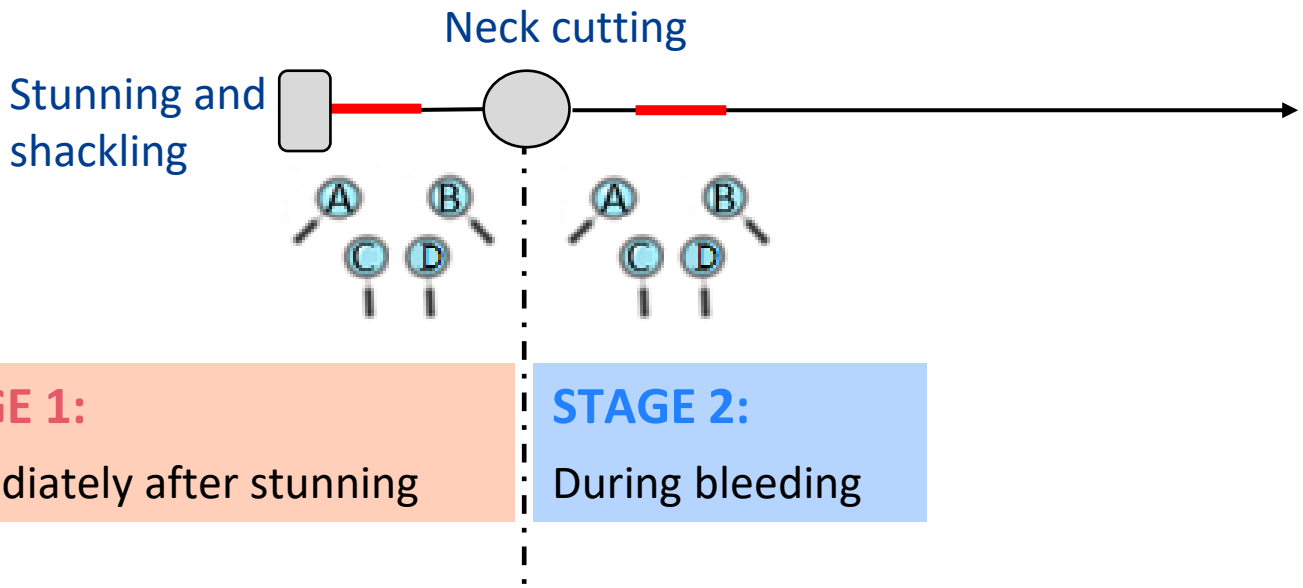
Material and methods

- **Observers:**

  16 slaughterhouses, 38 batches, 11,540 rabbits

  4 observers

- **Sample assessment:** Position and stages during the assessment of indicators

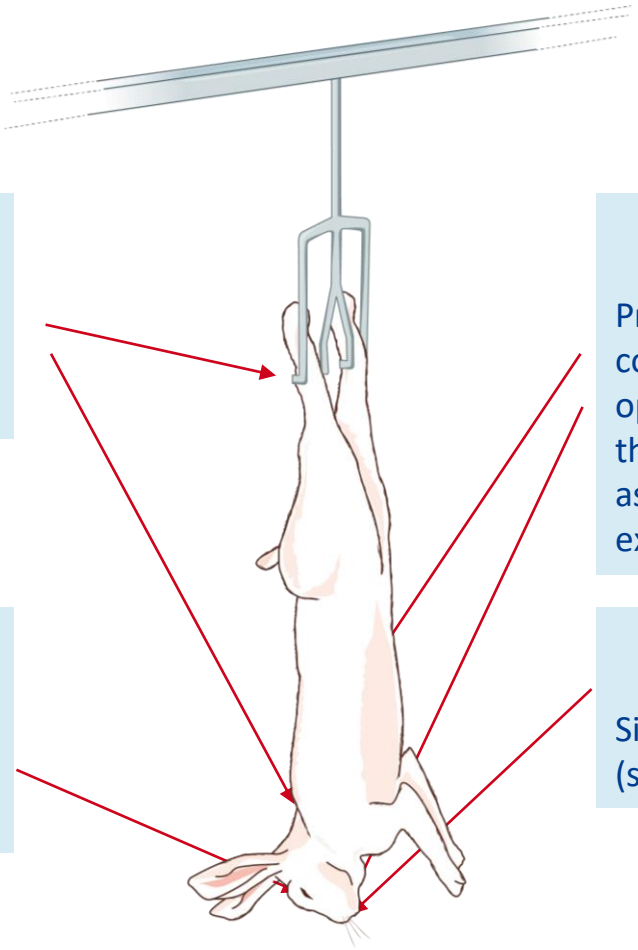


Indicators of consciousness assessed

STAGE 1: IMMEDIATELY AFTER STUNNING

Absence of TONIC-CLONIC SEIZURE
General loss of muscle tone and a completely relaxed and flaccid body, with no neck tension.

Presence of SPONTANEOUS BLINKING
Rabbit opens/closes eyelid on its own (fast or slow) without stimulation.



Presence of BREATHING
Presence of rhythmic breathing considered as a minimum of two openings of the mouth and thoracic or abdominal muscles associated to inhalation and expiration with similar cadence.

Presence of VOCALISATIONS
Single or repeated shrieking (screaming).

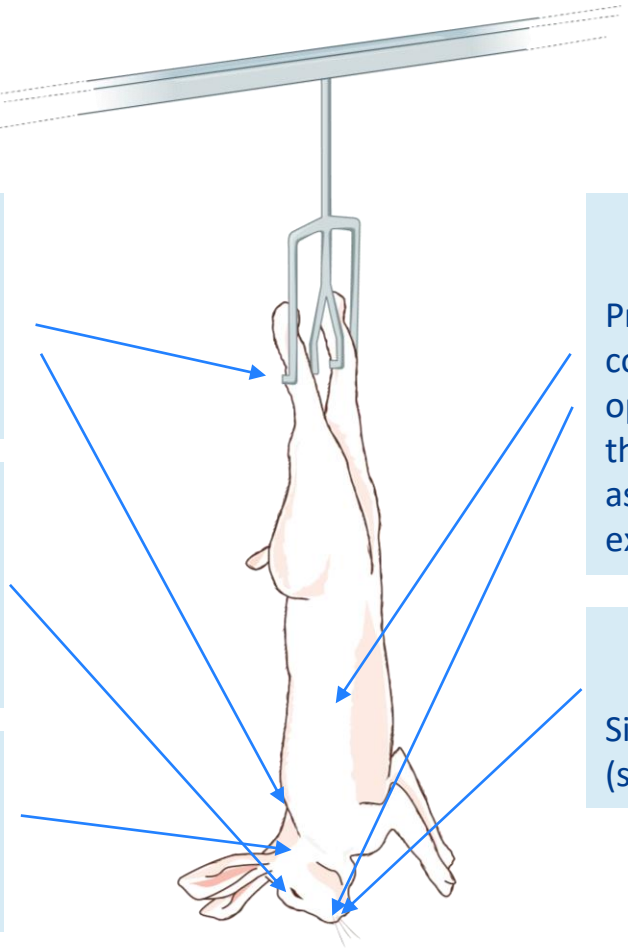
Indicators of consciousness assessed

STAGE 2: DURING BLEEDING

Absence of TONIC-CLONIC SEIZURE
General loss of muscle tone and a completely relaxed and flaccid body, with no neck tension.

Presence of SPONTANEOUS BLINKING
Rabbit opens/closes eyelid on its own (fast or slow) without stimulation.

Presence of RIGHTING REFLEX
Attempt to regain posture and/or raise the head.



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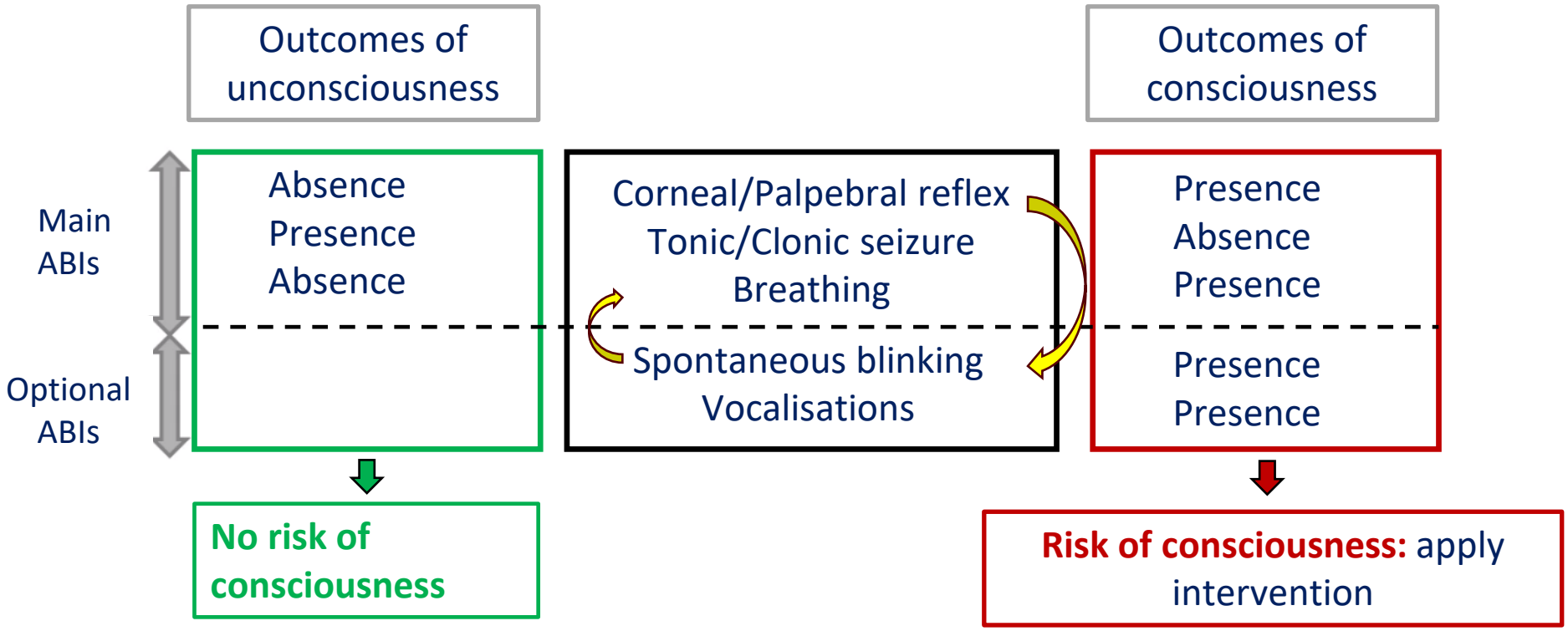
Single or repeated shrieking (screaming).

Main findings

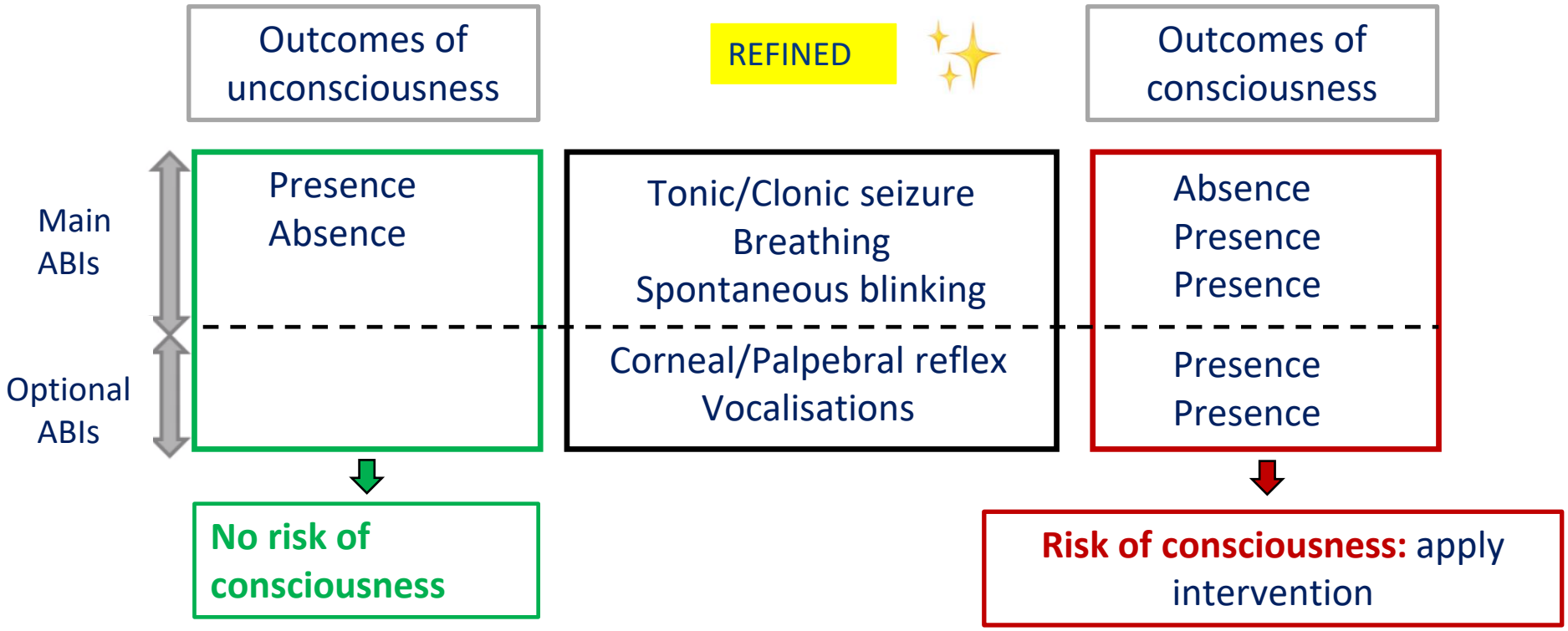
STAGE 1: IMMEDIATELY AFTER STUNNING



Toolbox: EFSA (2020)

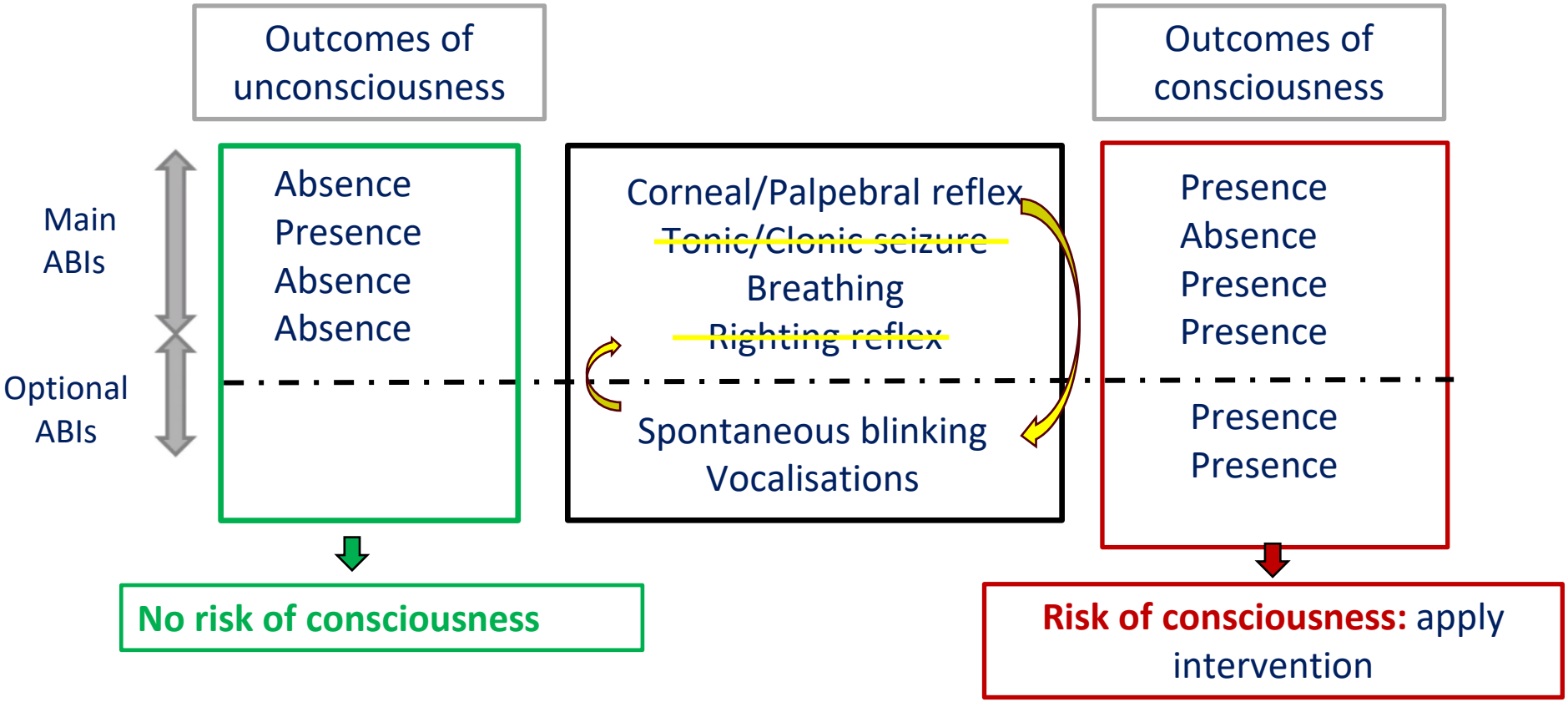
Main findings: Relevant indicators

STAGE 1: IMMEDIATELY AFTER STUNNING



Main findings: Relevant indicators

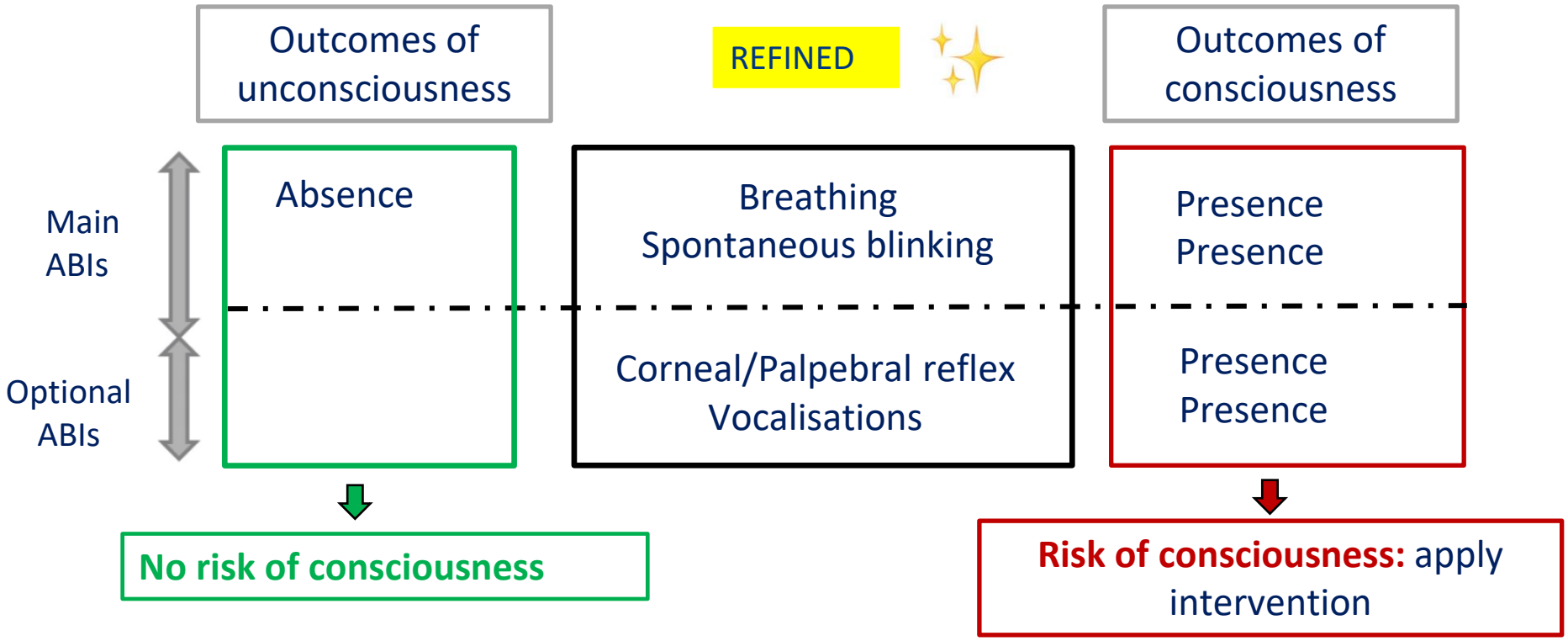
STAGE 2: DURING BLEEDING



Absence of tonic-clonic seizure at this stage does not imply consciousness
Righting reflex only when the rabbit breath or blink
Often confused with preagonal muscle movements that can occur in brain-dead animals

Main findings: Relevant indicators

STAGE 2: DURING BLEEDING



Main findings: Efficiency of stunning

STAGE 1: IMMEDIATELY AFTER STUNNING

Efficient induction to unconsciousness was observed in most of the batches assessed (15 out of 25 batches)

Main findings: Efficiency of stunning

STAGE 2: DURING BLEEDING

A variable prevalence of rabbits were progressively recovering consciousness before death **in all batches from all SHs**

Stun-to-stick interval: 2 - 3s

Stun-to-stick interval: < 1s
Prevalence: 2.3 and 2.7%

Summary

1. There is considerable variability in slaughterhouse designs, slaughter capacities, rabbit management practices, types of head-only electrical stunning devices used, key parameters applied, stun-to-stick intervals, and type of neck cuts used.

2. A refined and validated ABIs with good level of repeatability have been identified so that can be used for the assessment of the state of consciousness in rabbit commercial slaughterhouses.

3. Effective induction of unconsciousness occurred in nearly all rabbits. **BUT**, indicators of consciousness often reappear after neck-cutting in a variable but significant proportion of rabbits in **all** slaughterhouses. Rabbits with indicators are at high risk of experiencing pain, distress and suffering.

4. The longer the stun-to-stick interval, the higher the risk of rabbits recovering the state of consciousness.

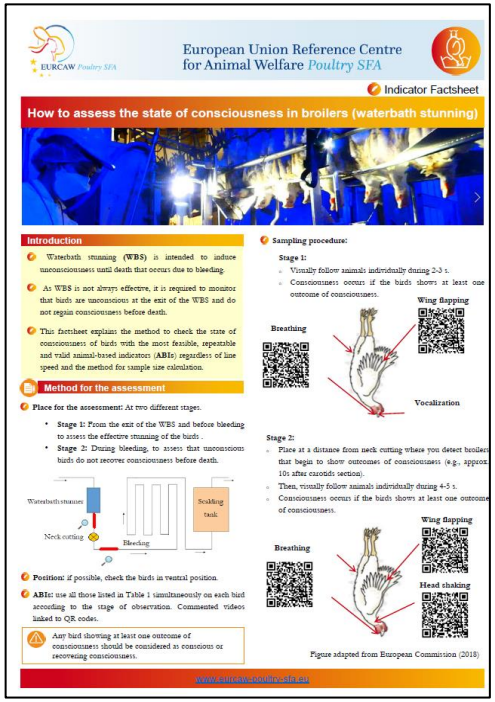
WEBINAR:

"Welfare assessment during electrical stunning in rabbits"

November 12th, 2024

From 10:00 to 12:00 (UTC+2, CEST)

FACTSHEET:



Questions?

Good Practices

- Concrete examples of good practices may inspire poultry and rabbit producers in the European Union to take up similar practices or implement related initiatives.

- Since 2021, EURCAW-Poultry-SFA searched for and identified farms and slaughterhouses showing good practices related to the Centre's 5 priority areas on the welfare of poultry and rabbits:

- **Broiler chickens on farm**
- **Laying hens in alternative housing systems**
- **Stunning and killing**
- **Rabbits on farm, with a focus on alternative housing systems**
- **Turkeys on farm and during transport**

Good Practices work

- During the past year, members of the consortium visited a selection of good practices.

- The knowledge gained during the visits was used for the final decision on which examples of good practices were approved by the Centre.




Good Practices work

EU Member States use the Good Practices Factsheets for various purposes:

- For the preparation/updating of national guidelines.
- Used as support during animal welfare inspections.
- Distributed to
  - animal welfare inspectors,
  - stakeholders (e.g., the Egg and Broiler Associations),
  - farmers (usually after inspections to show examples of good practices).
- Introduced at training sessions.

What has been achieved since last CA meeting

2023:

- Design and management of covered verandas for optimal use

- Elevated pen system for breeding and growing rabbits

- An example of inspections of compliance with the transport regulation (COUNCIL REGULATION (EC) No. 1/2005)

2024:

- Mobile cart with head only electric stunning device, for on farm culling and carcass collection
- Outdoor rearing of rabbits
- Early litter access for pullets housed in aviary systems
- Preventing heat stress in layer systems with covered veranda and outdoor access
- Automatic assessment of Footpad Dermatitis (FPD)

Good Practices factsheet 2023:

Design and management of covered verandas for optimal use

EURCAW Poultry SFA

European Union Reference Centre for Animal Welfare Poultry SFA

Best practiceFactsheet

Design and management of covered verandas for optimal use

What is a covered veranda?

A covered veranda, also termed winter garden, is an enclosed and roofed area with a littered concrete floor, which is accessible via popholes from the poultry barn. It is uninsulated and therefore has a variable climate. The solid roof protects against rain, but at least one side usually consists of netting, allowing natural light and fresh air into the veranda. Some systems with a covered veranda also have an outdoor range, which can be accessed from the veranda.

Benefits of having access to a covered veranda

The covered veranda provides the poultry with outdoor climatic conditions and more choice in their environment, while still protecting against predators, wild birds and extreme weather conditions. A veranda provides extra space and conditions that facilitate active behaviour, such as foraging, locomotion, exploratory and dustbathing behaviour. Behavioural needs are better accommodated, which may reduce the risk of developing injurious pecking, i.e., feather pecking and cannibalism. Use of the veranda also effectively reduces the indoor stocking density. Since the roof and netting protects against contact with wild birds and their droppings, the risk of disease spreading from wild birds (e.g., avian influenza) is considerably reduced compared to systems with access to an outdoor range.

Broiler chickens dustbathing in direct sunlight in a covered veranda.

Providing enrichment in the veranda

A veranda will be frequented more if enriched. The floor should be littered (e.g., placing bales that the birds have to spread themselves), preferably with a different substrate than used indoors. Provision of litter and enrichments such as bales, foraging materials and other pecking substrates will encourage foraging and exploration. A veranda is an ideal location for the provision of roughage, as the roughage will then be protected against contact with wild birds and their droppings, and moist roughage will not compromise the litter quality indoors.

Laying hens in a veranda enriched with birch branches, A-frame perches and litter.

Access from an early age

Veranda access can be offered as early as when the birds are 14 days old, if they have easy access to the barn to allow for behavioural thermoregulation. Outdoor climatic conditions (i.e., temperature, humidity and wind) are to be taken into account as well as the feather coverage of the birds. Early access to verandas or outdoor ranges promotes later use.

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Best practice Factsheet

Design and management of covered verandas for optimal use

How to best design the veranda

- A minimum size of 10-20% of the indoor usable floor area is recommended.
- A minimum height of 2 m allows stockpersons to inspect the veranda. Some farmers warn against making the height too large, as a low height will make the birds feel safer.
- The width of the veranda should be a minimum of 3 m, but preferably 4-5 m.
- A concrete floor can be cleaned between flocks. Cast the floor such that a gradient is created away from the barn.
- Depending on the local climate, use both non-transparent and transparent tiles in the roof to create both bright and darker areas in the veranda.
- Use strong fabric-netting with a small mesh size, which helps prevent rain from entering even on windy days.

Veranda with fabric netting with small mesh size as sides and roof tiles alternating in transparency.

Popholes between the indoor area and veranda

- Particularly for broilers and young birds, it is important to have the pophole and veranda level with the floor indoors. For layers, a maximum of 25 cm from ground level is advised.
- Good litter condition near the popholes will promote pophole use.
- The distance from anywhere in the barn to the popholes should be as short as possible – maximum 25 m.
- Greater width of popholes improves use – at least 1 m per 1000 birds or 2 m per 100 m² of the barn.
- Adjust the ventilation system if a covered veranda is added to an existing indoor barn and consider the veranda in the ventilation plan when building a new barn.
- Close the popholes during the night to efficiently ventilate if the ventilation system cannot run when popholes are open.

Pophole where the veranda floor is level with the floor inside the barn.

Covered veranda – a smooth transition

In systems with an outdoor range, a covered veranda functions as a smooth transition between the dark and climate-stable indoor barn and the bright and climate-variable outdoor range, reducing the fear-provoking effect of venturing outdoors. A veranda can therefore act as a transitional environment facilitating a better use of the outdoor range.

A veranda can also minimise frustration for birds if outdoor range access is denied due to disease risk (e.g., avian influenza) or adverse weather. Birds are usually still allowed into the covered verandas, ensuring that they stay familiar with the outdoor climate, so they are prepared when access to the outdoor range is provided again.

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Good Practices fact sheet 2024:

Elevated pen system for breeding and growing rabbits

European Union Reference Centre for Animal Welfare *Poultry SFA*

Best practice Factsheet

Elevated pen system for breeding and growing rabbits

Introduction

In October 2023, the EURCAW Poultry-SFA visited an intensive rabbit farm with elevated pen system. The farm is part of an integrated company which is driving the adoption of such system, along with increased technological innovation, to improve the welfare of rabbits. In particular, farmers who decide to renew their equipment by acquiring these new technologies can be included in the company's labelling program that allows them to have economic benefits based on welfare and production parameters.

The farm houses about 2,000 breeding rabbits and 8,000 growing rabbits. The animals are raised in two separate insulated sheds (Figure 1), which are used alternately for breeding and growing phases (dual band); this allows for an all-in all-out approach and to respect a sanitary empty period of about one week between flocks of growing rabbits. Before the entrance to the barn, it is required to wear protective clothing (coveralls, footwear) and to disinfect the footwear (Figure 1).

- When temperatures reach or exceed 30 degrees, the cooling system is activated to mitigate heat stress.
- The feeding system is automatic, and feed consumption is monitored daily. Animal growth is monitored through an automatic weighing system in some of the pens that also allows for adjustment of ventilation (calculated in kg meat/m³/h) and the amount and type of feed. Each rabbit category has its own specific type of feed.
- An alarm system activates, alerting the farmer via cell phone, in case the automatic system (i.e., the ventilation system or the feeding system) do not function properly. In the case of lack of general electric supply, a back-up electrical generator is available. Most of the energy comes from the solar panels placed on the roof of the farm.
- Mortality is around: 2-3%. Moreover, outbreaks of disease are very uncommon, which allows for extremely reduced antibiotic use, including cycles completely antibiotic-free.
- Droppings are removed through automatic scrapers once or twice a day.

Figure 1. Outside the barn and disinfection procedures before entrance

General characteristics of the farm

- Natural light is provided.
- Forced ventilation equipped with a cooling system is provided (Figure 2 and 3).
- Environmental detectors for monitoring gases (CO_2 and NH_3), temperature and humidity are positioned in each barn (Figure 4).
- Ventilation is set according to the weight and number of the animals; its intensity is adjusted in order to avoid drafts and to allow ventilation of even the lowest areas of the cages at the same time. The temperature is set to be maintained around 21-25 degrees.

Figure 3. Forced ventilation fans

Figure 2. Cooling system

Figure 4. Air quality and ventilation parameter control panel

Best practice Factsheet

Elevated pen system for breeding and growing rabbits

The elevated pen system

The elevated pen system is a modular open-top system, which can be used for both breeding and growing rabbits.

Specifically, it is used for the housing of one reproducing doe from a few days before kindling until the end of lactation of her litter and then, after removal of some items and after joining four single modules, for group-housing of growing rabbits (Figure 5):

- For the **breeding phase**, the system allows the single litter to be reared in single module, measuring 1050 cm x 685 cm, and a platform measuring 415 cm x 685 cm.
- For the **fattening phase**, four modules are joined to raise four litters in a group, resulting in a 1050 cm x 2145 cm pen and a platform area of 415 cm x 2145 cm.

Each module is equipped with a semicircular feeder and two nipple-sized drinkers. The floor and the platform are made of slatted plastic, the latter removable for easy cleaning.

Figure 5. Dimensions of the elevated pen system used by the Italian farm (source: Manufac)

Breeding barn

During the breeding phase, individual modules are used and equipped with a removable nest containing wood shavings. However, at the time of the visit it could not be seen as it had been removed. An example of a nest without nesting material is showed in Figure 6. The rabbits are inspected at least once a day and handled to get them accustomed to humans.

A 42-day cycle is used in this farm: Females are inseminated at about 11 days postpartum, and parturition occurs on days 30-31. During the first two days after kindling, cross-fostering is applied to have an equal litter of up to 9 individuals. In this farm, the number of kits per doe is sufficiently low for the breeder to avoid culling a surplus of kits. Controlled lactation is performed in the first 15 days postpartum by means of a movable wall that allows the nest to be closed and opened to let the doe nurse her kits once a day for not less than one hour (Figure 6).

Weaning takes place at 30 days post-partum. During our visit, the kits were about 20 days old, and they just started to move freely and use the platform (Figure 7). They moved well and did not slide inside the splits in the plastic flooring (Figure 7 and 8). None of the does inspected had pododermatitis. The perforated side wire walls allow the does to have visual and tactile contact with each other through the netting (Figure 8). The observed rabbits were clean, calm, curious and bright-eyed (Figure 9). The cages and the environment were clean.

Figure 6. Plastic nest (marked with a red line) with a movable wall to allow controlled lactation. Wheat in use, wood shaving are used as bedding material.

Figure 7. 20-day-old kits on the platform

Figure 8. Kits drinking from the nipple drinker (under the platform)

Figure 9. Doe on the platform, curious and interacting with humans

Best practice Factsheet

Elevated pen system for breeding and growing rabbits

Fattening barn

The growing rabbits are raised in the park system from 30 to 66-70 days of age. During this period, four consecutive breeding modules are combined into a park, allowing four litters of up to nine weaned kits to be raised. Each park therefore possesses a long platform that runs along its entire length, three feeding points and six watering points (Figure 10, 12). The stocking density is kept at about 32 kg/m² at the end of the fattening period. The greater space available and the reduced risk of diseases result in faster growth, shortening the slaughter age, and thus also the risk of aggression which normally increases with age, is reduced.

Various **enrichment elements** are provided in each pen (Figure 11):

- one stick made of non-resinous wood
- one metal cage with cubes of alfalfa hay (Figure 12)
- one hiding area (replacing the nest)

During our visit, we observed that the animals were clean and had no visible injuries despite being near the end of their cycle (about 60 days old); they were very active, they could run, stand up, jump on the platform and make at least 3 consecutive jumps, they were curious and not afraid of humans (Video – QR code).

Figure 10. View of two elevated pens divided by a wire mesh wall

Figure 12. Elevated pen for growing rabbits – metal cage with cubes of alfalfa hay highlighted in red

Figure 11. Enrichments provided in each pen: a) Wooden stick; b) cubes of alfalfa hay; c) hiding area.

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Good Practices fact sheet 2023:

An example of inspections of compliance with the transport regulation (COUNCIL REGULATION (EC) No. 1/2005)

European Union Reference Centre for Animal Welfare Poultry SFA

Best practiceFactsheet

An example of inspections of compliance with the transport regulation (COUNCIL REGULATION (EC) No. 1/2005)

The EU transport regulation

The EU transport regulation (COUNCIL REGULATION (EC) No. 1/2005) sets forth provisions governing the transport of live vertebrate animals. It establishes transport conditions to be fulfilled in order to reduce negative animal welfare consequences and prevent suffering.

This factsheet provides an example of how to do an inspection of compliance with the regulation.

Example of a cross-border transport within the EU

The target of the veterinary inspection was a flock consisting of 7300 female turkeys, age 17 weeks and with a body weight around 11 kg. The inspection took place at the farm in Denmark before departure and was carried out in November 2023. The destination for the transport was a German slaughterhouse. The journey duration was in total 8 h, including the mandatory break for the driver. The plan for emptying the house was loading two vehicles with turkeys one evening and then another three vehicles the following evening. Each vehicle consisted of a rigid truck with a trailer of equal size. Containers were stacked 6 high and 5 deep, totaling 30 containers on each the truck and the trailer, i.e., 60 in total.

The barn containing 7300 female turkeys, age 17 weeks and with a body weight of approximately 11 kg.

Inspection of transport – step-by-step

Loading of the turkeys was scheduled to start at 18:00. However, the starting point may be rather flexible, so the veterinary inspector arrived at 17:10. Upon arrival, the veterinary inspector introduced herself and the purpose of the control to the owner, driver and catching team.

Then the inspection started. The veterinary inspector followed a check list, which contained a list of requirements to control. For each of the requirements the following was given: a reference to the text in the regulation, a description of what to control and whether the control of the element was found to be satisfactory/not relevant or unsatisfactory.

1. Checking travel documents

The truck driver was at the venue when the veterinary inspector arrived. The veterinary inspector checked his travel documents (the animal journey log (AJL), the planned journey, the authorization of the transport company, the approval of the vehicle and the certificate of competence for the driver.

Checking the travel documents.

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An example of inspections of compliance with the transport regulation (COUNCIL REGULATION (EC) No. 1/2005)

Inspection of transport – step-by-step (continued)

2. Checking the condition of the vehicle

The design and condition of the vehicle were checked to ensure the vehicle was suitable for the transport of turkeys. The containers on the vehicle were inspected regarding proper ventilation, suitability for being cleaned/disinfested and whether the floor was solid and free of sharp edges. The driver explained and showed that the outermost edge of the container had been smoothened to avoid damage to the turkeys when they are pushed into the containers. The floor was solid such that faeces were prevented from dropping to lower-placed containers. The curtains and how they were attached to the sides were inspected to ensure that the turkeys were protected against harsh weather conditions during transport. The containers were checked, ensuring that they were in place and firmly locked. The requirement of a sign on the back of the vehicle warning other road users that live animals were on board was checked.

Left: the floor in the containers; Right: the curtains in the storage position

3. Catching the turkeys

The procedure consisted of first corralling a sub-flock of turkeys into the bucket of a wheel loader. Then the wheel loader was driven a short distance (approx. 200 m) to the vehicle and the turkeys were loaded manually from the bucket into the containers. The veterinary inspector followed this procedure for multiple sub-flocks.

Corralling of the turkeys onto the bucket of the wheel loader was accomplished by 5-6 catchers walking behind the turkeys while swaying large yellow plastic bags. When reaching the bucket, some birds were pushed further into the bucket by one catcher, standing on the side, by placing one hand around the neck to steer the bird while using the other hand to push from the rump of the bird. The bucket was designed like a pen, with the front side being removed while the turkeys were corralled onboard and replaced when the bucket was fully loaded.

Corralling the turkeys from the barn into the bucket of the wheel loader.

The inspector checked that the catchers did not corral too many turkeys into the bucket, i.e., each bird could stand on the floor without being squeezed, and that the process was done without imposing unnecessary stress on the turkeys. She also inspected whether the turkeys were fit for transport (see section '6. Fitness for transport').

A full load of turkeys in the bucket of the wheel loader, ready to leave the barn and go the short distance to the vehicle.

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An example of inspections of compliance with the transport regulation (COUNCIL REGULATION (EC) No. 1/2005)

Inspection of transport – step-by-step (continued)

4. Fitness for transport

Before the loading of the turkeys, the veterinary inspector asked the farm owner if he had sorted out the turkeys that were not fit for transport. The veterinary inspector observed the turkeys both during the process of corralling them into the bucket of the wheel loader and after being loaded from the bucket into the containers on the vehicle. She looked for dead birds and birds showing signs of sickness or reduced welfare, including birds with broken wings/legs or injuries.

5. Loading the turkeys

At the vehicle, the bucket with the turkeys was raised so that the catchers were in line with the container to be loaded.

The veterinary inspector checked how the catchers handled the turkeys during the manual loading of the birds from the bucket to the containers on the vehicle. This included whether the catchers:

- Only lifted one bird at a time,
- Used both hands; one hand partly supporting the body by grabbing under the thigh while keeping the wing in the right place, while the other hand kept the other wing folded up against the body,
- Walked all the way up to the container before placing the turkeys inside, including ensuring that the throw used when starting to fill a container was not too rough, while at the same time checking that no turkeys fell out due to being placed too close to the opening of the containers.

Manuel loading of the turkeys from the bucket into the containers of the vehicle.

6. Containers

Stocking density within the containers was checked. While the catchers were loading the turkeys, the veterinary inspector counted the number of turkeys loaded into each container. This was done for several of the containers. A total of 27 turkeys were loaded into each container, with 15 loaded from one side and 12 from the other side of the vehicle. The driver informed that up to 33 turkeys were permitted in each container.

The height in the containers was 36 cm. The veterinary inspector checked whether the turkeys were able to sit comfortably with their head held in a natural position when loaded into the containers.

Turkeys in a sitting position when loaded into the containers.

Additional information

An inspection of the transport regulation should always include the loading of at least one full vehicle. In this case, loading started at 18:00 and was done at 19:45 when both the truck and the trailer were fully loaded and ready for departure.

Two days prior to the described inspection, a veterinary inspection of the flock was done, which is a legal requirement for every poultry transport across borders (COMMISSION DELEGATED REGULATION (EU) 2020/688).

The inspection checklist (Danish) used during the inspection is available upon request.

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Good Practices fact sheet 2024:

Mobile cart with head only electric stunning device, for on farm culling and carcass collection

European Union Reference Centre for Animal Welfare Poultry SFA

Good practice Factsheet

Mobile cart with head only electric stunning device, for on farm culling and carcass collection

Introduction

Cervical dislocation is the most common on farm method used for emergency killing of sick or injured birds. However, there is evidence that cervical dislocation may not always induce immediate loss of consciousness. For this reason, several animal welfare assessment schemes propose, as gold standard, to stun the birds by percussive blow followed by cervical dislocation as a killing method. However, also percussive blow may not consistently induce unconsciousness and requires that personnel performing this method is properly trained to stun the birds consistently, humanely, and effectively.

According to Reg 1099/2009, cervical dislocation and percussive blow to the head shall only be used on poultry up to 5 kg live weight and, in case of manual cervical dislocation, shall not be used on birds above three kg live weight. Furthermore, no person shall kill by manual cervical dislocation or percussive blow to the head more than seventy birds per day and the methods shall not be used as routine methods but only where no other methods are available (figure 1).

Similarly to neck dislocation, percussive blow to the head is generally not well accepted by most operators.

For all these reasons, there is interest in identifying alternative stunning systems that can be shared as good practices.

Electrical stunning is recognised as a humane method for stunning poultry.

The method in general consists in passing a current through the head of the bird to induce a seizure which causes an instantaneous loss of consciousness.

In particular, head-only stunning systems perform individual stunning and when correctly operated, are able to consistently induce instantaneous loss of consciousness (figure 2).

Figure 1: a) manual cervical dislocation, b) percussive blow, c) mechanical cervical dislocation , CIZSLER)

Figure 2: head-only electrical stunning

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Good practice Factsheet

Mobile cart with head only electric stunning device, for on farm culling and carcass collection

Mobile cart with head only electric stunning device

An electrical cart equipped with a head only electrical stunner has been adopted in some farms to improve the welfare of birds during culling operations.

The cart can be successfully used during the daily inspections both for the collection of dead birds as well as the culling of birds experiencing pain and the subsequent transfer of the carcasses to the disposal area.

During inspections, the speed of the cart can be adapted to the operator's requirements and is equipped with 3 containers for carcass collection with a total capacity of 100kg.

The stunning device is attached to the rear of the cart and has been designed and manufactured in compliance with Reg 1009/2009. It has fixed tongues that hold electrodes, with which the animals can be stunned before being killed through bleeding, induced by mechanical cervical dislocation with the use of a purposely designed device (hook) attached to the cart (figure 3).

Figure 3: Hook for mechanical cervical dislocation.

Current regulation: it is possible to process birds of different size, species, and category such as pigeons, broilers and layer chickens, ducks, geese, turkeys etc.

The control panel (figure 4), equipped with convenient drive devices and a large display, allows the operator to easily adjust the machine parameters and read the information quickly and clearly.

Figure 4: Control panel of the device.

The USB connector integrated (figure 5) into the electronic equipment automatically records the stunning data (date – time – Ampere – Volt – Hertz – Seconds) in the USB key, without the need for operator intervention. The frequency is fixed at 50 Hz, while the voltage will vary according to the settings based on the resistance of the bird processed.

Figure 5: Control panel of the device.

Once the birds head (figure 6) is introduced between the tongues of the stunner, its impedance is detected and the necessary voltage to ensure the correct current flow is delivered to the bird by pressing the button. Exposure time can be set according to legislation requirements and an acoustic signal will indicate the correct exposure time. The efficacy of stunning can be detected by the operator who will then immediately complete the killing of the bird by mechanical neck dislocation. Exsanguination, through mechanical cervical dislocation, to achieve death should be performed within 15 seconds after stunning.

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Good practice Factsheet

Mobile cart with head only electric stunning device, for on farm culling and carcass collection

Mobile cart with head only electric stunning device

Dislocation is done mechanically by placing the bird's neck in the hook attached to the cart and pulling the birds legs upwards towards the operator. Successful dislocation can be assessed by feeling the gap between the bird's head and its neck. The bird is then placed in the container on the cart for disposal after the assessment of death indicators. Indicators of death are absence of palpebral reflex, absence of breathing and carcass relaxation.

Figure 6: Birds head is introduced between the tongues of the stunner.

Benefits of a mobile electrical cart

The stunning device, is easy to operate and when correctly used ensures an effective stun of birds belonging to different species and categories, avoiding limitations and uncertainties that are inherent to percussive stunning and neck dislocation. Mechanical neck dislocation applied within less than 15 seconds post stun is an effective means of killing through bleeding with no blood loss in the environment. Use of an electrical cart ensures proper and reduced handling, which is vital to minimise distress, particularly in the case of birds experiencing pain. An electrical cart equipped with a head only electrical stunner has the advantage of bringing the stunning device to the suffering bird avoiding the need to transport the bird to reach the stunner.

Figure 7: Suffering bird.

Legal References

"All animals kept in husbandry systems in which their welfare depends on frequent human attention shall be inspected at least once a day" (Directive 98/58/EC, Annex, point 2).

"All chickens kept on the holding must be inspected at least twice a day. Special attention should be paid to signs indicating a reduced level of animal welfare and/or animal health" (Directive 2007/43/EC, Annex I, Paragraph 8).

"Any animal which appears ill or injured must be cared for appropriately without delay and, where an animal does not respond to such care, veterinary advice must be obtained or used as possible" (Directive 98/58/EC, Annex, point 6).

"Chickens that are seriously injured or show evident signs of health disorder, such as those having difficulties in walking, severe lesions or severe malformations, and are likely to suffer, shall receive appropriate treatment or be killed immediately" (Directive 2007/43/EC, Annex I, Paragraph 9; (figure 7).

"It is an ethical duty to kill productive animals which are in severe pain where there is no economically viable way to alleviate such pain" (Reg EC 1099/2009, preamble 12).

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GP: Gather information

- Do you have examples of good practices?
- Do you know vet inspectors that are progressive/particularly interested in animal welfare and willing to be contacted/assist with identifying good practices?
- Do you know of vet inspectors whose inspections may be considered a good practice, because they do something extra?

Vet inspectors that are willing to collaborate with us are very valuable

Open discussion

Questions?

Topics of discussion proposed by Member States

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Cyprus: Rabbits in alternative (non-cage) systems

Rabbit rearing systems:

- **Conventional cages → Bicellular cages and Dual-purpose cages**
- **Enriched cages**
- **Alternative cages → Park system**
- **Niche systems → Outdoor, Organic and Floor pen**

Alternative cages: Park system

- Better conditions for expression of natural behaviour
- Modular open-top units (from 4 individual spaces for lactating females and one large space for fattening rabbits)
- Minimum surface area 4000/16000 cm^2
- Plastic platform and slatted floor (80% minimum) + gnawing material and enrichment (shelters and hiding places)
- Group breeding (20-40 animals)

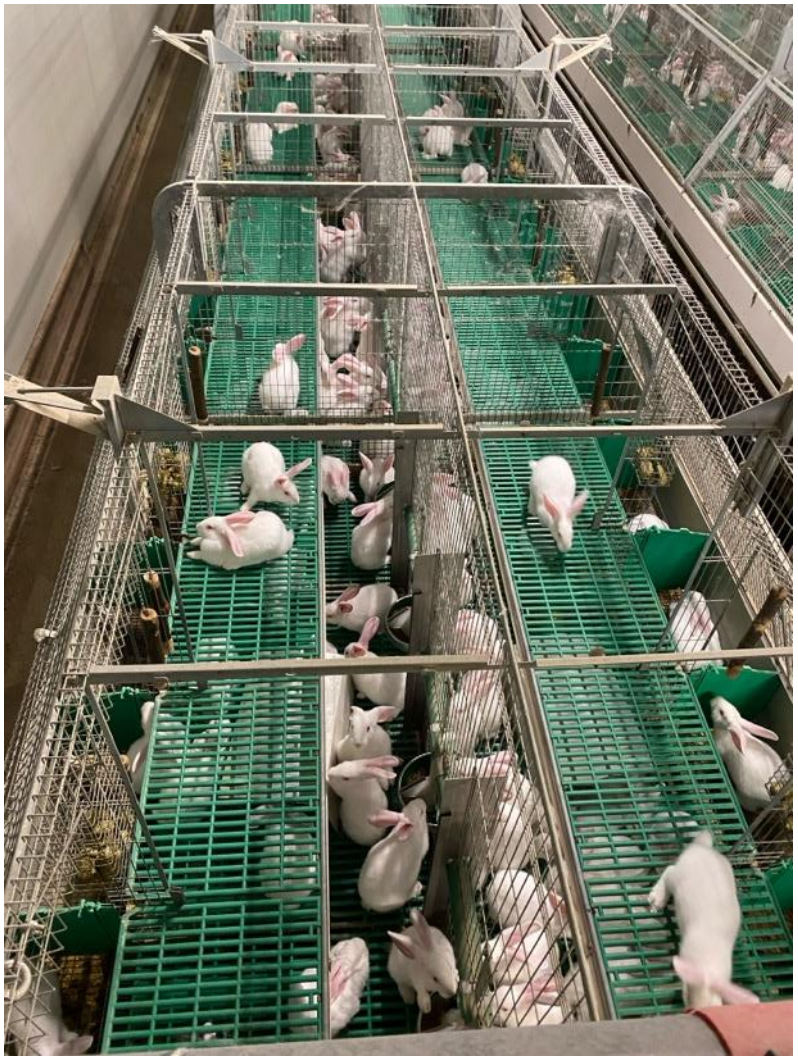
- Skin diseases (dermatomycosis, furunculosis etc.)
- Injuries
- Resting problems

Recommendations:

- Stocking density never higher than 40 kg/m^2 (better: 32 kg/m^2)
- Adequate environmental hygiene control and quality of facilities
- Biosecurity measures
- Good management (facilities, nest material, microclimate, correct handling of animals)

Park system: Reproduction

Park system: Fattening



Park system : Enrichments

Niche systems: Outdoor and Organic

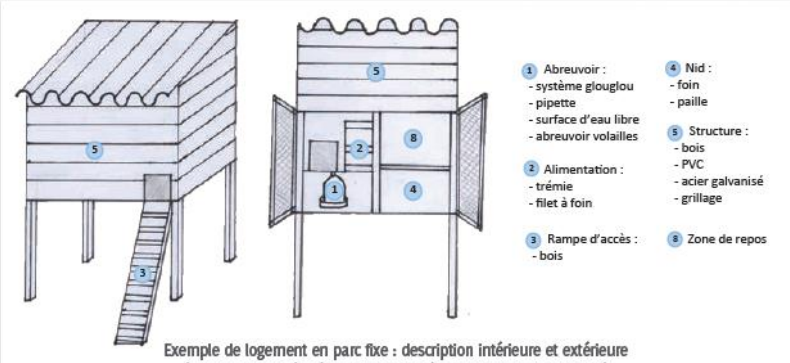
- Fixed to the ground or mobile **facilities**
- Access to outdoor grazing area protected from predators
- No standards excepting for Organic farms →
- **EU Reg. 2018/848**, EU Implementing **Reg. 2020/464:** Specific requirements regarding stocking density, shelter construction and pasture management (vegetation and rotation)

- Diversified behavioural repertoire → pasture
- Heat stroke/hypothermia (kits +++)
- Health problems (e.g. parasites, RHD, GE disorders, reproductive disorders, pododermatitis) and injuries
- Mortality of kits (aggression, reduced parental care)

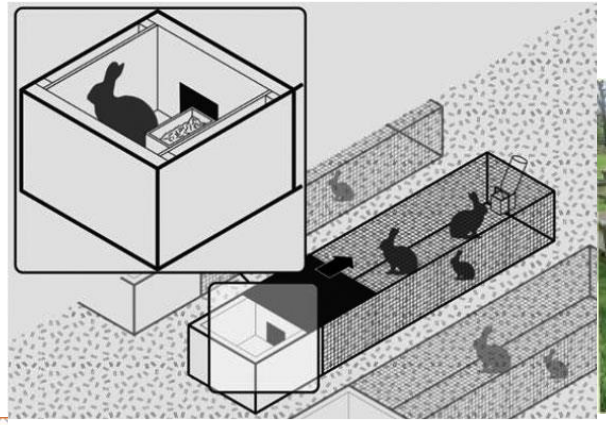
Recommendations:

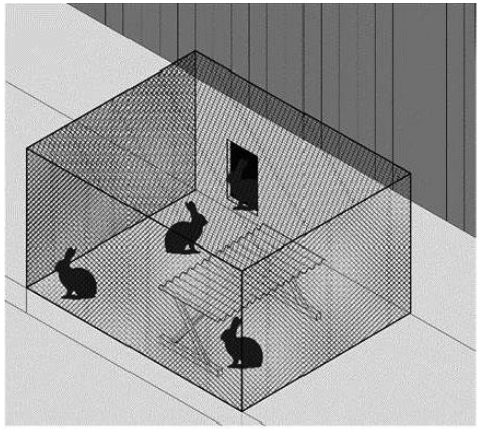
- Hygiene, prophylaxis and biosecurity measures
- Attention to management (staff training), facilities and housing conditions (shelters, ventilation, humidity and temperature)
- Balanced feeding and attention to pasture quality

Outdoor and Organic



Exemple de logement en parc fixe : description intérieure et extérieure
(source : dessins réalisés par Maud Leray à partir de constats de terrain)





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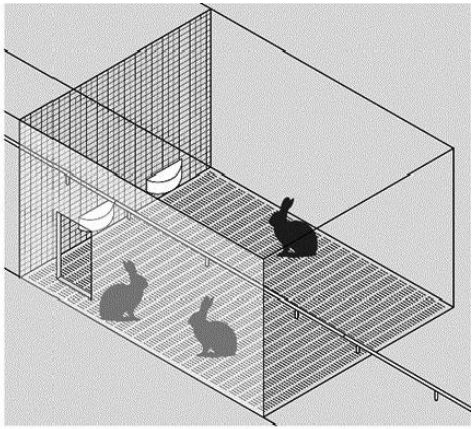
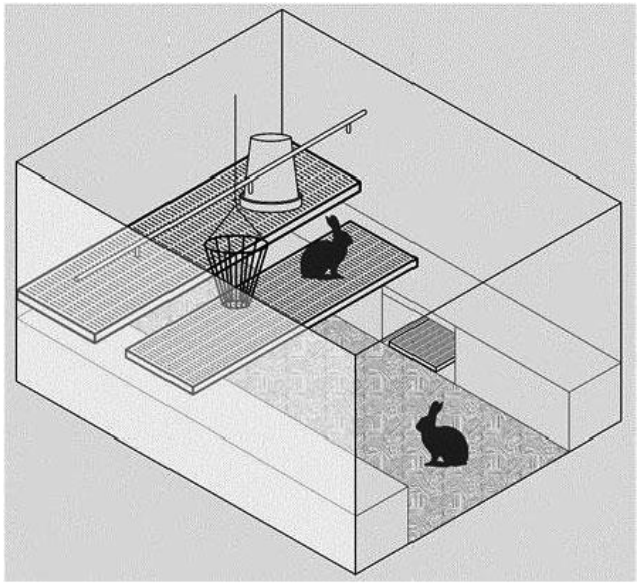


b)

Other niche systems: floor pen

- Niche breeding used in Switzerland → limited knowledge
- Indoor facility/enclosure, without cover on solid floor (straw)
- In gruppi (part-time per le femmine da riproduzione)
- Positive aspects... Gap of Knowledge



- Health problems (gastrointestinal disorders, skin diseases)
- Resting problems issues (dirty/unmanaged litter, group housing)
- Aggressions
- Prolonged hunger and thirst (dirty feeders and drinkers)
- Neonatal disorders (cannibalism)
- Heatstroke

Recommendations:

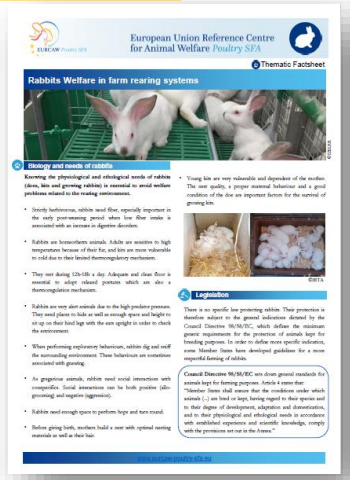
- Hygiene, prophylaxis and biosecurity measures
- Microclimate management
- Individual and suitable nests
- Reducing the number of animals and increasing available space
- Balanced feeding with fibre

Activities of EURCAW's Rabbit team 2021-2024

Best practice + Factsheet

Review: Farm rabbit's welfare in different farming systems

- Positive and negative aspects
- «Gaps of knowledge»
- Recommendations



Webinar

Report: Rabbit welfare indicators and method of assessment

- Bibliographic research
- Directive 98/58/EC requirements
- Four principles (Welfare Quality)
- Ranking: validity, feasibility, reliability

Queries

- Stocking density for the keeping of growing rabbits grouped in elevated pens.
- Recommended parameters for part-time group housing of does (rabbits).

Italy

- **Turkey welfare**

Open discussion – what kind of information is the requestor looking for?

Germany: catching methods for turkeys before transport to the slaughter house

See **Q2E-Poultry-SFA-2023-007** Catching of turkeys in a loose house

See Q2E infographic : Manual handling and carrying a turkey: **https://zenodo.org/records/11487567**

GP FS transport: An example of inspections of compliance with the transport regulation (COUNCIL REGULATION (EC) No. 1/2005) **https://zenodo.org/records/10479363**

Do you still have questions?

➢ Spain

Directive 98/58/EC — protection of animals kept for farming purposes comma 13: …..Where the health and well-being of the animals is dependent on an artificial ***ventilation system****, provision must be made for an appropriate* ***backup system*** *to guarantee sufficient air renewal to preserve the health and well-being of the animals in the event of failure of the system, and an* ***alarm system*** *must be provided to give warning of breakdown. The alarm system must be tested regularly.*

Backup system

(window opening not sufficient)

Alarm system:

activated in case of failure as breakdown or failure to preserve animal health and wellbeing ?

Council Directive 2007/43/EC Laying down minimum rules for the protection of chickens kept for meat production

Annex I; Requirements applicable to holdings

Ventilation and heating

4. Ventilation shall be sufficient to avoid overheating and, where necessary, in combination with heating systems to remove excessive moisture.

Annex II; Requirements for the use of higher stocking densities

2. The owner or keeper shall maintain and have available in the house compiled documentation describing in detail the production systems.

b) ventilation and, if relevant, cooling and heating system, including their location, a ventilation plan, detailing target air quality parameters, such as airflow, air speed and temperature;

d) alarm systems and backup systems in the event of a failure of any automated or mechanical equipment essential for the health and well-being of the animals;

….inspections of the ventilation and alarm system shall be recorded.

The owner or keeper shall communicate to the competent authority any changes to the described house, equipment or procedures which are likely to influence the welfare of the birds without undue delay

3. The owner or keeper shall ensure that each house of a holding is equipped with ventilation and, if necessary, heating and cooling systems designed, constructed and operated in such a way that:

a) the concentration of ammonia (NH_3) does not exceed 20 ppm and the concentration of carbon dioxide (CO_2) does not exceed 3000 ppm measured at the level of the chickens' heads;

b) the inside temperature, when the outside temperature measured in the shade exceeds 30 °C, does not exceed this outside temperature by more than 3 °C;

c) the average relative humidity measured inside the house during 48 hours does not exceed 70 % when the outside temperature is below 10 °C.

Lombardy regional Animal Welfare Plan

Regione Lombardia

«Heat emergency: preparedness»

Actions

1. meetings with farmers or supply chains, to discuss high summer mortalities that occurred in recent years.
2. Evaluation of the on-farm situation: the farmer, with the support of a technical reference figure, will carry out an assessment of the facility conditions related to the heat stress that animals may experience whit temperatures > 30°C and humidity > 70%.
3. Based on the assessment results, actions will be defined to improve critical areas and a contingency plan will be formalized .

The emergency plan must contain descriptions of:

- Facilities
- Insultation system
- Ventilation system
- Back-up ventilation system and alarm system, indicating any failures
- Any other additional system
- procedures that can be adopted in the event of a climatic emergency

In the event that the facilities, in compliance with legal limits, do not allow for changes, periods of empty sheds or reduced animal density must be scheduled during the most risky months.

In the event of weather alert, the emergency plan must be implemented with continuous monitoring of mortality and, in the event of significant variations, immediate notification to the Competent Authority.

Belgium: dead-on-arrival (DOA) for broiler chickens and laying hens

Open discussion –

- ✓In Flanders we are monitoring the dead-on-arrivals (DOA) of poultry at the slaughterhouse.
  - For 2023 the average number of dead-on-arrivals was 0,11 % for broilers and 0,29 % for laying hens.
- ✓We invite you to discuss:
  - Do you collect the information of DOA of the SL in Member States.
  - Is there any data available on the number of dead-on-arrivals for broilers and laying hens at slaughterhouses of other Member States?
  - Are these figures in line with those of other Member States.
  - DOA is an iceberg indicator. Do you assess the risk factors related to DOA (e.g. temperature, distance)

Germany: Prolonged husbandry of laying hens

Open discussion:

- Laying hens are kept for longer for economical reasons
- Issue with health of animal: KBD, emaciation,…?
- Issue with feathering & pecking?
- Moulting?
- Body condition of the bird when the leave to slaughter?
- Other?

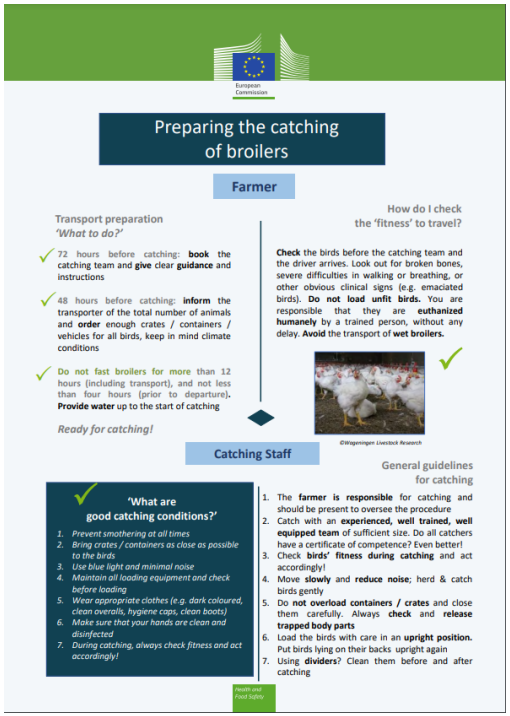
Topics of discussion proposed by Member States

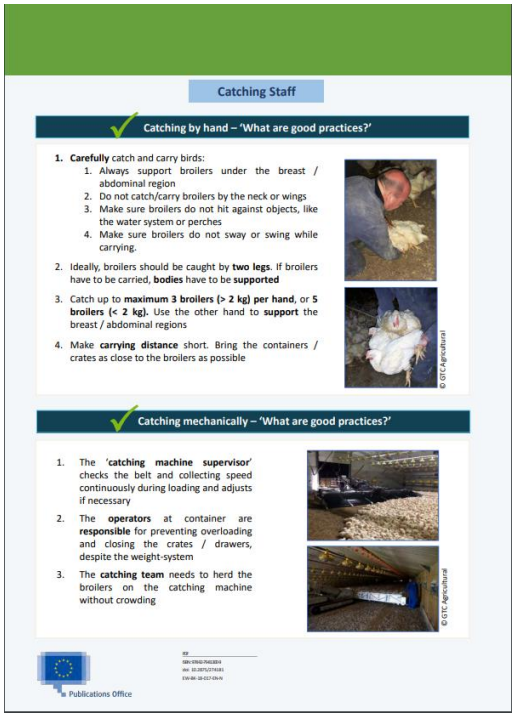
Germany: As it was determined by the Supreme Court of the Netherlands on 4.6.2024 (21/762-764, 23/7, 23/1023, 23/1057-1059, 23/1468 (vgl. https://uitspraken.rechtspraak.nl/details?id=ECLI:NL:CBB:2024:370) that the currently practiced catching of broiler chickens on the legs and upside down violates the applicable EU law in particular the provisions of the Council Regulation (EC) No 1/2005 of the protection of animals during Transport
→ an exchange on experiences and possibilities of upright catching of poultry (especially broiler chickens and laying hens) would be desirable

Open discussion

Preparing the catching of broilers

Available on our website in the transport section of the page knowledge base





Austria: **dealing with floor eggs in an animal friendly way (no electrical wires in the corners)**

Multifactorial problem → multifactorial solutions

Rearing: early access to perches / similar system as layers / dark brooders

Early transfer / next box availability at early laying

Light management / feed management

Floor walks at early laying

Aviary design (drinkers, platforms to access the nest)

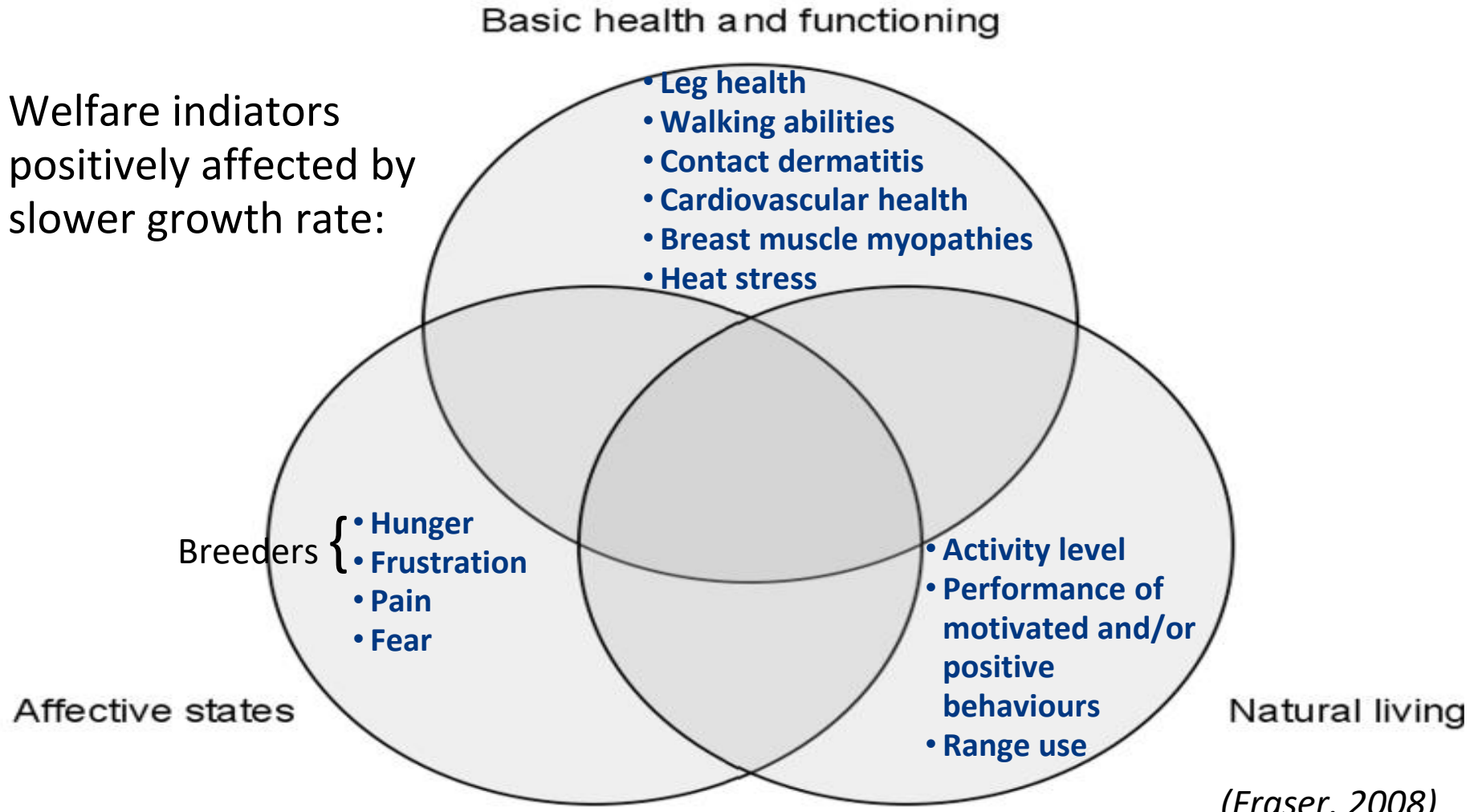
Restricting access to litter temporarily

Floor robots (?)

Open discussion

Ireland: Genetic related welfare issues in broilers

Welfare indiators positively affected by slower growth rate:



(Fraser, 2008)

Ireland: Genetic related welfare issues in broilers

- Overwhelming scientific evidence that returning to a more normal state by slowing the growth rate has a positive influence on broiler and broiler breeder welfare.
- Growth rate affects multiple welfare indicators within all concerns of animal welfare, i.e. basic health and functioning, natural behaviour and affective states.
- Generally, the slower the growth, the better the welfare (EFSA recommends <50 g/day).

❖ Not only growth rate, but other aspects affected by the genetic selection may result in welfare improvements.

Ireland: Stocking density assessment in Broiler houses

Open discussion – what information is the requestor looking for?

- Potential topic for a Q2E?

Ireland: Mobile housing requirements for laying hens and broilers

Open discussion – what kind of information is the requestor looking for?

Parameters that need particular attention:

- Temperature management
- Ventilation
- Manure removal
- Feed and water supply
- Avian flu lock-ins
- Habituation of pullets to the mobile house

Ireland: Enrichment in laying hens- quantity and type

Open discussion – what kind of information is the requestor looking for?

- Knowledge is available on the **types** of enrichment that are used by the hens and that have positive effects on the welfare of the laying hens.
- There is a gap of knowledge when it comes to the **quantity** of the different types of environmental enrichment needed for all hens to have access to a sufficient extent for the enrichment to have a positive effect.

- **Potential topic for a Q2E?**

Ireland: Optimum litter management

Open discussion – what kind of information is the requestor looking for?

- Which animal category? Broilers, laying hens, other?

- Potential topic for a Q2E?
- We have also listed this as a potential topic for a good practice factsheet.

Spain: How to manage all the information / production of the EURCAW's

Open discussion

- Is the information useful for CA and Official inspectors?
- What type of information do you find more useful (e.g. factsheet, training material)?
- Do you have time to review and use all the information?
- How do you manage it?

Closure

Co-funded by the European Union

Agenda: Wednesday, 02 October

09:00	09:05	Welcome *(V. Michel)*
09:05	09:25	**Update on the Centre's actual work on training (activity 4)** *(A. Xercavins)*
09:25	09:45	**Update of the Centre's actual work on Dissemination (activity 5)** *(E. Nehlig)*
09:45	10:45	**Participative session: males chicks culling banishment in Europe:** *(B. Favier (FR) S. Schreiber (DE), K. Eder (AT), A. Ferraro (IT))*
10:45	11:05	Break
11:05	12:25	**Interactive discussion on the next period: 2025-2027** •Work Programme proposal *(V. Michel, A. Riber, F. Mocz, A. Velarde, A. Xercavins)* •EURCAW-Poultry-SFA Roadshows *(V. Michel)* •EURCAW-Poultry-SFA Community of Practice (CoP) (*V. Michel)* •EURCAWs Common work *(A. Velarde, E. Nehlig)*
12:25	12:30	Wrap up second morning *(V. Michel)*
12:30		Closure of the meeting *(DG SANTE, V. Michel)*

Update on the Centre's actual work on training (activity 4)

Chaired by Antonio Velarde

EURCAW-Poultry-SFA

Co-funded by the European Union

Review of existing training activities and materials

(BTSF and National courses in some Members States)

➢ **Assessment of consciousness after electrical stunning in rabbits** (June 2024)

5 training courses analysed

- ABIs for assessment of state of consciousness partially covered
- RBIs well covered in 3 courses
- Sample size not addressed in any course

Review about the main welfare aspects of stunning methods in rabbits
Scientific study in electrical stunning + Factsheet + Webinar

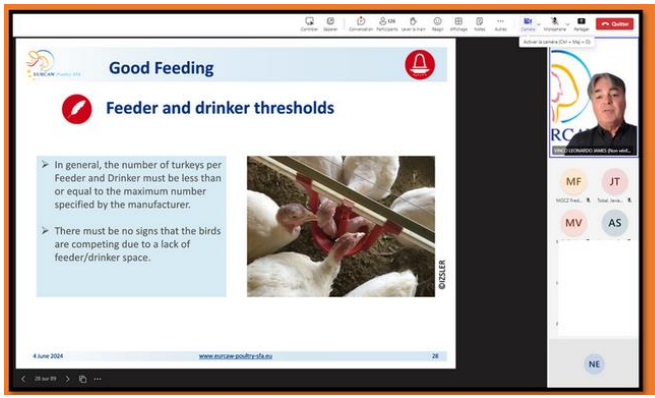
Development of training material for specific topics

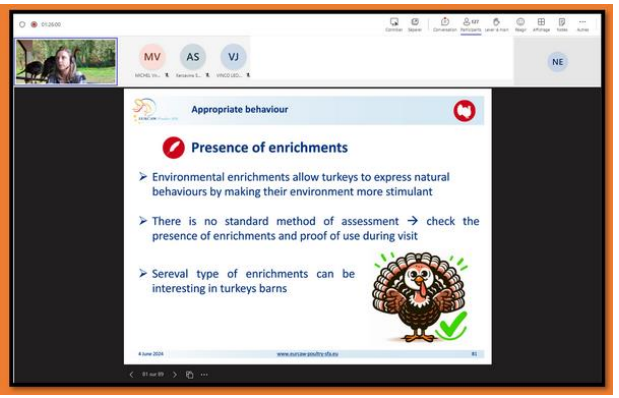
Webinar assessment welfare of turkeys on farm

4 June 2024

Presentation of the assessment of welfare in turkeys on-farm using the most relevant ABI (or RBI and MBI if no relevant ABI) and their methods

The webinar was attended by 138 people (189 registered), from 17 EU Member States





Development of training material for specific topics

Webinar assessment consciousness after electrical stunning in rabbits

Save the date: 12/11/2024!

Time: 10.00h to 12.00h (UTC +2, CEST)

- Most relevant indicators, method and recommendations to assess the state of consciousness after electrical stunning of rabbits.
- Presenting results from the scientific study conducted at 16 commercial EU slaughterhouses.

Questions?

Update on the Centre's actual work on dissemination (activity 5)

Chaired by Antonio Velarde

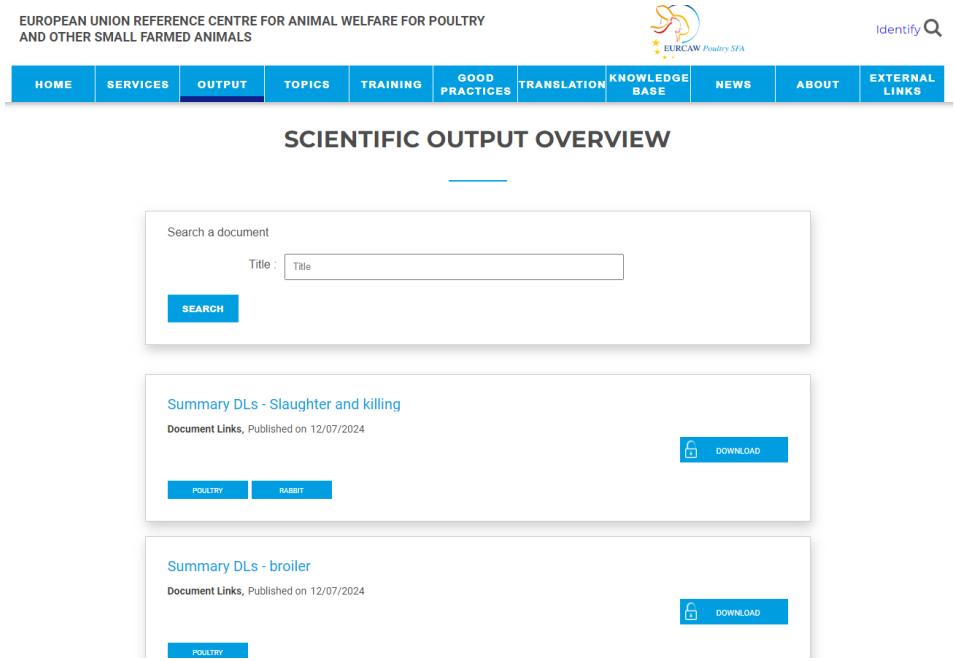
EURCAW-Poultry-SFA

Co-funded by the European Union

Website modification

➢Based on the feedback received from our target audience, on the EURCAW-Poultry-SFA website, the Centre made possible modifications on the website architecture this summer.

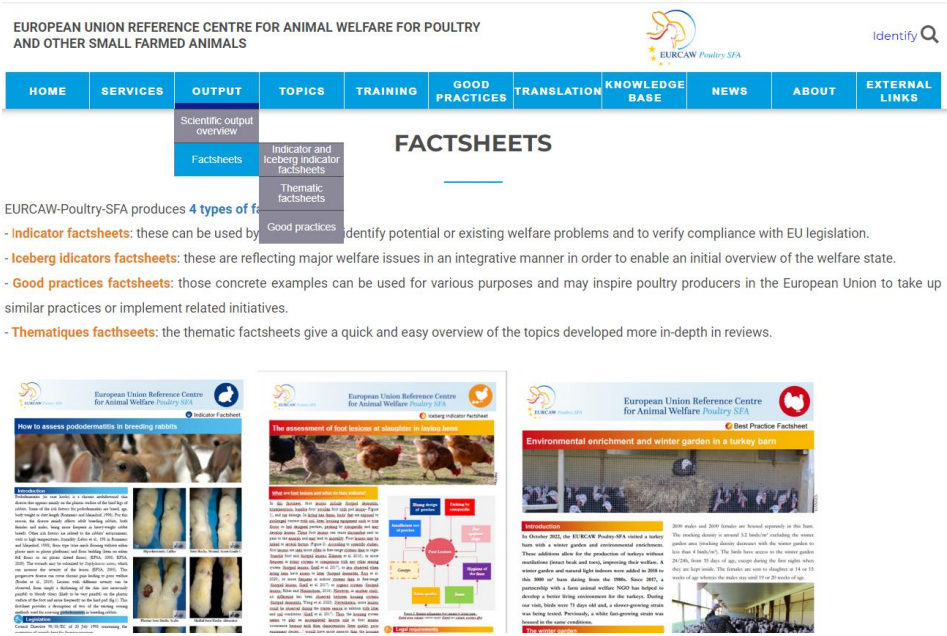
- In the sub-page 'scientific output overview' you are now able to ***download summary deliverables*** Excel tables **per priority area**.



Update on the Centre's actual work on training (activity 5)

Website modification

- Factsheets have been sorted out in 3 sub-pages: Indicators & Iceberg indicators, thematic and Good practices.

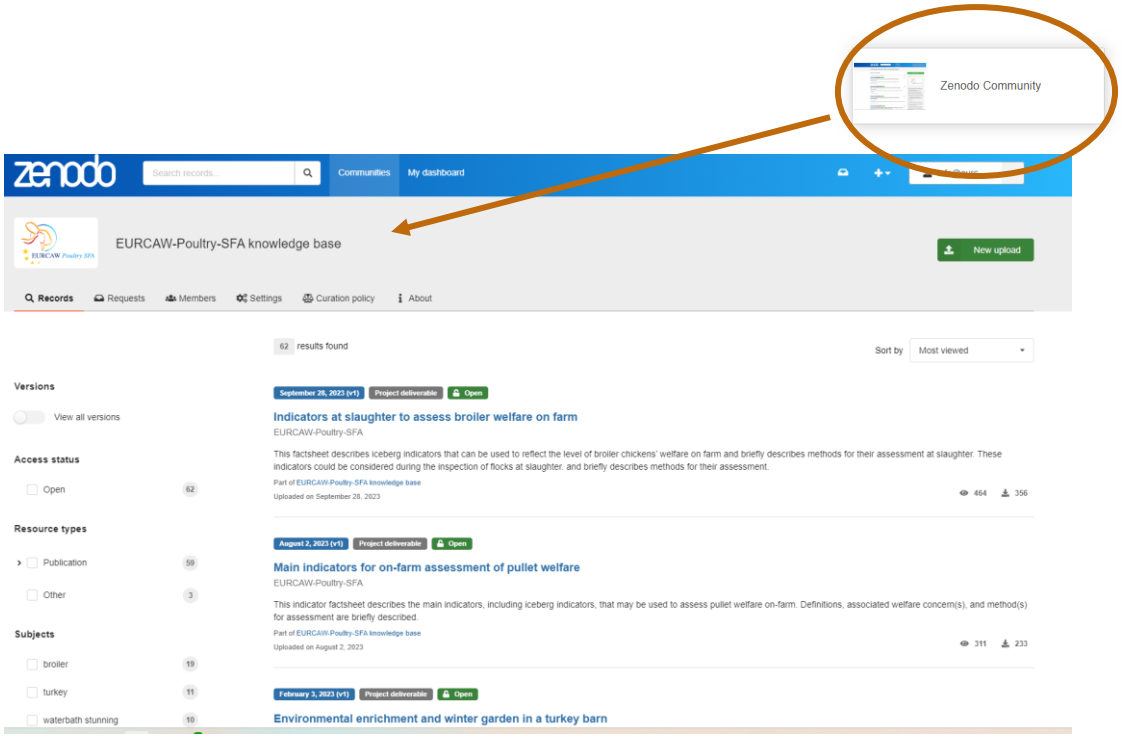


- Q2E answers have been sorted out into 3 sub-pages: slaughter and killing, husbandry and transport.

Update on the Centre's actual work on training (activity 5)

The Zenodo community: EURCAW-Poultry-SFA knowledge base

- **Is updated regularly**



Update on the Centre's actual work on training (activity 5)

Newsletter

✓ **389 subscribers**

Since last meeting:

- 1 newsletter published and disseminate in 2023
- 3 newsletters published and disseminate in 2024
  + 1 to be issued this December

EURCAW Poultry SFA

European Union Reference Centre for Animal Welfare Poultry SFA

Newsletter EURCAW-Poultry-SFA

20 September 2024, Edition 9

EURCAW-Poultry-SFA Questions to EURCAW (Q2E)

All Q2E answers are available online.

Q2E-Poultry-SFA-2024-002 (ongoing)
Killing of unhatched chicks

Q2E-Poultry-SFA-2024-003
Pullet lighting improvement

Q2E-Poultry-SFA-2024-004
Broiler lighting improvement

Q2E-Poultry-SFA-2024-005 (ongoing)
Broiler optimum feeding frequency

Q2E-Poultry-SFA-2024-006 (ongoing)
Emergency and alarm system to guarantee animal welfare

→ **The Q2E webform is available online** here or https://survey.anses.fr/SurveyServer/s/DSL/Querywebform1Q3/questionnaire.htm

→ You can download here the webform in PDF to prepare your Q2E submission.

Manual handling and carrying a turkey

The Centre is proud of presenting you its latest infographic issued from a Q2E answer, realized in collaboration with La Chaire bien-être animal: for manual handling and carrying turkeys. A graphic tool for operators in the field for improved turkey welfare !
The document is available here.

Save the date!!

The next EURCAW-Poultry-SFA **webinar** will take place on November 12th , 2024 for 2 hours. This webinar will be on **'Welfare assessment during electrical stunning in rabbits'.**

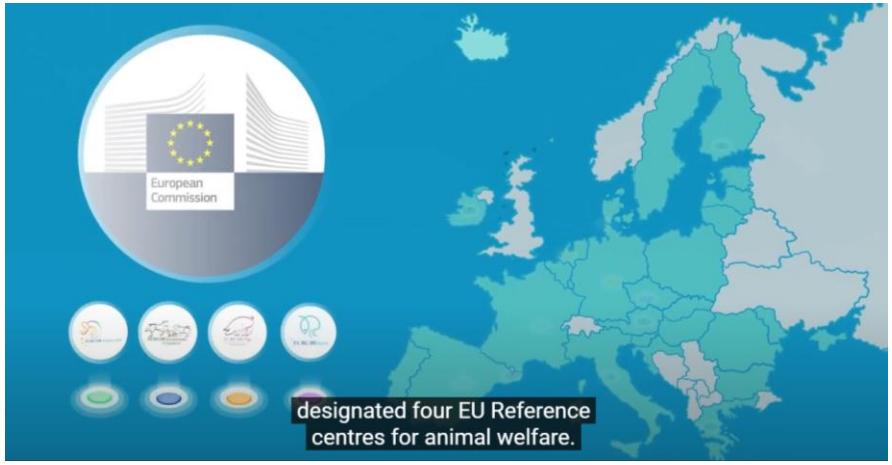
EURCAW-Poultry-SFA website

Based on the feedback received from our target audience, on the EURCAW-Poultry-SFA website, the Centre made possible modifications on the website architecture. Take a look!
- In the sub-page 'scientific output overview' you are now able to download summary deliverables Excel tables per priority area.
- Factsheets have been sorted out in 3 sub-pages: Indicators & Icebeeg indicators, thematic and Good practices
- Q2E answers have been sorted out into 3 sub-pages: slaughter and killing, husbandry and transport.

www.eurcaw-poultry-sfa.eu

Centre presentation video

Was updated to include the 4th EURCAW



Scientific papers

➢ **The work carried on in activity 2 and 3 lead to the publication of 2 peered reviewed papers in 2024:**

- "Alternative to Carbon Dioxide in Two Phases for the Improvement of Boiler chickens' Welfare during Stunning", *Animals* 2024, *14*(3), 01/02/2024

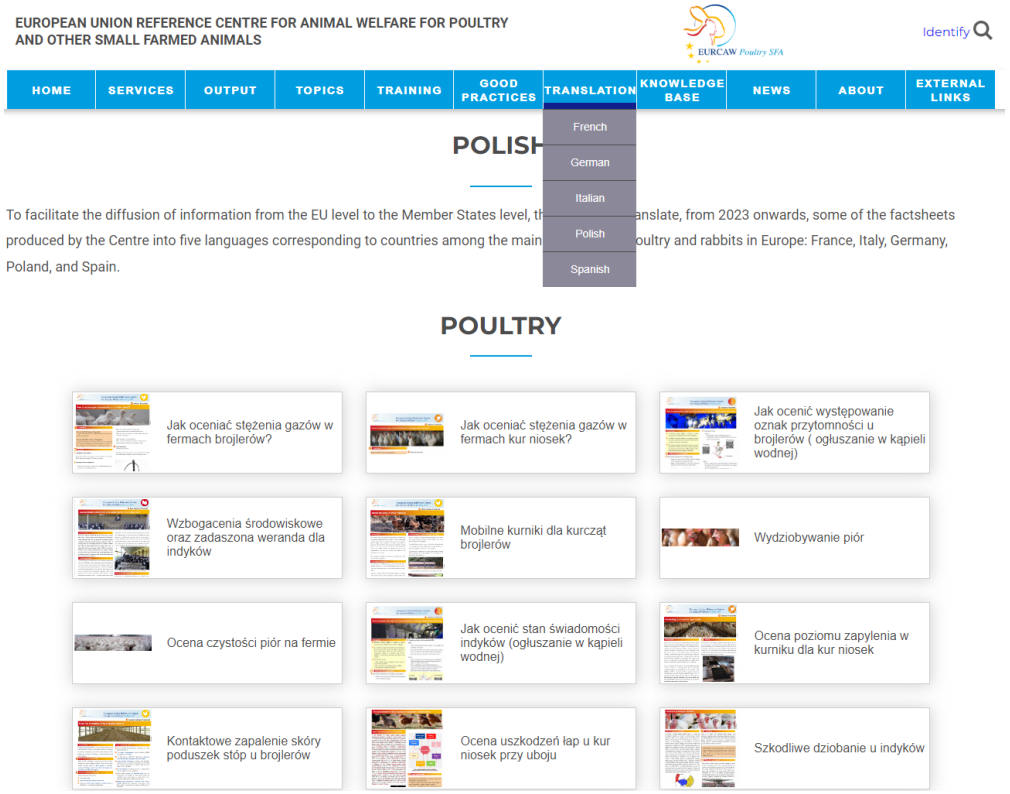
- "Overview of the various methods used to assess walking ability in broiler chickens", *VetRecord* 2024, *195,*(4), 08/08/24

Update on the Centre's actual work on training (activity 5)

Translations

- We translate factsheets into 5 languages for the moment: FR, DE, IT, PL, ES

- During 2023-2024 period: 16 FSs are being translated. Pages will be updated by the endof the year



- If you are and willing or if you know someone which is interested to proof-read pre-translated factsheets using automatic translations into your native language, please contact us: **info@eurcaw-poultry-sfa.eu**

Work with the 4 EURCAWs

➢ Regular meetings with the other EURCAWs to:

- Harmonize as much as possible visual identities, websites, outputs ….
- Help and inspire each other
- Try to find potential solutions for common issues the EURCAWs are facing

➢ Prepare the next period (2025-2027):

- Discuss possible common work across EURCAWs

Plenary session on the ban of culling male chicks in some EU Member States

Chaired by Anja Riber

EURCAW-Poultry-SFA

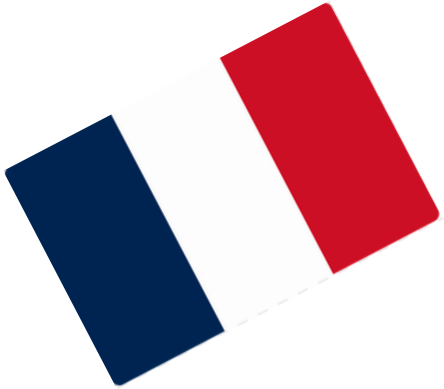
Co-funded by
the European Union

France
B. Favier

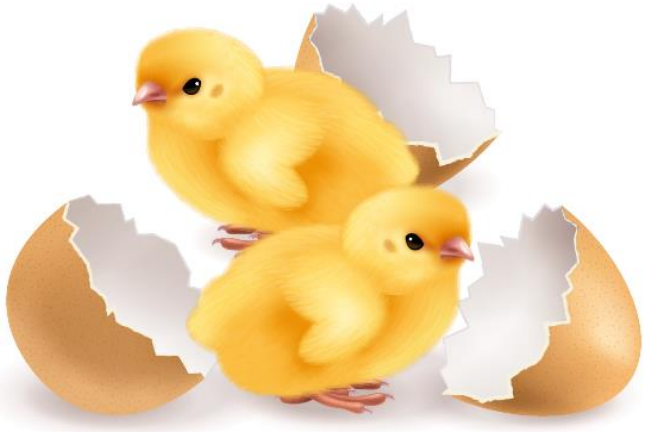
Males chicks culling banishment in France

Co-funded by the European Union

MALES CHICKS CULLING BANISHMENT IN FRANCE



Since December 31, 2022, the culling of some male chicks in the laying hens sector has been banned in France.



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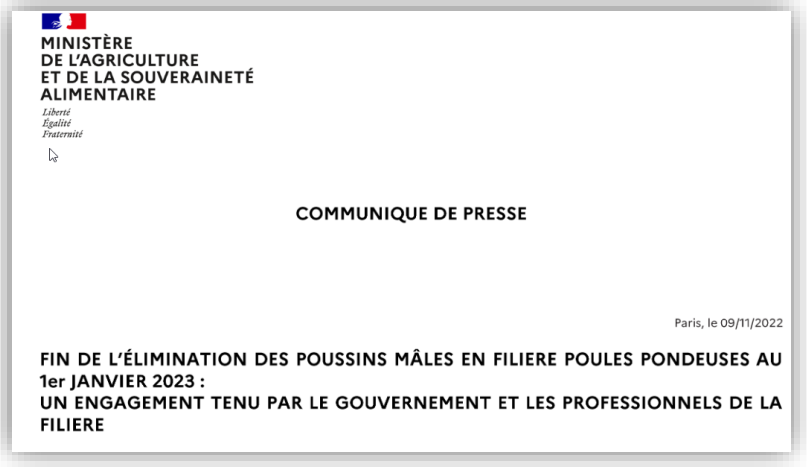
CONTEXT



MINISTÈRE
DE L'AGRICULTURE
ET DE LA SOUVERAINETÉ
ALIMENTAIRE

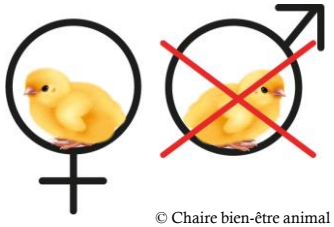
Liberté
Égalité
Fraternité

COMMUNIQUE DE PRESSE

Paris, le 09/11/2022

FIN DE L'ÉLIMINATION DES POUSSINS MÂLES EN FILIERE POULES PONDEUSES AU 1er JANVIER 2023 :
UN ENGAGEMENT TENU PAR LE GOUVERNEMENT ET LES PROFESSIONNELS DE LA FILIERE

- In the laying hen sector, only female chicks are kept alive to become laying hens. Males are culled.



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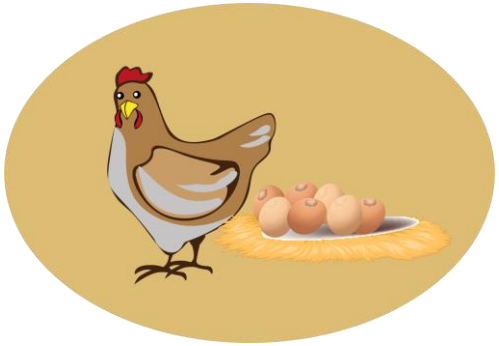
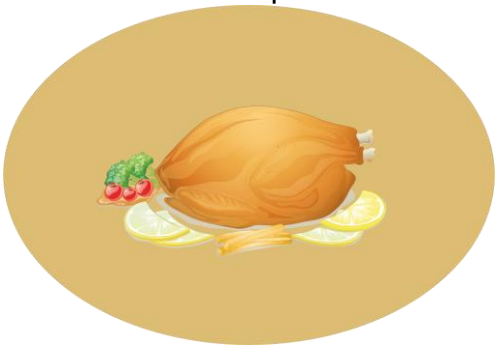
- Following Germany, France decided the males chicks culling banishment with ***decree no.2022-137 of February 5, 2022***.
- Before the ban, about 40 millions males chicks a year were killed by crushing or gassing in France.

IN FRANCE, GALLUS GALLUS CHICKEN LINES ARE USED IN:

The « layer » chicken sector, which raises laying hens.



The « broiler » chicken sector, for meat consumption.



THE DECREE : WHAT DOES IT SAY ?

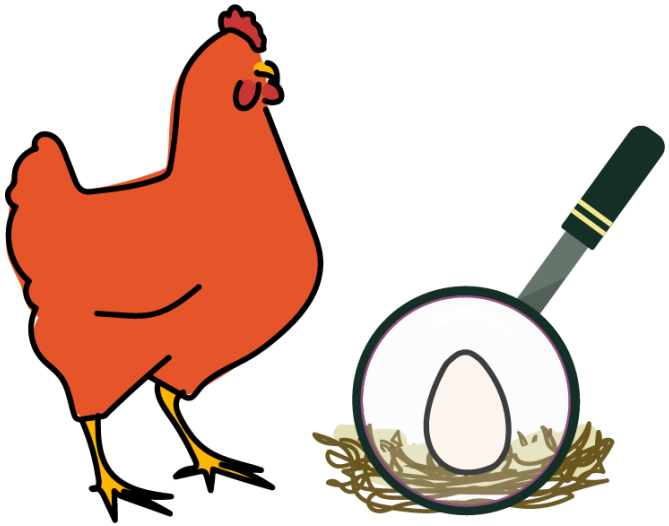
- Starting from December 31, 2022, « ***the culling of chicks of Gallus gallus species intended for the production of eggs is prohibited*** ».
- Crushing or gassing males chicks of **brown breed** is therefore forbidden.
- Farmers need to find **alternatives**:
  - Either by **sexing the egg** no later than the 15th day of incubation,
  - Or by using « *any other means providing equivalent guarantees* ».

⇨ This is a **huge poultry welfare milestone**.

© Chaire bien-être animal

THIS BAN DOES NOT APPLY TO

- Gallus gallus chicks used for **breeding purposes**,
- Female ducklings for the ***foie gras* industry,**
- Chicks whose eggs are used in **industrial animal feed,**
- Male chicks from **white eggs** (because the most used *in ovo* sexing method does not apply to white eggs - 15% of laying hens in France – *they can be only gassed*),
- Chicks used for **scientific purposes,**
- Chicks of brown breed resulting from **sexing errors,** or **injured,** or **non-viable female chicks** (*they can be crushed or gassed*).



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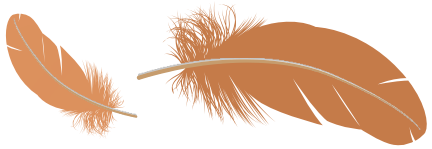
AN ALTERNATIVE: SEXING IN THE EGG OR *IN OVO*

SEXING IN THE EGG OR *IN OVO* :



- Consists in determining the sex of the embryo in the egg before hatching.
- Male eggs do not hatch, but are transformed into egg products.
- *In ovo* sexing must be **accurate**, **painless** for the embryo, **rapid**, **not too costly** and **not reduce the egg hatching rate**.
- Different techniques are used in France (mainly non-invasive):
  - **Non-invasive methods:**
    - *Spectroscopy* to identify the color of feathers in the egg: the least expensive and most used technique in France, but not applicable to white eggs (decree provides for a derogation),
    - *MRI* (Magnetic Resonance Imaging) on day 12 (applies to brown and white eggs).
  - **Invasive method:** bio marker detection through a small hole in the eggshell on day 9.

PAIN IN THE EGG?

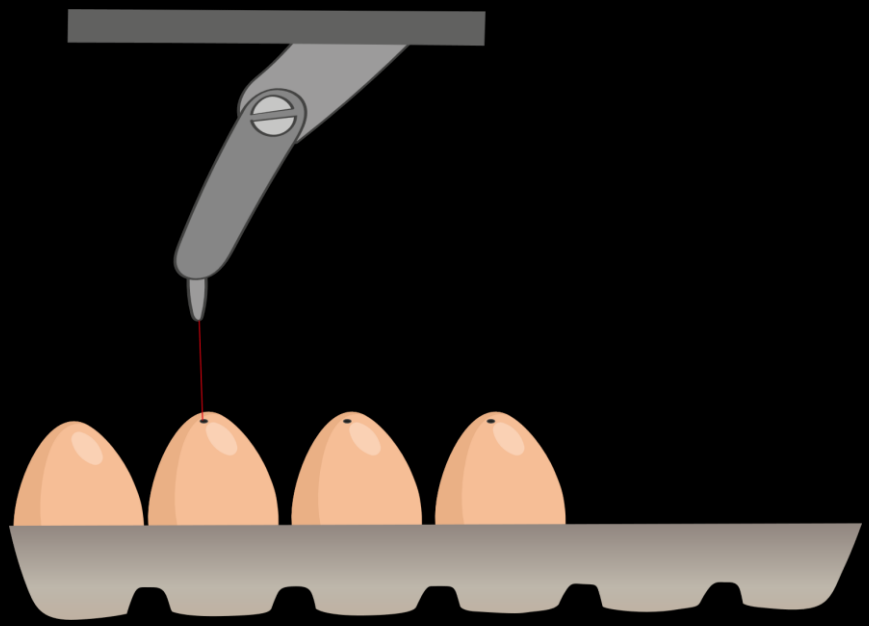
Some *in ovo* techniques are intrusive for the egg or late, which raises the question of the potential pain felt by the embryo.

There is no scientific consensus on the date from which embryos are capable of feeling pain: between the 7th and 15th day of incubation.

The decree specifies that *in ovo* sexing must be carried out on the 15th day at the latest.

In addition, ovo sexing techniques try to improve earliest detection :

- not possible for methods based on feather color identification (depending on embryo development),
- could be theorically technically possible for methods detecting gonad development (from day 7).



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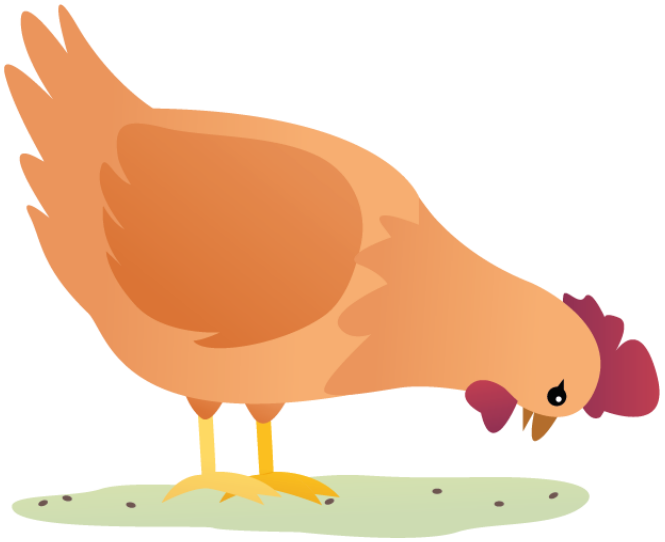
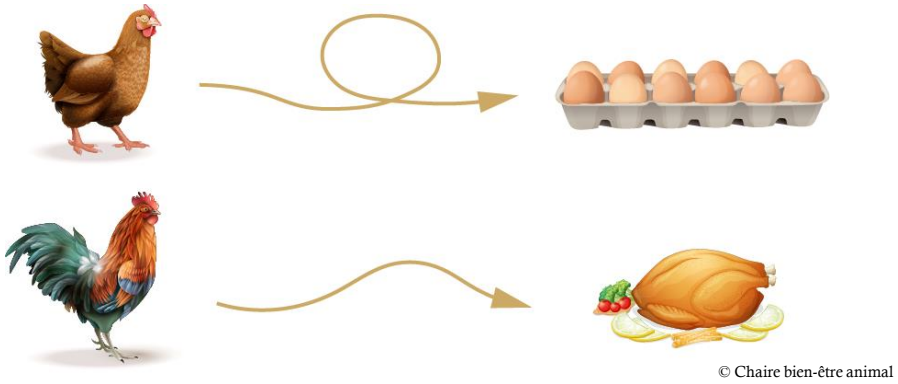
AN ALTERNATIVE: SELECTING MIXED BREEDS



SELECTING MIXED BREEDS

- Females used for laying and males for broiler production.



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- But today, this dual use is not possible and it **would require genetic selection**.

Germany
S. Schreiber

Ban on the killing of male layer chicks

Co-funded by the European Union

Federal Ministry
of Food
and Agriculture

Ban on the killing of male layer chicks

Situation in Germany 3 years later

bmel.de

Legal Situation in Germany

2019 (June)
- Ruling by the Federal Administrative Court
- Chick culling incompatible with Animal Welfare Act

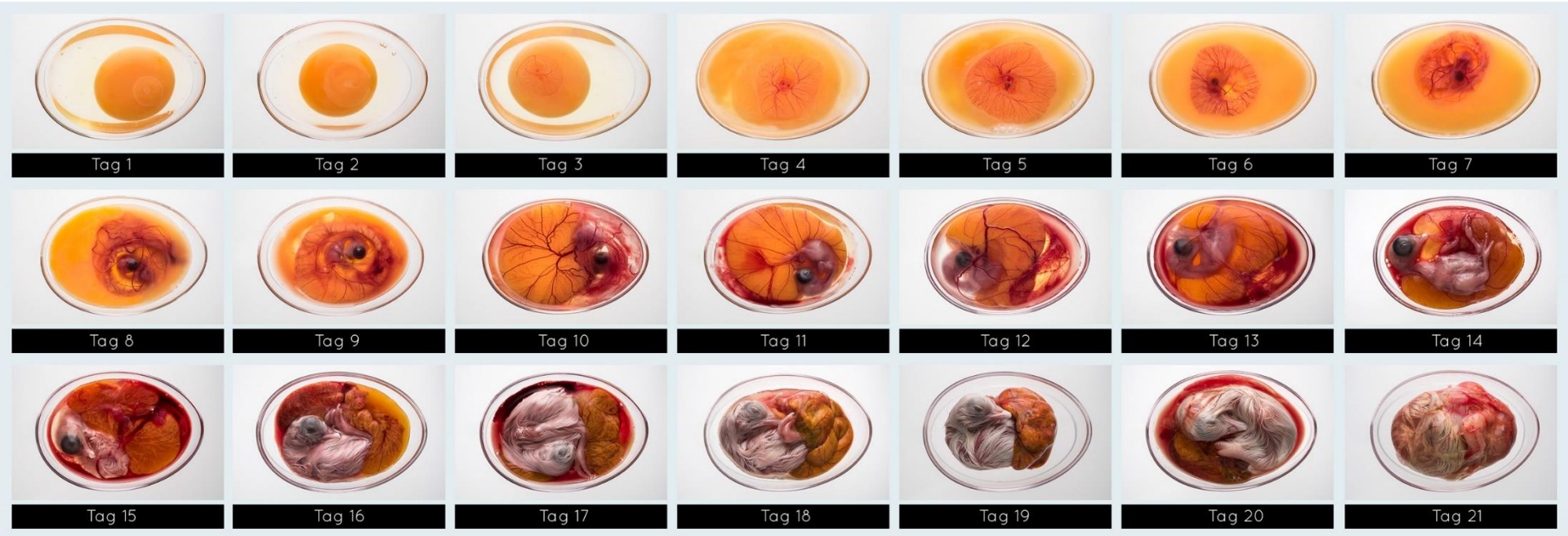
2021 (June)
- Parliament passes ban (Gallus gallus)
- Ban applies from 2022 (killing chicks after hatching) & 2024 (terminating incubation)

2022 (Jan)
- **Ban on killing chicks after hatching becomes applicable**
- Exemptions: animal health & welfare, meat, research; not for feeding purposes!

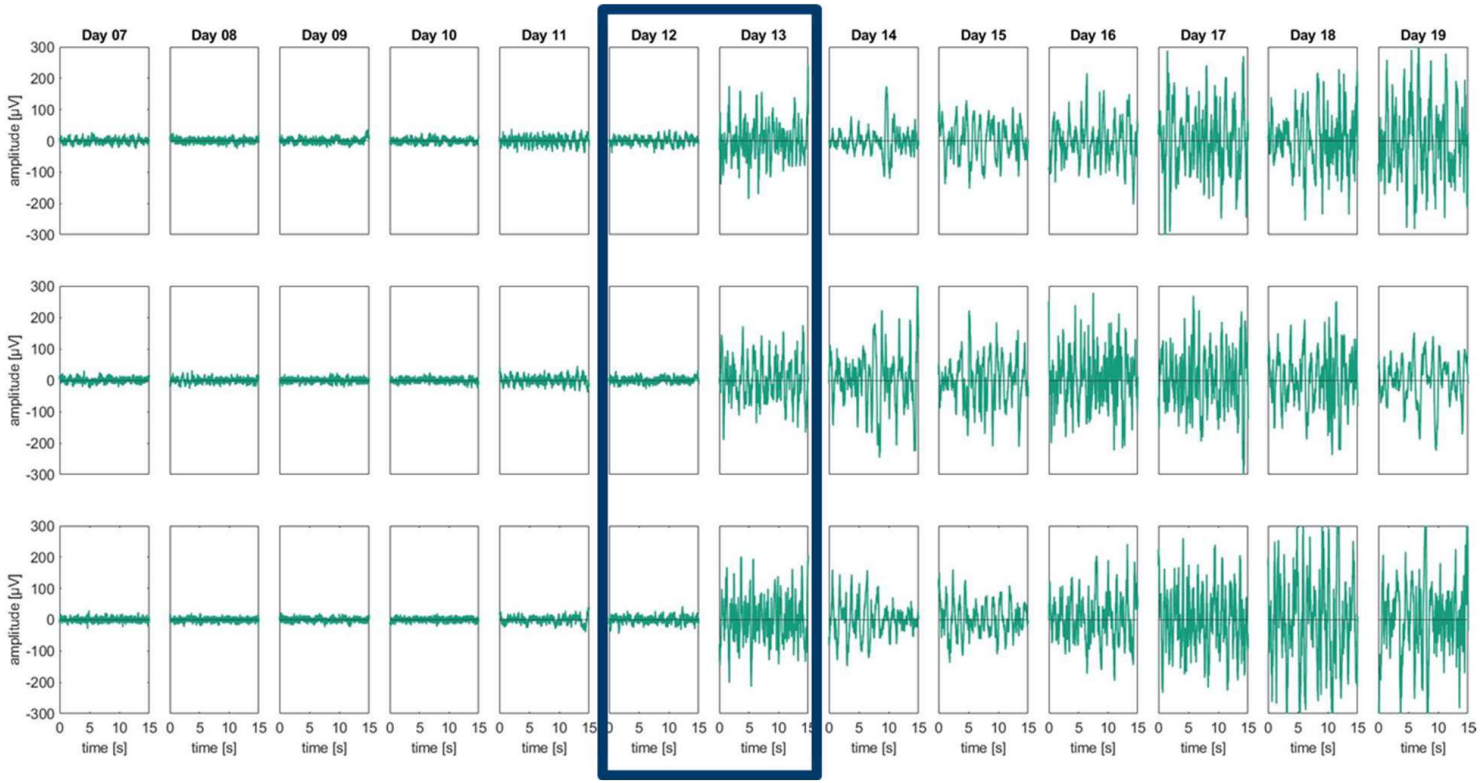
2023 (Aug)
- Parliament revises act
- Ban on terminating incubation changed to day 13 (originally day 7)

2024 (Jan)
- **Ban on terminating incubation from day 13 becomes applicable**

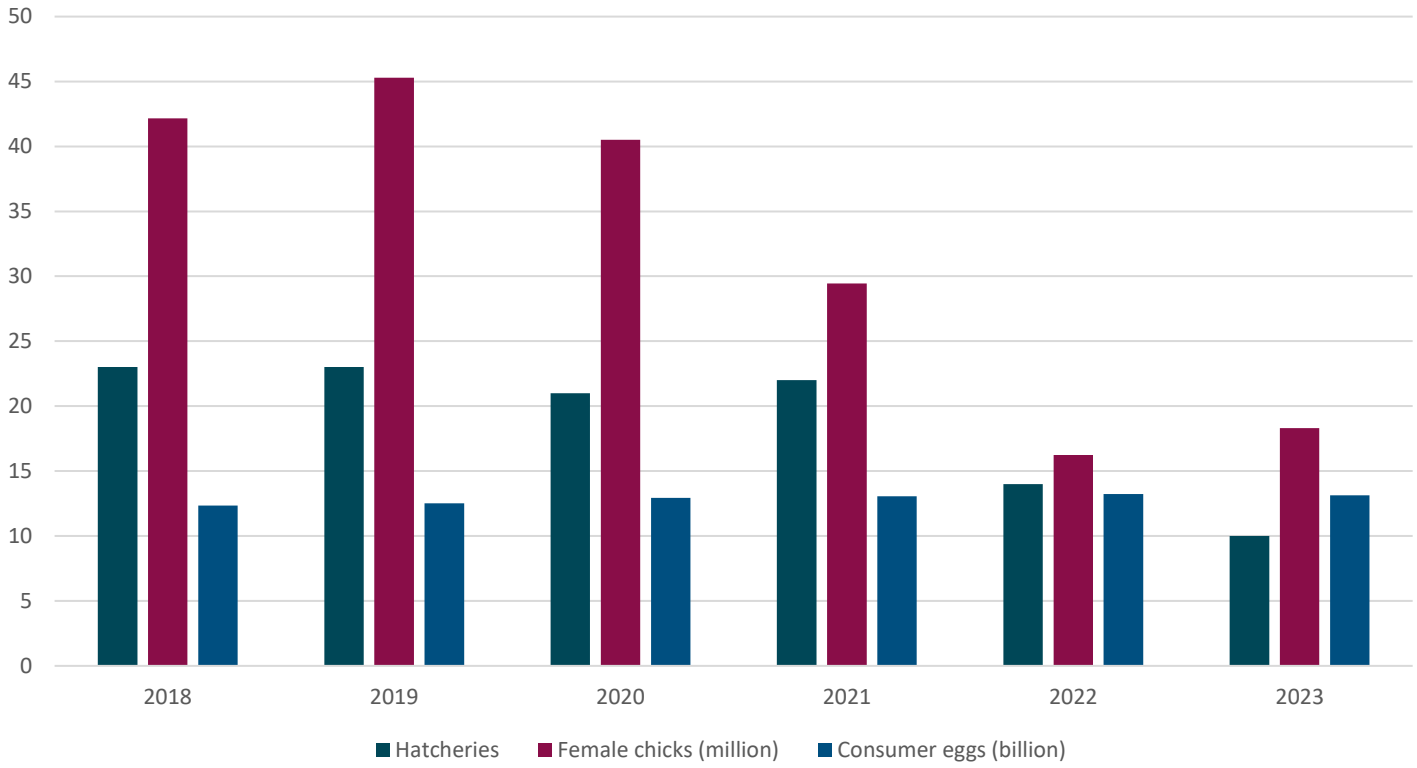
Ban on terminating incubation from day 13 (1 of 2)



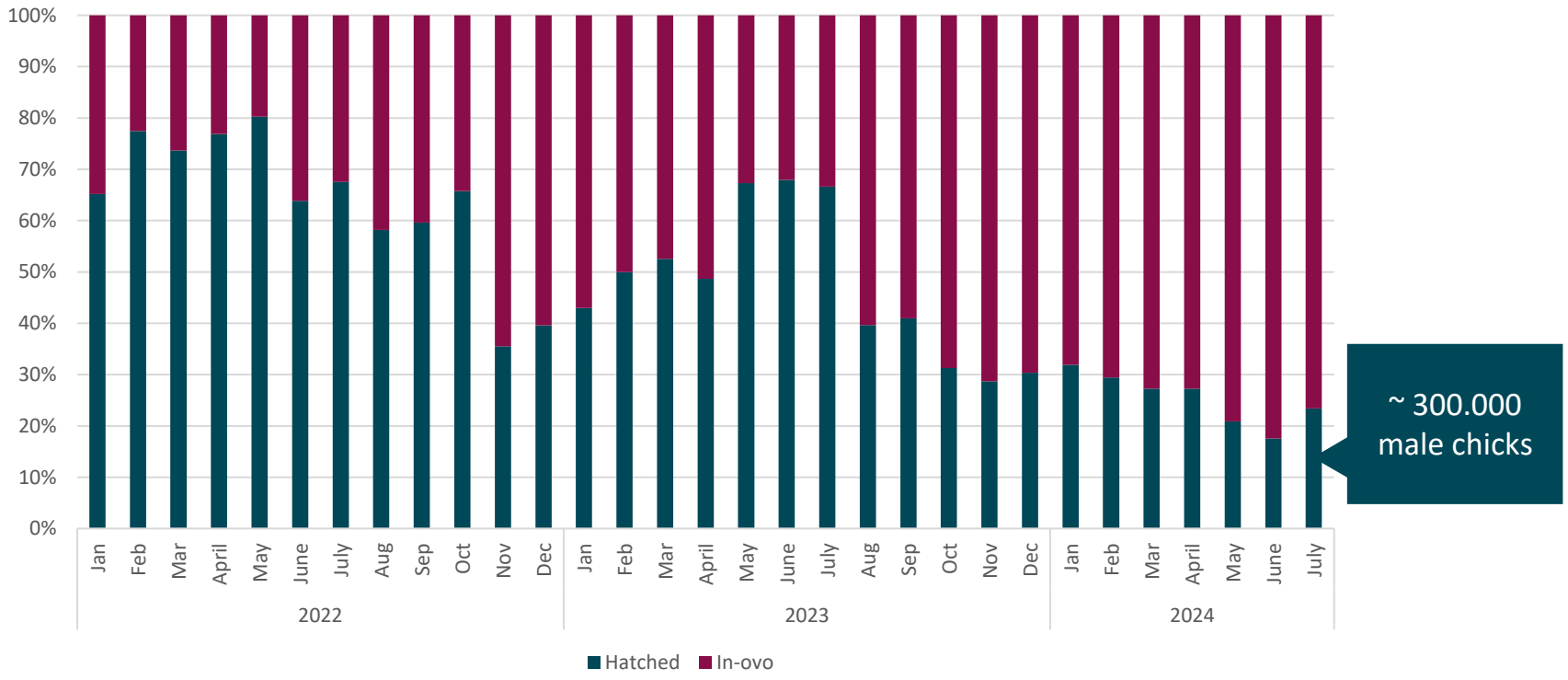
Ban on terminating incubation from day 13 (2 of 2)



Production of chicks & eggs in Germany



Ban implementation: fate of male chicks



In-ovo methods supplying the German market

Fluid-based

- Respeggt (DE)
- PLANTegg (DE)
- Ella (NL)

Image-based

- CHEGGY (DE)
- Genus Focus (DE)

Thank you for your attention!

‘I want to propose to phase out this practice and I hope I can count on your support.’

Commissioner Stella Kyriakides
Meeting of the Council
17 October 2022

Contact

Federal Ministry of Food and Agriculture
Unit 321 ‘Animal Welfare’
Rochusstraße 1
53123 Bonn

www.bmel.de

Simon Schreiber

Simon.Schreiber@bmel.bund.de
+49 22 89 95 29 42 52

Image credits
- slide 3: https://www.agri-at.com/en/products/in-ovo-sex-determination (no longer available)
- slide 4: https://doi.org/10.3390/ani13182839
- this slide: https://audiovisual.ec.europa.eu/en/album/M-003289

Federal Ministry
of Food
and Agriculture

Austria
K. Eder

Ban on culling viable chicks in Austria

Co-funded by the European Union

Ban on culling viable chicks in Austria

Fifth EURCAW-Poultry-SFA & EU Member State Competent Authorities network meeting, 1st -2nd October 2024

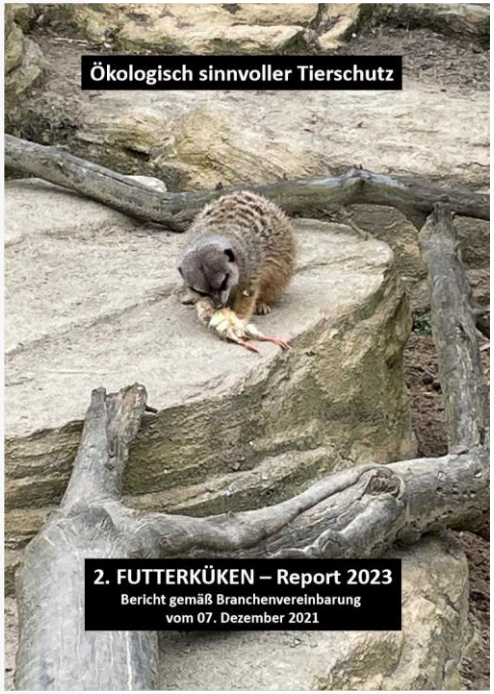
Katrina Eder

Austrian Animal Welfare Centre

Fachstelle für tiergerechte Tierhaltung und Tierschutz

Ban on culling viable chicks in Austria

- **Since 2022** Agreement of the Austrian poultry industry, zoos, bird of prey stations
- **Since 2023** Prohibition of killing viable chicks anchored in the Animal Welfare Act.



QGV 2. Futterküken – Report 2023;

Fachstelle für
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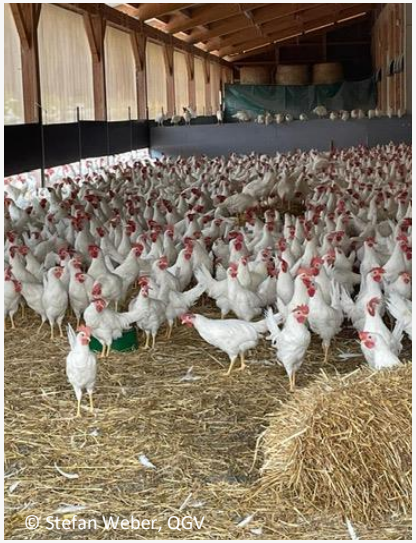
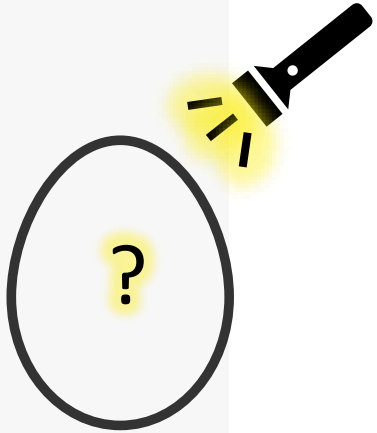
Austrian Agreement since 2022

„ 3-Pillar Model“

- Use as feed chicks
- Raising male chicks
- Early gender detection in the egg





Fachstelle für
tiergerechte Tierhaltung und Tierschutz

Animal welfare requirements in Austria since 2023

§ 6 Austrian Animal Welfare Act*

(2a) The macerating of live chicks is prohibited. **The killing of viable chicks is also prohibited unless they are used to produce feed**. The hatchery must provide proof of this purpose at any time upon request to the district administrative authority.

(2b) If a method is used for the early detection of gender during incubation and the sorting of chicks in the embryonic stage, this is only permitted with anesthesia from the seventh day of incubation. Sorting is prohibited after the 14th day of incubation.

*Bundesgesetz über den Schutz der Tiere (Tierschutzgesetz – TSchG), BGBl. I Nr. 118/2004, idF BGBl. I Nr. 124/2024

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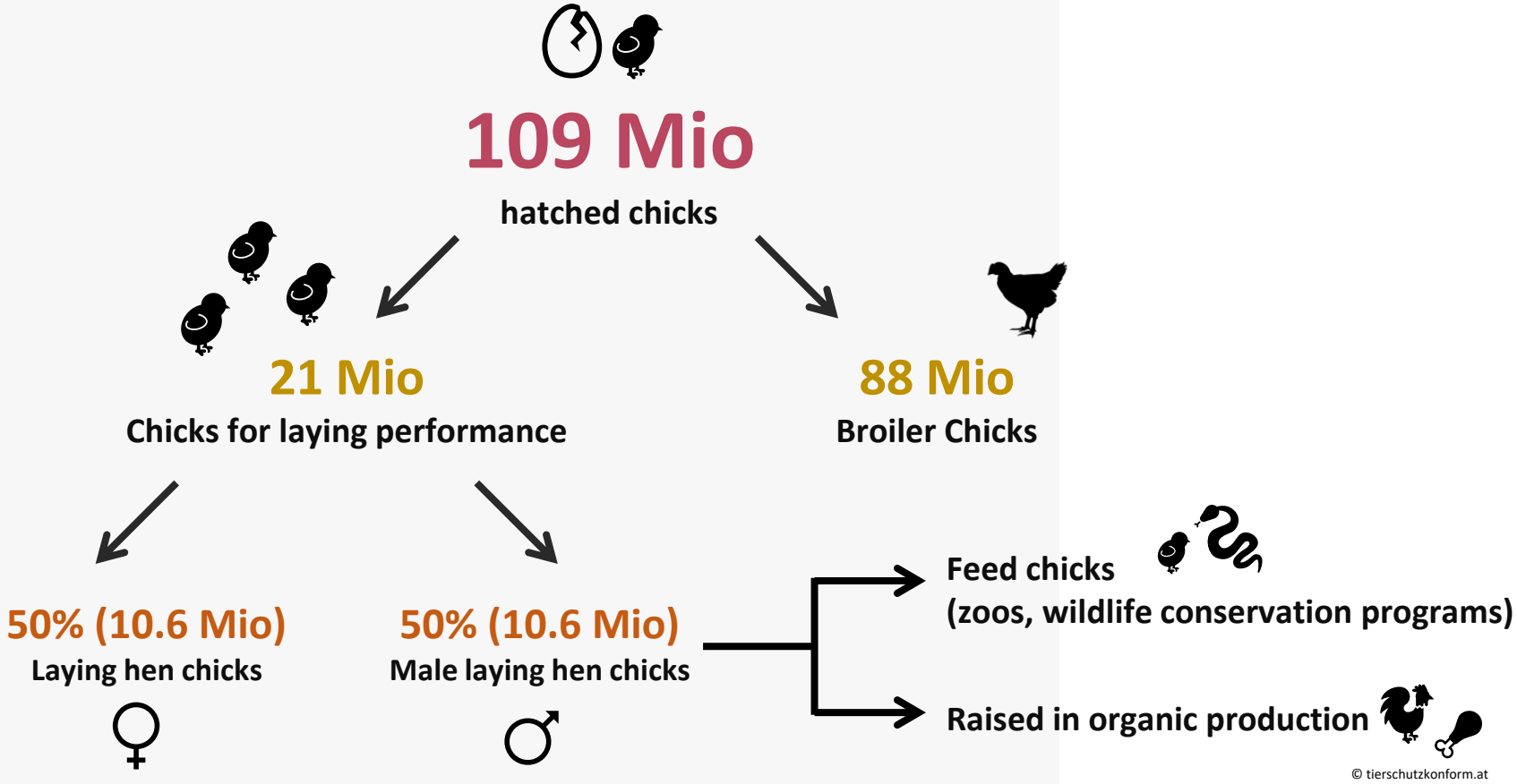
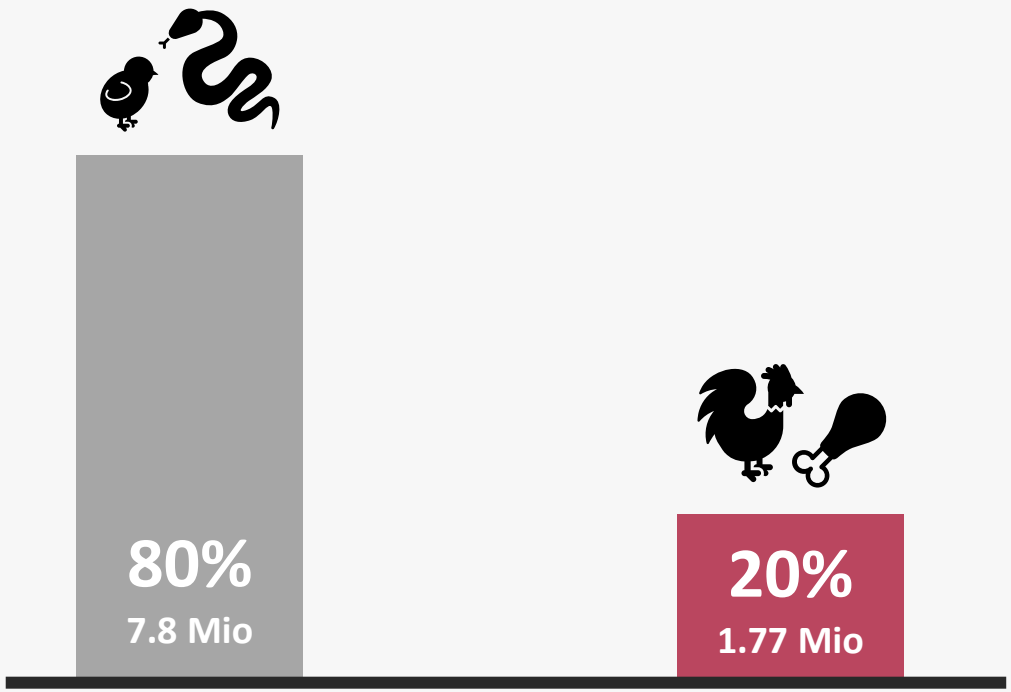


Data: QGV, Futterkükenreport 2023, Statistik Austria



Data: QGV, Futterkükenreport 2023, Statistik Austria

„Brother Rooster“ Programs

- In Austrian organic production, 100% of the male chicks are raised.
- The costs of raising male layinghen chicks must also be covered by the price of the eggs and the price of the pullets.
- There are guidelines for raising male layinghen chicks in organic farming.

Italy
A. Ferraro

Chaired by A. Riber

EURCAW-Poultry-SFA

Co-funded by
the European Union

EURCAW-Poultry-SFA & EU Member State Competent Authorities network meeting

DVM Antonio Ferraro

Ministry of Health - General Directorate for Animal Health

Office 6 for animal welfare

October 2, 2024

Decree n. 205 December, 7, 2023

From 31 December 2026, the selective killing of male-line chicks of hens of the Gallus gallus domesticus species is prohibited

Exceptions:

Emergencies due to malfunction of egg-sexing machines

Egg-sexing errors

Depopulation

Public health and safety

Animals killed during scientific experiments

In any case from 31 December 2026 male chicks can be killed only with methods alternative to maceration.

Questions?

Interactive discussion

Chaired by Virginie Michel

EURCAW-Poultry-SFA

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➢ Broiler

Activity No.	Description	
2.1	Factsheet providing recommendations for how to **assess litter quality with a visual scoring scale** on farm.	
	Study investigating whether **play behaviour collected after transects** can be validated as an **indicator of positive welfare**.	Factsheet If validated: Practical description of the method for use by official inspectors during on-farm visits. If not validated: More general description of play behaviour as a positive welfare indicator. A report on the study will be written.
3.2	Study investigating the optimal broiler age for providing access to the veranda during different seasons. **Recommendations will be provided in study report**.	
3.3	Examples of potential good practices on broiler farms: - Good management practices for litter maintenance on broiler farms - Hatching on-farm of broilers - How to reduce hunger in broiler breeders - How to avoid water restriction in broiler breeders	

Laying hens

- **Environmental enrichment:**
  - Literature review on the use of environmental enrichments for laying hens,
  - From the review: a factsheet will be developed on the resource-based indicators of environmental enrichment laying hens.

- **Fitness for transport:**
  - In 2024: review about FFT.
  - In end of 2025: workshop about the fitness for transport of end-of-lay hens to deeply discuss the indicators that can be used and gaps of knowledge with the official inspectors.
  - 2025-26: field visit to collect material.
  - Mid of 2027: practical guidelines to assess fitness for transport of end-of-lay hens to deliver tools immediately usable by inspectors assessing animal welfare.
  - In end of 2027: webinar (training) about FFT assessment in end of lay hens.

Turkeys

- **Activity 3.1** To do a literature **review** on the use of environmental enrichments on turkey farms

The aim of this deliverable is to identify commercial enrichments that have been assessed by scientific papers for the actual use by birds and the impact on their welfare.

- **Activity 2.1** To develop a **factsheet** on the resource-based indicator of environmental enrichment turkey barns

Based on the review on environmental enrichment in broiler, laying hen and turkey barns, three factsheets will be developed on the resource-based indicator of environmental enrichment in broiler, laying hen and turkey barns (M36).

- **Activity 3.3** To develop a **factsheet** on Use of sick pens in the production of turkeys on farm

➢ Slaughter and killing: Depopulation

Deliverables in 2024	Deliverables in 2025
+ Report on **the welfare consequences and efficacy of the different depopulation methods** and procedures used in the EU	+ Elaboration of **« good practices »** for at least one depopulation method **(optional, M12)**
+ **Decision tree for the selection of the most appropriate depopulation method** acccording to the characteristics of the affected farm and the species at stake	+ Creation of an **online**, more sophisticated, **version of the decision tree** to facilitate its use by the competent authorities **(M12)**
+ Suggestions for **welfare assessment** on depopulation sites	+ **Organization of a webinar** to present our **refined suggestions for welfare assessment** based on operators' feedback **(M11)**

➢ Slaughter and killing: other activities

Sub-activity 3.3.1 Reporting of scientific and technical knowledge

- A review of current **on-farm killing methods for rabbits** across three categories: growing rabbits, breeding rabbits, and kits (2026);

- A guidance describing the content of the instructions to be checked by the competent authorities for **assessing a stunning and killing equipment** (2027)

Sub-activity 3.3.2 Scientific and technical studies to validate indicators and methods

- Report on the scientific study on commercial slaughterhouses of **ducks stunned with electrical waterbath devices** (M29).

➢ Rabbits

Activity 2

- ❑ **A factsheet on the assessment of thermal stress for rabbits on-farm (2025)**
- ❑ **A factsheet on how to catch rabbits for transportation (2026)** for loading rabbits from cages into containers or crates and transfer into transport vehicles.

Activity 3

- ❑ **A review on gnawing material and general enrichment for rabbits + a thematic factsheet (2025):** description of the benefits of introducing this material in the housing of growing and breeding rabbits in order to reduce stress and increase the repertoire of positive behaviours, emphasizing the importance in improving rabbit welfare.

➢ Training

3 Reviews of existing training activities and materials:

- Depopulation/Killing rabbit on farm
- Fitness for transport
- Depopulation/killing poultry on farm

4 Webinars:

- Assessment for poultry welfare on depopulation farms.
- Indicators of the state of consciousness after waterbath stunning for ducks
- Fitness for transport
- On-farm killing methods for rabbits

3 knowledge pills

Topics to be determined: **suggestions are welcome!**

➢ Activity 5 Disseminating research and innovations

✓ 5.1 Centre website and knowledge base implementation and maintenance

- **Informative website and knowledge base** fulfilling the needs for disseminating research findings, innovations and technical expertise.
- **Production of quarterly newsletters**.
- **Create and maintain the EURCAW-Poultry-SFA LinkedIn** account.

✓ 5.2 Development of dissemination tools to promote knowledge

- **Develop at least one infographic**(s) based on EURCAW-Poultry-SFA Q2E-answers.
- **Develop at least one video on selected topics of interest** within the Centre's outputs to promote the knowledge produced (link with activity 4).

✓ 5.3 Development of a Community of Practice

- **Feasibility and development if previous established CoP are successful, of a EURCAW-Poultry-SFA pilot Community of Practice.** (topic discussed later)

✓ 5.4 Translation of outputs in national languages

- **21 Factsheets translated into 5 languages (DE, ES, FR, IT, PL)**.

Interactive discussion: Roadshows

EURCAW-poultry SFA will organise maximum 3 Roadshows per year in a total of maximum 9 MSs over the 3-years period.

One Roadshow per year will be **physical** and the other ones will be online.

Delegates will be from MSs CAs (e.g., inspectors, policy workers, NCPs,) of the country where the roadshow will take place.

The meeting will be held as much as possible in the language of the country (interpretation will be organised).

The topics are to be proposed by the MSs, to allow targeted support. They should, as much as possible, be linked to MSs' interest and priorities.

If possible, a field visit will be added to the program in collaboration with local experts during the meetings.

Interactive discussion: Roadshows

If the road show is targeting DK, ES, FR, IT, it will be organised by the national team from the four consortium partners.

If the road show is targeting other EU MSs, it will be organised by a team from one or two of the four consortium partners together with local experts.

→ The local and EURCAW experts will provide the translation of documents and interpretation of presentations and discussion during the road shows as well as a written summary of the topics discussed, points raised, advice given and agreed follow-up actions, if any.

→ The summary, the original and the translated documents will be uploaded in English and in the language of the MS concerned on the centre's website in a dedicated area.

Interactive discussion: Roadshows

Open discussion:

→Results of the padlet

Questions?

Interactive discussion: Community of Practice

Community of practice: dedicated space on a website for discussion on specific topics between CA and field inspectors of different MSs.

The work will consist in following other EURCAWs' Community of Practice (CoP) creation and development.
If other EURCAWs' CoP are successful, a pilot for the EURCAW-Poultry-SFA CoP will be explored to assess the benefits of a knowledge exchange between EU MS CAs (e.g. Official Inspectors, policy workers, national contact points…) and EURCAW-Poultry-SFA.

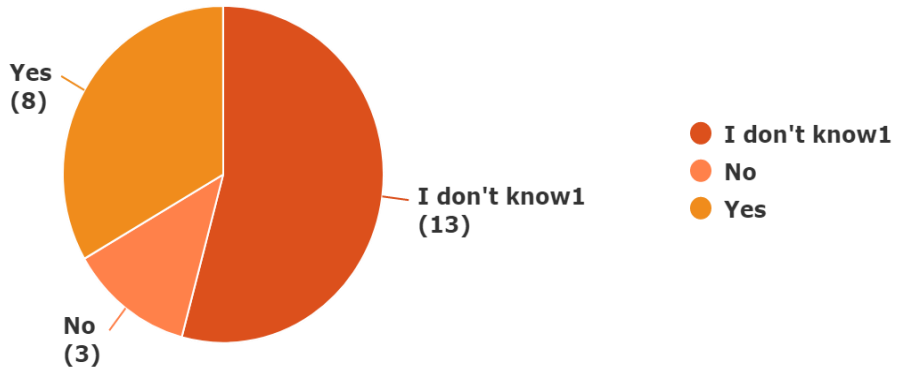
Objective:

- To follow EURCAW-Pigs and EURCAW-Ruminants & Equines CoPs creation and development.
- In case the EURCAWs' CoPs are successful, to investigate the feasibility of a pilot CoP.
- If feasible, develop a pilot CoP.
  - ✓ The registration form would be sent to the participants trough CA national contact points to ensure that the aimed audience is reached.
  - ✓ The connection would be password protected to enable the exchange of knowledge and experience by CAs in a safe environment.

Interactive discussion: Community of Practice

Results of the survey conducted during 2024

Is your Member State interested to be part of a EURCAW-Poultry-SFA community of Practice?

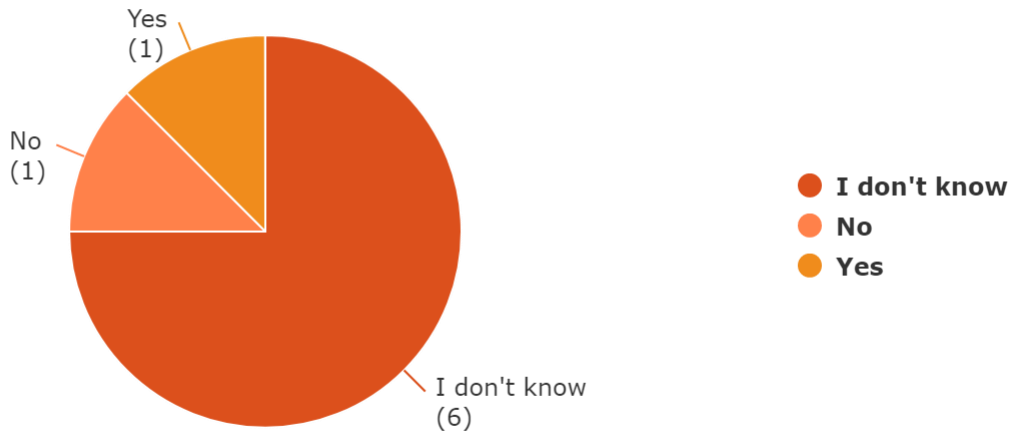


If yes, which kind of audience should have access to it?

	N
only Competent Authority contact points	3
only official inspectors	0
mix of Competent Authority contact points and Vet inspectors.	5
TOTAL	8

Results of the survey conducted during 2024

Will you have the time to actively contribute to this Community of Practice?



If no, why?

Rechercher...

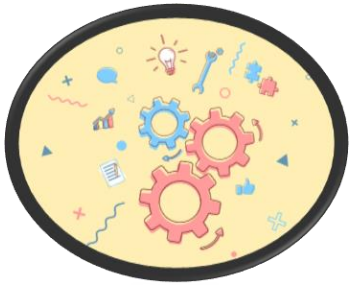
"It depends how demanding and time consuming is this contribution"

Open discussion

Domain

What we care about

Practice



What we do together about it

Community

Who we do it with

Questions?

Inroduction

- Legislation 1099/2009 states that 'Products marketed or advertised as restraining or stunning equipment shall only be sold when accompanied by appropriate instructions concerning their use in a manner which ensures optimal conditions for the welfare of animals.

- Those instructions shall also be made publicly available by the manufacturers via the Internet'.

- Some Member States have already raised issues about new equipment being installed, for which proof of efficiency has not been made available.

Introduction

- For the next Work Program (2025 –2027) the four EURCAWs will jointly work on a 'guidance for the assessment of stunning equipment'.

- The activity consists in developing a guidance describing the content of the instructions to be checked by the competent authorities.

- This will harmonize the information on the equipment that should be available on internet.

Introduction

- EURCAW-Poultry-SFA sent a questionnaire to MSs to know the interest in this topic and if they have any material of use about this topic.

- The aim was to have a better understanding about the possible needs of MSs and the type of work that EURCAW can provide on this topic.

Summary of the survey for poultry and rabbits

- 15 MSs answered the survey, all of them except one were interested in EURCAWS developing a guidance for evaluating the effectiveness (in terms of unconsciousness and induction of death) of equipment used for slaughter and killing on farms and slaughterhouses.

- 12 of 15 MSs carry out an assessment to verify whether the stunning equipment in use (on farms and slaughterhouses) comply with Article 8 of Council Regulation (EC) No. 1099/2009.

- Most of the MSs carry out the assessment when the animal welfare assessments are performed, only three of them do it before the installation of the equipment.

Summary of the survey for poultry and rabbits

- In most of the MSs the assessment is conducted by official inspectors, in France it's done by certification bodies in some locations.

- In most of the MS the assessment is documentary (key parameters, registers) and physical (ABIs assessment).

Common work across EURCAWs: 'Guidance for the assessment of stunning equipment'

- **Open discussion**

How do you verify if the stunning equipment complies with Article 8 of Council Regulation (EC) No. 1099/2009.

Do you think it will be good to have a common and harmonized guidance to verify if the stunning equipment complies with Article 8 of Council Regulation (EC) No. 1099/2009 among MS?

- Do you have any material (e.g. guidance or checklist,…)?
- If yes, are you willing to share this material?

Interactive discussion: Common work across EURCAWs

From 2025 onwards, the **4 EURCAWs will work jointly on dissemination tools**:

- A 'pilot activity' aiming to improve accessibility to factsheets and other practice-ready documents for official inspectors by **creating downloadable audio versions in multiple languages**, based on current translations.

→*This pilot activity will be led by EURCAW Ruminants & Equines*

- 'Development of a **pilot of an APP for on-field inspectors**'. Explore the possibility to partially reuse already available tools for further development, in particular, the CARE4DAIRY APP and its source IT systems.

→ *This pilot activity will be led by EURCAW Pigs*

Questions?

Final question?

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anses

IRTA Institute of Agrifood Research and Technology

AARHUS UNIVERSITY

IZSLER

Wrap up

Co-funded by the European Union

anses

IRTA Institute of Agrifood Research and Technology

AARHUS UNIVERSITY

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ONE PICTURE ALL TOGETHER FOR OUR NEWSLETTER !

European Union Reference Centre for Animal Welfare *Poultry SFA*

Newsletter EURCAW-Poultry-SFA

20 September 2024, Edition 9

EURCAW-Poultry-SFA Questions to EURCAW (Q2E)

All Q2E answers are available online.

- **Q2E-Poultry-SFA-2024-002** (ongoing) Killing of unhatched chicks
- Q2E-Poultry-SFA-2024-003 Pullet lighting improvement
- Q2E-Poultry-SFA-2024-004 Broiler lighting improvement
- **Q2E-Poultry-SFA-2024-005** (ongoing) Broiler optimum feeding frequency
- **Q2E-Poultry-SFA-2024-006** (ongoing) Emergency and alarm system to guarantee animal welfare

→ **The Q2E webform is available online** here or https://survey.anses.fr/SurveyServer/s/DSL/Querywebform1Q3/questionnaire.htm

→ You can download here the webform in PDF to prepare your Q2E submission.

Manual handling and carrying a turkey

The Centre is proud of presenting you its latest infographic issued from a Q2E answer, realized in collaboration with La Chaire bien-être animal: for manual handling and carrying turkeys. A graphic tool for operators in the field for improved turkey welfare ! The document is available here.

Save the date!!

The next EURCAW-Poultry-SFA **webinar** will take place on November 12th , 2024 for 2 hours. This webinar will be on **'Welfare assessment during electrical stunning in rabbits'.**

EURCAW-Poultry-SFA website

Based on the feedback received from our target audience, on the EURCAW-Poultry-SFA website, the Centre made possible modifications on the website architecture. Take a look!

- In the sub-page 'scientific output overview' you are now able to download summary deliverables Excel tables per priority axes.
- Factsheets have been sorted out in 3 sub-pages: Indicators & Iceberg indicators, thematic and Good practices
- Q2E answers have been sorted out into 3 sub-pages: slaughter and killing, husbandry and transport.

www.eurcaw-poultry-sfa.eu

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Closure

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Thank you for your attention!!

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