Webishop

Depopulation methods in cases of Avian Influenza

Co-funded by the European Union

anses

IRTA Institute of Agrifood Research and Technology

AARHUS UNIVERSITY

IZSLER

Audience

European Commission

DG Santé

1 member

16 countries

1 EFTA country

158 participants

At least 70 registered to the workshop

Agenda of the webishop

I. WEBINAR

Plenary

09h00 – 09h15: Welcome & introduction
(Virginie Michel & Louise Kremer)

09h15 – 10h00: Presentation of key deliverables
(Louise Kremer)

10h00- 10h15: Group exercise
(Louise Kremer)

II. WORKSHOP

Group sessions

10h30 – 11h45: Discussion on **one** welfare assessment protocol for poultry

Plenary

11h45 – 11h50: Your feedback
(Emilie Nehlig)

11h50 – 12h00: Conclusion
(Virginie Michel, Antonio Velarde & Louise Kremer)

Ground rules

Webinar Etiquette

Microphones should be muted when you're not speaking

Keeping your mic muted when not in use helps reduce background noise and disruptions for other participants.

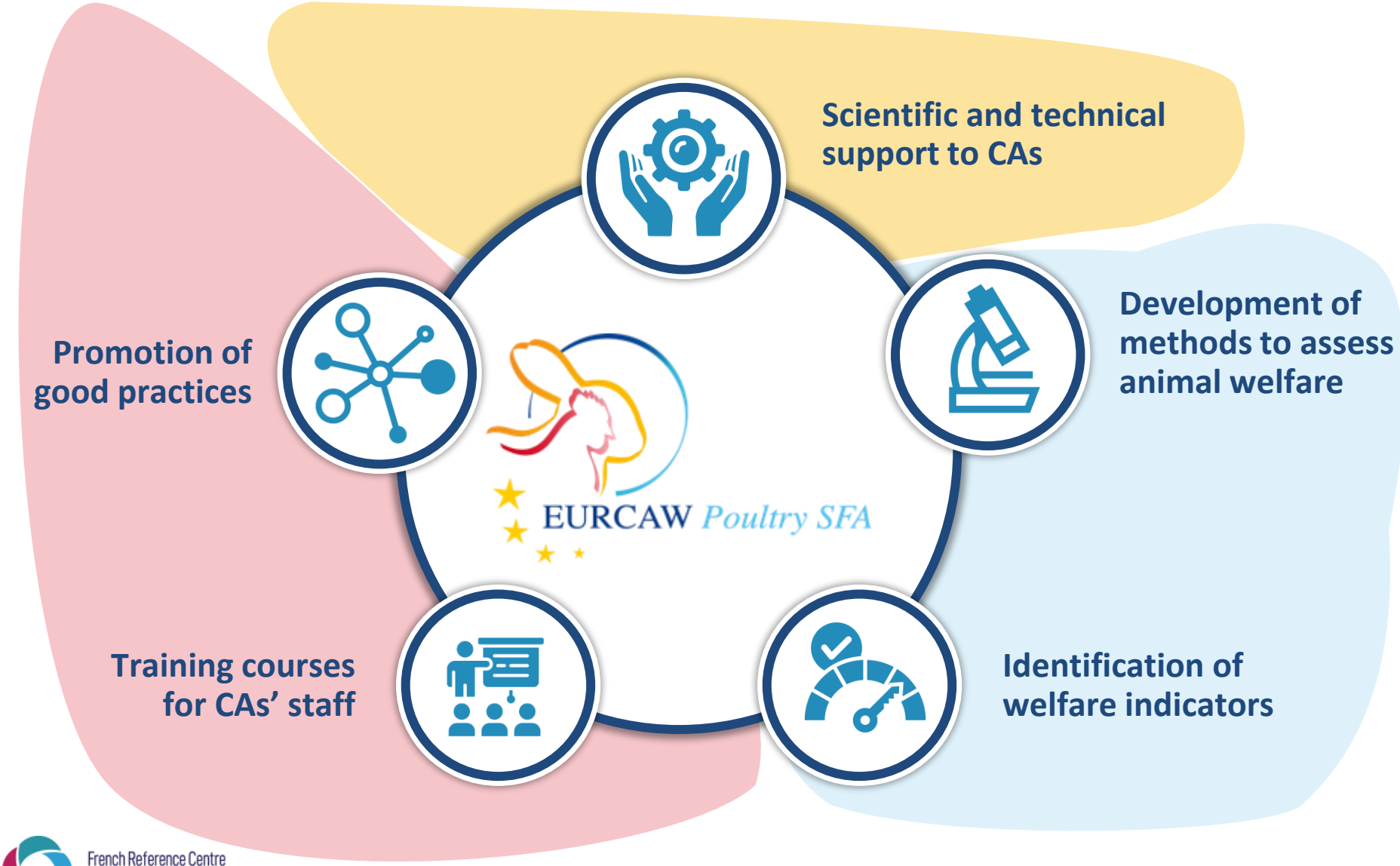
Please write your questions in the chat or use the raise hand function

Use the chat or raise hand feature to ask questions, ensuring a smooth and organized Q&A session.

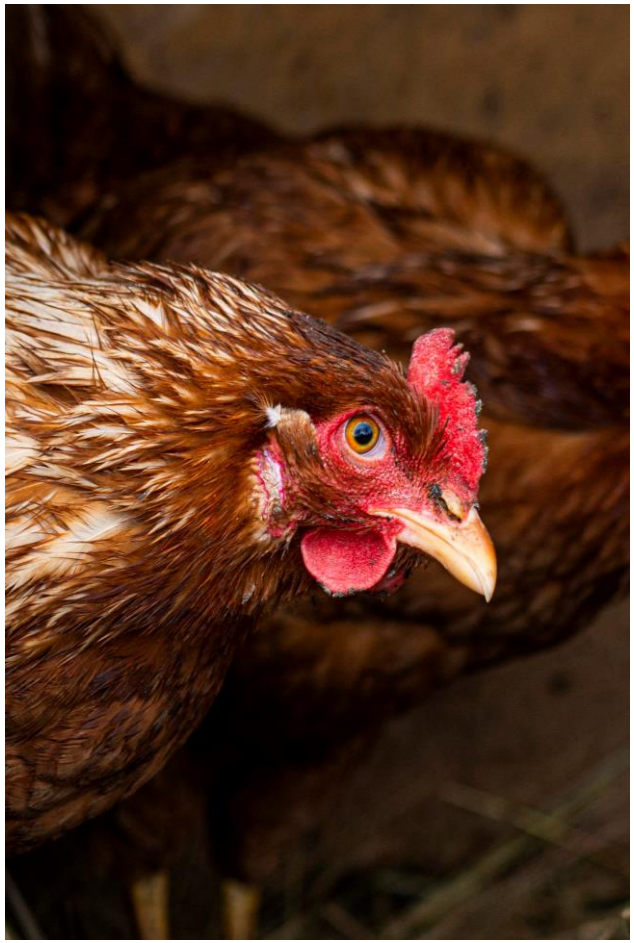
The webinar will be available online after the session

The recording of the webinar will be made available for those who were unable to attend or wish to review the content.

The EURCAW-Poultry-SFA



Introduction



Joint activity since 2023

Collaboration between the EURCAW-Poultry-SFA and the French Reference Centre for Animal Welfare

In response to a european need

At the request of the Competent Authorities of several member states

To promote more ethical depopulation practices in the event of Avian Influenza

Recommendation of the most appropriate depopulation method based on farm characteristics and the species concerned

Deliverables

Part I. Webinar

Comprehensive report

Objective

+ **Procedures used in the EU**
+ Effectiveness and impact on animal welfare

Scope

+ The **11 most used depopulation methods** in the EU

Method

+ 10 surveys
+ 2 workshops

Selection guide

Objective

+ Guidance on the **selection of the most appropriate method**

Part II. Workshop

Welfare assessment protocols

Objective

+ Practical tool for **standardised monitoring of welfare** on depopulation site

Scope

+ Three methods among the top-ranked in terms of welfare

Method

+ 2-days internal consultation
+ **Feedback collection from field experts**

EURCAW Poultry SFA

French Reference Centre for Animal Welfare

WEBINAR

Depopulation methods used in the EU

Methods at the group level

Containerized gassing (N=17)

Pre-filling

Containers are pre-filled with gas (CO_2 > 70 %) and **poultry is added in layers**

Gradual filling

Poultry is inserted in **modules placed into a gas-tight metal container**

Gas (CO_2, CO_2-Inert, CO) is then added

House-gassing (N=14)

Whole-house gassing (N=13)

Administration of CO_2 (> 40 % CO_2) or N_2 (<2-3 % O_2) in the house

Partial-house gassing (N=1)

Gassing in litter-based system with CO_2 pellets in a dedicated subpen

Electrical waterbath (N=4)*

Birds are **shackled on a line** that passes over a **water-filled trough**, which is **electrically charged**

The exposure to the electrical current causes an **epileptic seizure** and a **cardiac arrest**

Methods at the group level

Containerized gassing (N=17)

Pre-filling

Containers are pre-filled with gas (CO_2 > 70 %) and **poultry is added in layers**

Gradual filling

Poultry is inserted in **modules placed into a gas-tight metal container**
Gas (CO_2, CO_2-Inert, CO) is then added

Methods at the group level

House-gassing (N=14)

Whole-house gassing (N=13)

Administration of CO_2 (> 40 % CO_2) or N_2 (<2-3 % O_2) in the house

Partial-house gassing (N=1)

Gassing in litter-based system with CO_2 pellets in a dedicated subpen

Methods at the group level

House-gassing (N=14)

Partial-house gassing (N=1)

Gassing in litter-based system with CO_2 pellets in a dedicated subpen

CO_2 pellets **should not be used to kill birds in bags** due to sublimation inefficiencies

Methods at the group level

Electrical waterbath (N=4)*

Birds are **shackled on a line** that passes over a **water-filled trough**, which is **electrically charged**

The exposure to the electrical current causes an **epileptic seizure** and a **cardiac arrest**

Methods at the individual level

Lethal injection (N=14)

Administration of **pentobarbital** or **T61** most often intraperitoneally

Injections in **the vein and occipital sinus** should be preferred.
T61 should only be used on **unconscious poultry**


From Virginie Michel


Adapted from HSA

Captive bolt stunning (N=5)

Administration of a blow to the head using a penetrative or a **non-penetrative bolt stunners**

Commercially-available penetrative bolt stunners are less effective on heavy poultry than non-penetrative ones

Methods at the individual level

Manual blunt-force trauma (N= 3)

Firm and accurate blow to the head of a bird, reportedly using a **hard tool** (e.g., metal pipe)

The blow has to be delivered with a hard tool of **sufficient mass** and **with enough velocity**

Electrical methods

Head-to-body killing (N=2)

Exposure of the body to an electric current delivered via **different equipment, whose efficacy varies**

Head-only stunning (N=2)

Exposure of the brain to an electrical current, reportedly using tongs

Cervical dislocation (N= 15)

Manual or **mechanical stretching and twisting of the neck** causing skull–spine separation and carotid severance

Neck-crushing equipment should **not** be used

Methods at the individual level

Example of H2H euthanizer

Electrical methods

Head-to-body killing
(N=2)
Exposure of the body to an electric current delivered via **different equipment, whose efficacy varies**

Head-only stunning
(N=2)
Exposure of **the brain** to an electrical current, reportedly using tongs

Adapted from HSA

Methods at the individual level

Livetec Nex

Cervical dislocation (N= 15)

Manual or **mechanical stretching and twisting of the neck** causing skull–spine separation and carotid severance

Neck-crushing equipment should **not** be used

EURCAW Poultry SFA

French Reference Centre for Animal Welfare

WEBINAR

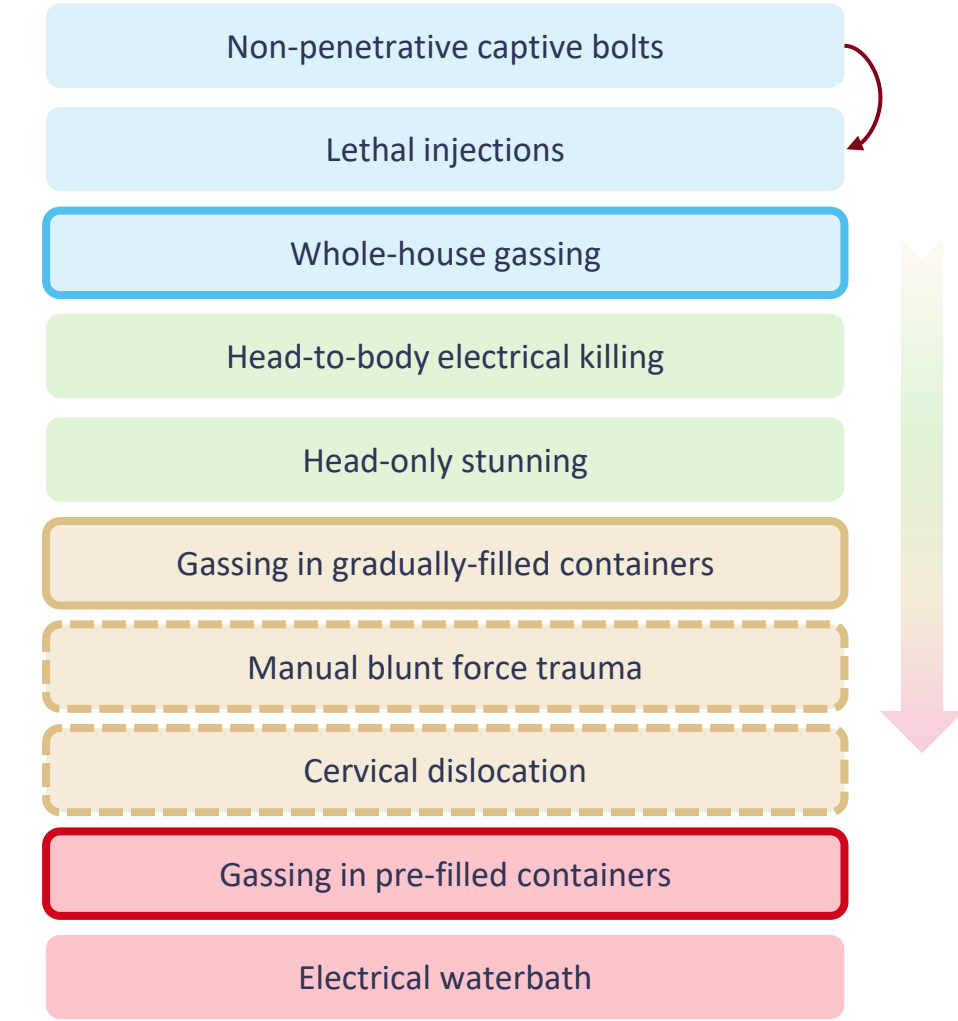
Online guide for the selection of a method

General considerations

Ranking based on poultry welfare under the assumption that **all methods are « correclty » performed**

Exclusion of factors indirectly related to poultry welfare (e.g., operator safety)

A **living document** subject to updates based on scientific and technological developments



A dynamic ranking

TWO KEY CRITERIA

Flock size

Small (hundreds of individuals)

Medium (few thousands of individuals)

Large (tens of thousands of individuals)

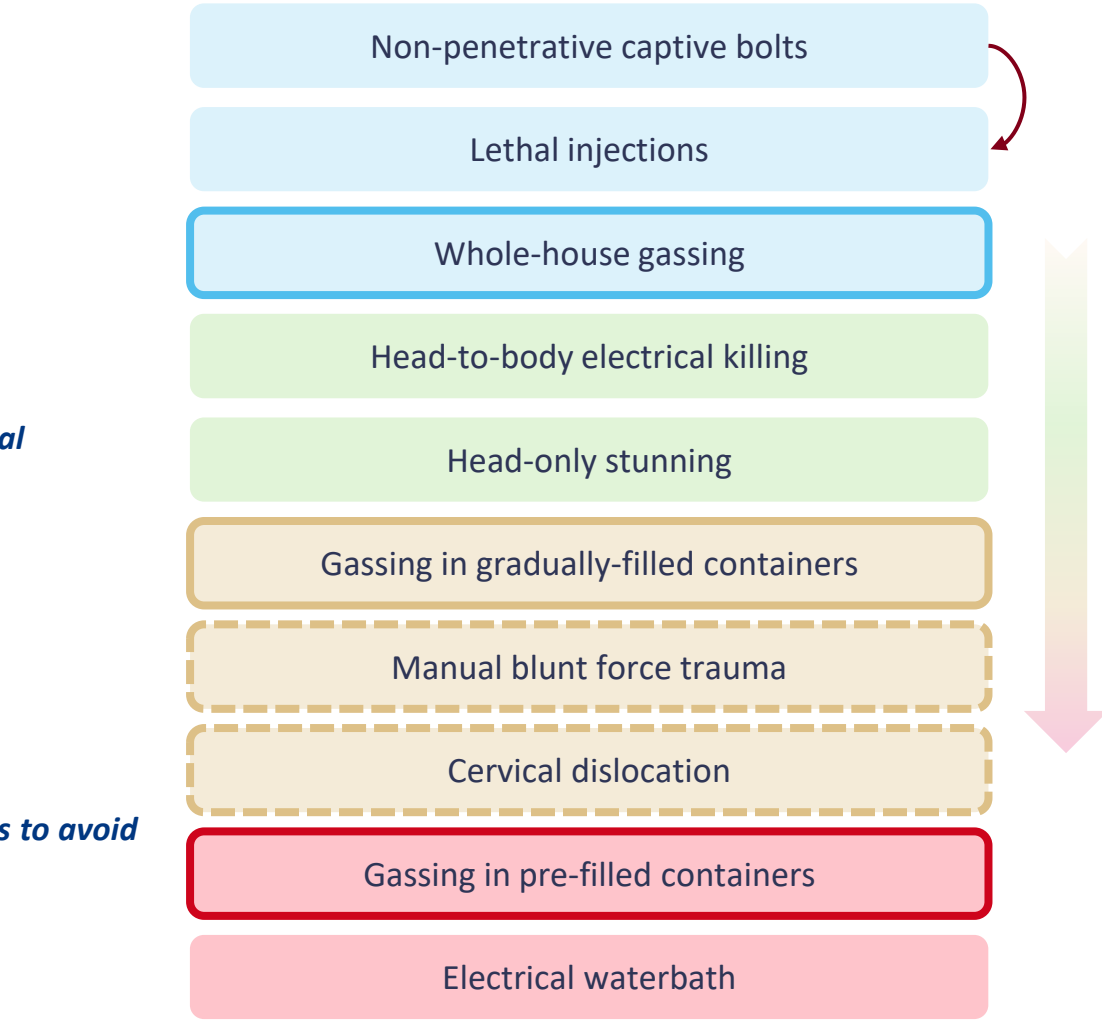
➢ ***Manual blunt for trauma and cervical dislocation for small flocks only***

Presence of clinical symptoms

Whole house gassing

Gassing in gradually filled containers

➢ ***Preference for group-based methods to avoid prolonged suffering***



A dynamic ranking

TWO KEY CRITERIA

Flock size

Small (hundreds of individuals)

Medium (few thousands of individuals)

Large (tens of thousands of individuals)

- ***Manual blunt for trauma and cervical dislocation for small flocks only***

Presence of clinical symptoms

Whole house gassing

Gassing in gradually filled containers

- ***Preference for group-based methods to avoid prolonged suffering***

Example for a flock of medium size without clinical symptoms

- Non-penetrative captive bolts
- Lethal injections
- Whole-house gassing
- Head-to-body electrical killing
- Head-only stunning
- Gassing in gradually-filled containers
- Gassing in pre-filled containers
- Electrical waterbath

A dynamic ranking

TWO KEY CRITERIA

Flock size

Small (hundreds of individuals)

Medium (few thousands of individuals)

Large (tens of thousands of individuals)

- ***Manual blunt for trauma and cervical dislocation for small flocks only***

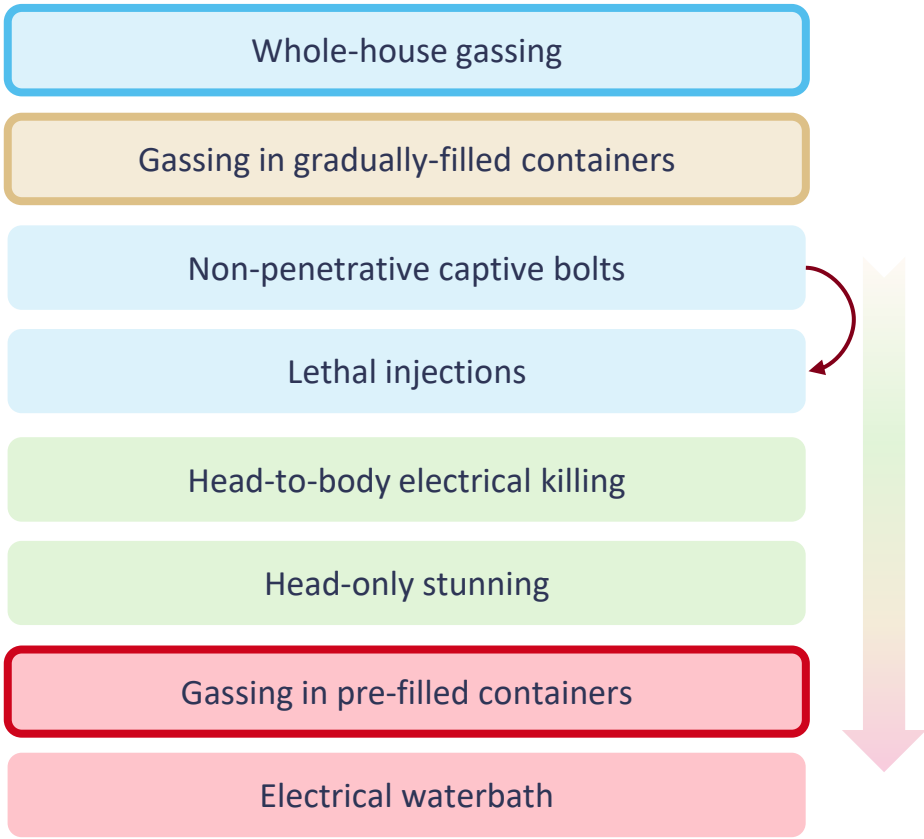
Presence of clinical symptoms

Whole house gassing

Gassing in gradually filled containers

- ***Preference for group-based methods to avoid prolonged suffering***

Example for a flock of medium size with clinical symptoms



A dynamic ranking

TWO KEY CRITERIA

Flock size

Small (hundreds of individuals)

Medium (few thousands of individuals)

Large (tens of thousands of individuals)

➢ ***Manual blunt for trauma and cervical dislocation for small flocks only***

Presence of clinical symptoms

Whole house gassing

Gassing in gradually filled containers

➢ ***Preference for group-based methods to avoid prolonged suffering***

Example for a flock of medium size with clinical symptoms

- Whole-house gassing
- Gassing in gradually-filled containers
- Non-penetrative captive bolts
- Lethal injections
- Head-to-body electrical killing
- Head-only stunning
- Gassing in pre-filled containers
- Electrical waterbath

Ranking rationale

	PROS	CONS
Non-penetrative captive bolt stunning	Immediate death Individual assessment On-site application	Restraint required, sometimes with suspension and inversion of the birds
Lethal injection		
Whole-house gassing		
Head-to-body killing		
Head-only electrical stunning		

Ranking rationale

	PROS	CONS
Gassing in gradually-filled containers	Possible removal of birds in case of problems	Death within minutes Handling required Aversive reaction to CO_2
Manual blunt force trauma		
Cervical dislocation		
Pre-filled containers		
Electrical waterbath		

A collection of decision trees

One decision tree per method, for a total of 11 **trees**

Each tree is based on 3 **categories of questions** that relate to human, technical and environmental ressources

A method is recommended for use only if **all conditions are met to ensure poultry welfare**. Otherwise, the possibility of implementing the next best method is examined, etc.

Our online tool

Questions

Do you have any questions?

A group exercise

Ranking depopulation methods based on additional decision factors

Let's switch to Mentimeter

Answer 3 quick questions to rank the depopulation methods based on key decision factors for competent authorities

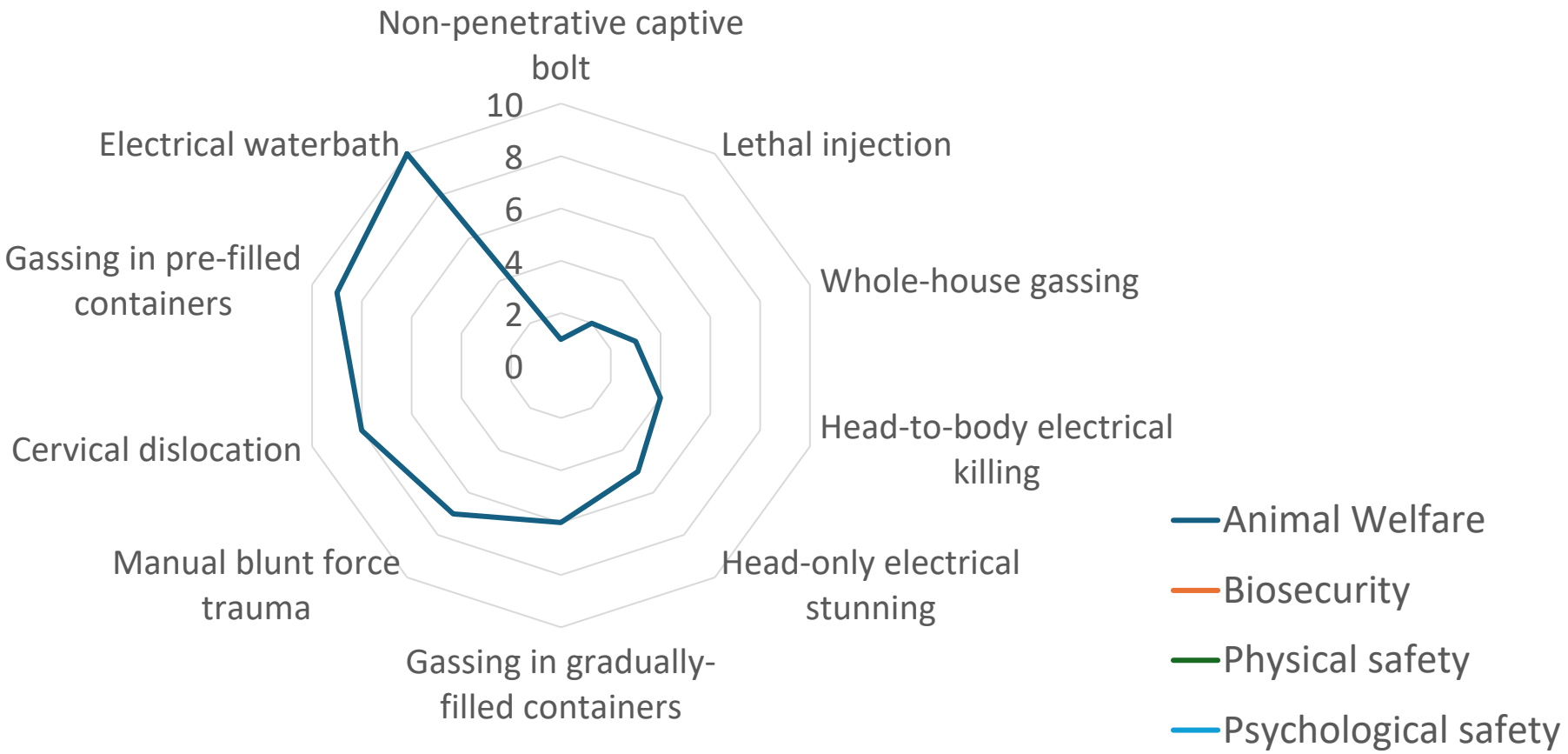
Study case

Large flock with clinical symptoms of Avian Influenza

Use your phone or browser to participate

Results

Multidimensional evaluation of depopulation methods



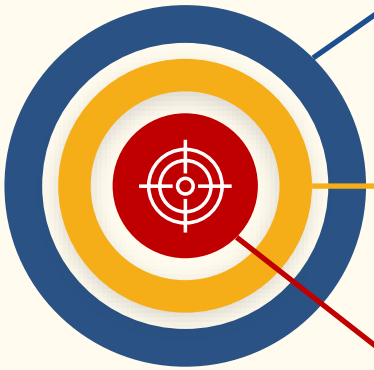
Thank you for your attention

Co-funded by the European Union

WORKSHOP

Welfare assessment protocols

Objectives



01 Familiarize yourself with the proposed **welfare assessment protocols** for captive bolt stunning, whole-house gassing, and containerized gassing

02 Share your views on the **validity** of the proposed indicators

03 Share your views on the **feasibility** of the proposed indicators

Develop practical and valid welfare assessment protocols applicable across Member States and depopulation practices

Ground rules

Respect of the **Chatham House Rule**

Group allocation to depopulation method based on preparatory survey results, country and job position

Role attribution based on expertise

Active participant	Observer
Microphone open	Microphone closed
Actively engages in discussion	Listens to the discussoin
Contributes via Padlet	Contributes via Teams chat

Please let us know if you want to **contribute as an active participant**!

Coffee break

Back at 10h30 in your working group

Co-funded by the European Union