Killing of animals for disease control

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Reg. (EC) No 1099/2009: Determinants

(48) Depopulation often involves crisis management with parallel priorities, such as animal health, public health, environment, or animal welfare. Whilst it is important that animal welfare rules are complied with at all stages in the process of depopulation, it may occur that under exceptional circumstances compliance with those rules may put human health at risk or may significantly slow down the process of eradication of a disease, thereby exposing more animals to sickness and death.

(49) Accordingly, the competent authorities should be permitted to derogate from certain provisions of this Regulation on a case-by-case basis where the animal health situation requires the emergency killing of animals and/or when no suitable alternatives are available to provide optimum welfare for them. Such derogations should not, however, be a substitute for proper planning. To this end, the level of planning should be increased and animal welfare properly integrated into contingency plans for contagious diseases.
To minimize the risk of disseminating disease agents and according to different Council Directives covering the control of disease, the animals affected by the disease shall be isolated and killed on-site, without delay. Killing on-site reduces the risk of the possible spread of the agent into the environment and leads to a focussing of e.g. cleaning, disinfection measures in one place.

- Biosecurity is an important consideration and, for this reason, non-invasive killing methods might be preferred.
- Handling and restraint requirements are different from those in slaughter facilities. Availability of restraint may make certain killing methods more practical than others.
- During the application of the disease control measure, animal welfare requirements must always be safeguarded even in an emergency. On-farm killing of animals shall not only ensure that the killing is done in a humane way, but also ensure the biosecurity and safety of personnel.

List of appropriate methods and principles for killing of animals on-site:
- mechanical: - gunshot
- captive bolt (penetrating / non-penetrating)
  - blow to the head / cervical dislocation / decapitation
- electrical: - two cycle method (large animals)
  - electrical waterbath (poultry)
- gaseous: - poultry, piglets
  - whole house gassing / container
  - pre-filled / gradually filling (invasion)
  - single gases / mixtures
  - CO₂ / CO / inert gases (N₂, Ar, He)
  - high expansive foam: CO₂ / inert gases
- chemical: - lethal injection (Barbiturates, T61, ...) / Chloral hydrate

Description of use / advantages / disadvantages / monitoring points
Proposal

- AW monitoring procedures for several animal species related to slaughterhouses (poultry, pigs, sheep, goats, lambs, goat kids, rabbits), 2012, 2013
- Guidance on the assessment criteria for studies evaluating the effectiveness of stunning interventions regarding animal protection at the time of killing (2013)

but not:

- Guidelines on AW Risk Assessment on Killing for Disease Control
  - in farm/field environment in mainly emergency cases
  - using less specialized equipment in sometimes provisional arrangements
  - in competitive situations with epidemiological requirements
  - taking own epidemiological (and zoonotic) hazards and risks of applied procedures and measures into account

Re-Evaluation on Avian Influenza Epidemic in Netherlands, 2003

**February 2003:**

*Holland was hit by a large-scale AI outbreak*

- How became so many poultry farms infected (1,369)?
- How could the virus spread so fast wiping out 1/3 of the total Dutch poultry industry?
- Are some farm types more sensitive to contamination; prior to and during an outbreak?
- What has been the influence of factors such as wind and contamination by polluted Transport?
- What role have poultry workers, reamers and pickers in the distribution of the virus?
- What lessons can be drawn out on the basis of the assessments and scientific research material?

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**AI in The Netherlands, 2003**

**Dividing culling operations on 1.134 farms (based on locations)**

- **Besmet**: 7,0%
- **Verdacht**: 6,3%
- **Preventief**: 10,3%
- **Welzijn - vervoersverbod**: 76,4%

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**Significantly more risks of infection for labour intensive farming**

- 79% of all farms with the notification Infected/Suspected were labour intensive farms
- In total 29 370 427 were culled
  - 4 727 124 birds were infected/suspected
  - Additionally, 24 643 303 birds were culled for prevention- or welfare reasons
- ~ 50 % of workers with seroconversion

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**Seminar on Disease Control, September 23th, 2015**

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Program of the Seminar - 23 September 2015 -

08:00 h: Registration
09:00 h: Welcome and Introduction
Michael Benten
Institute of Animal Welfare and Animal Husbandry, FLI, Celle

Author: M. Benten
09:15 h: Animal welfare during disease outbreaks and control measures in the context of European and German legal framework
J. Schermer
Institute of Animal Welfare and Animal Husbandry, FLI, Celle

09:45 h: Welfare aspects of methods for emergency killing of poultry during disease outbreaks
D. Heinemann, V. Fischel
Vesagenex UK

10:15 h: The role of wild birds in the transmission of influenza virus infections to poultry
C. J. Goralski
Institute of Epidemiology, FLI, Braunschweig / Insel Potsdam

10:45 h: Coffee Break

11:25 h: Lessons learnt from the outbreak of classical swine fever in Denmark, 2006
A. Morten
Chamber of Agriculture North West - Hamburg

11:55 h: Virus transcription during the outbreak in the Netherlands, 2003
A. Ossen
Vesagenex UK

12:25 h: Viral sequence networks of an avian influenza pandemic reveals virus adaptation and unexpected turnover, nidovirales chains
G. Field
Vesagenex UK

12:55 h: Reference of OE guidelines during the PPR outbreak in Taiwan
H. Wang
10th Annual Animal Society of Taiwan (AST)

13:25 h: Lunch, Coffee

14:10 h: Implementing animal welfare in SPPs for culling measures
H. Kleiber
Applied Veterinary Technologies (AVT) Europe 40

15:00 h: Reorganisation of the prioritises for animal disease control in Germany
A. von Seidle
North Rhein - Westphalia animal Disease Point

15:30 h: Animal disease control in Germany: past - present - future
M. Werthausen
Institute of Animal Welfare and Animal Husbandry, FLI, Celle

16:00 h: General discussion, Conclusions

Proposal (again)

- EFSA call on proposals to Art. 36 Institutions (or in another form) to work out Guidelines on AW Risk Assessment on Killing for Disease Control:
  - in farm/field environment in mainly emergency cases
  - using less specialized equipment in sometimes provisional arrangements
  - in competitive situations with epidemiological requirements
  - taking own epidemiological (and zoonotical) hazards and risks of applied procedures and measures into account

- Creating a kind of network of the National Contact Points regarding Art. 20 of Reg. (EC) No 1099/2009 to share already existing plans, procedures, scientific results, experiences, etc.