

Guidance on the development of an action plan for killing operations and the selection of the optimal killing method

Applicable legislation:

- AHL and related Commission Regulations (2016/429 EU and 2020/687 EU)
- ABP Regulation (1069/2009/EC)
- Regulation on the protection of animals at the time of killing (1099/2009 EC)

According to Article 12 of Regulation 2020/687, following an outbreak of category **A** disease, the competent authority **shall slaughter the** affected livestock (immediately at the outbreak or delayed if emergency suppressive vaccination is used).

In order to ensure that the control of an outbreak is effective, the **contingency plan** should be followed. The contingency plan is essential to ensure preparedness in peacetime.

The culling **action plan** (standard operating procedures) is the tool that coordinates the response to an animal disease outbreak. The first step is to write the action plan, which is in effect a detailed plan for the culling **in the affected establishment**. In order to carry out the cull quickly and efficiently, all relevant data on the establishment must be known as soon as possible (see Annex)

The **action plan shall be drawn up by the competent authority responsible for the killing** before the actual start of the operation. This shall be done on the basis of the guidelines set out in the contingency plan, taking into account standard operations to ensure compliance with the rules laid down in Council Regulation (EC) No 1099/2009 on the protection of animals at the time of killing as regards stunning and killing methods and animal welfare standards.

The construction is carried out by official veterinarians (or under the supervision of official veterinarians) or by trained staff (certificates of competence required).

The action plan under the relevant legislation (Article 18 of Regulation (EU) No 1099/2009) **must include:**

- The stunning and killing methods to be used;
- Staff available;
- Available resources (equipment, materials and tools);
- Biosecurity during slaughter;
- Psychological impact, communication before, during and after killing;
- Method of disposal;
- Disposal of carcasses and other materials (1069/2009EK);
- Cleaning and disinfection after removal of carcasses;
- Management of other species that may be present on the site;

Personnel who come into contact with animals during killing operations must be specifically trained for the species concerned to ensure compliance with animal welfare requirements. Prior to evacuation, staff and veterinarians (all) working in the same location

should receive additional **training in biosecurity, personal protection against zoonoses and personal safety, completion of forms to enumerate the animals killed and their categories, killing methods and supervision during killing, in** accordance with their action plan. This extra training can be done during the briefing before the start of the working day.

The official veterinarians ensuring the correct application of the rules must have adequate expertise **in the requirements of** the chosen **stunning method**, the recognition of **stress in animals**, the **absence or presence of unconsciousness** and the **confirmation of the death of animals** after stunning and killing operations. In addition, veterinarians may take samples during killing to assess the spread of animal diseases as part of epidemiological investigations.

The **culling (action) plan** should include guarantees for the provision of additional staff in the short term. Animal handling staff should be sourced from contractors who can be trusted to provide qualified staff or who can be trusted by qualified farm workers to handle their animals. Contracts and on-site inspections must ensure the suitability of the businesses. Liaison with the veterinary profession and businesses, as well as with government bodies employing veterinarians, should also be ensured to ensure that sufficient veterinarians can be mobilised to participate in culling operations when human resources are scarce.

KILLING METHODS

(ANNEX I TO REGULATION (EC) NO 1099/2009 ON THE PROTECTION OF ANIMALS AT THE TIME OF KILLING):

- **Optimal method:** the method has the least negative impact on animal welfare, there is no better option for the animals.
- **Suboptimal:** the method is the best available option for killing. There are other options, but the circumstances are such that no other method is applicable.
- **Marginal (not recommended) method:** better methods are available and should be used.

The simplest and cheapest method may not be the best or most ethical choice.

MECHANICAL METHODS

- **Free-ball firearm:**
 - **Speed:** Fast
 - **Safety of personnel and premises:** Low (moving projectile)
 - **Number of staff needed:** medium (qualified, licensed)
 - **Degree of negative animal welfare impacts:** high (moving target), **but** the shooting itself and the sight of dead herd members does not cause additional stress to the animals
 - **Animal species:** all (mostly **large, unhandled, grazing** animals), not practical for small animals.
 - **Special requirements:** police licence, qualified staff

- **Fixed latching device (penetrating/non-penetrating) (followed by killing by spinal cord injury)**
 - **Speed:** Medium
 - **Safety of staff and premises:** medium (training)
 - **Number of staff needed:** High
 - **Degree of negative animal welfare impacts:** medium
 - **Animal species:**
 - intruder: all
 - non-intrusive: ruminants, poultry, rabbits and hares. Care must be taken **not to cause skull fractures**. Only for **ruminants less than 10 kg live weight.**)
 - **Special precautions:** risk of TSE (**destruction of the brain**)

METHODS INVOLVING THE USE OF GAS

Carbon dioxide (CO₂) barn

- **Speed:** Fast
- **Safety of staff and premises:** medium (removal of persons, freezing of water pipes)
- **Number of staff needed:** Low
- **Extent of negative animal welfare impacts:**
 - for chicken: medium (excitement, temperature);
 - **for pigs: high (excitement)**
- **Animal species:** pigs, weasels, chinchillas, poultry (except ducks and geese).
- **Special requirements: minimum concentration of 80% for pigs, not allowed for ducks and geese; EXCEPT!** Derogation under Article 18(3) EC 1099/2009: in **exceptional circumstances**, the competent **authority may grant a derogation** where it considers that compliance is likely to affect **human health** or **significantly slow down the eradication of a disease. The derogation must be indicated in the killing decision and in the so-called killing report!**

Dry ice (solid form of CO₂) container

- **Speed:** Medium
- **Safety of personnel and premises:** high (medium if used outdoors or in well-ventilated areas)
- **Number of staff needed:** medium
- **Animal species:** pigs, weasels, chinchillas, poultry except ducks and geese
- **Extent of negative animal welfare impacts:**
 - for chicken: medium (excitement, temperature);
 - **for pigs: high (excitement)**
- **Species:** Pigs, weasels, chinchillas, poultry (except ducks and geese)
- **Special requirements: minimum concentration of 80% for pigs, In general, 1.1% of the dry ice required for killing of the live weight in the container is not allowed for ducks and geese; EXCEPT!** Derogation under Article 18(3) EC 1099/2009: in **exceptional circumstances**, the competent **authority may grant a derogation where it considers that** compliance with the provisions is likely to affect **human health** or

significantly slow down the eradication of a disease. The derogation must be indicated in the killing decision and in the so-called killing report!

- **CO2 gas tank container**
- **Speed:** Medium
- **Safety of personnel and premises:** high (medium if used outdoors or in well-ventilated areas)
- **Number of staff needed:** medium
- **Species:** Pigs, weasels, chinchillas, poultry, except ducks and geese
- **Extent of negative animal welfare impacts:**
 - for chicken: medium (excitement, temperature);
 - for pigs: **high (excitement)**
- **Species:** Pigs, weasels, chinchillas, poultry (except ducks and geese)
- **Special requirements: minimum concentration of 80% for pigs, not allowed for ducks and geese; EXCEPT!** Derogation under Article 18(3) EC 1099/2009: in exceptional circumstances, the competent authority may grant a derogation if it considers that compliance is likely to affect human health or significantly slow down the eradication of a disease. **The derogation must be indicated in the killing decision and in the so-called killing report!**

METHODS INVOLVING THE USE OF ELECTRICITY

Individual electrical wiring (*Electrical wiring applied to the head and body*)

- **Speed:** Medium
- **Safety of staff and premises:** medium (use of trained staff)
- **Number of staff needed:** medium
- **Level of negative animal welfare impacts:** medium (requires capture and handling of animals before slaughter)
- **Animal species:** all, not practical for small animals. Mainly **sheep, goats and pigs**
- **Special precautions:** electromuscular stunning applied to **the head only does not cause death by itself!**

Categories of animals	Bovine animals 6 months old and over	Bovine animals less than 6 months old	Sheep and goats	Porcine animals	Chicken	Turkey
Minimum current	1,28 A	1,25 A	1,00 A	1,30 A	240 mA	400 mA

Electric water bath

- **Speed:** High
- **Safety of staff and premises:** high
- **Number of staff needed:** medium
- **Degree of negative animal welfare impacts:** medium (requires handling and handling of animals before slaughter, duck goose wing flapping, hanging for max 2 minutes, use of **breast stroke**)
- **Species:** Poultry.
- **Special requirements:** electrical requirements for water-bath stunning equipment:

Frequency (Hz)	Chicken	Turkey	Duck and goose	Forj
< 200 Hz	100 mA	250 mA	130 mA	45 mA
200 to 400 Hz	150 mA	400 mA	Not authorised	Not authorised
400 to 1 500 Hz	200 mA	400 mA	Not authorised	Not authorised

OTHER METHODS

Lethal injection

- **Speed:** Slow
- **Safety of staff and premises:** medium (use of trained staff)
- **Number of staff needed:** high
- **Level of negative animal welfare impacts:** medium (requires capture and handling of animals before slaughter)
- **Animal species:** all
- **Special requirements:** high human resources, need for expertise (a poultry flock of about 3000 poultry requires at least 3-4 veterinarians and support staff)