

COUNCIL DIRECTIVE 93/119/EC

of 22 December 1993

on the protection of animals at the time of slaughter or killing

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 43 thereof,

Having regard to the proposal from the Commission ⁽¹⁾,

Having regard to the opinion of the European Parliament ⁽²⁾,

Having regard to the opinion of the Economic and Social Committee ⁽³⁾,

Whereas Council Directive 74/577/EEC ⁽⁴⁾ established rules on the stunning of animals before slaughter;

Whereas the European Convention for the Protection of Animals for Slaughter was approved on behalf of the Community by Council Decision 88/306/EEC ⁽⁵⁾; whereas the scope of the Convention is wider than existing Community rules on the matter;

Whereas national laws concerning the protection of animals at the time of slaughter or killing have an impact on the conditions of competition and accordingly on the operation of the common market in agricultural products;

Whereas there is therefore a need to establish common minimum standards for the protection of animals at the time of slaughter or killing in order to ensure rational development of production and to facilitate the completion of the internal market in animals and animal products;

Whereas at the time of slaughter or killing animals should be spared any avoidable pain or suffering;

Whereas, however, it is necessary to allow for technical and scientific experiments to be carried out and to take account of the particular requirements of certain religious rites;

Whereas the rules should also ensure satisfactory protection, at the time of slaughter or killing, for animals not covered by the Convention;

Whereas in the declaration on the protection of animals annexed to the Final Act of the Treaty on European Union, the Conference calls upon the European Parliament, the Council and the Commission, as well as the Member States, when drafting and implementing Community legislation on the common agricultural policy, to pay full regard to the welfare requirements of animals;

Whereas in so doing Community action must comply with the requirements arising out of the principle of subsidiarity laid down in Article 3b of the Treaty;

Whereas Directive 74/577/EEC should be repealed,

HAS ADOPTED THIS DIRECTIVE:

CHAPTER I

General provisions

Article 1

1. This Directive shall apply to the movement, lairaging, restraint, stunning, slaughter and killing of animals bred and kept for the production of meat, skin, fur or other products and to methods of killing animals for the purpose of disease control.

2. It shall not apply to:

- technical or scientific experiments relating to the procedures mentioned in paragraph 1, carried out under the supervision of the competent authority,
- animals which are killed in cultural or sports events,
- wild game killed in accordance with Article 3 of Directive 92/45/EEC.

Article 2

For the purposes of this Directive the following definitions shall apply:

1. *slaughterhouse*: any premises, including facilities for moving or lairaging animals, used for the commercial slaughter of animals referred to in Article 5 (1);
2. *movement*: unloading of animals or driving of them from unloading platforms, stalls or pens at slaughterhouses to the premises or place where they are to be slaughtered;
3. *lairaging*: keeping animals in stalls, pens, covered areas or fields used by slaughterhouses in order to

⁽¹⁾ OJ No C 314, 5. 12. 1991, p. 14.

⁽²⁾ OJ No C 241, 21. 9. 1992, p. 75.

⁽³⁾ OJ No C 106, 27. 4. 1992, p. 15.

⁽⁴⁾ OJ No L 316, 26. 11. 1974, p. 10.

⁽⁵⁾ OJ No L 137, 2. 6. 1988, p. 25.

- give them any necessary attention (water, fodder, rest) before they are slaughtered;
4. *restraint*: the application to an animal of any procedure designed to restrict its movements in order to facilitate effective stunning or killing;
 5. *stunning*: any process which, when applied to an animal, causes immediate loss of consciousness which lasts until death;
 6. *killing*: any process which causes the death of an animal;
 7. *slaughter*: causing the death of an animal by bleeding;
 8. *competent authority*: the central authority of a Member State competent to carry out veterinary checks or any authority to which it has delegated that competence.

However, in the Member States, the religious authority on whose behalf slaughter is carried out shall be competent for the application and monitoring of the special provisions which apply to slaughter according to certain religious rites. As regards the said provisions, that authority shall operate under the responsibility of the official veterinarian, as defined in Article 2 of Directive 64/433/EEC.

Article 3

Animals shall be spared any avoidable excitement, pain or suffering during movement, lairaging, restraint, stunning, slaughter or killing.

CHAPTER II

Requirements applicable to slaughterhouses

Article 4

The construction, facilities and equipment of slaughterhouses, and their operation, shall be such as to spare animals any avoidable excitement, pain or suffering.

Article 5

1. Solipeds, ruminants, pigs, rabbits and poultry brought into slaughterhouses for slaughter shall be:
 - (a) moved and if necessary lairaged in accordance with the provisions of Annex A;
 - (b) restrained in accordance with the provisions of Annex B;
 - (c) stunned before slaughter or killed instantaneously in accordance with the provisions of Annex C;

(d) bled in accordance with the provisions of Annex D.

2. In the case of animals subject to particular methods of slaughter required by certain religious rites, the requirements of paragraph 1(c) shall not apply.

3. With due regard for the general rules of the Treaty, the competent authorities of the Member States may, for establishments qualifying for derogations pursuant to Articles 4 and 13 of Directive 64/433/EEC, Article 4 of Directive 91/498/EEC and Articles 7 and 18 of Directive 71/118/EEC, grant derogations from paragraph 1(a) in respect of cattle, and from paragraph 1(a) and from the methods for stunning and killing referred to in Annex C in respect of poultry, rabbits, pigs, sheep and goats, provided that the requirements laid down in Article 3 are met.

Article 6

1. Instruments, restraint and other equipment and installations used for stunning or killing must be designed, constructed, maintained and used in such a way as to achieve rapid and effective stunning or killing in accordance with the provisions of this Directive. The competent authority shall check that the instruments, restraint and other equipment used for stunning or killing comply with the above principles and shall check regularly to ensure that they are in a good state of repair and will allow the aforementioned objective to be attained.

2. Suitable spare equipment and instruments must be kept at the place of slaughter for emergency use. They shall be properly maintained and inspected regularly.

Article 7

No person shall engage in the movement, lairaging, restraint, stunning, slaughter or killing of animals unless he has the knowledge and skill necessary to perform the tasks humanely and efficiently, in accordance with the requirements of this Directive.

The competent authority shall ensure that persons employed for slaughtering possess the necessary skill, ability and professional knowledge.

Article 8

Inspections and controls in slaughterhouses shall be carried out under the responsibility of the competent authority, which shall at all times have free access to all parts of slaughterhouses in order to ascertain compliance with this Directive. However, such inspections and controls may be carried out at the same time as controls carried out for other purposes.

CHAPTER III

Slaughter and killing outwith slaughterhouses

Article 9

1. Where animals referred to in Article 5 (1) are slaughtered outwith slaughterhouses, Article 5 (1)(b), (c) and (d) shall apply.

2. Member States may, however, grant derogations from paragraph 1 in respect of poultry, rabbits, pigs, sheep and goats slaughtered or killed outwith slaughterhouses by their owner for his personal consumption, provided that Article 3 is complied with and that pigs, sheep and goats have been stunned in advance.

Article 10

1. Where animals referred to in Article 5 (1) are to be slaughtered or killed for purposes of disease control, this shall be carried out in accordance with Annex E.

2. Animals farmed for their fur shall be killed in accordance with Annex F.

3. Surplus day-old chicks, as defined in Article 2 (3) of Directive 90/539/EEC, and embryos in hatchery waste shall be killed as rapidly as possible in accordance with Annex G.

Article 11

Articles 9 and 10 shall not apply in the case of an animal which has to be killed immediately for emergency reasons.

Article 12

Injured or diseased animals must be slaughtered or killed on the spot. However, the competent authority may authorize the transport of injured or diseased animals for the purpose of slaughter or killing provided that such transport does not entail further suffering for the animals.

CHAPTER IV

Final provisions

Article 13

1. If necessary, rules on the protection of animals at the time of slaughter or killing other than those in this Directive shall be adopted by the Council acting by a qualified majority on a proposal from the Commission.

2. (a) The Annexes to this Directive shall be amended by the Council acting on a proposal from the

Commission, in accordance with the procedure laid down in paragraph 1, in particular in order to adapt them to technological and scientific progress;

(b) in addition, and no later than 31 December 1995, the Commission shall submit to the Council a report drawn up on the basis of an opinion from the Scientific Veterinary Committee together with appropriate proposals concerning the use, in particular, of:

- free bullet pistols, applied to the brain, or of gases other than those referred to in Annex C or combinations thereof for stunning and more particularly carbon dioxide for stunning poultry,
- gases other than those referred to in Annex C or combinations thereof for killing,
- any other scientifically recognized procedure for stunning or killing.

The Council shall act by a qualified majority on these proposals;

(c) by way of derogation from (a), and no later than 31 December 1995, the Commission, in accordance with the procedure laid down in Article 16, shall submit to the Standing Veterinary Committee a report drawn up on the basis of an opinion from the Scientific Veterinary Committee, together with appropriate proposals, with a view to laying down:

- (i) the strength and duration of use of the current necessary to stun the various species concerned;
- (ii) the gas concentration and length of exposure necessary to stun the various species concerned;

(d) pending implementation of paragraphs (b) and (c), national rules in the matter shall apply, in compliance with the general provisions of the Treaty.

Article 14

1. Commission experts may make on-the-spot checks in so far as is necessary to ensure uniform application of this Directive. In order to do this, they may check a representative sample of establishments to ensure that the competent authority is checking that the said establishments are fulfilling the requirements of this Directive.

The Commission shall inform the Member States of the result of the checks carried out.

2. The checks referred to in paragraph 1 shall be carried out in collaboration with the competent authority.

3. A Member State in whose territory a check is being carried out shall give all the necessary assistance to the experts in carrying out their duties.

4. The detailed rules for implementing this Article shall be determined in accordance with the procedure laid down in Article 16.

Article 15

In the course of the inspection of slaughterhouses or establishments which have been or are to be approved in third countries for the purpose of being able to export to the Community in accordance with Community rules, the Commission experts shall ensure that the animals referred to in Article 5 have been slaughtered under conditions which offer guarantees of humane treatment at least equivalent to those provided for in this Directive.

To enable meat to be imported from a third country the health certificate accompanying such meat must be supplemented by an attestation certifying that the above requirement has been met.

Article 16

1. Where the procedure laid down in this Article is to be followed, the matter shall without delay be referred to the Standing Veterinary Committee by its chairman, either on his own initiative or at the request of the representative of a Member State.

2. The representative of the Commission shall submit to the committee a draft of the measures to be taken. The committee shall deliver its opinion on the draft within a time limit which the chairman may lay down according to the urgency of the matter. The opinion shall be delivered by the majority laid down in Article 148 (2) of the Treaty in the case of decisions which the Council is required to adopt on a proposal from the Commission. The votes of the representatives of the Member States within the committee shall be weighted in the manner set out in that Article. The chairman shall not vote.

3. (a) The Commission shall adopt the intended measures when they are in accordance with the opinion of the committee.

(b) Where the intended measures are not in accordance with the opinion of the committee, or if no opinion is delivered, the Commission shall

without delay submit to the Council a proposal relating to the measures to be taken. The Council shall act by a qualified majority.

If, on the expiry of a period of three months from the date on which the matter was referred to it, the Council has not acted, the proposed measures shall be adopted by the Commission, save where the Council has decided against the said measures by a simple majority.

Article 17

Directive 74/577/EEC shall be repealed with effect from 1 January 1995.

Article 18

1. Member States shall bring into force the laws, regulations and administrative provisions, including any penalties, necessary to comply with this Directive on 1 January 1995. They shall forthwith inform the Commission thereof.

When Member States adopt these measures, they shall contain a reference to this Directive or shall be accompanied by such reference on the occasion of their official publication. The methods of making such reference shall be laid down by Member States.

2. However, as from the date laid down in paragraph 1, Member States may, with due regard for the general rules of the Treaty, maintain or apply in their territory more stringent provisions than those contained in this Directive. They shall inform the Commission of any such measures.

3. Member States shall communicate to the Commission the texts of the main provisions of national law which they adopt in the field governed by this Directive.

Article 19

This Directive is addressed to the Member States.

Done at Brussels, 22 December 1993.

For the Council
The President
J.-M. DEHOUSSE

ANNEX A

REQUIREMENTS FOR THE MOVEMENT AND LAIRAGING OF ANIMALS IN
SLAUGHTERHOUSES

I. General requirements

1. Every slaughterhouse coming into operation after 30 June 1994 must have suitable equipment and facilities available for the purpose of unloading animals from means of transport, and all existing slaughterhouses must comply with these requirements by 1 January 1996.
2. Animals must be unloaded as soon as possible after arrival. If delay is unavoidable they must be protected from extremes of weather and provided with adequate ventilation.
3. Animals which might injure each other on account of their species, sex, age or origin must be kept and lairaged apart from each other.
4. Animals must be protected from adverse weather conditions. If they have been subjected to high temperatures in humid weather they must be cooled by appropriate means.
5. The condition and state of health of the animals must be inspected at least every morning and evening.
6. Without prejudice to the provisions laid down in Chapter VI of Annex I to Directive 64/433/EEC, animals which have experienced pain or suffering during transport or upon arrival at the slaughterhouse, and unweaned animals, must be slaughtered immediately. If this is not possible, they must be separated and slaughtered as soon as possible and at least within the following two hours. Animals which are unable to walk must not be dragged to the place of slaughter, but must be killed where they lie or, where it is possible and does not entail any unnecessary suffering, transported on a trolley or movable platform to the place of emergency slaughter.

II. Requirements for animals delivered other than in containers

1. Where slaughterhouses have equipment for unloading animals, such equipment must have non-slip flooring and, if necessary, be provided with lateral protection. Bridges, ramps and gangways must be fitted with sides, railings or some other means of protection to prevent animals falling off them. Exit or entry ramps must have the minimum possible incline.
2. During unloading, care must be taken not to frighten, excite or mistreat the animals, and to ensure that they are not overturned. Animals must not be lifted by the head, horns, ears, feet, tail or fleece in such a way as to cause them unnecessary pain or suffering. When necessary, they must be led individually.
3. Animals must be moved with care. Passageways must be so constructed as to minimize the risk of injury to animals, and so arranged as to exploit their gregarious tendencies. Instruments intended for guiding animals must be used solely for that purpose, and only for short periods. Instruments which administer electric shocks may be used only for adult bovine animals and pigs which refuse to move, provided that the shocks last no more than two seconds, are adequately spaced out and that the animals have room ahead of them in which to move. Such shocks may be applied only to the muscles of the hindquarters.
4. Animals must not be struck on, nor shall pressure be applied to, any particularly sensitive part of the body. In particular, animals' tails must not be crushed, twisted or broken and their eyes must not be grasped. Blows and kicks must not be inflicted.
5. Animals must not be taken to the place of slaughter unless they can be slaughtered immediately. If they are not slaughtered immediately on arrival they must be lairaged.
6. Without prejudice to derogations granted pursuant to Articles 4 and 13 of Directive 64/433/EEC, slaughterhouses must be equipped with a sufficient number of pens for adequate lairaging of the animals with protection from the effects of adverse weather.
7. In addition to complying with requirements already laid down in Community rules, lairages must have:
 - floors which minimize the risk of slipping and which do not cause injury to animals in contact with them,

- adequate ventilation, taking into account the extremes of temperature and humidity which may be expected. Where mechanical means of ventilation are required, provision must be made for emergency back-up facilities in the event of breakdown,
 - artificial lighting at a level sufficient to permit inspection of all animals at any time; if necessary, adequate back-up lighting must be available,
 - where necessary, equipment for tethering animals,
 - where necessary, adequate supplies of a suitable bedding material for all animals kept in the lairage overnight.
8. Where, in addition to the lairages referred to above, slaughterhouses also have field lairages without natural shelter or shade, appropriate protection from adverse weather must be provided. Field lairages must be maintained in such condition as to ensure that animals are not subjected to physical, chemical or other health hazards.
 9. Animals which are not taken directly upon arrival to the place of slaughter must have drinking water available to them from appropriate facilities at all times. Animals which have not been slaughtered within 12 hours of their arrival must be fed, and must subsequently be given moderate amounts of food at appropriate intervals.
 10. Animals which are kept for 12 hours or more at a slaughterhouse must be lairaged and, where appropriate, tethered, in such a way that they can lie down without difficulty. Where animals are not tethered, food must be provided in a way which will permit the animals to feed undisturbed.

III. Requirements for animals delivered in containers

1. Containers in which animals are transported must be handled with care, and must not be thrown, dropped or knocked over. Where possible, they must be loaded and unloaded horizontally and mechanically.
2. Animals delivered in containers with perforated or flexible bottoms must be unloaded with particular care in order to avoid injury. Where appropriate, animals must be unloaded from the containers individually.
3. Animals which have been transported in containers must be slaughtered as soon as possible; otherwise they must if necessary be watered and fed in accordance with point II.9.

ANNEX B

RESTRAINT OF ANIMALS BEFORE STUNNING, SLAUGHTER OR KILLING

1. Animals must be restrained in an appropriate manner in such a way as to spare them any avoidable pain, suffering, agitation, injury or contusions.

However, in the case of ritual slaughter, restraint of bovine animals before slaughter using a mechanical method intended to avoid any pain, suffering or agitation and any injuries or contusions to the animals is obligatory.

2. Animals' legs must not be tied, and animals must not be suspended before stunning or killing. However, poultry and rabbits may be suspended for slaughter provided that appropriate measures are taken to ensure that, on the point of being stunned, they are in a sufficiently relaxed state for stunning to be carried out effectively and without undue delay.

Furthermore, holding an animal in a restraint system may in no circumstances be regarded as suspension.

3. Animals which are stunned or killed by mechanical or electrical means applied to the head must be presented in such a position that the equipment can be applied and operated easily, accurately and for the appropriate time. The competent authority may, however, in the case of solipeds and cattle, authorize the use of appropriate means to restrain head movements.
 4. Electrical stunning equipment must not be used as a means of restraint or immobilization or to make animals move.
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ANNEX C

STUNNING OR KILLING OF ANIMALS OTHER THAN ANIMALS REARED FOR FUR

I. PERMITTED METHODS

A. Stunning

1. Captive bolt pistol
2. Concussion
3. Electronarcosis
4. Exposure to carbon dioxide

B. Killing

1. Free bullet pistol or rifle
2. Electrocutation
3. Exposure to carbon dioxide

- C. The competent authority may, however, authorize decapitation, dislocation of the neck and the use of a vacuum chamber as a method of killing for certain specific species, provided that Article 3 is complied with and that the specific requirements laid down in point III of this Annex are met.

II. SPECIFIC REQUIREMENTS FOR STUNNING

Stunning must not be carried out unless it is possible to bleed the animals immediately afterwards.

1. *Captive bolt pistol*

- (a) Instruments must be positioned so as to ensure that the projectile enters the cerebral cortex. In particular, it is prohibited to shoot cattle in the poll position.

Sheep and goats may be shot in the poll position if the presence of horns prevents use of the crown position. In such cases the shot must be placed immediately behind the base of the horns and aimed towards the mouth, and bleeding must commence within 15 seconds of shooting.

- (b) When using a captive bolt instrument, the operator must check to ensure that the bolt retracts to its full extent after each shot. If it does not so retract, the instrument must not be used again until it has been repaired.

- (c) Animals must not be placed in stunning pens unless the operator who is to stun them is ready to do so as soon as the animal is placed in the pen. Animals must not be placed in head restraint until the slaughterman is ready to stun them.

2. *Concussion*

- (a) This is only permitted using a mechanically-operated instrument which administers a blow to the skull. The operator must ensure that the instrument is applied in the proper position and that the correct strength of cartridge is used, in accordance with the manufacturer's instructions, to produce an effective stun without fracture of the skull.

- (b) However, in the case of small batches of rabbits, where a non-mechanical blow to the skull is used, that operation must be carried out in such a way that the animal is immediately rendered unconscious and remains so until its death and in compliance with the general provisions of Article 3.

3. *Electronarcosis*A. *Electrodes*

1. Electrodes must be so placed that they span the brain, enabling the current to pass through it. Appropriate measures must also be taken to ensure that there is good electrical contact, in particular by removing excess wool or wetting skin.

2. Where animals are stunned individually, the apparatus must:
 - (a) incorporate a device which measures the impedance of the load and prevents operation of the apparatus if the minimum required current cannot be passed;
 - (b) incorporate an audible or visible device indicating the length of time of its application to an animal;
 - (c) be connected to a device indicating the voltage and the current under load, positioned so as to be clearly visible to the operator.

B. Waterbath stunners

1. Where waterbath stunners are used to stun poultry, the level of the water must be adjustable in order to ensure that there is good contact with the bird's head.

The strength and duration of the current used in this case will be determined by the competent authority so as to ensure that the animal is immediately rendered unconscious and remains so until death.
2. Where poultry are stunned in groups in a waterbath, a voltage sufficient to produce a current strong enough to ensure that every bird is stunned must be maintained.
3. Appropriate measures must be taken to ensure that the current passes properly, in particular good electrical contacts and wetting the shackle-to-leg contact.
4. Waterbaths for poultry must be adequate in size and depth for the type of bird being slaughtered, and must not overflow at the entrance. The electrode which is immersed in the water must extend the length of the waterbath.
5. If necessary, manual back-up must be available.

4. Exposure to carbon dioxide

1. The concentration of carbon dioxide for stunning pigs must be at least 70 % by volume.
2. The chamber in which pigs are exposed to the gas, and the equipment used for conveying the pigs through it, must be so designed, constructed and maintained as to avoid injury to the pigs and compression of the chest and enable them to remain upright until they lose consciousness. Adequate lighting must be provided in the conveying mechanism and the chamber to allow pigs to see other pigs or their surroundings.
3. The chamber must be fitted with devices for measuring the gas concentration at the point of maximum exposure and for giving a clearly visible and audible warning if the concentration of carbon dioxide falls below the required level.
4. Pigs must be placed in pens or containers in which they can see each other and conveyed into the gas chamber within 30 seconds from their entry into the installation. They must be conveyed as rapidly as possible from the entrance to the point of maximum concentration of the gas and must be exposed to it for long enough to ensure that they remain unconscious until they have been killed.

III. SPECIFIC REQUIREMENTS FOR KILLING

1. Free bullet pistol or rifle

These methods, which may be used to kill various species, in particular large farmed game and deer, are subject to authorization by the competent authority, which must ensure in particular that they are used by duly qualified staff and in compliance with the general provisions of Article 3 of this Directive.

2. Decapitation and dislocation of the neck

These methods, which are to be used only for killing poultry, are subject to authorization by the competent authority, which must ensure in particular that they are used by duly qualified staff and in compliance with the general provisions of Article 3 to this Directive.

3. Electrocution and carbon dioxide

The competent authority may authorize the killing of various species by these methods provided that, in addition to the general provisions of Article 3, the specific provisions laid

down in point II (3) and (4) of this Annex are complied with. It shall also, to achieve this, lay down the strength and duration of the current used and the concentration and length of exposure to carbon dioxide.

4. *Vacuum chamber*

This method, which is to be used only for the killing without bleeding of certain animals for consumption belonging to farmed game species (quail, partridge and pheasant), is subject to authorization by the competent authority, which shall ensure, in addition to compliance with the requirements laid down in Article 3, that:

- the animals are placed in an airtight chamber in which a vacuum is swiftly achieved by means of a powerful electric pump,
- the vacuum is maintained until the animals are dead,
- the animals are held in groups in transport containers which can be placed in the vacuum chamber, which is designed for that purpose.

*ANNEX D***BLEEDING OF ANIMALS**

1. For animals which have been stunned, bleeding must be started as soon as possible after stunning and be carried out in such a way as to bring about rapid, profuse and complete bleeding. In any event, the bleeding must be carried out before the animal regains consciousness.
2. All animals which have been stunned must be bled by incising at least one of the carotid arteries or the vessels from which they arise.

After incision of the blood vessels, no further dressing procedures nor any electrical stimulation may be performed on the animals before the bleeding has ended.
3. Where one person is responsible for the stunning, shackling, hoisting and bleeding of animals, that person must carry out those operations consecutively on one animal before carrying them out on another animal.
4. Manual back-up must be available where poultry is bled by means of automatic neck-cutters so that, in the event of a breakdown, birds may be slaughtered immediately.

*ANNEX E***KILLING METHODS FOR DISEASE CONTROL****Permitted methods**

Any method permitted under Annex C which causes certain death.

In addition, the competent authority may, in compliance with the general provisions of Article 3 of this Directive, permit the use of other methods for killing conscious animals, ensuring in particular that:

- if methods are used which do not cause immediate death (for example, captive bolt shooting), appropriate measures are taken to kill the animals as soon as possible, and in any event before they regain consciousness,
 - nothing more is done to the animals before it has been ascertained that they are dead.
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ANNEX F

METHODS OF KILLING FUR ANIMALS

I. Permitted methods

1. Mechanically-operated instruments which penetrate the brain.
2. Injection of an overdose of a drug with anaesthetic properties.
3. Electrocution with cardiac arrest.
4. Exposure to carbon monoxide.
5. Exposure to chloroform.
6. Exposure to carbon dioxide.

The competent authority shall decide on the most appropriate method of killing for the different species concerned in compliance with the general provisions of Article 3 of this Directive.

II. Specific requirements

1. *Mechanically-operated instruments which penetrate the brain*

- (a) Instruments must be positioned so as to ensure that the projectile enters the cerebral cortex.
- (b) This method is permitted only if it is followed by immediate bleeding.

2. *Injection of an overdose of a drug with anaesthetic properties*

Only those anaesthetics, doses and applications which cause immediate loss of consciousness followed by death may be used.

3. *Electrocution with cardiac arrest*

Electrodes must be placed so that they span the brain and the heart and the minimum current level used must lead to immediate loss of consciousness and cardiac arrest. However, for foxes, where electrodes are applied to the mouth and rectum, a current of an average value of 0,3 amps must be applied for at least 3 seconds.

4. *Exposure to carbon monoxide*

- (a) The chamber in which the animals are exposed to the gas must be designed, constructed and maintained in such a way as to avoid injury to the animals and allow them to be supervised.
- (b) The animals must be introduced into the chamber only after it has been filled with a concentration of carbon monoxide of at least 1 % by volume, supplied by a source of 100 % carbon monoxide.
- (c) The gas produced by an engine specially adapted for that purpose may be used to kill mustelids and chinchillas provided that tests have shown that the gas used:
 - has been suitably cooled,
 - has been sufficiently filtered,
 - is free from any irritant matter or gas,
 - and that the animals cannot be placed in the chamber until the concentration of carbon monoxide has reached at least 1 % by volume.
- (d) When inhaled the gas must first induce deep general anaesthesia and must then cause certain death.
- (e) The animals must remain in the chamber until they are dead.

5. *Exposure to chloroform*

Exposure to chloroform may be used to kill chinchillas provided that:

- (a) the chamber in which the animals are exposed to the gas is designed, constructed and maintained in such a way as to avoid injury to the animals and allow them to be supervised;

- (b) the animals are introduced into the chamber only if it contains a saturated chloroform-air compound;
- (c) when inhaled, the gas first induces deep general anaesthesia and then causes certain death;
- (d) the animals remain in the chamber until they are dead.

6. *Exposure to carbon dioxide*

Carbon dioxide may be used to kill mustelids and chinchillas provided that:

- (a) the chamber in which the animals are exposed to the gas is designed, constructed and maintained in such a way as to avoid injury to the animals and allow them to be supervised;
 - (b) the animals are introduced into the chamber only when the atmosphere contains the highest possible concentration of carbon dioxide supplied by a source of 100% carbon dioxide;
 - (c) when inhaled, the gas first induces deep general anaesthesia and then causes certain death;
 - (d) the animals remain in the chamber until they are dead.
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ANNEX G

KILLING OF SURPLUS CHICKS AND EMBRYOS IN HATCHERY WASTE

I. Permitted methods for the killing of chicks

1. Use of a mechanical apparatus causing rapid death.
2. Exposure to carbon dioxide.
3. However, the competent authority may permit the use of other scientifically recognized killing methods provided that they comply with the general provisions of Article 3.

II. Specific requirements

1. *Use of a mechanical apparatus producing rapid death*
 - (a) The animals must be killed by an apparatus which contains rapidly rotating mechanically operated killing blades or expanded polystyrene projections.
 - (b) The capacity of the apparatus must be sufficient to ensure that all animals are killed immediately, even if they are handled in large numbers.
2. *Exposure to carbon dioxide*
 - (a) The animals must be placed in an atmosphere with the highest obtainable concentration of carbon dioxide, supplied by a source of 100 % carbon dioxide.
 - (b) The animals must remain in this atmosphere until they are dead.

III. Permitted method for the killing of embryos

1. To kill any living embryos instantaneously, all hatchery waste must be treated by the mechanical apparatus mentioned in point II (1).
 2. However, the competent authority may permit the use of other scientifically recognized killing methods provided that they comply with the general provisions of Article 3.
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