

Code of Practice for the Disposal of Chicks in Hatcheries

3rd Edition, December 2019

Preface

Whilst the disposal of day-old chicks is a sensitive issue which many people prefer not to acknowledge, hatcheries are faced with the responsibility of making sure that every chick in their care is humanely dispatched.

In 1998, the Humane Slaughter Association (HSA) carried out a confidential survey of UK hatcheries. This provided clear evidence that significant changes could be made to improve the welfare of chicks at disposal.

Results highlighted a lack of up-to-date technical advice available on methods of dispatch, and the HSA was asked to produce a Code of Practice for hatchery management and staff, to provide independent, authoritative guidance on humane disposal. It was at times difficult to reach agreement on all the issues, but finally, following detailed consultation with the industry, the first Code was published in 1999. Since then, many hatcheries are to be commended for their determination to put the recommendations into practice and for the significant welfare improvements that have been achieved.

The major point of discussion has been the use of carbon dioxide systems. This gas is acidic and scientific research has shown that, at concentrations over 40%, it can cause head shaking and gasping in chicks, indicating that it is unpleasant to inhale. As a result, the HSA no longer considers this to be an acceptable method for chick disposal. Hatcheries are therefore advised to use an alternative gas system or Instantaneous Mechanical Destruction (IMD). Both are effective and humane methods of disposal, provided that equipment is set up and operated correctly.

The Code was based on the legislative requirements of *The Welfare of Animals (Slaughter or Killing) Regulations 1995 (as amended) (WASK 95)* but was updated in 2019 in line with *Council Regulation (EC) No 1099/2009 on the protection of animals at the time of killing* and *'The Welfare of Animals at the Time of Killing (England) Regulations 2015' (WATOK)*, the latest scientific evidence, practical observation and experience.

The HSA believes that implementation of this Code will make significant improvements to the welfare of chicks. The poultry industry is to be congratulated on its willingness to acknowledge the need for an independent, recognised standard and for agreeing to put this Code into practice.

Finally, thanks must go to all those individuals and companies who have given their time freely to assist the HSA in producing this publication.

This Code was written by the Humane Slaughter Association in consultation with the British Poultry Council and the Pullet Hatcheries Association.

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Introduction

Every year millions of chicks are dispatched in hatcheries because they are either sickly when hatched or are males unwanted for the production of eggs. EU Regulation No 1099/2009 requires that no avoidable pain, distress or suffering is caused by the method of disposal, and operators must be aware of their responsibility to treat each chick with care and consideration.

Whilst the disposal of chicks may be an unpleasant, or even distressing, task for hatchery staff to carry out, human perceptions must not be allowed to overtake the welfare of the chicks. Therefore, whilst screening may be used to protect staff sensibilities, this must never prevent the effective operation, inspection and maintenance of equipment.

Every hatchery should have an up-to-date copy of this Code and all those involved in the disposal of chicks should be familiar with it, whether they are directly handling chicks in the hatchery or are responsible for hatchery management, supervision or inspection.

Scope and definitions

Council Regulation (EC) No 1099/2009, (Annex I, Chapter I, Tables 1.4 and Chapter II) and The Welfare of Animals at the Time of Killing (England) Regulations 2015' (Schedule 2, Part 5, Para 44).

Note: hatchery operators in Scotland, Wales and Northern Ireland must refer to their respective versions of *The Welfare of Animals at the Time of Killing Regulations*.

This Code sets minimum standards based on current legislation, scientific evidence and best practice. It includes the humane disposal of broiler and layer chicks, turkey poults, goslings and ducklings.

Unless otherwise specified, 'chick' is used to describe all species of poultry that are less than 72 hours of age. The term 'chick' covers sickly, injured or deformed chicks and also those chicks that may be healthy but are still unwanted (eg male chicks surplus to the egg production industry).

For the purpose of this Code, a 'pipping egg' should be considered a 'chick' if the bird has broken away or is free from its shell. If it remains enclosed in its shell, it should be considered an 'embryo' and should be treated as an 'embryo in hatchery waste' in accordance with the Regulations

1. Hatchery procedures

- 1.1 Every hatchery must have documented procedures in place to cover the handling and methods of disposal used for cull chicks. These must include the effective and safe operation of equipment and its setting-up, regular maintenance and cleaning. They must also contain contingency plans for emergencies, or equipment failure.

1.2 A member of hatchery staff must be appointed as the Hatchery Welfare Officer to be responsible for the chick cull operation and to ensure the welfare of each chick is protected. This person must have the skill, knowledge, training and authority to take appropriate action, if and when necessary.

2. Hatchery Welfare Officer (HWO)

- 2.1 The HWO will be responsible, either directly or through personal supervision, for the
- effective operation of equipment
 - regular maintenance, adjustment and setting of equipment
 - daily inspections of equipment
 - training of hatchery staff, in accordance with this Code.
- 2.2 The HWO must establish documented procedures for regular inspections and cleaning of chick disposal equipment, clear pass/fail criteria, corrective action in the case of equipment failure, and training. The HWO must ensure that up-to-date records are kept of:
- all inspections of chick disposal equipment
 - performance against clear pass/fail criteria
 - corrective action taken
 - maintenance, cleaning, adjustment and setting of equipment
 - staff training

3. Handling of chicks for disposal

When chicks are sorted and segregated for disposal they must be handled with particular care and attention. A percentage of the chicks is likely to be sickly, injured or deformed and their welfare must not be further compromised by the handling procedures.

- 3.1 A trained operator must separate chicks from other debris, shells and waste before disposal.
- 3.2 Chicks that are sick, injured or deformed must be dispatched without delay, to prevent any unnecessary suffering. In the case of an emergency, or breakdown of equipment, these chicks must be given priority.
- 3.3 Chicks must be sorted in one of the following ways:
- a) manually, directly into the apparatus for immediate disposal
 - b) onto a continuously moving conveyor to be transferred for immediate disposal
 - c) into trays which should be collected as soon as possible and taken for immediate disposal.
- 3.4 Chicks awaiting disposal must be kept in a suitable draught-free, covered area, protected from extremes of temperature.
- 3.5 Chicks awaiting disposal must not be caused injury or distress.

- 3.6 When chicks are carried by hand they must be handled with care and consideration, in a manner which does not cause distress. They must not be thrown or dropped.
- 3.7 Chicks sorted onto trays or conveyors must not be overcrowded, to avoid distress or suffocation.
- 3.8 Handling systems must prevent chicks from becoming loose in the hatchery, getting trapped, falling or being thrown from conveyors or trays.
- 3.9 When chicks are carried in trays, the trays must be held horizontally to allow the chicks to maintain their balance. The containers must not be thrown, dropped or tipped. Chicks must be unloaded from the trays in a manner which does not cause distress.
- 3.10 Chicks carried on a conveyor, either free-standing or in trays, must travel only at speeds that allow them to maintain an upright position throughout. Chicks must not be dropped or be thrown from conveyors.,

4. Instantaneous Mechanical Destruction (IMD)

To be considered humane, mechanical equipment must cause immediate death. This involves depositing individual chicks, manually or mechanically, into a machine which will either mince or crush the birds. There are two common designs of IMD device in use in the UK.

The first `crushing` design operates with either one roller that rotates against a solid projection, or two contra-rotating rollers. These rollers rapidly rotate and have raised, solid expanded polystyrene projections that run along their length. Chicks are crushed and immediately killed in a narrow, restricted gap between the rollers or projections.

The second `knife-type` design has rapidly rotating projections, which effectively operate as blades and mince the chicks.

Whilst it may be aesthetically unpleasant, IMD is an acceptable and humane method of chick disposal, provided that equipment is functioning correctly and operated by trained staff in accordance with the recommendations set out in this Code.

- 4.1 Machinery must be properly set up according to the manufacturer's specification and must operate to the optimum recommended speed. The capacity of the IMD device must be compatible with the throughput of the hatchery.
- 4.2 Equipment must be set up to allow regular, daily inspection of material leaving the machinery.
- 4.3 If a `crushing` design is used, the gap between the rollers or side projections, ie the area through which chicks are crushed, should be less than 10mm. The gap must never exceed 10mm and the rollers must not be forced apart by the chicks.

- 4.4 To prevent blockages, chicks must be fed into the equipment at a rate compatible with the capacity of the IMD device.
- 4.5 The entrance to the IMD device must be designed to guide chicks directly into the working parts of the machine. Chicks must not accumulate at the entrance of the machine.
- 4.6 Chicks should be fed into the IMD device either by a trained operator who will manually place individual chicks into the apparatus, or on a free-standing conveyor that carries chicks, in a single layer, into the apparatus.
- 4.7 The drop into the IMD machine must be kept to a minimum.
- 4.8 The blades or projections must be correctly positioned to kill the chicks immediately, causing no deflection.
- 4.9 Daily inspections must be made to ensure that the equipment is operating effectively. Checks must be made to confirm that every chick is dead on immediate exit from the IMD device. A record of inspections and a report of findings must be kept. If any chicks are leaving the IMD device alive, the equipment must be stopped immediately and not used again until the problem is corrected.
- 4.10 If the IMD device stops, then any mechanical conveyor must also stop immediately and simultaneously.

5. Gas Killing

EU Regulation 1099/2009 and The Welfare of Animals at the Time of Killing (England) Regulations 2015 (WATOK) permit a variety of gas mixtures to be used for the dispatch of chicks (*similar legislation applies in Scotland, Wales and Northern Ireland – operators in these countries should refer to their respective versions of the legislation*). Legislation allows for either direct or progressive exposure of conscious animals to an inert gas mixture, such as argon or nitrogen, leading to anoxia and death; or a mixture of an inert gas with a maximum of 40% carbon dioxide, but the recommended maximum is 30% carbon dioxide. The residual oxygen content of the mixtures should be no more than 2%.

The preferred choice would be 90% argon, as evidence suggests loss of consciousness by anoxia does not cause any respiratory discomfort.

Following entry into the gas, chicks should lose posture (consciousness) after approximately 10-15 seconds. After loss of consciousness they will then convulse. This is a normal reaction.

Inert gas mixtures which are not aversive to chicks are an acceptable and humane method of disposal, provided that equipment is functioning correctly, operated by trained staff and that hatcheries are adopting the recommendations set out in this Code.

5.1 General

- 5.1.1 Chicks must be placed into the required concentration of gas. Chicks must never be placed into a container to which the gas is then added.
- 5.1.2 Appropriate gas concentrations must be continuously controlled and monitored at chick level. A documented record of gas concentration must be made at least twice a day.
- 5.1.3 Chicks must be placed in the gas in single layers to prevent their piling up and being suffocated.
- 5.1.4 When chicks enter the gas on a conveyor, they must not be allowed to become `piled` or `bunched up` on entry to the apparatus.
- 5.1.5 Hatcheries must allow sufficient time between adding batches of chicks to ensure they are all killed by the gas and NOT by suffocation. When chicks are placed manually in the gas, the operator must ensure they are all dead before another layer is added.
- 5.1.6 Daily inspections must be made to ensure the equipment is operating effectively. Checks must be made to ensure that every chick is killed in the gas, and a record of inspections and a report of findings must be kept, If any chicks are leaving the equipment still alive, the equipment must be stopped immediately and not used again until the problem is corrected.
- 5.1.7 Gas monitoring equipment must be kept in good working condition, it must be regularly calibrated. Records of calibrations must be kept.

5.2 Alternative gas systems

In addition to the general requirements of 5.1 the following specifications must be met:

- 5.2.1 The level of residual oxygen is critical to the wellbeing of the chicks, therefore, the **HSA recommends that a maximum level of 1% should not be exceeded** in order to ensure that the chicks do not recover in the gas mixtures.
- 5.2.2 Oxygen monitoring equipment must be incorporated into the chick killing apparatus and be fitted with an alarm to warn the operator when oxygen concentration rises above 1% at chick level. If this occurs the system must be stopped. Equipment and gas concentrations must be checked and killing must not recommence until it is certain that the apparatus is working correctly.
- 5.2.3 Chicks must remain in the gas until dead. All chicks must be checked to ensure that there are no signs of life. The following minimum dwell times must be adhered to:
 - Chicks – 3 minutes
 - Turkey poults: sickly injured or deformed – 5 minutes
 - Turkey poults: healthy but unwanted – 3 minutes
 - Duckling and goslings – 5 minutes

6. Neck dislocation

Research has shown that neck dislocation does not consistently concuss the brain and it is unlikely to cause immediate unconsciousness. Therefore, neck dislocation is not recommended for the routine disposal of chicks.

- 6.1 Neck dislocation should only be used for very small numbers of chicks, or in an emergency. EU Regulation No 1099/2009 requires that no person shall kill by manual cervical dislocation more than 70 animals per day.
- 6.2 It must be accompanied by severance of the spinal cord and blood vessels in the chick's neck.
- 6.3 Neck dislocation must only be carried out by a proficient and competent operator.

7. Training

- 7.1 Staff must be trained and competent before inspecting or operating equipment, or undertaking chick handling and disposal.
- 7.2 Staff directly involved with chick disposal should have received and understood this Code of Practice. Records must be kept to show the date that members of staff received the Code.
- 7.3 Records of staff training must be maintained.

8. Safety

- 8.1 Systems used for the disposal of chicks must be safe for the operator. Regular health and safety checks must be made. Records must be maintained and be made available to staff.