RSPCA

RSPCA standards justification

Farmed rainbow trout

Contents

Introduction

This document provides the rationale underpinning the setting of certain, key standards within the RSPCA Welfare Standards for farmed Rainbow Trout. As such, this document provides the justification behind the setting of such standards.

Not all standards are covered within this document, as either further explanation is not required, e.g. the justification is clear within the standard itself, or the standard is based on a legal requirement. However, those standards that go above legal minimum requirements and could be set at a range of levels are generally included.

Justifications are not exhaustive, but are typically representative of the evidence base (where this exists) for that issue.

In some cases, a summary of the full standard wording has been provided. Therefore, please refer to the RSPCA Welfare Standards for farmed Rainbow Trout for the full standard wording.

References to legal requirements relate to domestic legislation.

Management

Inspection and records

- **Moribund removal: Tanks and enclosures are inspected daily for moribund fish. If found, they are removed promptly and humanely culled.**

  This standard was introduced in the 2025 version of the standards. Moribund fish are those fish that are likely significantly suffering and/or nearing death. Their prompt removal (when possible) from the tank/enclosure is essential to minimise their suffering and to reduce the potential spread of pathogens. These fish must be humanely culled according to the appropriate methods after removal from the tank/enclosure.

Husbandry practices

Crowding

- **Time in crowd: Fish must not be crowded for more than 2 hours.**

  Regardless of the situation, crowding of fish must not last longer than 2 hours. Crowding is stressful for fish and can lead to injury or mortality if prolonged. Two hours was considered to be an appropriate maximum amount of time when the standards were first introduced and there is no evidence to suggest amending this requirement.

Non-medicinal treatments for sea lice and amoebic gill disease - pre-treatment

- **Frequency of treatments: Fish must not receive more than 1 treatment within a 28 day period.**

  Studies have demonstrated that the negative impacts of non-medicinal treatments are exacerbated by repeated handling within a 3 week time period for salmon (Moltumyr *et al.*, 2022). Repeated handling in a short period of time also suggests a potential failure to control sea lice or levels of amoebic gill disease (AGD), which may be considered a welfare issue. Given this evidence, it was felt that a period of 28 days would be appropriate for rainbow trout.

- **Thermal treatments parameters: In thermal delousers, the treatment water temperature must not exceed 34°C and fish must not be exposed for longer than 35 seconds.**

  Studies in salmon have shown that, statistically, there is no increase in the number of lesions or welfare indicator scores when the water is heated to 34°C for 30 seconds (Moltumyr *et al.*, 2021). However, there is no evidence above these thresholds, hence why these limits are set. 35 seconds allows for the realistic scenario that some fish might not pass through as quickly as others.

Non-medicinal treatments for sea lice and amoebic gill disease - post-treatment

- **Post-treatment report: A post-treatment report must be created and included within the VHWP within 14 days. It must include details on mortality (per enclosure and for the farm), efficacy of lice removal (where applicable), results of WOAs and whether any issues occurred during the treatment including an action plan to remedy them.**

  Reviewing non-medicinal treatments in thorough detail is the most appropriate way to assess the welfare impact of the treatment and to create actions for further improvements to the treatment process. Failure to do so can lead to repeated failures, which is a significant welfare concern.

Enrichment

- **Environmental enrichment (information box only): The RSPCA encourages further commercial research and trial work into environmental enrichment to determine appropriate forms to benefit rainbow trout welfare.**

  Environmental enrichment has been shown to positively benefit animal welfare in terrestrial farm animal species. Data from a small-scale trial shows that it can confer similar benefits for fish in captivity (Arechavala-Lopez *et al.*, 2022). However, as yet, there have been no full-scale commercial trials for rainbow trout. Until the benefits and

potential challenges of providing enrichment have been investigated, the RSPCA remains committed to exploring how to progress the provision of environmental enrichment within the RSPCA welfare standards.

Equipment and environmental quality

Tank, pond, raceway and net pen enclosure construction, situation and maintenance

- **Flow rate: The flow must allow fish to hold their position in the water column, whilst ensuring dead fish and metabolites are easily removed, and that the structure of the enclosure is not compromised.**

  The flow must be set at an appropriate rate so that fish are able to rest on a daily basis and are not forced to struggle to maintain their position in the water column. At the same time, waste must be able to move out of the enclosure and dead fish must be moved towards the appropriate collection point. The flow must also not negatively impact the enclosure; the most obvious example being that the flow should not erode the sides of ponds.

Feeding

Fasting / feed withdrawal

- **Feed withdrawal period: The period of feed withdrawal must not exceed a maximum of 54 degree days. If it is required to go beyond this, the reason must be provided by a veterinary surgeon, subjected to a risk assessment and recorded in the VHWP.**

  While wild fish can go extended periods of time without being fed, farmed fish are generally fed on a daily basis and, as such, become accustomed to daily feeding. Removal of feed should therefore last for the shortest time necessary. A study by a rainbow trout producer found that the gut of rainbow trout are generally empty by around 50 degree days. Given that most feed withdrawal events take place to ensure fish have empty guts (often to minimise the potential oxygen requirement during digestion), this is accepted as being the maximum time allowed for feed withdrawal. However, the time should always be kept as short as possible.

Health

General

- **Veterinary Health and Welfare Plans (VHWPs): Site specific VHWPs must be drawn up at the start of each production cycle or annually. They must include future husbandry plans, risk assessments, and monitoring and control plans for fish health and diseases. The VHWP must be treated as a live document and updated without delay when a problem is identified.**

  VHWPs are an invaluable tool for tracking fish health and welfare on a site, as well as providing a framework for measures to prevent potential or reoccuring health and welfare issues. As such, they need to be updated either annually to review the previous year or before a new production cycle starts so the previous cycle can be reflected on and learnings made and recorded in the VHWP. During production, health and welfare problems (along with their causes, treatment or mitigation and outcomes) must be recorded in the VHWP as soon as practically possible.

- **Reporting thresholds and timeframes: Any weekly mortality over the specified thresholds must be reported to the certification scheme assessing against these standards within the specified timeframe (72 hours of the end of the reporting period).**

  Reporting mortality that breaches the threshold is important as it allows the certification scheme assessing against these standards to undertake specific visits or obtain further information if there is a concern for the welfare of the fish. It also provides valuable information to the RSPCA of the main mortality drivers that are currently affecting the industry. Further, prompt reporting allows rapid action to be taken as required.

Casualty killing

- **Approved methods: Anaesthetic overdose, electrical stun-to-kill and percussive blow (for fish over 5g only).**
  The above methods are the only permitted methods of casualty killing or culling on farms for fish that require euthanasia. Any other method is not permitted as it either causes suffering and is inhumane (e.g. asphyxiation, bleeding without prior stunning) or has not been investigated and approved by the RSPCA.

Medicinal products

- **Antibiotic use and review: Antibiotics must be used in accordance with UK legislation and must not be used prophylactically or without good reason. The use of antibiotics must be reviewed annually or at the end of a production cycle and a written action plan produced to reduce the use of antibiotics through improvements in husbandry.**

  Antibiotics must not be used unless there is a diagnosis or strong suspicion of a bacterial infection. From 2025, all farms must complete an antibiotic review plan, even if no antibiotics were used. The findings must then be used to identify any husbandry practices that can be implemented to reduce any potential future use of antibiotics.

Welfare Outcome Assessment

- **The role of welfare outcome assessments: WOAs to be performed in both freshwater and seawater according to protocols outlined in standards. Any welfare issues highlighted through assessments to be recorded in VHWP.**

  In order to continue to improve rainbow trout welfare, there needs to be a robust system of measuring and quantifying welfare. The most feasible current method is to use operational welfare indicators, scored on a regular basis from fish netted and subsequently anaesthetised from their tank/enclosure. These fish must be scored for fin malformation, eye loss/damage, jaw deformity, spine deformity, snout injury, scale loss and skin damage, physical wounds and lesions, operculum damage, and sea lice damage (seawater only). The intention is to identify potential welfare issues that require further investigation.

Transport

General

- **Overseeing transport operations: There must be an agreed person/s present to oversee transport operations and who is deemed responsible. This is a person agreed by the supplier, the receiver and the transporter.**

  Having a defined person/s present that has overall responsibility for the transport operations means that a quick and decisive decision to protect fish welfare can be made when necessary. This can be multiple people to cover different stages of the journey, but their roles and cross-over should be clearly defined.

Stunning beyond recovery / killing

General

- **Prohibited methods: Bleeding or decapitation without prior stunning, asphyxia, evisceration, live chilling, ice slurry or bath and carbon dioxide narcosis are all prohibited methods of slaughter.** All of the above methods of slaughter are considered to be inhumane and can cause an immense degree of suffering for rainbow trout. They are not permitted under any circumstances. Many are legally prohibited in other countries like Norway. These methods were expressly prohibited in the 2025 version of the standards.

- **Re-stunning of trout: Trout that have not been effectively stunned must be re-stunned immediately. Each re-stun must be reported to the person in charge with action taken to rectify any issues which may have caused the ineffective stun.**

  An ineffectively stunned trout is likely to be suffering and its welfare will very likely be compromised. An immediate and effective re-stun will end its suffering, so it is vital it is performed quickly and correctly. Reporting each re-stun will allow the person in charge to monitor the number of fish needing re-stunned and the potential reasons that stuns are being ineffective. Actions must be taken as needed to stop further fish being ineffectively stunned. This standard was introduced in the 2025 version of the standards.

Electronarcosis followed by bleeding / electrocution

- **Requirements when using electrical stunning: When using any form of electrical stunning, it must be ensured that fish are rendered insensible within 1 second, do not suffer any pre-stun shocks and that the shock is maintained until the fish dies. Regular assessments of stunning efficacy are required, including assessing eye movement, opercular movement, muscle twitches and reaction to tail pinch.**

  The use of electricity can be an effective stunning mechanism for rainbow trout but it is vital that the correct procedures are in place to stop any avoidable suffering. Individual trout must receive an immediate and full electric shock that renders them immediately insensible. There must be no prior shocks as these can cause pain while the fish is fully conscious. The shock must be sufficient so that there is no suffering before death occurs (even if further stunning is to take place). Trout must be assessed regularly to ensure that the stun is being correctly applied.

Stunning beyond recovery / killing

- **Use of CCTV: CCTV must be in place to cover the stunning and killing process. It must show a clear view of each process and must be recorded whenever rainbow trout are undergoing the processes outlined in the standard. The footage must be stored for at least 3 months.**

  The use of CCTV in slaughter facilities (including on vessels) is a vital tool for monitoring and enforcement of standards during the stunning and slaughter processes. It can also be useful for training purposes and for providing records to assurance scheme assessors, inspectors and other interested parties. Together, this helps to protect rainbow trout welfare at the time of killing and as such, is an important component of the welfare standards. All CCTV standards were first introduced in the 2025 version of the standards.

References

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