

## *Animal Care Best Management Practices*

NTF published its first guidelines on the care of turkeys in 1990 and has continued to update its members with new information ever since.

To do this, NTF has developed Animal Care Best Management Practices (AC-BMP) to encourage humane production and slaughter practices. The BMP manuals provide the industry with the tools needed to make improvements with the current state-of-the-art practices and to set the stage for future enhancements.

Turkey producers are very attentive to the birds' needs, and use humane processes while still providing high-quality, economical, safe and wholesome turkey products for consumers. With a long-term view, improvements can and should be accomplished without causing significant economic disruption to our nation's food production system.

Guidelines within the AC-BMP manual have been developed with the best available information and must be continually updated in order to make sound improvements as new knowledge emerges.

These guidelines were developed by NTF to provide information on euthanasia methods to turkey producers and veterinarians. These methods apply to hatcheries and farms. Hatcheries and farms should have policies and detailed training for employees that perform any of these methods.



## *Euthanasia Guidelines*

## **Acknowledgements**

These guidelines were produced under the guidance of the NTF Turkey Health & Welfare Committee. Members of NTF's Live Production Committee, Technical and Regulatory Committee, and NTF staff were also involved in the development, review and adoption of the AC-BMP Manual.

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## Background and Introduction

### 1. Objectives

- a. The *Guidelines for the Euthanasia of Turkeys* provides information on euthanasia methods to turkey producers and veterinarians, and is a companion document for the *Animal Care Guidelines for the Production of Turkeys (ACG)*.

### 2. Distribution of the Guidelines

- a. Members and affiliates of NTF (via NTF website EatTurkey.com)
- b. Allied and commodity groups whose interest includes the care of food animals.
- c. Organizations providing input and expertise on care requirements for food animals.
- d. Groups and agencies representing and informing the consuming public on animal care.

### 3. Euthanasia Guidelines – A Dynamic, Ongoing Process

- a. The development of the Euthanasia Guidelines is an evolving, dynamic and ongoing process. The Euthanasia Guidelines must be up-to-date and reflect the state-of-the-art in animal euthanasia methods. Industry methods of euthanasia can change as new information and innovations are developed and adopted.
- b. Each operation should appropriately incorporate new information and techniques as they evolve and make decisions based on the NTF-BMP.
- c. The Euthanasia Guidelines is a standalone document that provides guidance on current euthanasia methods and serves as a supplement to the *Animal Care Guidelines for the Production of Turkeys*. Information on relevant government agencies and regulations, other animal welfare organizations, and the structure of the ACG and Food Safety Best Management Practices (FS-BMP) may be found in the Background and Introduction to the ACG. General turkey welfare information is available in the Appendices of the ACG.
- d. The Euthanasia Guidelines should undergo an industry-wide review whenever the ACG is updated, which occurs approximately every two years.

### 4. Reference Information

- a. References:
  - 1) Euthanasia and Slaughter of Livestock, Temple Grandin, Ph.D., Colorado, *Journal of the AVMA*, Vol 204 (1994) 1354-1360.
  - 2) Erasmus, M.A., Turner, P.V., and Widowski, T.M., 2010, Erasmus Et Al.: Measures Used to Asses Insensibility, *Poultry Science Association*, p. 288-298.
  - 3) Alphin, R.L., Benson, E.R., Dawson, M.D., Johnson, K.J., Malone, G.W., and Seta, A., 2009, Dawson Et Al.: Monitoring Cessation of Brain Activity, *Poultry*

*Science Association*, p. 135-142.

- 4) Duncan, I.J.H., Erasmus, M.A., Lawlis, P., and Widowski, T.M., 2010, Evaluating On-Farm Killing Methods for Turkeys, *Poultry Science*, p. 1345-1354.

## Definition and Purpose

1. ***Euthanasia is a humane death that occurs with minimum pain and distress.***
2. When caring for animals, it is inevitable that some will become ill, debilitated or injured. If a bird is unlikely to respond favorably to treatment or if treatment is not feasible because of practical or public health considerations, euthanasia may be the best option to prevent the bird from suffering.
3. These guidelines are designed to assist turkey producers and veterinarians in making appropriate decisions regarding the euthanasia of turkeys.

## Decision Making Criteria

Questions to be considered in deciding whether an ill, debilitated or injured turkey should be euthanized include:

- Is the bird experiencing pain or distress?
- Is the bird able to access feed and water?
- Can the bird be treated?
- Would treatment cause additional pain and distress?
- Is recovery likely?
- Is the bird likely to transmit disease to other birds?
- Is the bird suitable for human consumption or will it be suitable for consumption after recovery or treatment?

## Considerations for Euthanasia Methods

1. **Poultry Welfare**: The method chosen should minimize the pain and distress experienced by the turkey. However, the choice of techniques may be limited in certain environments. With all methods, turkeys should be restrained, if necessary, to ensure effective administration of euthanasia.
2. **Human Safety**: The method chosen should not pose undue risks to the individual performing the euthanasia. Some methods are more dangerous than others and should only be used under controlled conditions with proper equipment and protection.
3. **Training**: Appropriate training of personnel is essential for all euthanasia methods to ensure that turkeys are euthanized appropriately and effectively, while ensuring the safety of those administering the euthanasia. Training should be tailored to the specific methods available on a farm.

4. **Aesthetics:** Some methods may be visually objectionable to the person performing the procedure because of blood loss or involuntary reflex movements by the turkey. Personnel that may euthanize turkeys must be trained to understand how birds respond to particular euthanasia methods.
5. **Limitations:** Some methods may be suitable only for certain ages of turkeys.

## **Euthanasia Methods for Poultry**

*All methods of euthanasia should be administered according to the AVMA Guidelines for the Euthanasia of Animals: 2013 Edition, with exceptions and/or additions as noted. Additional methods of euthanasia beyond those listed here may be available or developed in the future, and should be administered in accordance with the AVMA Guidelines.*

- **Cervical Dislocation:** Carried out near the head area, dislocation of the neck vertebrae from the cranium damages the lower brain region, causing rapid unconsciousness. In order to be humane, dislocation must cause severance of the brain from the spinal cord. Training of personnel is critical for appropriate administration of the method. Any cervical dislocation procedure should be carried out swiftly and effectively. Cervical dislocation can be carried out either manually or via the assistance of a tool at the discretion of the operator. Flapping and other postmortem reflex body movements may persist for several minutes after cervical dislocation. Turkeys should be restrained, if necessary, to ensure effective administration of this method.

- **Gas Euthanasia:** Turkeys can be euthanized by being placed in containers that are sufficiently airtight to maintain the gas at desired concentration. Any gas method should result in rapid onset of anesthesia with subsequent death. Death should occur in 2-5 minutes depending on the age of the turkeys, the number of turkeys placed in the gas chamber, and the concentration of gas used (refer to *AVMA Guidelines for the Euthanasia of Animals: 2013 Edition* for specific information on gas concentrations).

Depending on how many birds are being euthanized, use of a circulation system may be necessary to ensure that the gas does not become stratified. To meet the criteria for humane euthanasia, birds already in the chamber must be unconscious before being overlain by other birds loaded after them, and unconsciousness must be maintained until death occurs. Note: It is especially important to confirm death when birds are euthanized using gas, since they can appear dead, but then regain consciousness.

- **Blunt Force Trauma to the Head:** A sharp blow to the head with a blunt instrument or captive bolt system can be used to euthanize turkeys. The blow must land with appropriate force and be properly placed such that the initial blow results in swift and effective unconsciousness and death. As with other methods, appropriate training and evaluation are essential. Turkeys should be restrained, if necessary, to ensure effective administration of this method.

- **Manually Applied** — Although effective, manually applied blunt force trauma presents challenges regarding aesthetics. NTF encourages those using manually applied blunt force trauma to the head to search for alternative methods. However, NTF also

recognizes that there are situations where other methods may be unavailable or impractical.

- **Mechanical** — Purpose-built captive-bolt systems, and other devices, must be used in accordance with the manufacturer’s recommendations.
- **Anesthetic Overdose:** This method is available through and used under the direction of a licensed veterinarian. Refer to *AVMA Guidelines for the Euthanasia of Animals: 2013 Edition*.
- **Maceration:** Maceration causes immediate fragmentation and death of neonatal poultry and embryonated eggs. A review of the use of commercially available macerators for euthanasia of chicks, poults, and pipped eggs indicates that death by maceration in neonatal poultry occurs immediately with minimal pain and distress.

## **Confirmation of loss of consciousness and death**

**Confirmation of death is critical regardless of the method chosen.** Turkeys must be observed after administration to ensure that death occurs, and additional euthanasia procedures must be employed for any turkey showing signs of recovery.

- The cessation of reflexes in the head area can be used to confirm loss of consciousness:
  - Lack of response to a hard pinch delivered to the snood
  - Lack of blink reflex when the eye is touched
- The following signs can be used to confirm death:
  - Cessation of respiration
  - Cessation of heartbeat

The operator must confirm death before disposal. For most methods of euthanasia, a recommended follow-up time of approximately five minutes can ensure that any bird showing signs of recovery is identified and euthanized.

## **Mass Depopulation**

Under unusual conditions, such as disease eradication and natural disasters, euthanasia options may be limited or not practical. In these situations, the most appropriate technique that minimizes human and animal health concerns must be used. These options include, but are not limited to, gases or physical methods such as gun shot, penetrating captive bolt, cervical dislocation, and the use of a water-based foam as outlined by “*USDA APHIS Performance Standards for the Use of Water-Based Foam as a Method of Mass Depopulation of Domestic Poultry*” and approved by AVMA as a poultry depopulation method.

## Monitor and Feedback Forms

Personnel involved in the euthanasia of animals must be trained in appropriate euthanasia methods and be provided with any equipment that might be necessary for euthanizing sick or injured birds. A written action plan for routine and emergency euthanasia should be developed and followed whenever birds are handled. Since improved euthanasia methods for poultry are constantly under development, the action plan should be reviewed and updated regularly to incorporate these new methods as appropriate. It is very important to have a plan, oversee and update the plan, and evaluate the oversight of the plan. It is also recommended that documentation related to training and qualifications be kept and made available as necessary.

### NTF Animal Care – Euthanasia Action Plan

*The euthanasia form below is an example outline for operations that do not have reporting forms in place.*

Farm Name:		
Date:		
Drafted by:		
Place	Method of Choice	Alternative Method
Hatchery		
Poults		
Larger Turkeys		

Post this plan in a centralized area as a guideline for humane euthanasia of turkeys on your farm. Remember that only trained, competent employees should be allowed to euthanize animals, and that the plan should be reviewed during training and on an annual basis.

***This document has been reviewed and approved by academic poultry science professionals.***

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