

HPAI Response

Alternatives to Disposal for Shell Eggs and Egg Products from a Highly Pathogenic Avian Influenza (HPAI) Infected Premises

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Please note: These procedures may be revised as the situation develops.

BACKGROUND INFORMATION

Since HPAI was identified in February 2022 and expanded into the most significant foreign animal disease event in the United States' history, an estimated 218 million eggs have needed disposal from commercial facilities in the United States. Composting, landfilling, and other methods to dispose of large quantities of shell eggs and egg products are resource intensive, expensive, waste edible protein, and sometimes require cooperation and coordination across multiple agencies. Although HPAI virus may be recovered from the external surfaces of the eggshell and internal contents, there is no reported evidence of vertical transmission from internally contaminated eggs.¹

The [Secure Egg Supply Plan](#) was developed for continuity of business for uninfected premises within a Control Area. The risk assessment recommended a 2-day holding time and active daily surveillance testing to reduce the likelihood of moving contaminated eggs from a monitored premises.² The egg industry operates in a 'just-in-time' supply-demand production chain with a holding capacity of approximately 48 to 72 hours. Scientific modeling supports a 2-day holding time, demonstrating that eggs produced by a flock two days prior to the flock testing positive for HPAI pose negligible risk of spreading virus if released into commerce.³

PURPOSE

The purpose of this document is to define and describe which shell eggs/egg products are eligible for movement from an infected premises for usual routes of commerce and which shell eggs/egg products must receive a heat treatment process as defined by the World Organisation for Animal Health ([WOAH](#)). The movement of shell eggs from an infected premises, as described below, is an alternative to disposal methods such as digestors, landfill, or composting which result in unnecessary waste of protein. If the shell eggs from an infected premises cannot be moved based on a risk analysis, the eggs may be eligible for indemnity at the discretion of the National Incident Commander (NIC).

For uninfected premises in the Control Area, producers should follow the [Control Area Permitting](#) guidance; these do not require NIC review and approval.

¹ Fernandez et. al., 2010, p. 129

² Bjork et al., 2012, p. 897-904

³ FSIS, 2010

GENERAL GUIDANCE

Indemnity

- ♦ Shell eggs and liquid egg products laid two (2) days or greater prior to the presumptive positive date should be moved by permitting into usual routes of commerce.
- ♦ Shell eggs and liquid egg products on site that originated from uninfected flocks from a separate premises are not eligible for indemnity.
- ♦ If a producer or processor chooses to comingle shell eggs from uninfected flocks with shell eggs from an infected flock(s) laid within two (2) days prior to the presumptive positive date, all shell eggs must receive a heat treatment process as defined by WOAHA.
- ♦ Any compensation for shell eggs or liquid egg products received by the owner from a source other than APHIS is considered fair market value. APHIS will not consider claims for indemnity or additional compensation for these marketed products.
- ♦ As with other indemnity payments, the producer has an option to appeal if they feel they did not receive fair market value from APHIS' indemnity.

Plans for Alternatives to Disposal

- ♦ The Incident Commanders at the local State and Federal level will outline in writing the enhanced sanitary and biosecurity procedures; controls; disposal of broken eggs, shells, and any inedible egg products on hand; and routes of vehicles moving the restricted shell eggs or liquid egg products.
- ♦ The sanitary and biosecurity procedures for alternatives to disposal for shell eggs plans, must address the sanitation of egg equipment and reuseable packaging material, and the disposal of shipping and packaging materials that cannot be disinfected.
- ♦ APHIS recognizes that there are unique layouts and circumstances for egg laying premises that cannot be anticipated beforehand. APHIS will consider unique requests on a case-by-case basis.
- ♦ Any restricted movement of nest run, shell eggs, or liquid egg products from an infected premises, as described in Table 1, requires an epidemiological review and a written plan that includes diagrams of the premises outlining the lines of separation between the processing side and the production houses.
- ♦ Any movement(s) must meet the requirements of the destination State.
- ♦ The shell eggs or liquid egg products are eligible for U.S. domestic use only and are not eligible for export.
- ♦ It is the processing facility's responsibility to maintain records documenting the product lots associated with shell eggs or liquid egg products in accordance with the applicable regulatory authority of the appropriate agency.
- ♦ Table 1 outlines the categories of eggs and egg products that may be moved from the infected premises under increased written biosecurity and biocontainment procedures prepared by the unified Incident Commanders and submitted to the NIC for review and approval.

Table 1: Disposition of shell eggs and egg products from an Infected Premises

Type of product	Produced two (2) days prior to the presumptive positive date	Produced within two (2) days the presumptive positive date
Nest run eggs	Process, then proceed into normal routes of commerce	Process and heat treatment
Washed, sanitized shell eggs	Normal routes of commerce	Heat treatment process
Liquid Egg Product(s)	Normal routes of commerce	Heat treatment process

Plans for “Early” Return to Processing Operations

- ◆ An infected premises that wants to resume processing activities before restocking should first prioritize completion of depopulation and disposal activities and meet the initial virus elimination (IVE) date.
- ◆ Premises may wish to resume some processing operations, such as receiving eggs for washing and sanitizing, breaking, or liquid egg for heat-treatment, before the quarantine is released. Written plans reviewed by local Incident Commanders should be submitted to the NIC for review and approval.

ACCEPTABLE PROCESSING METHODS

- ◆ Any process that meets the time and temperature sufficient to inactivate HPAI viruses in egg products as outlined in the WOA [Terrestrial Animal Health Code Article 10.4.23](#).
- ◆ Facilities that could process eggs from infected premises flocks with increased biosecurity precautions may include:
 - A facility that can perform in-shell egg heat treatment process that inactivates HPAI viruses.
 - An egg breaking facility where the liquid egg product is destined for a heat treatment process or other process that is sufficient to inactivate HPAI viruses.
 - A facility that processes shell eggs to a fully cooked hard-boiled egg product, a fully cooked product under Food and Drug Administration (FDA) oversight.
 - A company that produces pet food and has supporting documentation that their treatment processes are sufficient to inactivate HPAI viruses.

REFERENCES

- ¹ Fernandez, Peter J. and White, William R. p. 129 (2010) Atlas of Transboundary Animal Diseases, OIE
- ² Malladi S, Weaver JT, Goldsmith T, Hueston, W, Voss, S, Funk, J, Der C, Bjork K, Clouse TL, Hennesey M, Sampedro F, Lee B, Haloverson D. The Impact of Holding Time on the Likelihood of Moving Internally Contaminated Eggs from a Highly Pathogenic Avian Influenza Infected but Undetected Commerical Table-Egg Flock. *Avian Diseases*. 56: 897-904; 2012.
- ³ Interagency Risk Assessment for the Public Health Impact of Highly Pathogenic Avian Influenza Virus in Poultry, Shell Eggs, and Egg Products. Food Saftey Inspection Services (FSIS) in collaboration with FDA and APHIS; 2010.