

Poultry Antemortem Inspection

Objectives

1. Describe the proper procedure for conducting antemortem inspection on a poultry lot.
2. List at least three reasons why poultry antemortem inspection is conducted differently than red meat antemortem inspection.
3. From a list of responsibilities, determine which are plant management's and which are inspections.
4. List the sources of authority for conducting poultry antemortem inspection.
5. Describe in writing the lighting and condemn container requirements for antemortem inspection of poultry.
6. List at least five symptoms of disease that might be observed on antemortem inspection.
7. Discuss the good commercial practices regulatory requirements for poultry.
8. Properly execute the antemortem portion of FSIS Form 9061-2 (Poultry Condemnation Certificate).
9. Describe the proper action by inspection when live poultry are removed from the official plant premises for the following reasons:
 - The plant feels that inspection is condemning an excessive number of poultry carcasses on postmortem inspection.
 - The plant suspects a reportable disease present in the poultry.
 - The plant suspects a biological residue present in the poultry.
 - The plant wishes to send live poultry to another plant for slaughter for the purpose of split-lot correlation between the inspection forces of two plants.
10. Define "positive control" of poultry condemned during antemortem inspection.
11. List at least three acceptable methods the plant can use to dispose of poultry condemned on antemortem inspection.

12. Compare the required disposal of poultry condemned for biological residues to the required disposal of poultry condemned for other reasons.
13. Render an antemortem disposition according to FSIS rules, guidelines, and procedures when given a description of antemortem findings.
14. State who may officially perform antemortem inspection.
15. Describe the procedures that must be followed when poultry suspected of having a contagious disease transmissible to humans are detected during antemortem inspection.
16. State whether poultry condemned on antemortem inspection may enter any part of the official establishment.
17. Describe the procedures that must be followed when poultry affected by a biological residue are detected during antemortem inspection.
18. List four non-disease factors that may affect the condition of poultry presented for inspection.

Resources

FSIS Directive 6000.3 Ante mortem and Postmortem Poultry Inspection

FSIS Directive 6110.1 Verification of Poultry Good Commercial Practices

FSIS Directive 6020.1 Rev. 1 Enhanced Inspection of Poultry in Response to a Notification of a Highly Pathogenic Avian Influenza Outbreak

FSIS Directive 6000.1 Rev. 1 Responsibilities Related to Foreign Animal Diseases (FADs) and Reportable Conditions

Poultry Antemortem Inspection

Antemortem means "before death." The Act and Regulations require that antemortem inspection be performed on poultry presented for slaughter.

Antemortem inspection of poultry is performed on a lot basis. The plant or establishment designates the size of the lot. Generally a lot is made up of birds from a single house of poultry grown on a particular farm, but it may be as large as several houses of poultry. Lot size designation depends upon the criteria used by plant management.

Authorities

The Agency's authority for conducting ante-mortem inspection can be traced to the statutes. The authority for conducting ante-mortem inspection in poultry is found in 21 USC, Chapter 10, Section 455(a), of the Poultry Products Inspection Act (PPIA).

The regulations covering ante-mortem inspection of poultry are found in Title 9 - Animals and Animal Products, Chapter III - Food Safety and Inspection Service, Department of Agriculture of the Code of Federal Regulations. Part 381.36(b) addresses the facilities for Inspection. Parts 381.70 through 381.75 cover ante-mortem Inspection.

There are some FSIS Directives related to ante-mortem inspection. They include the FSIS Directive 6110.1 "Verification of Poultry Good Commercial Practices", FSIS Directive 6100.3, 'Ante-Mortem and Post-Mortem Poultry Inspection", and the FSIS Directive 6170.1, "Ratite Ante-Mortem and Post-Mortem Inspection". These are instructions to inspection personnel.

The statutes establish our authority to examine and birds prior to slaughter. Under the statutes, we are to accept for slaughter as a result of inspection only those birds which are capable of producing products that are acceptable for use as human food. With this goal in mind, the purpose of ante-mortem inspection is to accept only those animals and birds that are healthful, safe from harmful chemical and drug residues, and capable of being converted into wholesome product for the consumer. Inspection of birds is a screening process to remove obviously diseased animals from the food supply prior to slaughter and to identify animals that require a more extensive postmortem examination by an FSIS veterinarian. It is the first line of defense in protecting the public from potentially harmful poultry products. Those birds that exhibit abnormal signs must be withheld from normal slaughter and segregated for closer examination.

Scientific studies have established the basis for conducting antemortem inspection of poultry. The observation of poultry while they are in coops or batteries, before or after their removal from trucks near the point where live poultry are hung on the line, meets the antemortem inspection requirement, with the exception of antemortem inspection of ratites (ostriches, emus, and rheas). By observing several birds from each lot, the FSIS inspector meets this requirement. Such inspections help insure that only poultry that could be acceptable as human food enter the plant.

If a bird is alive, it will be hung on the line. If it is dead, the bird must be condemned and maintained under positive control until disposed of properly. Positive control means:

- under direct observation by inspection personnel
- denatured or decharacterized by chemical agents
- secured in a properly marked container by a government lock or seal

Verification of Good Commercial Practices for Poultry

In poultry operations, methods of handling and slaughtering that are consistent with good commercial practices increase the likelihood of producing unadulterated product. FSIS regulations describe the operating procedures that poultry processors must follow to ensure sanitary processing, proper inspection, and the production of poultry products that are not adulterated. Under 9 CFR 381.71, FSIS condemns poultry showing, on antemortem inspection, certain diseases or conditions. Bruising is one condition that may result in condemnation (9 CFR 381.89). Bruises are likely to result when birds are not treated humanely. Moreover, the PPIA (21 U.S.C. 453(g)(5), as well as agency regulations (9 CFR 381.90), provide that carcasses of poultry showing evidence of having died from causes other than slaughter are considered adulterated and condemned. The regulations also require that poultry be slaughtered in accordance with good commercial practices, in a manner that results in thorough bleeding of the poultry carcass, and ensures that breathing has stopped before scalding so that the birds do not drown (9 CFR 381.65(b)). Compliance with these requirements helps ensure that poultry are treated in a humane manner.

FSIS Directive 6110.1, issued on July 3, 2018, instructs Agency in-plant personnel assigned to poultry slaughter facilities to perform a Good Commercial Practices task on a daily, per shift basis when the establishment slaughters. During this verification task, the PHV, or designee, is to systematically observe the conditions in the receiving to pre-scald area. Once a week, Agency in plant personnel are to review the establishment records documenting its adherence to good commercial practices, if the establishment keeps such records. Establishments are not required to keep records of good commercial practices. However, if establishments do keep such records and make them available, IPP are to review the records. The Directive also clarifies that video surveillance can be used by the establishment as a form of GCP record.

When verifying good commercial practices in the receiving through pre-scald areas, you are to observe whether establishment employees are mistreating birds or handling them in a way that will cause death or injury or prevent thorough bleeding or result in excessive bruising. For example, observe whether establishment employees are breaking the legs of birds to hold the

birds in the shackle or squeezing them into a shackle or otherwise mishandling birds while transferring them from the coops to the shackles. In cold weather, observe if birds are frozen inside the cages or frozen to the cages themselves, or in hot weather, observe if the birds are dead from heat exhaustion. The main observable symptom of heat stress in poultry is heavy panting.

Observe the handling and treatment of loose birds in the unloading and live hang areas. For example, are establishment employees driving over live birds with equipment or trucks? If the birds are stunned before being bled, observe whether stunning equipment is functioning properly. However, stunning birds before bleeding is not a regulatory requirement. For example, a post-stun posture that includes arched neck and wings tucked in is visual evidence of an effective stun. You also want to observe whether or not the bleeding equipment is functioning properly. For example, check if birds are entering the scalders are still breathing; if there are increased numbers or clusters of cadavers at the inspection station; or if there is other evidence that birds died other than by slaughter. Observe whether there are an increased number of bruised wings or legs; or whether there are any other activities that will interfere with thorough bleeding of the birds, or could result in the birds still breathing at the time they enter the scalders.

If you observe that the establishment is not observing good commercial practices, as evidenced by birds dying other than by slaughter or not being completely bled out before entering the scalders, you are to inform the offline CSI or PHV immediately. They will document the noncompliance on a Noncompliance Record or a Poultry Mistreatment MOI. The District Veterinary Medical Specialist (DVMS) will routinely correlate and review the documentation and observations in the GCP NRs and Poultry Mistreatment MOIs. In specific situations, after DVMS review of a mistreatment MOI, there may be a need for additional notification of the appropriate state officials/

Poultry and Livestock Antemortem Comparison

Antemortem inspection requirements for poultry are different from those for livestock. The following are examples that illustrate the differences.

- Age -- A poultry lot goes to slaughter at an early age (6-8 weeks). Livestock are generally much older.
- Genetics -- A poultry lot is closely related to the same parentage. Livestock have greater variation.

- Nutrition and Health Management -- A poultry lot is under the same influence of feed, vaccinations, and environment from the hatchery to the slaughter plant.

Poultry antemortem inspection is performed on a lot basis because of the way the PPIA, and Poultry Regulations are written. The fact that the origins of the Meat Act and the Poultry Act are different has something to do with the different methods of inspection. The original Meat Act basically had its beginnings in the early 1900's and was precipitated by public opinion and Upton Sinclair's book *The Jungle*. The original Poultry Act was not passed until the 1950's. Both the times and public opinion had changed considerably.

Some of the major differences between poultry and red meat antemortem inspection are as follows:

- An antemortem bird-by-bird inspection of poultry is not a feasible task. Therefore, inspection on a lot basis was established.
- .U.S. Condemn tags are not used in poultry antemortem inspection.
- An official U.S. Suspect pen is not required in poultry antemortem inspection.
- In red meat U.S. Suspects have their body temperatures taken, but poultry antemortem inspection does not involve taking body temperatures.
- Biological residue condemnations in poultry must be burned or buried.

Observation of humane slaughter is not required for poultry since there is not a Federal humane poultry slaughter law. However, observation of good commercial practices is required, and if condemned live poultry are to be killed, they must be killed in a humane manner.

Antemortem inspection must be performed before daily slaughter operations begin and as often as necessary during the shift, as determined by the veterinarian in charge. On antemortem inspection, any birds that do not clearly show but are suspected to have any disease or condition that may cause condemnation of part or the entire carcass on postmortem inspection under 9 CFR Part 381, are to be designated as "U.S. Suspect".

The birds identified as "U.S. Suspect" are to be segregated and the PHV must verify that they are slaughtered separately from the birds passed for normal slaughter. The plant or establishment is required to provide adequate facilities, equipment, and necessary supplies for FSIS to perform this inspection.

Poultry are condemned on antemortem inspection if they present with diseases or conditions that, under 9 CFR 381.71(a), warrant condemnation. Birds condemned on antemortem inspection cannot enter the official establishment and must be disposed of properly, according to 9 CFR 381.95. Poultry that are dead on arrival must be identified, counted, and weighed, and the number recorded on FSIS Form 9061-2, Poultry Condemnation Certificate. Condemn barrels must be leak proof and clearly marked.

Ratite Antemortem Inspection

Antemortem inspection in ratites more closely matches the livestock method of antemortem inspection. There must be an identification system used that accurately identifies each animal and establishes that Agency personnel have performed antemortem inspection on that bird. This is often done using pen cards, similar to pen cards used in livestock antemortem inspection.

All ratites are to be observed at rest and in motion. When viewing each ratite during antemortem inspection, you are to observe the overall condition of the ratite; the body of the bird and the head, including the eyes, nostrils, beak, and neck; the degree of alertness, mobility, and breathing; and look for any unusual swellings or other abnormalities.

When you find ratites showing signs of abnormalities or diseases on antemortem, you are to have the establishment segregate all affected ratites (e.g., suspect pen) for further examination by the PHV (9 CFR 381.72(a)). Ratites that are seriously crippled and non-ambulatory and those suspected of having any disease or condition requiring condemnation of all or part of the carcass are to be designated as a "U.S. Suspect" with a serially numbered metal or plastic leg band or tag bearing the term "U.S. Suspect". These birds are to be slaughtered separately from the ratites pass for normal slaughter.

Under specific circumstances, ratites are eligible for delayed (9 CFR 381.70(b)(2)) and emergency slaughter (9CFR 381.70(b)(1)). For a more complete description of the applicable circumstances, see FSIS Directive 6170.1, "Ratite Ante-Mortem and Post-Mortem Inspection".

Ratites that are dead on arrival, that died at the establishment, that are plainly affected with any disease or condition that would cause condemnation on postmortem inspection under 9 CFR Part 381, or that are affected with any condition that would preclude the release of the animal for slaughter for human food are to be designated as "U.S. Condemned". Ratites condemned on antemortem inspection are to be disposed of in accordance with 9 CFR 381.95.

Conditions Seen During Antemortem Inspection

Symptoms of disease that may be observed on antemortem inspection include:

- Swelling around the head and eyes
- Edema of the wattles
 - Gaspings and sneezing
 - Coughing
 - Off-colored diarrhea
 - Skin lesions
 - Lameness
 - Torticollis or wry neck (neurological)
 - Bone or joint enlargement
 - Dermatitis
 - Stumbling and falling down
 - Sudden increase in bird deaths without clinical signs

Some non-disease factors that may affect the condition of poultry presented for inspection are as follows:

- Season of the year
- Heat
- Humidity
- Freezing rain
- Distance hauled to the plant
- Number of birds in a coop
- Time withdrawn from feed and water prior to slaughter

Antemortem inspection can be performed officially by either a food inspector or a veterinarian. However, if a food inspector suspects that a live lot of poultry has a contagious disease that might be transmissible to humans, the food inspector must notify a veterinarian. If the veterinarian decides that further handling of the poultry will create a health hazard, such poultry may be released for treatment under the control of appropriate State or Federal officials. If treatment is not practical, all birds found to be or suspected of being affected with the disease must be condemned on antemortem. Birds condemned on antemortem for any reason may not be brought into any department of the plant but must be disposed of according to regulations.

In summary, antemortem inspection of poultry can be a valuable aid to the inspection team in the poultry plant. These are some points to remember.

- Antemortem inspection is performed before the start of operations on the day of slaughter on each lot of birds.
- After the start of operations, the veterinarian in charge determines the frequency of antemortem inspection.
- Live birds, even if diseased, may be removed from the official premises. In case of a reportable disease (like ornithosis/chlamydiosis) is involved or suspected, contact your supervisor.
- Birds (alive or dead) that are condemned on antemortem must be counted, weighed, and denatured by plant personnel. This information is reported on FSIS Form 9061-2 (Poultry Condemnation Certificate) for each lot.
- Condemnations must be maintained under positive control until proper disposal

Antemortem Workshop

1. Describe the proper procedure for conducting antemortem inspection on a poultry lot.

- b. a disease condition in live poultry that might cause plant production problems
8. Define "positive control" of poultry condemned during antemortem inspection.
9. Describe the action inspection should take when *live* poultry are removed from the official plant premises for the following reasons.
- a. The plant feels that inspection is condemning excessive numbers of poultry carcasses on postmortem inspection.
 - b. The plant suspects that a reportable disease is present in poultry.
 - c. The plant suspects that there is a biological residue present in the poultry.
 - d. The plant wants to send live poultry to another plant for slaughter for the purpose of split lot correlation between the inspection forces of two plants.
10. List three acceptable methods the plant can use to dispose of poultry condemned on antemortem inspection.
11. Describe the difference between the required disposal of poultry condemned for biological residues and the required disposal of poultry condemned for other reasons.

12. Given the following descriptions of antemortem findings, render an antemortem disposition according to FSIS rules and regulations.

a. Birds that are coughing and sneezing and have swollen sinuses

_____pass for regular slaughter

_____withheld from slaughter

_____slaughtered as suspects

_____condemned on antemortem

b. Birds with obvious signs of a disease transmissible to humans

_____pass for regular slaughter

_____withheld from slaughter

_____slaughtered as suspects

_____condemned on antemortem

c. Birds with diarrhea and dirty feathers

_____pass for regular slaughter

_____withheld from slaughter

_____slaughtered as suspects

_____condemned on antemortem

d. Birds that are suspected of containing a biological residue

_____pass for regular slaughter

_____withheld from slaughter

_____slaughtered as suspects

_____condemned on antemortem

13. Identify the true statements by placing an "X" in the box provided.

- A. DOA birds must be identified, counted, weighed, and their number reported on the FSIS Form 9061-2 (Poultry Condemnation Certificate).
- B. Poultry must be humanely slaughtered according to the provisions of the Humane Slaughter Act.
- C. Poultry suspected of having biological residues may be returned to the grower under certain conditions.
- D. Each poultry antemortem lot must be identified with a pen card.
- E. Antemortem inspection shall only be performed on lots identified for slaughter by the establishment.
- F. Poultry shall not receive antemortem inspection until they are removed from the truck.
- G. Dead on arrival birds must be left in the coops for on-the-farm disposal.
- H. Antemortem inspection is required in each official establishment that slaughters birds.
- I. Poultry suspected of having biological residues may be slaughtered at the official establishment and sold for pet food.
- J. Live poultry affected with a disease that is transmissible to humans may be released for treatment.

- K. The primary purpose of antemortem inspection is to be able to inform plant management when sick birds arrive.
- L. Live poultry that were used in a chemical company experiment must be approved for slaughter by the Administrator.
- M. Antemortem inspection is official only when an FSIS veterinarian performs it.
- N. Antemortem inspection is optional in plants that export poultry.
- O. Live birds that are condemned and killed on antemortem inspection must be killed in a humane manner.

Poultry Regulations 381.70-381.75

Subpart J--Ante Mortem Inspection

Sec. 381.70 Ante mortem inspection; when required; extent.

(a) An ante mortem inspection of poultry shall, where and to the extent considered necessary by the Administrator and under such instructions as he may issue from time to time, be made of poultry on the day of slaughter in any official establishment.

(b) The examination and inspection of ratites will be on the day of slaughter, except:

(1) When it is necessary for humane reasons to slaughter an injured animal at night or on a Sunday or holiday, and the FSIS veterinary medical officer cannot be obtained; or

(2) In low volume establishments, when ante mortem inspection cannot be done on the day of slaughter, and the birds to be slaughtered have received ante mortem inspection in the last 24 hours, provided the establishment has an identification and control system over birds that have received ante mortem inspection.

Sec. 381.71 Condemnation on ante mortem inspection.

(a) Birds plainly showing on ante mortem inspection any disease or condition, that under Secs. 381.80 to 381.93, inclusive, would cause condemnation of their carcasses on post mortem inspection, shall be condemned. Birds which on ante mortem inspection are condemned shall not be dressed, nor shall they be conveyed into any department of the official establishment where poultry products are prepared or held. Poultry which has been condemned on ante mortem inspection and has been killed or died otherwise shall under the supervision of an inspector of the Inspection Service, be disposed of as provided in Sec. 381.95.

(b) Dead-on-arrival ratites and ratites condemned on ante mortem inspection will be tagged "U.S. Condemned" by an establishment employee under FSIS supervision and disposed of by one of the methods prescribed in Sec. 381.95.

(c) All seriously crippled ratites and non-ambulatory ratites, commonly termed "downers," shall be identified as "U.S. Suspects."

(d) Ratites exhibiting signs of drug or chemical poisoning shall be withheld from slaughter.

(e) Ratites identified as "U.S. Suspects" or "U.S. Condemned" may be set aside for treatment. The "U.S. Suspect" or "U.S. Condemned" identification device will be removed by an establishment employee under FSIS supervision following treatment if the bird is found to be free of disease. Such a bird found to

have recovered from the condition for which it was treated may be released for slaughter or for purposes other than slaughter, provided that in the latter instance permission is first obtained from the local, State, or Federal sanitary official having jurisdiction over movement of such birds.

(f) When it is necessary for humane reasons to slaughter an injured ratite at night or Sunday or a holiday, and the Agency veterinary medical officer cannot be obtained, the carcass and all parts shall be kept for inspection, with the head and all viscera except the gastrointestinal tract held by the natural attachment. If all parts are not so kept for inspection, the carcass shall be condemned. If on inspection of a carcass slaughtered in the absence of an inspector, any lesion or other evidence is found indicating that the bird was sick or diseased, or affected with any other condition requiring condemnation of the animal on ante mortem inspection, or if there is lacking evidence of the condition that rendered emergency slaughter necessary, the carcass shall be condemned. Ratites that are sick, dying, or that have been treated with a drug or chemical and presented for slaughter before the required withdrawal period, are not covered by emergency slaughter provisions.

Sec. 381.72 Segregation of suspects on ante mortem inspection.

(a) All birds, except ratites, that on ante mortem inspection do not plainly show, but are suspected of being affected with, any disease or condition that under Secs. 381.80 to 381.93 of this Part may cause condemnation in whole or in part on post mortem inspection, shall be segregated from the other poultry and held for separate slaughter, evisceration, and post mortem inspection. The inspector shall be notified when such segregated lots are presented for post mortem inspection, and inspection of such birds shall be conducted separately. Such procedure for the correlation of ante mortem and post mortem findings by the inspector, as may be prescribed or approved by the Administrator, shall be carried out.

(b) All ratites showing symptoms of disease will be segregated, individually tagged as "U.S. Suspects" by establishment personnel under FSIS supervision with a serially numbered metal or plastic leg band or tag bearing the term "U.S. Suspect," and held for further examination by an FSIS veterinarian. Depending upon the findings of the veterinarian's examination, these birds will either be passed for regular slaughter, slaughtered as suspects, withheld from slaughter, or condemned on ante mortem. Those ratites affected with conditions that would be readily detected on post mortem inspection need not be individually tagged on ante mortem inspection with the "U.S. Suspect" tag provided that such ratites are segregated and otherwise handled as "U.S. Suspects." All ratites identified as "U.S. Condemned" shall be tagged by establishment personnel, under FSIS supervision, with a serially numbered metal or plastic leg band or tag bearing the term "U.S. Condemned."

Sec. 381.73 Quarantine of diseased poultry.

If live poultry, which is affected by any contagious disease which is transmissible to man, is brought into an official establishment, such poultry shall be segregated. The slaughtering of such poultry shall be deferred and the poultry shall be dealt with in one of the following ways:

(a) If it is determined by a veterinary inspector that further handling of the poultry will not create a health hazard, the lot shall be slaughtered separately, subject to ante mortem and post mortem inspection pursuant to the regulations.

(b) If it is determined by a veterinary inspector that further handling of the poultry will create a health hazard, such poultry may be released for treatment under the control of an appropriate State or Federal agency. If the circumstances are such that release for treatment is impracticable, a careful bird-by-bird ante mortem inspection shall be made, and all birds found to be, or which are suspected of being, affected with a contagious disease transmissible to man shall be condemned.

Sec. 381.74 Poultry suspected of having biological residues.

When any poultry at an official establishment is suspected of having been treated with or exposed to any substance that may impart a biological residue that would make their edible tissues adulterated, they shall, at the option of the operator of the establishment, be processed at the establishment and the carcasses and all parts thereof retained under U.S. Retained tags, pending final disposition in accordance with Sec. 381.80, of this part, and other provisions in subpart K; or they shall be slaughtered at the establishment and buried or incinerated in a manner satisfactory to the inspector. Alternatively, such poultry may be returned to the grower, if further holding is likely to result in their not being adulterated by reason of any residue. The Inspection Service will notify the other Federal and State agencies concerned of such action. To aid in determining the amount of residue present in the poultry, officials of the Inspection Service may permit the slaughter of any such poultry for the purpose of collecting tissues for analysis of the residue. Such analysis may include the use of in-plant screening procedures designed to detect the presence of antimicrobial residues in any species of poultry.

Sec. 381.75 Poultry used for research.

(a) No poultry used in any research investigation involving an experimental biological product, drug, or chemical shall be eligible for slaughter at an official establishment unless the operator of such establishment, the sponsor of the investigation, or the investigator has submitted to the Inspection Service, or the Veterinary Biologics unit of Veterinary Services, Animal and Plant Health Inspection Service of the

Department or the Environmental Protection Agency, or the Food and Drug Administration of the Department of Health, Education, and Welfare, data or a summary evaluation of the data which demonstrates that the use of such biological product, drug, or chemical will not result in the products of such poultry being adulterated, and the Administrator has approved such slaughter.