



# Meat Messenger

North Dakota State Meat and Poultry Inspection Program

2015 Quarter 1

## Livestock producers looking for more inspected slaughter

*By Nathan Kroh*

At the 2014 North Dakota Lamb and Wool Producers Association state convention last October, a producer from outside of Fargo gave a short presentation on the demand for lamb and some methods she uses for directly marketing the meat. She raises about 30 sheep which she directly markets to end consumers and restaurants in the Washington D.C. area. She is near a federally inspected slaughter facility, which opens up her market to anyone.



A number of sheep producers would gladly sell meat and are even actively looking for a way to sell and market their product, but they need properly inspected meat to sell off farm. As the local foods movement continues to grow, demand for local, small town, inspected slaughter capabilities is climbing as the market for lamb increases. Visit the ND Lamb and Wool Producer's association website ([ndlwpa.com](http://ndlwpa.com)) and email ([ndlwpa@gmail.com](mailto:ndlwpa@gmail.com)) to ask about perspective customers in your area. Many cattle ranchers are looking for inspected slaughter services as well.

No minimum or maximum production volumes are necessary for state inspection. If a plant is interested in slaughtering and processing meat under state inspection, the first step is to contact the ND Department of Agriculture. They will work with the plant to develop an inspection schedule that is convenient for both the area inspector and the plant. The

inspection services are provided at no charge. The North Dakota State Meat and Poultry Inspection Service will take plant owners step-by-step through the whole process of state inspection.

Inspected slaughter services will give producers the option to sell whole animals or premium cuts of meat, opening up the market to those consumers looking for manageable quantities of quality local meat. The slaughter plant may gain a steady source of animals, pickup some wholesale accounts, and have fewer unpaid custom jobs taking up valuable freezer space. Inspected slaughter may be the most profitable option for both the plant and the local livestock producers, looking to increase their customer base.

Contact Nathan Kroh at 701-328-4767 or email [nkroh@nd.gov](mailto:nkroh@nd.gov) to learn more about state inspected slaughter.

### What would you like to read in the next issue?

The Meat Messenger is your newsletter. If you like the content, please feel free to share this issue with your employees, your livestock producers and customers. We welcome any questions, comments, or suggestions for future topics. Please contact **Nathan Kroh** at [nkroh@nd.gov](mailto:nkroh@nd.gov) or 701-328-4767 or **Julie Nilges** at [jnilges@nd.gov](mailto:jnilges@nd.gov) or 701-204-3248.

## Meat Messenger

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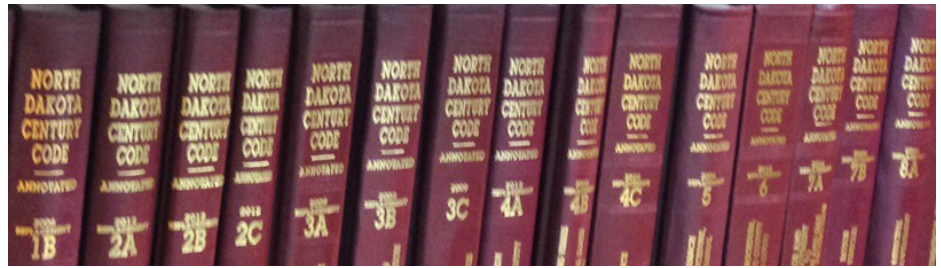
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## Regulation Reminder

CHAPTER 36-24, MEAT INSPECTION, 36-24-01. Definitions.

In this chapter, unless the context otherwise requires:

1. “Adulterated” means a whole carcass, part of a carcass, or meat food product:
  - a. That bears or contains a poisonous or harmful substance that may render it injurious to health;
  - b. That bears or contains a chemical pesticide that is unsafe under the federal Food, Drug, and Cosmetic Act [21 U.S.C. 301 et seq.];
  - c. That bears or contains a food or color additive that is unsafe under the federal Food, Drug, and Cosmetic Act [21 U.S.C. 301 et seq.];
  - d. That contains a filthy, putrid, or decomposed substance or is for any other reason unfit for human food;
  - e. That has been prepared, packed, or held under unsanitary conditions;
  - f. That is wholly or partly the product of an animal that has died in a manner other than slaughter;
  - g. The container of which is wholly or partly composed of a poisonous or harmful substance that may make the contents harmful to health;
  - h. That has been intentionally subjected to radiation, unless the use of the radiation conformed with a regulation or exemption in effect under the federal Food, Drug, and Cosmetic Act [21 U.S.C. 301 et seq.];
  - i. That is damaged or inferior and that damage or inferiority has been concealed; or
  - j. That has had a substance added to it or mixed or packed with it so as to increase its bulk or weight, or make it appear better than or of greater value than it is.

All laws written with product contamination or determination of production condition are based on these definitions of “adulterated”. The majority of the State regulations are developed to prevent any of the previously mentioned definitions and resulting products made under those conditions from entering commerce.

# Demystifying Direct Observation

By Beth A. McKew, DVM

Your plant's HACCP system may include several other verification activities, but direct observation must be one of them. What does "direct observations of monitoring activities" mean? Direct observation is primarily a way of verifying that monitoring activities are being performed the way it's written in your HACCP plan. Thus, while one employee monitors the critical control point, a second employee verifies that the first employee is performing the monitoring activity as described in the HACCP plan.

With some clarification, direct observation actually makes sense. Verification activities help support whether an establishment's Hazard Analysis and Critical Control Point (HACCP) system is working effectively day to day. Direct observation is one of three ongoing verification activities specifically required by the regulations.

Title 9 of the Code of Federal Regulations (CFR) 417.4 (a) (2) (i-iii) states: Ongoing verification activities include, but are not limited to:

- (i) The calibration of process-monitoring instruments;
- (ii) Direct observations of monitoring activities and corrective actions; and
- (iii) The review of records generated and maintained in accordance with § 417.5(a) (3) of this part.

Direct observation is not a second person monitoring the same critical control point at the same or a



different time, just as it certainly is not the same person monitoring the same critical control point for a second time. Simply put, direct observation is not duplicate monitoring.

For example, if a critical control point is to measure and record finished product temperature in the cooler, then the ongoing verification activity of direct observation is performed by a second employee observing or watching the first employee actually take and record the temperature of the product in the cooler. The direct observer should be familiar with the critical control point in order to ensure that the activity is being performed as described in the HACCP plan, accounting for technique, equipment, location, time, or frequency as appropriate. By performing direct observation, you're conducting ongoing verification that the monitoring procedure is being performed as intended.

Since direct observation is, by law, a required verification activity, it has a set of requirements that go with it. Your HACCP plan must describe what you'll be observing and at what frequency the observation will occur. A frequency must be specified in your HACCP plan and the reason as to how you decided on that frequency must be documented. Direct observation recordkeeping must include:

- The results of the procedure performed,
  - The initials or signature of who performed the direct observation, and
  - The date and time it was performed
- Remember: HACCP records are required to be recorded at the time the specific event occurs.

If you have further questions about direct observation, ask your inspector, or submit your question to askFSIS at <http://askFSIS.custhelp.com>.

The author is a staff officer, State Outreach and Technical Assistance Staff, Office of Outreach, Employee Education and Training, Food Safety and Inspection Service.

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# Ante-mortem inspection

By *Nathan Kroh*

“All livestock offered for slaughter in an official establishment shall be examined and inspected on the day of, and before slaughter.” Code of Federal Regulation - Title 9, Section 309.1

North Dakota state inspectors perform slaughter inspection in a prescribed manner to ensure every animal is properly inspected, and that only safe and wholesome animal tissues are passed for food. Ante-mortem (before death) inspection is critical, because certain abnormal conditions are easier to detect while the animal is alive. All animals are inspected while at rest, so conditions such as labored breathing are detectable. The inspector closely watches walking animals for signs of lameness, stiffness, disorientation, muscle tremors and the like. Signs of central nervous disease, toxic poisoning, moribundity or depression may not be detectable in carcasses or parts of the animals. Signs of depression could indicate the animal was tranquilized, which would render it unsafe. Inspectors look for any condition that might indicate an animal may be unsafe for human consumption and they are also looking for humane handling of the animals from truck unloading through stunning and bleeding.

There are three possible outcomes or dispositions that follow ante-mortem inspection:

- Passed for Slaughter – An apparently healthy animal showing no signs of disease.
- U.S. Suspect – An animal that may exhibit abnormal conditions, such as extreme weakness or thinness, missing eyes or indications of pain. Other abnormal signs include lumpy jaws, bug eyes, abnormalities of the skin, abnormal color of exposed membranes, abnormal discharges and odors, swelling and fever. Inspectors will ask the plant to hold U.S. suspect animals in separate pens to await disposition by a public health veterinarian (PHV).
- U.S. Condemned – All non-ambulatory cattle and all animals with abnormally high temperatures must be condemned.

Temperatures that warrant Condemnation:	
Species	Temperature
Cattle	105.0
Swine	106.0
Sheep	105.0
Horse	105.0

Not all abnormal conditions render the animal unsafe, but a PHV must determine the appropriate

disposition, so only safe animals are passed for food. The veterinarian works with Animal and Plant Health Inspection Services (APHIS) to eradicate specific animal diseases, reporting all cases of anthrax, bluetongue, cysticercosis, scabies, tuberculosis, scrapie, and more. The plant's cooperation is vital in discovering diseased animals and determining the sources of diseases. All USDA-inspected slaughter plants and North Dakota official slaughter plants are subject to same ante-mortem inspection methods.

Inspectors also verify that only unadulterated meat is produced after slaughter. Post-mortem (after death) inspection will be detailed in the next issue of *The Meat Messenger*.

Livestock Slaughter Inspection Training Course (2012). USDA, FSIS. Accessed 1 Dec, 2014.

[http://www.fsis.usda.gov/wps/wcm/connect/521b3568-3e3e-4289-8852-37e6ce806867/LSIT\\_AnteMortem.pdf?MOD=AJPERES](http://www.fsis.usda.gov/wps/wcm/connect/521b3568-3e3e-4289-8852-37e6ce806867/LSIT_AnteMortem.pdf?MOD=AJPERES)



## Recalls & Alerts Count

According to FSIS, the number and reason of public health alerts published for the 4th quarter of 2014 are as follows: 11-Misbranding & Undeclared Allergens. 2- CCP Flaw. 2-Without Benefit of Inspection.

And 1 each of – Possible E. Coli 0157:H7 Contamination, Staphylococcal Enterotoxin Contamination, Listeria Contamination, Nitrite not listed as an ingredient, Pork not

listed as an ingredient, Temperature abuse, label missing mark of inspection.

Of these listed 18 are Class I recalls.

Further information on all current recall and alerts can be found at: <http://www.fsis.usda.gov/wps/portal/fsis/topics/recalls-and-public-health-alerts>

# Tuberculosis in Animals

Tuberculosis (TB) is one of the oldest recognized diseases of humans and animals. Ancient manuscripts indicate that humans recognized the disease when they first started to develop villages. Egyptian mummies have shown lesions typical of TB. Tuberculosis is a zoonotic disease, transmissible between humans and animals with clinical signs generally similar in various species.

Tuberculosis is caused by bacteria in the Mycobacterium family, which are also responsible for leprosy, chronic pulmonary disease, Johne's disease and other diseases. Tuberculosis is mostly spread when the bacilli bacteria are inhaled via infected droplets from an infected person's or animal's lungs, or by ingesting contaminated food, milk or water. The lungs are most often affected, but if bacteria get into the lymphatic system, they can travel to all parts of the body. A waxy coating makes the bacilli very resistant to digestion by the host's white blood cells. The immune system of an infected animal will then attempt to isolate bacilli inside hard nodules and thus "tubercles" are formed. If the tubercle effectively encapsulates all of the mycobacterial bacteria, the disease may be stopped. If some of the bacilli escape, the disease may start over and the animal will become emaciated, lethargic and weak and may eventually die.



Wild animals act as reservoirs for the Mycobacterium, so eradication of TB has proven very difficult. White-tail deer are a primary concern for spreading the disease in the U.S., while badgers have been implicated in the United Kingdom. The Mycobacterium family have been known to affect ruminant animals, ferrets, badgers, rodents, elephants, various birds, pigs, coyotes, fish, cats, dogs, primates and humans.

In 1917, the U.S. Department of Agriculture made the eradication of TB a long term goal. The campaign required approximately 232 million tuberculin tests and the slaughter of 3.8 million tubercular animals. The 23-year program was hugely successful and today's infection rate is less than 0.002 percent of U.S. cattle. The zoonotic potential of TB is still a serious issue in many other countries of the world, but drug treatments are available and vaccines are being improved as research continues.

Larson, J. (2007). Tuberculosis in Animals: Mycobacterium bacilli that cause Devastating Zoonotic Diseases in many Animals. Animal Welfare Information Center Series No. 2004-01.

Two of about 60 deer at the ARS National Animal Disease Center in Ames, Iowa. The unique research herd is used to study vaccines for prevention of tuberculosis in white-tailed deer. Photo by Peggy Greb.

## Controlling salmonella during the hog slaughter process

A guideline available through FSIS discusses best practices through every step of slaughter and references scientific studies that show large, or temporary holding pens, can be a significant factor in the spread of Salmonella.

Key points to recognize:

- Maintain acceptable sanitation in pens.
- Maintain suitable sanitary separation between each carcass, and between parts and viscera during dressing.
- Routinely clean and sanitize equipment and hand tools that are used to prepare for presentation prior to opening, and remove contamination after cutting into the carcass
- Design and arrange equipment to prevent the contact of successive carcasses and carcass parts with contaminated equipment.
- Frequently wash hands and aprons that come in contact with carcasses.
- Implement, or take action to decontamination and antimicrobial intervention treatments.

For more information, confer with an inspector or for a full text of "The Compliance Guideline for Controlling Salmonella in Market Hogs."

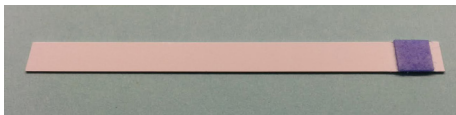
visit <http://www.regulations.gov/#!documentDetail;D=FSIS-2014-0002-0001>,

# 5 Guidelines for effective sanitization

By *Nathan Kroh*

Sanitization is the application of heat or chemicals on cleaned food-contact surfaces to achieve a 99.999 percent reduction of representative disease microorganisms of public importance. Sanitizing is mandatory in meat processing facilities. Following a few guidelines will help ensure that you are using your sanitizer in the most effective way possible.

1. Test every batch of sanitizer. The concentration of sanitizer is very important in reaching the 5 log reduction of bacteria, and it can be very easy to miss the concentration mark. Automatic dispensing machines should be checked often, as the concentration of the sanitizers being mixed may change over time.



2. Use test strips correctly. Different brands of chemical sanitizers may vary in content, so use test strips provided by the chemical supplier. Quaternary ammonia (quat) strips only provide accurate readings in still, room temperature water. Foamy, warm or swirling water will affect the accuracy of the test strip reading. If you can only dispense quat sanitizer in hot water, fill the sink, scoop out a shallow bucket from the sink, and test the bucket after letting the sanitizer cool near room temperature. The quat sanitizer is still effective in a warm solution, but the test strip will always read high when dipped in warm quat solution.

3. Replace sanitizing solution frequently. Sanitizer solutions should be replaced throughout the day, especially in the third compartment sink. Chlorine solutions work best when warm and fresh. The sanitizing power begins to deteriorate as organic material and soapy runoff dilute the solution, change the temperature and raise the pH. Quat solutions begin to break down as soon as they are dispensed. Spritz bottles of quat last about 24 hours and need to be completely remixed every day.

4. Allow sanitizers to work. Sanitizers do not work instantaneously. The longer the contact time between the food-contact surface and the sanitizer, the better the microbial kill. A quick dunk in a sink of dirty bleach water will do little as far as actual sanitizing. Submerging utensils and dishes for a minute or more in fresh solution is the best option.

5. Do not use rags or dish towels soaked in quaternary ammonia. The polarity of the fibers in rags and dish towels interacts with the quat, locking the active ingredients within the towel itself. If you wring the towel out, only water will be released, and the quat will remain in the towel. If multiple towels are soaking in your quat sanitizer, you may have no useable quat left to sanitize. The towels will only push around water; doing nothing to sanitize your equipment. Microfiber cloths are a better option, because they have a different polarity and will not absorb the quat like a regular dish rag will. The best option is filling a spritz bottle with fresh quat and misting the equipment. The quat will sanitize

well and will not leave a toxic residue when correctly mixed. Completely empty and refill the quat spritz bottle every day.



Additional tips: Buy sanitizer from knowledgeable dealers and obtain required letters of guarantee. Use the sanitizer according to the specific use on the labeling. Maintain sanitizer dispensers. Rotate your sanitizer supply. Clean and sanitized equipment will meet sanitation regulations and produce safer product with a longer shelf life.





# Classified ads

We are always looking for industry related items to advertise in the Meat Messenger. We post sale and want ads **FREE**. Contact Julie Nilges (701-204-3248) at [jnilges@nd.gov](mailto:jnilges@nd.gov) or Nathan Kroh (701-328-4767) at [nkroh@nd.gov](mailto:nkroh@nd.gov) with product description and contact information.

**Sipromac one truck smokehouse:** Smokehouse has a Juno microprocessor and liquid smoke attachment. Included are two trucks and many sticks and screens. \$12,000; True Brand cooler: Cooler has two sliding doors and was manufactured in 2001. \$1,000; New one-quart plastic containers with lids: \$20 per lot of 50. Please contact Calvin or Alex for more information at 701-743-4451. Located in Parshall.

**Walk-in freezer and components (4 items):** (1) Three-phase Copeland compressor Hp p62 Freon, new in 2005. (Model 4RA3-100A-TSK-800, serial 05A66497R). (2) Single-phase Bohn cooling unit (Model 2402B serial DCD4540). (3) Larkin single-phase outside evaporator. (4) Walk-in freezer with shelves/baskets, sharp freeze shelves and cooling unit, has four-glass doors, free standing unit, walls snap together. Please contact Denise for more information at 701-438-2334. Located in Esmond.

**Slaughter/processing business: Located in Esmond, ND.** Fully operational meat processing facility, all equipment and supplies included. Currently custom-exempt, with option for retail and/or state inspected status, many equipment/facility upgrades last four years. Very strong customer base. Please contact Denise for more information at: 701-438-2334 or 701-351-1231.

\*Housing is available and the local area market is favorable for those interested.

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## Find us on Facebook

Our Facebook page benefits both consumers and processors with facts about inspection, rules for producers who want to direct market their products, and tips for safely preparing meat and poultry products.

Please check out our page or feel free to ask a question by signing into Facebook and searching for North Dakota Meat and Poultry Inspection Program.



North Dakota Meat and Poultry Inspection Program



*The new Meat and Poultry Inspection Program Facebook Page*

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