



Meat inspection program meets federal requirements

North Dakota State Meat and Poultry Inspection Program has again met all the U.S. Department of Agriculture requirements for inspecting meat and poultry products to be sold within the state's borders.

"The USDA people spent two weeks going through our records and found everything in order," said Agriculture Commissioner Doug Goehring. "Our state program meets federal standards at every level."

The audit for fiscal years 2008-10 was conducted by the internal control and audit division of USDA's Food Safety and Inspection Service.

"The Food Safety and Inspection Service (FSIS) has completed the review for components 1 through 7 of North Dakota's FY10 on-site review and determined that you are operating your meat and poultry inspection program in accordance with your self-assessment submission and 'at least equal to' the federal requirements," said Ron Eckel, chief of USDA's federal-state audit branch, in a letter to Dr. Andrea Grondahl, director of the state program.

Goehring said North Dakota's record demonstrates that state-inspected meat and poultry products are safe and should be allowed for sale elsewhere in the country.

"More than two years ago, Congress ordered USDA to implement a new program by which state-inspected meat products could be sold anywhere in the U.S.," Goehring said. "So far, nothing has been done." Goehring said allowing interstate shipment and sales of state-inspected meat products is a matter of fairness and common sense.

"Meat products from many foreign countries can be sold in any American store, as long as the country's meat inspection program meets U.S. standards," he said. "State-inspected meat products can only be sold in their state of origin, although they too must meet or exceed the same federal standards."



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Meat Messenger

is published by the
**The North Dakota
Department of Agriculture**

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Authorized by the 1999 Legislature and established in 2000, the State Meat and Poultry Inspection Program provide inspection services that enable meat processors to retail and wholesale their products in the state. The program also ensures that custom exempt facilities – companies that slaughter and process meat provided by the customer – meet facility and sanitary standards.

The program currently provides inspection services to 15 slaughter and processing plants and 85 custom exempt plants.

North Dakota Meat and Poultry Inspection Welcomes New Arrivals

Two new inspectors – Joshua Epperly and Whitney Haux – have joined the North Dakota Department of Agriculture Meat and Poultry Inspection Program (NDMPIP).

An Adams County native, Epperly attended Dickinson State University and North Dakota State University, earning a bachelor's degree in environmental health. Before joining NDMPIP, Joshua worked in inventory control for TMI of Dickinson for five years. He will be working out of the Dickinson area, where he lives with his wife, Melanie and daughter Shya. Joshua says his two biggest enjoyments are spending time with his family and hunting.



Haux will work out of the Jamestown area. A 2010 graduate of North Dakota State University, she majored in animal science with minors in communications and extension education. Whitney has worked for Stockman's Supply for the last five years. A Cass county native, she enjoys showing cattle and sheep, and making jewelry. She and her fiancé, Justin Vogel, plan to wed in 2011.



FSIS leans on slaughterhouses to prevent beef carcass contamination

By Tom Johnston

SCOTTSDALE, Ariz. – Amidst USDA’s efforts to improve its capabilities in tracking and preventing foodborne illnesses, the agency’s Food Safety and Inspection Service will in 2011 be taking a closer look at how slaughter operators are controlling pathogenic contamination on beef carcasses.

Dan Engeljohn, FSIS’s chief policy writer, told attendees here at the North American Meat Processors Association’s annual outlook conference that there will be a regulatory shift toward ensuring meatpackers are preventing contamination on beef carcasses.

“The [current] regulations identify that there should be a minimization of contamination, and we check that by zero tolerance for E. coli,” he said. “But what that really says is we’re allowing contamination so long as you clean it off. We’re looking at changing that in a regulatory structure such that it’s mandatory to prevent contamination in the first place.”

FSIS is in the final stages of publishing a draft protocol to design a nationwide baseline study on contamination levels on beef carcasses intended to establish new performance standards that would apply to the carcass immediately after hide removal and prior to downstream interventions, Engeljohn said.

The draft protocol will be announced soon, he said, noting there will likely be an opportunity for industry stakeholders to comment on the baseline study protocol. FSIS envisions the baseline would be expanded to include post-chill and beef trim samples.

“Our focus is, we think those slaughter plants should be taking trim results and informing whether or not the slaughter process was working,” Engeljohn said. “But again, there is a need to put a standard there by regulation.”

Meanwhile, Engeljohn said FSIS concurrently will do pre-harvest sample collection at slaughter facilities. That could involve, for example, doing drag samples on cattle in holding pens or taking water samples to determine the type and level of contamination that is coming into slaughter facilities.

“Those are some tools that would put a phenomenal change in enforcement on beef slaughter,” Engeljohn said. He added, however, that pork and poultry slaughter operators processors should expect the same approach from FSIS.

Engeljohn said veal slaughter facilities also can expect more FSIS scrutiny on their slaughter dressing procedures next year because the agency has found there to be a disproportionate number of positives at those plants.

The author is managing editor of meatingplace.com, an on-line community for red meat and poultry processors, published by the Marketing & Technology Group. For more information, see www.meatingplace.com.



Meat Proteins 101: Improving Flavor, Color and Shelf Life with Antioxidants

By Robert Maddock, Ph.D

Antioxidants are a valuable ingredient in many meat product formulations. To effectively use antioxidants, it is best if you know what an antioxidant is and how it works. Even before discussing antioxidants, we should first discuss the role of free radicals, oxidation, and rancidity formation in meat. Flavor, color and shelf life all are related to the oxidative state of meat. It is important to understand the difference between oxidation — which is a chemical change to meat that will occur eventually no matter what processing or storage is used — and spoilage, which is the result of microbial growth in fresh meat. Oxidation and spoilage tend to occur at nearly the same rate, which is why color is a good indication of spoilage, but the two processes are not the same.

Oxidation is a chemical change of fat and meat pigments (proteins that give meat color, primarily Myoglobin) that leads to rancidity, color changes and flavor deterioration. In chemical terms, oxidation occurs when a source of “energy” either as light, heat or handling causes a chemical bond to break in a fat or meat pigment molecule. The source of the energy can be from lighting, temperature abuse or fluctuations, or simply the way meat is handled during processing. Meat in dark storage will not have as much oxidation as meat under display. Oxidation likely starts with the color pigments of meat and, via the formation of free radicals, spreads to the fat. This is why color and fat rancidity tend to go hand-in-hand. Free radicals are parts of a molecule that split off during oxidation. These “molecule parts” can initiate oxidation on a nearby molecule, thereby spreading the oxidation across the product. Some common meat ingredients, such as salt, can actually serve as pro-oxidants, increasing the spread of rancidity. Also, as indicated by the term “oxidation,” there must be oxygen available for the chemical reactions to occur. One of the major improvements in meat storage due to vacuum packaging is the exclusion of a large amount of oxygen. However, vacuum packaging does not eliminate all oxygen from the meat and so oxidation will continue to occur even in vacuum-packaged meat.

Antioxidants are like sponges that absorb free radicals and keep them from spreading the oxidation and rancidity. Antioxidants have chemical structures that allow them to capture the free radical, making them less effective at affecting meat quality. Antioxidants come in many forms, from common ingredients in pork sausage like BHA and BHT, to herbs such as rosemary, or other ingredients like lactates or citric acid sources like lemon juice. Some other ingredients such as phosphates also have antioxidant properties. The most effective antioxidant used in many meat formulations is nitrite (cure). The addition of nitrite to cooked meat is one of the major reasons that cooked and cured meats such as ham can have a very long shelf life.

So when should a processor use antioxidants in formulation? The simple answer is, any time the product will be stored for any extended period; any product that has a very high fat content; any product that has pro-oxidants such as salt added; and product that needs to have an extended shelf life.

The type of antioxidant used will depend upon the product.

- Cooked cure products will have antioxidants added in the form of nitrite and will not need additional antioxidants unless the processor is interested in extended shelf life. The addition of lactates, diacetates or other antimicrobials has the benefit of also serving as antioxidants.
- Fresh ground product, such as pork sausage, also benefits from antioxidants. Fresh pork sausage is one of the few products for which BHA or BHT is allowed. Other ingredients such as rosemary extract may also be used for a “cleaner” label.
- Pumped or enhanced fresh meat will also have a significantly longer shelf life with the addition of antioxidants when compared to others. Phosphates in many enhanced meat formulations will provide some antioxidant properties, but the addition of another ingredient such as a citric acid source will provide additional protection.

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So ultimately, the use of antioxidants depends upon the product, handling, and desired shelf life. The type of antioxidant to use may be regulated (BHA or BHT), common such as nitrite (cure), or often at the discretion of the processor.

The author is an associate professor of animal science at North Dakota State University. His article appears here, courtesy of meatingplace.com, an on-line community for red meat and poultry processors, published by the Marketing & Technology Group. For more information, see www.meatingplace.com.

Information on potential Salmonella in Ready To Eat(RTE):

While the incidence of Salmonella in RTE is lower than Listeria(Lm) in RTE products, the presence of Salmonella in RTE products may evidence a more serious processing and public health problem compared to the presence of Lm. While Salmonella in an establishment may be an environmental contaminant in some circumstances, its presence implies under processing or serious deficiencies for sanitary practices.



Salmonella can contaminate RTE products in the following ways:

1. Under processing:
 - a. Under processing occurs when the process is not adequate to eliminate the pathogens of concern. For heat-treated products, under processing may be the result of applying an inadequate temperature for an inadequate time to the product or the development of bacterial heat resistance before completion of the lethality step.
 - b. For cured and fermented products, inadequate drying, curing, or fermentation are causes of under processing.
2. Contamination from raw materials:
 - a. Raw or partially processed produce (e.g., raw or perhaps blanched), egg, spices, or other ingredients that are introduced to the processed products after the primary lethality event can be a source for Salmonella.
 - b. Salmonella from raw meat or poultry products that are processed in the same physical area can contaminate processed products by direct or indirect (e.g., environmental sources or food handlers) contamination routes.
3. Contamination from food handlers:
 - a. Given the incidence of human Salmonellosis in the U.S. and the potential for asymptomatic carriage in humans, there is potential for product contamination from establishment employees.
 - b. The food industry has a high turnover of food handlers. History has shown that training for personal hygiene and proper handling of foods may not be adequate in some circumstances.
4. Contamination from animal vectors:
 - a. Animals (e.g., birds, rodents) and insects have been shown to contaminate produce with Salmonella.
 - b. It is possible for animal fecal contamination within and outside the establishment to be introduced into the RTE production area.

Source FSIS Notice 60-10, attachment 1.

Food Related Fact Sheets Available for Emergency Preparedness at www.fsis.usda.gov/Fact_Sheets/index.asp.

Click on Emergency Preparedness to find information for food safety tips like:

Preparing for a Weather Emergency:

Lists the steps to take before, during and after a weather emergency.

Keeping Food Safe During an Emergency:

A flood, fire, national disaster, or the loss of power from high winds, snow, or ice could jeopardize the safety of your food. Knowing how to determine if food is safe and how to keep food safe will help minimize the potential loss of food and reduce the risk of foodborne illness.

Classifieds

Meat Manager Opening: Some experience is preferred, salary negotiable, start immediately. Any questions please call Kirk Reub at Ashley Meat Market, 1-701-288-3419.

Wanted: Upright show case freezer, can have up to 4 doors, must be in working order. Please call Manock Meats, in Great Bend and ask for Steve at 1-701-545-7513.