

Meat Messenger

North Dakota State Meat and Poultry Inspection Program

North Dakota Department of Agriculture

2008 Quarter 4

First Processing Facility in the West Fargo/Fargo Area Receives Grant of Inspection

By Jacee Lund

On September 29, 2008, Dakota Sausage Kitchen Inc. formally of Davenport, ND, now located in the new Eagle Run Plaza in West Fargo received the grant of inspection from the North Dakota Meat and Poultry Inspection Program (NDMPIP). The family owned business is operated by Nordan Lunde and his wife, Gwen, along with their son, Matt Lunde, and his wife, Stacey.



Nordan and Gwen started the business approximately 12 years ago in Davenport, specializing in making deer sausage and processing deer carcasses on a custom basis. While growing up, Nordan spent time learning the “tools of the trade” at the processing facility in Esmond and continued

his learning experiences while in the military in Germany. Nordan spent his weekends in Germany learning how to make sausage from a German sausage meister. Matt and Stacey Lunde, formally of Rugby, relocated to West Fargo in order to join the family business.

Currently, Dakota Sausage Kitchen processes a breakfast sausage and an Italian sausage under state inspection. In the near future, the Lundes plan to offer pizzas and a variety of brats and sausages including pepperjack, cheddar cheese, potato, garlic, hot Italian with mozzarella, andouille, and green onion. A fresh meat retail case located at the establishment is presently stocked with a variety of sausages, brats, jerky, beef sticks, steaks, poultry, pickled herring, and salsa.

Approximately one-half dozen local wholesale accounts have expressed interest in the Lunde’s products. In addition, some wholesale accounts in Moorhead are looking at their products. These accounts will have to wait approximately 18 months before being able to conduct business with Dakota Sausage. The Lundes have indicated an interest in becoming a Title 5 plant which under the 2008 Farm Bill will allow for interstate shipment of meat.

When asked what they like best about inspection, Nordan and Matt said that being state inspected opens up more markets and more opportunities; and allows more people to try their products. Matt also said, “We are not confined to only selling products across our retail counter, which may lead to business expansion in the future as well as the interstate shipment of our products.”



Meat Messenger

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

Commissioner
Roger Johnson

**Livestock Services Program Area
Program Manager**
Wayne Carlson

Director of Meat Inspection
Andrea Grondahl, DVM

Administrative Assistant
Becky Gietzen

Senior Meat Inspectors
Vawnita Best
Cody Kreft

Compliance Officer/Meat Inspector
Dave Slack

Meat Inspectors
Shawn Steffen
Heather Andersen
Cami Metzger *Certified Grader
Shaun Quissell
Holly Dalen
Dustin Person

Assistant/Relief Inspector
Jacee Lund

Please address all correspondence to:

**State Meat Inspection
North Dakota Dept. of Agriculture**
600 E. Boulevard Ave., Dept. 602
Bismarck, ND 58505-0020
(701) 328-2231
(800) 242-7535
FAX: (701) 328-4567

www.agdepartment.com
ndda@nd.gov

NATURAL vs. ORGANIC (Part 1)

By Jacee Lund

With growing consumer concerns about food safety, an increasing number of individuals are paying closer attention to product labels. Some examples include: *natural*, *all natural ingredients*, *organic*, *100% organic*, and *made with organic ingredients*. The first part of the article (below) and the second part (to appear in the next quarter's newsletter) will clarify the reasons why natural and organic are not synonymous.

NATURAL

The 2005 Food Standards and Labeling Policy Book defines *natural* meat and poultry products as follows:

The product does not contain any artificial flavor or flavoring, coloring ingredient, or chemical preservative, or any other artificial or synthetic ingredient. Additionally, the product and its ingredients are not more than minimally processed.

Minimal processing includes those traditional processes used to make food edible, preserve it, or make it safe for human consumption. Smoking, roasting, freezing, drying, and fermenting are examples of minimal processes. Likewise, the physical processes which do not fundamentally alter the raw product and/or which only separate a whole, intact food into components such as grinding meat may also bare the natural label. On the other hand, relatively severe processes such as solvent extraction and acid hydrolysis clearly do not meet the minimally processed requirements.

Products claiming to be natural must be accompanied by a brief statement explaining what is meant by the term natural. At a minimum, the statement may read, "Product contains no artificial ingredients and is minimally processed." A variety of claims may be made on the label; generally the claims are regulated by the FDA and must be verifiable through an audit, if challenged. Ideally the definition of natural should immediately follow the word. If that's not possible, use an asterik to indicate the location of the claim which must appear somewhere in the label.

If the product includes an ingredient that has been more than minimally processed, exceptions may be granted on a case-by-case basis. It must be proven that the use of such an ingredient does not significantly change the character of the product to the point that it could no longer be considered a natural product. Please note, that in such cases, the natural claim must be qualified to clearly identify the ingredient; for example, all natural ingredients except dextrose.

In summary, the requirements for natural labeling are less stringent than for organic. The USDA FSIS states that all fresh meat qualifies as "natural," but those labeled natural must meet the minimum requirements written in the 2005 Food Standards and Labeling Policy Book. Livestock that have been exposed to a variety of feedstuff, antibiotics, hormones, and/or raised in a feedlot may be labeled as natural unless the individual establishment's "Natural Claim" prohibits those practices.

Additional information regarding organic meat products will be included in next quarters Meat Messenger.

Food For Thought
Rats and Mice: The Dirty Facts
By Jacee Lund

With colder temperatures and shorter days approaching meat processing/slaughtering facilities will soon be switching their attention from flies to domestic mice and rats. By mid-fall every year, these rodents have already inhabited sheltered buildings in which to wait out the winter. Processors beware! Although there may not yet be enough signs (droppings, gnaw marks, tracks, etc.) for you to notice these pests, that could quickly change. These rodents have most likely begun producing their next litters, found and laid down trails to food and water sources, and located nesting materials necessary for the next several months.

The Dirty Facts

The movement of rats and mice is usually related to food, water and harborage. The most common rodents found in the US are the roof rat, Norway rat, and house mouse; occasionally deer mice and white-footed mice may be found sharing shelter with humans. If food and water are plentiful, mice may never venture more than 4-5 feet from their nest and seldom travel more than 15 feet away. Rats on the other hand will travel 100-150 feet along established trails for food and water. Rats and mice are nocturnal; rats show the greatest activity the first half of the night, and mice are usually active right after dark and between midnight and dawn. In order to gain access into a building, mice need at least a ¼” opening (diameter of a #2 pencil) and rats need an opening larger than ½”. Both rodents are prolific breeders; mice average 8 litters per year and rats average 4-6 litters per year. Moreover, rats are capable of transmitting diseases such as typhus fever, salmonellosis or bacterial food poisoning, brucellosis, tuberculosis, and foot and mouth disease. Mice carry a variety of food poisoning bacteria such as Salmonella, Shigella, and E.coli. The most common ways rodents transmit diseases is via their urine, feces, saliva, and hair in or on food, water, or inanimate objects. Rodents also carry fleas which move from infested rats to people or pets and begin feeding on them, thus passing on the disease. Humans may become infected with a disease by breathing in dust that has been contaminated with rodent urine, feces, or saliva.

Some Signs of Rodents

- Droppings (Mice: 1/8"-1/4" rod shaped & pointed; Rats: 1/2"-3/4" rod shaped, pointed or blunt ends)
- Gnaw marks - Tracks/Footprints - Rub marks (greasy markings)
- Burrows/Runways - Damaged Goods - Sounds while climbing, clawing, and moving

Regulations

9 CFR (Code of Federal Regulations) 416.2(a) states, “The grounds about an establishment must be maintained to prevent conditions that could lead to insanitary conditions, adulteration of product, or interfere with inspection by FSIS program employees, Establishments must have in place a pest management program to prevent the harborage and breeding of pests on the grounds and within establishment facilities. Pest control substances used must be safe and effective under the conditions of use and not be applied or stored in a manner that will result in the adulteration of product or the creation of insanitary conditions.” Also 9 CFR 416.2(b)(3) reads, “Walls, floors, ceilings, doors, windows, and other outside openings must be constructed and maintained to prevent the entrance of vermin, such as flies, rats, and mice.

In closing, remember good sanitation and food storage practices are helpful in reducing rodent population control. Prevent the harborage of rodents both outside and inside your premise by placing bait traps/stations in ideal areas, checking those bait stations regularly and keeping logs of your pest and rodent control management. For any further assistance, you may contact your local pest and rodent control services.





Lead in Venison

By Jacee Lund

As of the publication date of this newsletter, the North Dakota Dept. of Health (NDDH) has still not received results from the Centers for Disease Control and Prevention on the Blood Lead study. Once these results are known, the regulating agencies dealing with this issue (North Dakota Dept. of Agriculture, NDDH, North Dakota Game and Fish Dept.) will be better equipped to develop guidelines and recommendations for processors, hunters, and consumers.

The state of Minnesota recently completed a shooting study on ballistics and the extent of bullet fragmentation. Results of this study are provided in the article below. To view a video slideshow related to this same study, visit http://files.dnr.state.mn.us/fish_wildlife/lead/index.htm or <http://www.dnr.state.mn.us/hunting/lead/index.html> - then scroll down to 'View the Results' and click on 'Online Presentation'.

Condensed Summary of Examining Variability Associated with Bullet Fragmentation and Deposition in White-tailed Deer and Domestic Sheep: Preliminary Results

Lou Cornicelli, Big Game Program Coordinator
Minnesota Department of Natural Resources

The intent of the study was to conduct an experiment that would control for bullet caliber and focus on examining the variability of lead fragmentation and deposition associated with distinctly different categories of bullets and firearms used to harvest deer in Minnesota. We selected bullets based on their advertised performance and consumer availability. For this study, 72 previously euthanized domestic sheep were used as a surrogate for white-tailed deer.

The study was conducted in July 2008 at the Carlos Avery Wildlife Management Area. X-Rays and CT scans were taken at the University of Minnesota Small Animal Hospital, and lead analysis was completed by the University of Minnesota Veterinary Diagnostic Laboratory.

Each sheep was propped up in a broadside position and shot in the thoracic cavity at 50 meters. A chronograph was used to record the velocity, and bullets were recovered using a box filled with sand behind the target. The guns used for this study included a centerfire rifle, muzzleloader and shotgun.

For the centerfire rifle, we used a .308 with 150 grain bullets and five different bullet designs:

- Rapid Expansion (Ballistic Tip, Soft Point)
- Controlled Expansion (exposed lead core, non-exposed lead core)
- Non-lead (Copper)

For the muzzleloader, we used a .50 caliber, 100 grains of powder (2-50 grain Hodgdon 777 pellets) and two different bullet designs:

- 245 grain
- 300 grain

For the shotgun, we used a 12-gauge and a 1-ounce Foster-style slug

We also shot three sheep in the pelvic region using a ballistic tip, soft point, and slug to document dispersion of lead in animals shot poorly. We skinned and gutted each carcass, inserted a carbon fiber tube through the wound channel, then took a radiograph on the exit wound side. We also rinsed the sheep carcasses shot with both types of rapid expansion bullets and took a second radiograph to determine the effect washing had on fragment distribution.

A veterinarian counted the number of fragments and measured the maximum distances the fragments traveled.

(continued on page 5)

(continued on page 4)

The extent of lead contamination in muscle tissue was determined using techniques similar to other studies published in scientific literature. We collected muscle tissue samples at 2, 10 and 18 inches from the exit wounds. We also measured the diameter of the entry/exit holes and the wound channel length.

The study showed that using bullets with no exposed lead (a copper case completely surrounds the lead core) or copper are two ways to significantly reduce (or eliminate) lead exposure. The non-exposed lead core bullets averaged nine copper fragments in the animal with an average maximum distance from the wound channel of seven inches. By design, copper bullets leave no lead and the few fragments that were seen on x-ray were less than an inch from the exit wound. Overall, both of these bullet designs fragmented very little and left no lead.

The ballistic tip bullet (rapid expansion) had the highest fragmentation rate, with an average of 141 fragments per carcass and an average maximum distance of 11 inches from the wound channel. In one carcass, a fragment was found 14 inches from the exit wound.

Soft point bullets (rapid expansion) left an average of 86 fragments at an average maximum distance of 11 inches from the wound channel. In this research, bonded lead-core bullets (controlled expansion, exposed lead core) performed almost identically to the soft-core bullets and left an average of 82 fragments with an average maximum distance of nine inches from the wound.

Shotgun slugs left an average of 28 fragments at an average maximum distance of five inches from the wound channel. Muzzleloader bullets (245-grain and 300-grain respectively) left an average of three and 34 fragments, respectively, at an average maximum distances of one and six inches, respectively.

A key take away message from the study is that given fragments were found so far from the exit wound, routine trimming likely will not remove all of the fragments, and DNR cannot make a recommendation as to how far out trimming should occur.

In counting fragments, only about 30 percent were within two inches of the exit wound. Most were dispersed farther from the carcass. In some cases, researchers found low levels of lead as far away as 18 inches from the bullet exit hole. The DNR also learned that rinsing a carcass produced mixed results. While rinsing tends to reduce lead around the wound channel it also transports lead away from the wound.

The research also showed that a shot to the hindquarters of a deer – where heavy bones are found – will result in extensive fragmentation. Fragmentation was so pronounced that a hunter would likely not want to utilize this meat as there would be no way to remove all the fragments. The full research report is available at www.dnr.state.gov/lead.

Review of Lead Fragments in Venison Memo Dated July 30, 2008

From A. Grondahl, DVM, State Meat & Poultry Inspection Director, ND Dept of Agriculture

The following are the seven abbreviated recommendations taken from guidelines developed by the NDDA. These were included in a memo that was sent to all meat processors as recommendations that should be followed to limit the amount of lead found in ground deer or deer sausage.

- 1.** Try and determine the path of the bullet and if the bullet contacted any bone.
- 2.** Trim a generous distance away from the bullet wound channel and discard any meat that is bruised, discolored or contains hair, dirt, bone fragments or grass.
- 3.** Use care when selecting venison for grinding.
- 4.** Periodically check grinders for lead fragments.
- 5.** Avoid or minimize batching of multiple deer to avoid cross-contamination.
- 6.** Develop standard operating procedures (SOP's) for all employees to follow.
- 7.** Post information or otherwise inform your customers about steps being taken to limit lead contamination. For a list of the full recommendations, contact the NDDA.

North Dakota Meat Classifieds

Equipment For Sale:

FOR SALE ~ (2) Jim Vaughn Meat Saws; (2) Hobart Meat Grinders, 3 phase; Steak Maker Model 200 Tenderizer; Toledo Counter top scale; (75) Trolleys; Contact Larson's Processing and Locker Wyndmere, ND, (701) 439-2924 shop or (701) 439-2982 home.

FOR SALE ~ Wonder Roast –BBQ Chicken Cooker with warmer, 4-Rotissieres
Call Meats by John and Wayne, Fargo, ND, (701) 281-2300 (office).

FOR SALE ~ 1983 Ford 1 ton pick-up with 14 ft by 2 in boom, with enclosed trailer for doing custom mobile slaughter. Includes all hooks, cradle, 3 winches and many extras; asking \$4500. Call Bob Bergeron at (701) 572-1863.

FOR SALE ~ Kentmaster 75 splitting saw, 3 phase \$500 OBO; Double J Brand cure pump \$450 OBO; Hobart Bulker \$150 OBO. Call Maple Valley Lockers, Inc. at (701) 437-3311 and ask for Kevin.