



A Message From the Commissioner

Greetings,

In 2023, the North Dakota Department of Agriculture partnered with USDA's Agricultural Marketing Service (AMS) to provide meat inspection service to small and very small meat processing establishments in North Dakota. This cooperative partnership included sending one of our employees for an eight-week training course to become a certified grader. We are now able to offer USDA beef quality and yield grading services, with our own North Dakota state meat inspection program inspector.



USDA-AMS also recently announced the availability of a remote grading program. The new program allows plant employees to prepare the carcass in the same manner and then take pictures for review by a remote AMS inspector, with the final grade emailed to the plant. Only federally inspected or Cooperative Interstate Shipment approved slaughter plants are eligible to apply.

While the USDA is recognizing rising costs and exploring this pilot program to provide beef marketing opportunities for small rural plants, I have reservations about integrity of the program, knowing that misrepresenting carcass grades would undermine the marketing benefits and degrade consumer confidence. The pilot program's goal is to reduce total costs, but the USDA is still charging a significant initial fee, monthly fees and follow-up visit fees.

In the meantime, we will continue to work with you to strengthen the industry, add value locally and improve local economies. We look forward to continuing to serve you and ensuring a safe and economical meat supply for consumers.

Sincerely,

Doug Goehring

Meat Messenger

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“Product of USA” Labeling

The terms “Product of the USA” or “Made in the USA” are now only limited to products derived from an animal born, raised, slaughtered, and processed in the USA.



FSIS is also revising 9 CFR 412.3 to clarify that the use of a standalone image of the U.S. Flag or State Flag on the label will need to meet the requirements and will be limited to products derived from an animal born, raised,

slaughtered and processed in the U.S.A or respective state.

This applies for single ingredient meats and multi-ingredient products, as long as all ingredients other than spices and flavorings are of domestic origin and the processing occurred in the U.S.

Meat processors may specify types of processing steps on the label, such as “Smoked and Packaged in North Dakota,” if the source materials are not born, raised, and slaughtered in North Dakota.

All claims must be supportable, so a written description of controls used in birthing, raising, slaughter and processing is required at the plant. The plant will also need a description for controls used to verify the ingredient origins (except spices and flavorings) and separate the product from product that doesn't comply with the claim.

These labeling changes will be effective January 1, 2026. FSIS will remove the current “Products of USA” entry from its Food Standards and Labeling Policy Book.

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 or 701-328-4767.

New Official State Meat Plant: Nodak Meats in Steele

Nodak Meats in Steele is the newest North Dakota company operating under the State Meat and Poultry Inspection Program.

Scott Sandquist, the owner of Nodak Meats, grew up in Minnesota and always enjoyed trying to improve his dad's deer sausage recipe. While looking for hunting access, he discovered a need for local custom processing closer to Steele, so he decided to help the producers by building a meat plant. He finds building relationships with the local producers to be a very rewarding part of the business.



The grand opening of Nodak Meats in Steele

Nodak currently slaughters under official Inspection, to stock his retail display case with locally raised beef and will continue to expand into a full array of products as his business grows. He primarily offers custom exempt slaughter and processing for local beef producers.

The State Meat and Poultry Inspection program now has 17 plants that operate under official inspection, seven of which are approved to operate under the Cooperative Interstate Shipment Program, which allows the product to be sold across state lines.

Smoke House Cold Spots

One of the most important aspects of a consistent product is the air movement in a smokehouse. A cold spot, obviously, is an area within the smokehouse that is not as warm as the rest of the chamber. Convection currents (hot air rises, cold drops) cause the smoke to waft evenly around the product. If the product is not spaced out evenly or there is blockage of air flow in the smokehouse, some product will cook considerably faster than other product and the flavor development will be inconsistent.

Worst case scenario: If you only temp the front center of the product at the end of the cook cycle, you might be selling undercooked meat products, which could cause food-borne illnesses.

Tips for better, more consistent products:

- Evenly space the sausages on the sticks for better air movement
- Map your cold spot: Take temps at many locations within the smokehouse. Always record the lowest temperature as your final cook temp. That is the cold spot.
- Each product type may have a slightly different cold spot
- Put the smokehouse probe in the coldest spot within the smokehouse
- Load the smokehouse evenly from batch-to-batch, if possible

Knowing your cold spot will give you a more consistent and higher quality product.

Food Safety: Vacuum Sealing

Vacuum sealing foods has many benefits, such as nicer presentation, extended shelf-life, and reduced dehydration, but what are the risks of vacuum packaging?

Clostridium Botulinum commonly found in soil and can thrive without oxygen, therefore never vacuum seal foods like raw onions, fresh mushrooms and fresh garlic. Fish often contains certain strains of *C. botulinum*, so fish cannot be displayed for sale in a vacuum seal bag, unless it is frozen solid. It is imperative to break the seal of all fish that is thawed.

Listeria may survive and grow at lower temperatures, especially when given enough time. Therefore, very high sanitation levels are required when processing ready-to-eat foods to prevent *Listeria* contamination, and foods should not have date codes longer than 30 days if stored in refrigerated conditions.

Retail meat markets that vacuum seal foods are required to develop HACCP plans in accordance with the Food Code. The primary hazards of concern for vacuum seal foods are *Clostridium botulinum* and *Listeria monocytogenes*.

Common Errors with Vacuum Packaging

Vacuum sealing meat products is usually an effective barrier to oxygen, but when they leak, the product proves to have a shorter life than it should. Why do vacuum bags leak?

The wrong material. The options for vacuum packaging are nearly limitless. The challenge is balancing cost and desired properties. Thin materials are more permeable and not as durable, but they are cheaper. Shipped products get jostled a lot, so thicker bags might be worth the extra cost for customer satisfaction.

The seal fails or the vacuum doesn't hold. Poor seals may be difficult to identify. One quick way to test is to seal an empty bag, pump the bag up with a small pump (ball pumps and needles work), then submerge the bag under water. Any leaks other than the needle hole will bubble noticeably. Adjust the sealing bar and test your settings before you find a freezer full of failed bags that must be resealed.

The vacuum is inadequate. Some machines have meters that show you the amount of vacuum and you should adjust the settings to a strong vacuum. Colder meat is firmer, so keep your products as cold as practical and pay attention to the vacuum meter, so you can identify issues early.

Vacuum settings require trial and error, but customer satisfaction is greatly impacted by presentation and increased shelf life.

Meatingplace Editors. (2009) The three most common errors processors make with vacuum packaging. Retrieved at <http://www.meatingplace.com/Industry/TechnicalArticles/Details/10077> on Jan 16, 2014.

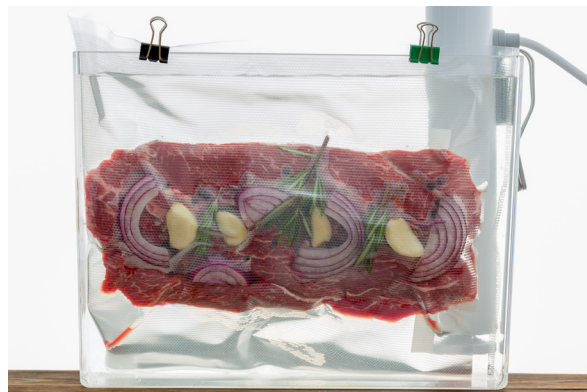


Unique Cooking Method: Sous-vide

Sous Vide (French for 'under vacuum') is a method of slowly cooking seasoned and vacuum sealed meat in a warm water bath. The intent is to cook the item evenly, ensuring that the inside is cooked without overcooking the outside, and to retain moisture.

This method works fantastic for perfectly evenly-cooked roasts and steaks, and is almost fool-proof, because product will never get above the set water temp (medium rare steaks will stay medium rare for hours).

To serve, remove the meat from the vac-bag, dry with a paper towel and brown the meat in a very hot pan quickly. The result is a perfectly brown crust, with a perfectly even cook throughout. Use the juices in the vac-bag for the pan sauce.



This method is very convenient to warm ham, leg-of-lamb, or beef roasts for the holidays. It is nearly impossible to overcook the meat and the oven is available for side dishes.

What is Freezer Burn?

Old frozen meat is fibrous and brown. Why? Known as freezer burn, ice crystals on the surface of the meat sublimates (evaporates without turning to water first), damaging the meat structure. Oxygen also reacts with the meat and fat causing the surface to brown and fats to go rancid. The texture and flavor are quite unappealing, but not unsafe. Fattier and thinner cuts will go rancid more quickly.



Mildly freezer burnt foods can be salvaged. Trim $\frac{1}{4}$ inch of surface off, then prepare the meat with higher moisture methods, like braise or crock-pot, with strong spices or marinades. Heavily freezer burnt meats and smaller cuts should be discarded.

Preventing freezer burn is nearly impossible. Using high-quality vac-bags and freezing the meat quickly will help. Frost on the freezer walls is mostly moisture drawn out of the foods and deposited on the freezer walls. Snow in the freezer means some foods are starting to freezer burn.

Chew the Fat: Rendering Fat in Your Facility



Seed oils are cheaper to process, so the most popular fast food chain, who originally used tallow for their famous fries, converted to vegetable fry oil in 1990. Recently, rendered animal fats have been having a resurgence in the U.S diet and topical skin care regiments. Pork fat was just listed as #8 on the BBC's list of the world's most nutritious foods, diverging from decades old belief that dietary fat caused obesity. Tallow was traditionally used for candles, soaps and skin care and lard was used for flaky pastries or frying. The harder fat around the loins and kidneys is often called suet and tends to be crumbly. Poultry fats are common, with goose 'smaltz' being very popular in Jewish fare. Duck fat is considered 'liquid gold' in the culinary world. July 13 is

National Beef Tallow Day, according to the Healthy Fats Coalition.

Rendered fat is a relatively easy product to produce. One of the easiest methods involves a slow-cooker or roaster. Simply place ground or diced fat with a small amount of water in a crock-pot or roaster on low-medium heat for several hours. When entirely liquid, strain the fat through a cheesecloth, ladle into containers and chill until solid again.

USDA regulations state that rendered fat may not contain any added water, so always roast until all the water is gone. Tallow is not allowed to have more than 0.15% insoluble impurities.

BBC Future by Fact and Story; Available at <https://www.bbc.com/future/article/20180126-the-100-most-nutritious-foods>; retrieved July 19, 2023

Beef Tallow Day- July 13, 2023; available at <https://nationaltoday.com/beef-tallow-day/>; retrieved July 19, 2023.

Cured Pork Products

Cured pork products, including hams, shoulders, picnics, butts and loins, shall comply with the minimum meat Protein Fat Free (PFF) percentage requirements.

What does that mean? Ham, cured shoulders, and loins with higher levels of added ingredients (including water) that will dilute the natural meat protein content, will have to be labeled to reflect the meat protein content.

Ham with lower proportions of protein, may have to be labeled "Ham with natural juices," or possibly "Ham with water product - x% of weight is added ingredients." Typically, this applies to budget deli ham products.



$$\text{PFF} = \frac{\% \text{ Meat Protein by Analysis} \times 100}{100 - \% \text{ Fat by Analysis}}$$

A table of minimum PFF is available in 9CFR 319.104.

The North Dakota Association of Meat Processors Convention: May 2-4, 2024

The NDAMP meat convention will be held May 2-4, 2024, at the Ramada by Wyndham, Bismarck, ND. Slaughterers, processors, packers and suppliers are getting together to listen to speakers, network, and compete in product contests with seven product categories. Three days of speakers, exhibits, a bags tournament, and some great food are on the agenda. More information is available at <https://ndamp.org/convention/>.

Classified Ads

We are always looking for industry-related items to advertise in the Meat Messenger. We post sale and want ads FREE. Contact Nathan Kroh at 701-328-4767 or nkroh@nd.gov with a product description and contact information.

3-Door Turbo Air Display Freezer: In working condition. Please contact Calvin or Alex for more information at 701-743-4451. Located in Parshall.

Smokehouse: Koch Grand Prize 3 - cart, jerky screens, rods and smoke generator, \$35,000. Call Dave Selensky at 701-465-3261, Selensky Meats, Drake ND.

Bizerba A 404fb Digital Meat slicer/stacker: Slices bacon, deli meat etc., slices/shingles/stacks, SN 10563332, \$12,500.

Promax DC900 Auto Swing lid Double chamber Vac Sealer: High production machine, all functioning order, with extra wear parts included, SN P11080415, \$12,000 OBO.

Rail Trolleys: heavy-duty carcass trolleys. 100 available. \$18 each. Call Mema's Meats at 701-453-3401, Berthold, ND.

Pro Smoker N Roaster Model T500 with a pc400 controller. Brand new in 2020. Pro smoker and roaster pellet smoke generator, product cart, sticks and jerky screens. Asking \$40,000.00. Call Greg at S & K Processing, Minot, ND. 701-839-6488.

Hickory Hut for Sale: established meat processing business for sale, 40'x120' shop with secondary cold storage building included. Property, buildings, and equipment are all well maintained. Operating under state/CIS inspection. Contact Keith Albrecht 701-370-1122 to discuss this wonderful opportunity to own a profitable turnkey business.

Meat Messenger

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In this Meat Messenger

- **A Message From the Commissioner**
 - **“Product of USA” Labeling**
- **New Official State Meat Plant: Nodak Meats in Steele**
 - **Smoke House Cold Spots**
 - **Food Safety: Vacuum Sealing**
- **Common Errors with Vacuum Packaging**
 - **Unique Cooking Method: Sous-Vide**
 - **What is Freezer Burn?**
- **Chew the Fat: Rendering Fat in Your Facility**
 - **Cured Pork Products**
- **The North Dakota Association of Meat Processors Convention: May 2-4, 2024**
 - **Classified Ads**

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