

Extension Cord

The Extension Cord is a regular column highlighting important events and issues affecting the citizens of Ashland and Bayfield County. The articles are written by UW-Extension staff working in Ashland and Bayfield County.

Making Safe Venison Jerky

Hunting season is upon us, and although there have been many grumbles about the low harvest numbers this year, there are a lucky lot of you out there with some venison on your hands.

Venison is a low fat vitamin packed addition to a Northwood's diet. And, provided you have the know how to field dress, skin and butcher your deer correctly, you are well on your way to a safe and tasty meal. (If you need to brush up on your processing skills, including lead shot and CWD precautions, check out the DNR site www.dnr.state.wi.us and search for 'lead ammunition' and/or 'CWD').

After taking all the necessary precautions in the field and on the butchering table, making meat into jerky is no time to slack on food safety. Recent outbreaks of Salmonella and E. coli 0157:H7 from contaminated meat have caused researchers to re-evaluate the techniques used to make jerky in the home kitchen. It is important to reach a sufficient temperature in the jerky-drying process to kill pathogens which may contaminate the product.

Based on research at begun at the University of Wisconsin in 1998 and continuing in 2008, UW Extension recommends the following guidelines for making jerky at home:

- Use only lean meat in excellent condition. Meat that is at least 93% lean is ideal. Choose clean, non-damaged meat from deer or other wild game.
- Maintain meat under refrigeration or keep frozen until use. If marinating meat, do so in the refrigerator. Whole muscle jerky is most often marinated in an acidic mixture containing spices and seasoning. Jerky made from ground meat is not marinated, but is mixed with dry spices and cure before forming into strips. Research has shown that the spice and cure (nitrite) in marinades and dry seasoning mixes will help in the destruction of pathogens.
- Keep raw meats and their juices away from other foods. Store raw meats on a plate or bowl in the refrigerator to catch drips. Sanitize cleaned and rinsed cutting boards with a solution of 1 teaspoon bleach per quart of water. Allow to air dry.
- Determine the true temperature of your dehydrator or oven when it is operating empty. Do not rely on the dehydrator's temperature settings.

Determine your dehydrator's drying temperature using a dial-stem thermometer as follows:

- For an oven or horizontal air-flow dehydrator, place the thermometer inside the unit and close the door.
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 - For a vertical air-flow dehydrator, stack 2 to 3 trays on the base and place the thermometer between the top 2 trays such that the dial is sticking out between the shelves.
 - Turn the dehydrator on to its maximum setting; set your oven to 155°F. Record the temperature once it has stabilized. In order to safely dry meat at home, your oven or dehydrator must be able to maintain a temperature of at least 145°F or 155°F, depending on which process is used (see below).
- Use only dehydrators with temperature control. Do not use dehydrators with a factory preset temperature that cannot be controlled, as they do not consistently produce a safe produce.
 - Choose one of the following recommended safe drying methods:
 1. **Dry meat at 155°F for at least 4 hours.** Drying meat at a lower temperature will produce a product that looks done before it is heated enough to destroy pathogens. This is the safest method for drying jerky with no other heating necessary. Only a few dehydrators currently on the market will maintain the necessary temperature of 155°F, so be sure to test your dehydrator's temperature.
 2. **Steam or roast meat strips in marinade to an internal temperature of 160°F before drying.** This is the USDA's current recommendation for making safe jerky. The pre-heating step assures that any bacteria present will be destroyed before drying and a lower dehydrator temperature (130°F – 140°F) can be used. Since it can be impossible to accurately measure the internal temperature of a thin strip of meat, consumers can boil meat in marinade (or water) for 5 minutes before drying. Unfortunately, this USDA-recommended method produced a dried, crumbly product that may be judged inferior by Wisconsin standards for chewy, flexible jerky.
 3. **Dry meat at 145°F for 8 hours, followed by heating for 10 minutes in a pre-heated oven set to 275°F.** If you choose to dry meat at a temperature of only 145°F, and if strips were not heated in marinade prior to drying, then meat should be heated in an oven after drying as an added safety measure. Place dried strips on a baking sheet, close together but not touching or overlapping. Heat for 10 minutes to an internal temperature of

160°F. Strips heated at 145°F will appear dry before the 8 hours is complete – resist the urge to remove the strips early. Always follow with a post-drying oven-heating treatment.

- Dried jerky can be stored for 1 to 2 months at room temperature; in the freezer for up to 6 months. Vacuum package jerky to extend its shelf life.

INTERESTED IN LEARNING MORE????

Bayfield County UW Extension will be putting on a series of venison preservation classes this month at the Washburn High School.

Making Venison Jerky
Thursday, December 11, 6pm – 8pm

Pressure Canning Venison
Saturday, December 13, 10am – 2pm

The cost of each session is \$10, or \$15 for both, which includes all canning equipment, ingredients, and recent editions of the UW Extension Food Preservation bulletins. Pre-registration is required. Call Karen at the Extension Office 373-6104 for more information or to register.