



No. 2 -- Field to Freezer

HE-125 (Revised), February 1993

Martin Marchello, Professor of Animal and Range Sciences Department, NDSU

- [Introduction](#)
 - [Field Dressing](#)
 - [Skinning a Deer](#)
 - [Muscle Boning Venison](#)
-

Each year hunting of animals and birds is increasingly popular, but often the game is wasted because of improper handling in the field. Nutritionally, game meats rate as well as domestic animals and may prove to be a healthier source of nutrition (see Wild Side of the Menu #1 Care and Cookery HE-124 for information on nutrient content). Wild game that is properly treated in the field and correctly cooked to enhance its distinctive flavors holds a special place for many gourmets.

It is important to be properly prepared for hunting. Check to see that you have all of the equipment needed not only for hunting but for handling your kill. This publication will discuss deer, but the principles apply to other large animals such as elk, moose, bear, antelope or mountain sheep.

A sharp hunting knife, small hatchet, 12 feet of light rope or nylon cord and a cloth to wipe out the dressed carcass and clean your hands are essential. If the weather is hot you probably will have to skin your deer to insure proper cooling; then cheese cloth and a can of black pepper are needed to protect the deer carcass from flies. Be sure to adhere to the game laws and fasten your deer tag before moving the deer.

Conspicuous clothing which complies with state laws and is appropriate for the weather, binoculars, a compass, map and matches add to the safety of the hunt. The hunter should carry a clean gun of the right caliber sighted in with proper ammunition.

Generally, the deer you shoot will not have to be bled out because enough blood vessels will be severed by the bullet. A carefully placed shot in the heart, lung, or neck region will prevent mutilating the choice meat cuts and it also will prevent the loss of a wounded deer. Avoid shooting the deer in the head or neck if you want to mount the head as a trophy. Shoot in the heart or lung area of the animal if it is a trophy buck. This will preserve the cape and head for mounting. Approach a downed deer with caution and be ready for another shot. If the deer is still struggling, place another shot in the neck just behind the ear.

Field Dressing

The sooner you dress the deer after shooting, the better the meat will be. Quick dressing insures rapid loss of body heat and prevents any fermentation from the guts entering the flesh. To dress, place the animal on its back with the front end elevated and spread the hind legs. Open up the midline of the carcass by cutting from the breast to the rectum. Avoid cutting the paunch and intestines by using the handle of the knife and your hand to crowd the guts away while making the cut along the midline (Figure 1).



Figure 1.

Split the breast bone and the aitch (pubic) bone. This can be done with a knife unless the deer is very old. Then you may have to use a hatchet or saw to split the bones. Cut around the anus, loosening the bung so that it will come out with the rest of the guts. Now cut the diaphragm free of the rib cage. Reach forward to cut the

windpipe, gullet and blood vessels.

Then pull the lungs, heart and guts out of the animal (Figure 2). Save the heart and liver if you like variety meat. Finish cleaning the deer by removing any remaining viscera and drain all excess blood from the body cavity. Wipe dry with a clean cloth and hang the deer up by the head to hasten cooling the carcass. The scent glands on the inside of the legs at the hock can be removed at this time or left intact (Figure 1). Research at Utah State University indicates that the scent glands do not cause off flavors or odors.



Figure 2.

Skinning a Deer

The temperature and condition of the deer dictates whether or not you should skin the carcass right after you dressed it or leave the pelt for transporting home. If the ambient temperature is cool, it is preferable to leave the hide on the carcass because this prevents excessive drying, avoids discoloration and keeps the carcass clean.

The secret to skinning out a deer is to use the knife as little as possible and to pull and fist the pelt. This generally will give you a nice appearing carcass and pelt relatively free of meat scraps, fat and hide cuts.

Begin by removing the forelegs at the smooth joint just below the knee and the hind legs at the break joint below the hock (Figures A-B).



Figure A. Removing foreleg at knee joint.



Figure B. Removing hind leg or hock.

Open the skin at the bung to the hock and skin along the midline of the carcass (Figure C).



Figure C. Loosening pelt along leg and flank.

Skin out the foreshanks so that the pelt will be pulled from the carcass more easily. Make an opening between the tendon and the hock to insert a gambrel and hoist the carcass up in order to pull the pelt from it (Figure D).



Figure D. Hanging carcass to complete skinning.

Now you can pull the pelt over the haunches, down the loin and back and over the shoulders (Figures E, F, G). If some flesh comes with the pelt, cut it off with your knife or fist it back. Remove the head at the atlas joint. This is the connection between the head and the first vertebra of the neck where the head is removed from the spinal

column.



Figure E. Pulling pelt from rounds.



Figure F. Pulling pelt from loin.



Figure G. Pulling pelt from shoulder.

If the head is to be mounted, do not open the pelt on the underside of the neck.

Apply fine non-iodized salt to the pelt and head and ship it to a taxidermist for mounting and tanning. Clean up the

carcass with plenty of clean water and remove any extraneous material. Refrigerate the carcass. If you do not have proper storage space for the carcass, cut and freeze it as soon as possible.

Many individuals like to age their game before processing. If you do not have the proper cooler space this will result in some spoilage (microbial growth) and dehydration. Furthermore, many hunters grind their venison to make sausage so you don't have to worry about tenderness. A more detailed discussion of aging is presented in circular [HE-124, Wild Side of the Menu #1, Care and Cookery](#). This author believes that the sooner you take care of your game meats and freeze the product, the more you will enjoy your game meats.

Muscle Boning Venison

Muscle boning a deer is a convenient way to take care of venison. It can be done on a kitchen table with a good sharp boning knife. It is not particularly difficult and has several advantages over conventional methods. It allows you to separate the meat into more selective pieces, taking up less freezer space, and is easier for the cook to handle and use.

To begin, lay the carcass on the table. Start by removing the shoulder. Cut between the chest and front leg and follow along the neck line beneath the shoulder blade (Figure 3).



Figure 3. Removing shoulder.

Finally, remove the shoulder at the top of the withers (Figure 4).



Figure 4. Removing shoulder.

The shank is trimmed out for venison burger or sausage. The blade bone and arm bones are removed by separating the meat away from these bones (Figure 5). Then, the flesh is rolled and tied together with a string to make a boneless shoulder roast.



Figure 5. Boning the shoulder.

Next, remove the hind leg by following behind and adjacent to the pelvic (hip) bone and cutting the leg bone away from the hip joint (Figure 6). Continue boning out the hind leg by following along the shank and extending the cut up to the leg bone (Figure 7).



Figure 6. Removing hind leg from carcass.



Figure 7. Boning out hind leg.

Next, cut from the knee cap along the front muscle to where the leg bone was attached to the pelvic bone. Remove the leg bone and you are left with the boneless leg consisting of the sirtip, outside leg and inside leg. These pieces can be separated along their natural seams and thus be used as roast, jerky, or sliced into steaks.

Remove the loin by cutting along the ribs from the front to the rear of the carcass (Figure 8).



Figure 8. Removing loin.

Score along the vertical spine of the back line and then remove the loin by cutting and peeling it loose from the groove between the ribs and backbone (Figure 9).



Figure 9. Removing loin.

After you have stripped out the loins, pull off the excess fat and cut into boneless loin chops. The tenderloin muscle is on the inside of the cavity. It can be stripped away from the backbone as described above. Sometimes the chops from the loin and tenderloin are quite small; then one can butterfly them to make the steaks larger in diameter. A butterfly steak is two steaks lying side by side and connected by the same tissue at one edge (Figure 10). The remainder of the unsoiled meat on the rib, flank and neck and/or skeleton can be trimmed off and used for sausage trimmings or ground venison.



Figure 10. Cutting butterfly steak.

After you have cut the deer into desired cuts, you are ready to wrap and freeze it. Select a good quality freezer wrap and put interleaving paper between your steaks. This enables you to remove as many from the package as you desire when not all of the family is home. Also, one can then cook the steaks while in the frozen state. Heavy duty aluminum foil, polyethylene bags or laminated freezer wrap are good materials to use for freezing. Date and label all packages. Properly wrapped venison, like meat of other ruminants, will keep 9 to 12 months in your freezer. Hunting laws require that all game be used before the next hunting season.

Nutritionally, venison is as good a source of protein as the meat of domestic animals. A typical venison steak or chop has 23.6 percent protein, 1.4 percent fat and 73.3 percent moisture. It will supply a total of 153 calories per 100 grams of raw meat. Yield information has shown that a field-dressed deer will yield approximately 61 percent boneless meat for the freezer while the skinned and dressed carcass will yield 72 percent. In other words, if your deer weighed 120 pounds field-dressed, and was not shot up severely, you could expect to obtain 70 pounds of boneless meat to put into the freezer as roasts, chops, steaks and sausage trim.

Collaborating with Dr. Marchello on the original version of From Field to Freezer were the late Irving J. Mork, Extension Wildlife Conservationist, and Ruth E. Krause, former Extension Food and Nutrition Specialist.

HE125 (Revised), February 1993

NDSU Extension Service, North Dakota State University of Agriculture and Applied Science, and U.S. Department of Agriculture cooperating. Sharon D. Anderson, Director, Fargo, North Dakota. Distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914. We offer our programs and facilities to all persons regardless of race, color, national origin, religion, sex, disability, age, Vietnam era veterans status, or sexual orientation; and are an equal opportunity employer.

This Publication will be made available in alternative format for people with disabilities upon request 701/231-7881.

[North Dakota State University](http://www.ext.nodak.edu/extpubs/yf/foods/he125w.htm)
NDSU Extension Service