Meat: Selection-Care-Cookery

Rena Wills

Follow this and additional works at: http://openprairie.sdstate.edu/extension_circ

Part of the Agriculture Commons

Recommended Citation
http://openprairie.sdstate.edu/extension_circ/671

This Circular is brought to you for free and open access by the SDSU Extension at Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. It has been accepted for inclusion in SDSU Extension Circulars by an authorized administrator of Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. For more information, please contact michael.biondo@sdstate.edu.
meat
SELECTION • CARE • COOKERY

BEEF
VEAL
PORK
LAMB
variety cuts

AGRICULTURAL EXTENSION SERVICE
U. S. DEPARTMENT OF AGRICULTURE
SOUTH DAKOTA STATE COLLEGE
Meats are excellent protein foods. Meat protein contains generous amounts of the essential amino acids. These are the amino acids which your food must provide to enable your body to build its protein. Protein rich vegetables and cereals may lack one or more of these essential amino acids. Meat enhances their protein value when it is served with them.

The B vitamins and the minerals—phosphorus, iron and copper—are found along with protein in the meat. Pork is an exceptionally good source of thiamine and iron. Under ordinary circumstances, if your protein needs are met, your body's need for the B vitamins and for phosphorus, iron and copper will also be supplied.

Liver, kidney and heart compare with the muscle meats in protein, and are even richer in the B vitamins and iron. Liver is also an excellent source of vitamin A and a good source of ascorbic acid.

Look for this inspection stamp. It is your guarantee that the meat is from healthy animals, slaughtered and processed under sanitary conditions.

*Miss Wills was assisted in preparation of this circular by R. J. Meyer who replaced the author as Extension Nutritionist on December 1, 1956.
Meat Selection, Care, Cookery

Under state and local board of health regulations.

The federal inspection stamp is placed on each wholesale cut of meat. This round, purple stamp guarantees that meat leaving the processing plant is suitable for eating purposes, and no labels appeared on it carrying misleading statements. The code number of the stamp identifies the packing house. Stamping is done with a harmless vegetable dye.

Trichinae infection of pork is not detected by present inspection methods. Federal inspection insures that the pork containing products which are to be eaten with no further cooking are treated so that no live trichinae are present.

Trichinae infection of pork is not detected by present inspection methods. Federal inspection insures that the pork containing products which are to be eaten with no further cooking are treated so that no live trichinae are present.

Notice the Grade. It is your guide to quality and preparation of the meat.

The basis for grading is:

1. **Conformation** — the general shape of the carcass and the ratio of lean meat to bone. Good conformation implies short necks and shanks, deep plump rounds, thick backs and full loins, well-fleshed ribs and shoulders.

2. **Finish** — quality, amount, color, and distribution of the fat. The best finish implies abundant marbling (intermingling) of the fat with lean and a smooth even covering of firm fat over the exterior surface of the carcass, side or cut.

3. **Quality** — relative tenderness, juiciness and palatability in so far as can be foretold by appearance.

The stamp indicating the grade occurs on practically all retail cuts (except pork.) A harmless vegetable dye is used.

**U. S. GOVERNMENT GRADES**

The government grades of meat which appear on the retail market are:

<table>
<thead>
<tr>
<th>Beef</th>
<th>Veal and Calf</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prime</td>
<td>Prime</td>
</tr>
<tr>
<td>Choice</td>
<td>Choice</td>
</tr>
<tr>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>Standard</td>
<td>Commercial</td>
</tr>
<tr>
<td>Commercial</td>
<td>Utility</td>
</tr>
<tr>
<td>Utility</td>
<td></td>
</tr>
<tr>
<td><strong>Lamb</strong></td>
<td><strong>Mutton</strong></td>
</tr>
<tr>
<td>Prime</td>
<td>Choice</td>
</tr>
<tr>
<td>Choice</td>
<td>Good</td>
</tr>
<tr>
<td>Good</td>
<td>Utility</td>
</tr>
<tr>
<td>Utility</td>
<td></td>
</tr>
</tbody>
</table>

**Prime**, the top grade, is not produced in quantity. More **Choice** beef is produced than any of the other grades. The **Good** and **Standard** grades have a high proportion of meat to fat and lack juiciness. The meat is relatively tender, however, when properly prepared. **Commercial** and **Utility** grades are mostly from older cattle. Long, slow cooking with moist heat is usually recommended for these two grades.
Identification of the kind of meat appears with the grade stamp for veal, calf, yearling mutton and mutton. Packers may use their own brand grade to indicate quality.

Select Cut For Your Purpose

Identify cuts of meat by:
- Color
- Shape
- Structure of muscles
- Bones which they contain

A cut of meat is tender or less-tender depending upon:

1. **Location in the Carcass**
   - **Tender**: Supporting muscles which lie along the backbone.
   - **Less-tender**: Neck muscles and muscles of locomotion found in the leg and shoulder.

2. **Grade**
   - **Prime Choice**
   - **Commercial Utility**

3. **Age of Animal When Slaughtered**
   - **Younger**
   - **Older**

4. **Amount of Aging After Slaughter (Beef)**
   - **Aged**
   - **Not Aged**

Cook according to the tenderness of the cut:

**Tender**: Dry heat
- Roasting
- Broiling
- Pan broiling

**Less-tender**: Moist heat to soften the connective tissue
- Braising
- Cooking in liquid: stews, large cuts

It is often more economical to buy a large cut of meat and plan several ways to use it.
The highest grades of beef come from steers and heifers. These are bred and fed for meat production and slaughtered as yearlings (13-24 months old) or two-year olds (24-36 months.) Many cattle are raised on the range, then put in feed lots and given concentrated rations for 90 days to a year.

The dressed beef carcass weighs little more than half of the live weight of the animal.

High grade beef has a smooth covering of firm, creamy white, evenly distributed fat. There is a high proportion of lean to bone. The lean is bright red, firm, fine textured and velvety in appearance. It is well marbled with fat. The bones are porous and reddish, indicating that the meat comes from a young animal. In the older animal the bones are white and flinty.

**Aging**

High quality beef is sometimes aged to develop tenderness and flavor. Other meats which are sometimes aged are mutton and lamb. Only the higher grades of meat can be aged because the meat must have a fairly thick covering of fat to prevent discoloration of the lean and to keep evaporation at a minimum during the holding period. The meat is kept at 34 to 38 degrees F. for three to six weeks.

Beef is cooked rare, medium or well done.
Younger animals provide veal and calf. The typical veal is less than three months of age and fed largely upon milk. Calves are usually between three and eight months of age.

Calf is distinguished from veal largely by color of the lean. The lean of veal is grayish pink to almost white. The lean of calf is reddish.

The lean should be fine in grain, and fairly firm. There is very little fat—no marbling. The fat is milky white. The bones are porous, soft, red and still pliable on the ends.

Veal is a tender meat, but it has a higher proportion of connective tissue than beef. Long, slow cooking of veal is preferred to soften the connective tissue. Cook by braising, roasting and cooking in water.

Veal is cooked to the well done stage. The heart, tongue and liver of veal are considered highly desirable. Another delicacy is sweet breads, the thymus gland from veal.

Most of the hogs are marketed as barrows (males unsexed while pigs), gilts (females which have not borne young) and sows (females which have borne young). Barrows and gilts are preferred. They are usually between six and seven months of age when marketed. Sows are slaughtered when one and one-half to
Meat Selection, Care, Cookery

three years of age. Only about 125 pounds of retail pork will be derived from a 230 pound hog, live weight.

Grades are usually not found on retail pork cuts. The thickness of the back fat is considered in selecting a pork carcass. Lean pork is preferred.

The lean of pork is a grayish pink in young animals, turning to a delicate rose color in the older animal. The flesh in high quality pork is firm, fine grained and free from excessive moisture. The lean is well marbled and the exterior is well covered with a layer of fairly firm white fat. The bones are reddish.

All cuts of pork are tender. All chunky cuts may be roasted. Pork chops and steaks are braised.

Pork should always be cooked well done—no tinge of pink at all. In cuts such as chops, you may slash along the edge of the bone where it joins the flesh, in order to see that the meat is no longer pinkish. You may cut into the center of larger pieces of meat to see if all trace of pink has disappeared.

Under Federal inspection sausage labeled “Pure pork” and “Country Style” may contain no extenders.

Over half of all pork (excluding lard) is cured as hams, picnics, Boston or boneless butts, and bacon. Lighter weight hams usually sell at higher prices per pound. Hams are sold sliced, whole or as butt and shank halves. The butt half usually sells for a higher price per pound than the shank half. It contains a little more meat and less bone. Hams may also be divided as center slices and butt and shank ends. Center slices are the most demanded and the most expensive. Hams prepared under Federal inspection are treated by approved methods that destroy any live trichinae that may be present.

Tendered hams have been partially cooked in processing and require a shorter cooking time. Both “ready-to-eat” and “fully cooked” hams prepared under Federal inspection may be eaten without further cooking. “Fully cooked” hams must have a fully cooked appearance. Tendered and ready-to-eat hams may be sold skinned or skinless. Skinless hams have all the skin and some of the fat removed. Skinned hams have the skin removed from half or more of the ham, starting at the butt end. Tendered and ready-to-eat hams may be boned and rolled, or partially boned.

Hams must be processed in the geographical area with which they are labelled or the word “type” or “style” must follow the geographical term on the label. For example, Smithfield ham must be prepared in Smithfield, Virginia. Otherwise it is a Smithfield type ham.

Cured and smoked picnics (shoulder) contain a higher proportion of bone, skin and connective tissue than ham and sell for less per pound.

Bacon is the trimmed, cured and smoked pork belly. High quality bacon is firm and the fat is white and well streaked with lean. The lean is bright pinkish-red in color. Slices for packaging are chosen for uniformity of size, shape and thickness, and ratio of fat to lean.

Canadian-style bacon is the lean muscle portion of the medium or heavy boneless loins, cured and smoked.
Lamb is a young sheep. It is usually around 8-12 months old when marketed. Mutton is from the older sheep. These are grouped as yearlings, between one and two years, and sheep, over two years.

High quality lamb has a smooth covering of clear, white, brittle fat over most of the exterior. The lean is pinkish red in lamb, a deeper red in the yearling and mutton. The lean is marbled with fat. The bones are reddish and porous. In the older animal the bones become hard and white. The break joint is a sure way of identifying a lamb carcass. The forefeet, when broken off, expose eight well defined ridges. This is known as the break joint. This joint cannot be broken by the time the mutton stage is reached.

The thin, papery covering over the outside of the lamb carcass is called the fell. The fell is removed from steaks and chops. Roasts keep their shape better and are believed to be juicier if the fell is left on.

All cuts of lamb may be cooked by dry heat. Most lamb cuts are cooked by roasting, broiling and pan boiling.

Lamb may be served medium or well done. Serve it piping hot, or cold, but never lukewarm.

**Variety Meats**

Liver, heart, kidney, tongue, tripe, brains, sweetbreads, and oxtails—these are called the variety meats.

Most variety meats are more perishable than other meats and unless frozen, should be cooked soon after slaughter. They are all cooked well done, except veal liver which may be served medium.

Sweet breads, brains, and the liver and kidney from young animals are tender. All other variety meats are less tender and need to be cooked by braising.

Liver, heart, kidney, brains and sweetbreads are purchased fresh. Tongue may be fresh, pickled, corned or smoked. Tripe may be fresh, pickled or canned. Fresh tripe is partly cooked before selling.

Sweetbreads and veal liver are among the highest priced meats.
CARE OF MEAT

The natural protective skin covering on halves and quarters of dressed animals makes it easier to keep them. When these wholesale cuts are divided into the smaller retail cuts, chances for contamination and drying out of the cut surfaces increases.

Unwrap fresh meat and store it in the coldest part of the refrigerator. Leave it uncovered or wrap it loosely in wax paper. A circulation of air about the meat dries the surface slightly, helping the meat to keep longer. Roasts will keep the longest, steaks and chops next. Ground meat does not keep well and should be held only one day. All fresh meats should be used within a few days of purchase. Variety meats are also especially perishable and should not be held more than two days.

Cured meat such as smoked hams and bacon and corned beef are stored, wrapped, in the refrigerator. These keep a little longer than fresh meat, but for top quality should be used in a week to 10 days.

Cover cooked meat tightly and store it in the refrigerator. It is desirable to prevent further drying of the meat in so far as possible. Store broth and gravy in the refrigerator covered and use within a day or two.

Frozen meat should be stored at 0 degrees F. or lower.

Meat need not be defrosted before cooking if an additional 15 to 20 minutes per pound is added to the normal cooking time. Thin steaks and chops will cook to a more uniform doneness if defrosted before cooking.

Meat defrosted before cooking is cooked in exactly the same way as meat which has never been frozen. Allow 20 to 50 hours for defrosting meat in the refrigerator, depending on the size and shape of the cut. This method of defrosting is preferred. Allow three to 12 hours for defrosting at room temperature. Cook meat as soon as it has defrosted.

COOKING

Use low heat to cook meat. It will cook more evenly and with less shrinkage.

A meat thermometer is the most accurate guide to the degree of doneness, especially of roasts.

Meat is cooked by dry heat, moist heat or with fat. In general, use moist heat for the less-tender cuts and for veal and for some of the smaller cuts of fresh pork.

Cooking by Dry Heat

ROAST pork and the tender, large cuts of beef, veal, or lamb.

1. Season with salt and pepper, if desired. The salt does not penetrate into the roast more than about ½ inch.

2. Place meat, fat side up, on rack in shallow, open roasting pan.

3. Insert meat thermometer. The bulb of the thermometer should be in the center of the thickest part and must not rest in fat or on bone. Use a skewer to make the incision before inserting the thermometer.

4. Roast in slow oven—300 degrees F. for beef, veal, lamb and cured pork—350 degrees F. for fresh pork since it re-
quires more time than other meats to cook.

5. Roast to desired degree of doneness. Beef may be rare, medium or well-done. Lamb may be medium or well-done. Veal and pork should be well-done. 30 minutes per pound is the approximate time to allow for roasting. Add about 10 minutes more per pound if the cut has been boned.

BROIL lamb chops, ham slices, tender beef steaks, bacon, ground beef or lamb patties.

1. Set oven regulator for broiling.
2. Place meat on rack. Top surface of meat should be two to three inches from the heat. The thicker chops or steaks should be the farthest from the heat.
3. Broil until top is brown. The browning indicates that the meat is cooked about half way through.
4. Season top side. Since salt draws juices out of the meat, salting before browning would increase the browning time.
5. Turn the meat and brown the other side. A test for doneness can be made by cutting a small gash in the meat next to the bone.
6. Season the second side and serve at once.

PAN-BROIL all cuts which may be broiled. It is preferred for the thinner cuts.

1. Place meat in a heavy fry pan. No fat is added; fry pan may need to be rubbed with fat to prevent meat patties from sticking. The fat edge of the meat may be cut in several places to prevent curling during cooking.
2. Cook slowly, turning occasionally to insure even doneness.
3. Pour off fat as it accumulates in the pan.
4. When evenly browned on both sides, season and serve at once.

Cooking by Moist Heat

BRAISE pot roast, swiss steak, pork and veal chops.

1. If desired, dredge meat in flour to which seasonings have been added.
2. Brown meat on all sides in a small amount of fat in a heavy kettle or fry pan. Season with salt and pepper after browning if the meat was not dredged with flour.
3. Add a small amount of liquid, if desired. Liquid may be water, vegetable juices, milk, cream, sour cream, fruit juices, soup stock, etc. More liquid can be added as needed during the cooking period.
4. Cover tightly.
5. Cook at a low temperature until tender. If using oven, set it at 300 degrees F. Allow around 40 to 50 minutes per pound for beef.
6. Use the liquid in the pan for a sauce or gravy.

COOK IN LIQUID stews and large cuts.

1. Brown meat on all sides in hot fat, if desired.
2. Season.
3. Add enough liquid to cover the meat. Liquid may be water, juices, soup-stock, etc.
4. Cover container tightly.
5. Simmer. Meat should not be boiled since it tends to make it more stringy.
6. Add vegetables just long enough
before serving to be tender but not overcooked.

7. Liquid may be thickened for gravy and served in a separate dish or poured over meat and vegetables.

**Cooking with Fat**

**PAN-FRY** thin steaks or chops, patties and when a slightly crisp outer coating is desired.

1. If desired, coat meat with seasoned flour or egg and crumbs.
2. Brown on all sides in a small amount of fat. Use a heavy fry pan. Season after browning if meat is not coated.
3. Cook at moderate temperature until done, turning occasionally to insure even cooking.
4. Serve at once.

**DEEP-FAT-FRY** liver, brains, sweet breads, meat croquettes.

1. Use a deep kettle, a frying basket and a frying thermometer. Heat fat to frying temperature (350-360 degrees F.) Use enough fat to cover the meat.
2. Usually the meat is dipped in flour or cornmeal or in egg and then crumbs. Using the frying basket, lower a few uniform size pieces of meat gradually into the hot fat.
4. Drain fat from cooked meat into kettle before removing meat from basket. Place meat on absorbent paper to remove most of the excess fat.
5. Serve at once.

*(NOTE: Strain fat after each use and store in refrigerator.)*

**How Much Meat Do You Need?**

Usually allow four servings to a pound of lean meat. Decrease the number of servings per pound in proportion to the amount of bone and fat in the meat.

Little bone (such as chops)—three servings per pound.

Medium amounts of bone (such as T-bone steak)—two servings per pound.

Much bone and gristle—one to 2 servings per pound.

**For meat at its best:**
- Select it wisely
- Care for it properly
- Cook it correctly
- Serve it attractively

*Source material courtesy of the National Livestock and Meat Board and the United States Department of Agriculture.*
EXTENSION SERVICE, SOUTH DAKOTA STATE COLLEGE OF AGRICULTURE AND MECHANIC ARTS, BROOKINGS, SOUTH DAKOTA