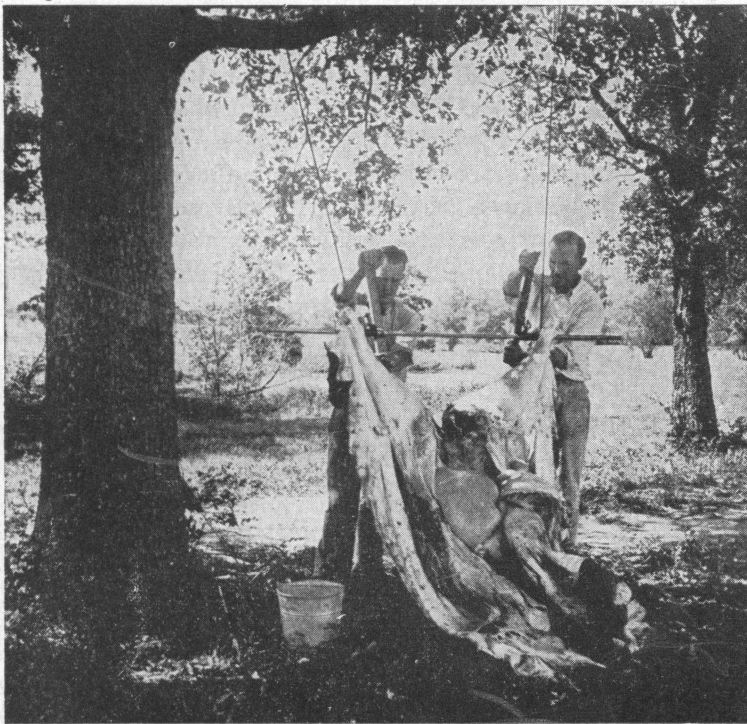


Killing and Cutting Beef On the Farm



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Killing and Cutting Beef On the Farm

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HIGH QUALITY BEEF comes only from high quality animals. There is no magic in canning that changes a scrubby immature, rough and rangy calf into the choice beef that farmers and ranchers are entitled to have on their tables. Too many farm-killed beeves are scrub dairy calves weighing about 300 pounds on hoof and dressing out about 150 pounds, of which about 30% is bone and waste. The remaining meat is dry, tough and unpalatable when prepared for the table.

The better calves butchered on Texas farms and ranches on the other hand, weigh from 500 to 800 pounds and dress out from 275 to 550 pounds, with only about 22% bone and waste. The resulting meat is tender, juicy and tasty.

Texas farmers and ranchers can provide the latter kind for home use without difficulty. In the first place a beef-bred animal should be fattened, if possible. It yields more choice, thick muscles than a dairy-bred animal; lays on fat through the lean muscles, thereby increasing tenderness; yields a superior white, crisp fat, and the lean muscles are a bright, attractive red color. Select a deep, thick, compactly built calf in preference to a rough and rangy one, because the former will carry more natural fleshing and will fatten more uniformly. A calf should be 9 to 12 months old when killed, except for creep fed calves which make choice beef about two or three months earlier than others. Always select for killing a thrifty animal, and never one that is losing weight.

Fatten the best animal available, regardless of whether it is steer or heifer. Heifers fatten a little quicker, but few people can tell the difference in the carcasses. A beef calf fed on grain feeds for 3 to 4 months after weaning will be extremely desirable for the home food supply. A calf that has had milk and good grazing on native pasture or sudan grass will be acceptable but can be much improved by feeding.

A practical method is to feed the calves grain, oats, shelled corn or milo before they are weaned. If the calf runs with its mother, this may be done by self feeding the grain in a pen that the cow cannot enter, or feeding the calf after the cow has been turned out for the day.

When feeding a weaned calf in the lot, supply at all times all of the good hay that the calf will eat. Feed a protein supplement of 1 to 1½ pounds of cottonseed meal per day, or use a limited amount of cottonseed, not over 2½ pounds daily. Feed the grains that are available, shelled corn, crushed ear corn or milo heads in the amount that the calf will eat without scouring. In the beginning this will be about 2 pounds daily and may be increased to 10 or 12 pounds. Start feeding with small amounts of cottonseed meal, cottonseed or grain and increase gradually. Do not feed moldy or dirty feeds. Gentle the calf, let him have salt and plenty of clean water and the calf will do his best.

Take the calf off feed at least 12 hours before killing, and better still, 24 hours. Provide the animal all the clean, fresh water it will take. Don't kill an excited, over-heated or even very warm calf. Such ones seldom bleed out well, the meat usually develops a very dark red color, is often blood-shot, and may even turn black. Poor handling in preparation for killing, such as using ropes around the legs, throwing the animal on a hard surface, or beating over the back, causes bruises that show up as bloody spots or blood-shot areas on the carcass. Such spots tend to spoil more quickly.

Killing

If the animal is quiet enough to rope and move to the spot where it will be raised, a great deal of hard work can be avoided. Kill by shooting or by stunning with an axe. The ideal spot to hit is a point on the forehead at the crossing of two imaginary lines from the base of each horn to the opposite eye.



Sticking

After stunning, delay sticking until the animal is relaxed. To avoid a painful kick, push the head back with one foot and the fore legs with the other. Stooping over, make an incision through the hide from the brisket almost to the jaw bone. Next cut the neck muscles so as to ex-

pose the windpipe. Raise the windpipe with the hand, ram the knife in to the hilt at right angles to the neck vertebrae and just in front of the brisket. Cut back to the breast bone. This cuts through a point where the jugular vein and carotid artery come together just under the point of the breast bone.

Removing the Head

Remove the hide from the head by first cutting across the back of the head from horn to horn, or across behind the poll. Then continue the cut around the horn down over the eye to the nostril. Peel the hide down over the cheek to the cut made in sticking. Peel the hide from the forehead and the other



cheek to where the ear can be cut off. Next remove the head by pulling it around so the horns act as a pry in clearing the tongue and jaw bone from the ground. By cutting just behind the jaw bones and across the esophagus, a straight cut through the large atlas joint will sever the head. Cut out the tongue at this time.

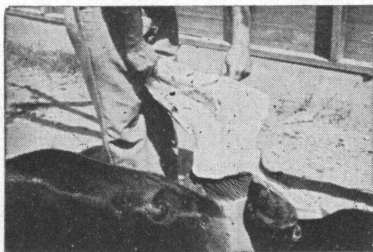
Dropping the Front Shanks

To remove the front shanks, first rip the hide along the back of the leg from the hoof to a point half way between the knee and the elbow joint. Peel back the hide to expose the knee and cut off the shank at the straight joint which lies just above the shin bone.



Dropping the Hind Shanks

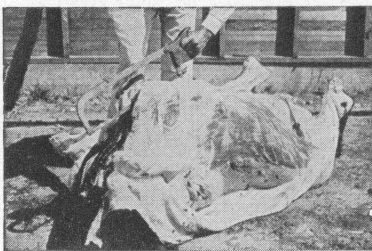
To remove the hind shanks, first rip the hide along back of the hind legs from the hoof over the hock and down over the round to a point about six inches behind the cod or udder. This is almost an equal distance between the cod and the bung.



Peel the hide down over the hock before attempting to cut off the shanks. To break the hind shank cut through the tendons on each side of the leg where they attach to the bone. A cut here will strike a straight joint at the lower edge of the hock and just above the shin bone. Cut as far as possible and then break.

Skinning the Beef

The next operation is to skin the beef as much as possible as it lies on its back. First slit the hide from center of the brisket to the bung, and then start siding being careful to cut neither hide nor meat. Do not hold the hide tight as a sharp knife will tend to run between the meat and the hide if the skin is held loosely and in its natural position. In skinning the brisket continue until the elbow joint is exposed. Then take hold of the loose brisket hide where it lies by the end of the foreleg, pull this hide over and across the foreleg, and then cut in line with the shank to the elbow joint. This completes the cut made when dropping the fore shanks and in the same operation opens the hide over the brisket.

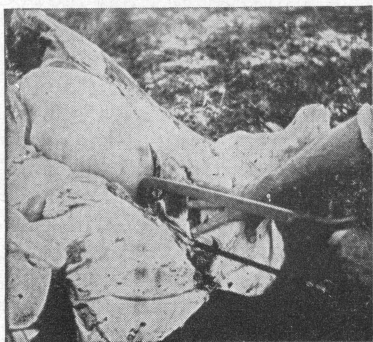


Splitting the Brisket

Split the brisket by sawing directly through the center.

Opening the Underline

Next rip open the underline by inserting the knife handle on the inside to prevent cutting the viscera, keeping the handle close to the under-surface, and pushing backward until the cod or udder is cut.



Splitting the Pelvic Bone

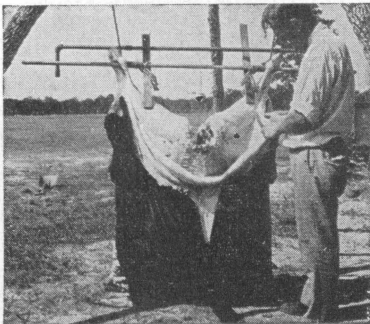
A saw or knife can be used to split the pelvic bone but with mature animals the saw is usually preferred. This is a good time to remove the caul fat which covers the paunch.

Raising the Beef

A simple way of raising a beef is illustrated on the cover page. A fork or rake handle or 6-foot gas pipe is slipped through holes on the hind shanks, ropes are suspended from a tree limb (tied wide apart at top) and below to short sticks which are placed on the inside of the shanks. Two men wind up the rope around the pipe or handle, using the short sticks as levers. When at the right height another pipe or rod or bar can be laid across between the ropes and sticks to keep the ropes from unwinding. As the beef is raised the legs are spread farther and farther apart, due to the fact that the ropes are tied wide apart at the top. Where trees are not handy a tripod answering the same purpose can be made out of three stout 12-foot poles, or of 2 x 6's, bolted or wired together at the top. A cross bar for suspending ropes can be wired to two legs about 8 or 9 feet above the ground.

Removing the Tail

After the beef has been raised about half way clear of the ground, split the hide of the tail on the inside and skin out partially, then cut off the tail bone close to the carcass, and after peeling out a short distance a dry cloth can be used to give a good grip for pulling out the tail bone.



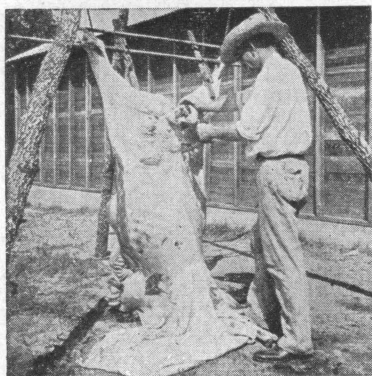
Rumping

With the carcass still suspended about half way, skin down over the rump. This rumping should not extend to the upper parts of the rounds. There the hide should be caught in the hands and pulled from the rounds so that the thin membrane known as fell may be left unbroken on the carcass. This fell makes the hind quarter more attrac-

tive and if put in storage for ripening the meat will keep much better.

Removing the Viscera

The viscera can now be removed by cutting around the bung and loosening the paunch and liver. Before the liver falls to the ground, cut it loose and pull it free from the gall bladder. Cut the diaphragm just at the edge of the lean muscle so the lungs and heart can be removed. Cut the heart loose from the lungs at this time.

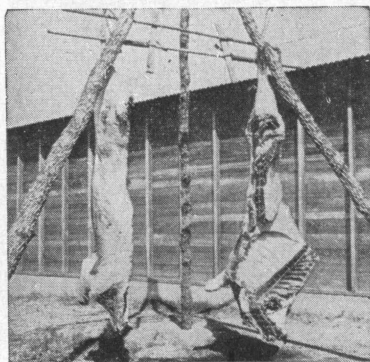


Splitting the Beef

Raise the beef a foot or two. Complete the removal of the hide, and then, while the carcass is low enough for easy working start splitting with the saw.

Quartering

After the beef has been swung clear of the ground, finish splitting down the center of the backbone. Wash the two sides clean of all dirt and blood spots. On heavy beeves quartering will make handling easier. To divide the side, leave one rib on the hind quarter to hold that quarter in shape. Let the carcass hang to cool and firm at least 24 hours before cutting.

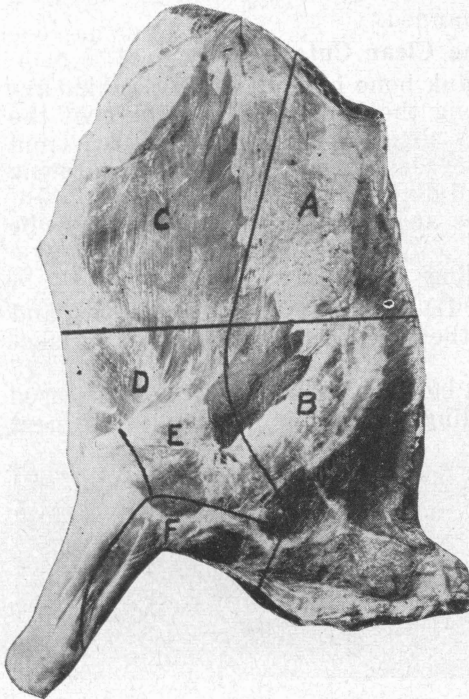


Cutting

Probably not more than 15% of farm-killed beef is eaten fresh. Canning is used to preserve most of the rest. Corning and drying are preservation methods not much in use at present, but are worthy of greater popularity. The cutting methods outlined in this bulletin have been worked out with these points in mind. The cuts described utilize the carcass to greatest advantage, save time, make canning simpler, and provide for corning and drying if desired.

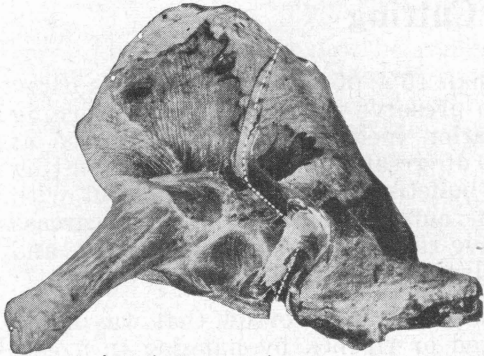
It is not necessary to can beef tomorrow that was killed today. Beef should be aged or ripened by hanging in a cool place at least 24 hours, and for several days if possible. This will improve the quality and tenderness. Beef that carries a good covering of fat will ripen more satisfactorily and keep longer than a thin one. The latter should not be ripened longer than 3 or 4 days. If cold storage is used, 38 degrees Fahrenheit is ideal.

THE FORE QUARTER



Fore Quarter Cuts

- | | | |
|-----------------------|---|-------|
| A. Rib | } | Back |
| B. Chuck | | |
| C. Navel | } | Plate |
| D. Brisket | | |
| E. Clear-cut Shoulder | | |
| F. Shoulder Arm | | |



Dividing the Fore Quarter

Divide the back (A & B) from the plate and shank by cutting from a point 2 or 3 inches from the eye on the rib end straight toward the angle made by the neck and shank. When the knife comes to the thick shoulder muscles, swing in a curving manner so as to cut over the shoulder knuckle. This disjoints the scapula from the fore leg. To complete the cut, saw the 12 ribs along the cut just made.

Removing the Shoulder Arm

To remove the shoulder arm (F), cut close to the front of the fore leg, remove the meat in front of the leg and down as deep as the brisket.

Use: Preferably grind for making into chili and hamburger, or cube for stew. It may be rolled and tied for use as a pot roast, either fresh or canned.

Removing the Clear Cut Shoulder

First take out the shank bone by cutting just behind the elbow joint and down along the bone. A few strokes of the knife will loosen the shank bone so that it can be lifted from the piece. Next cut out the clear cut shoulder by separating the muscles at their natural divisions.

Use: This piece makes an excellent pot roast or may be canned as a roast.

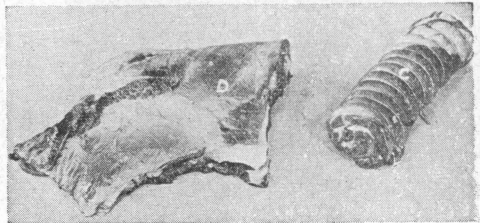
Dividing the Plate

Divide the plate (C & D) by cutting between the 5th and 6th ribs. (Always count the ribs from the front or brisket end.)

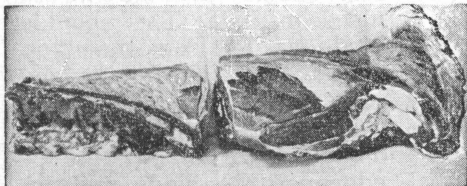
Use: These pieces can be sawed across the bone and used as short rib roasts or boiling beef. (For other uses see next illustration).

Preparing the Plate

Bone and roll the navel and brisket for ease of handling. This is illustrated here with the navel.



Use: These rolls may be canned but should be labeled N.S.G.—(not so good). They are often put in brine to be used as corned beef.



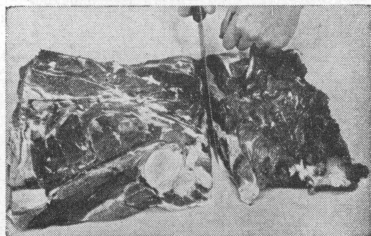
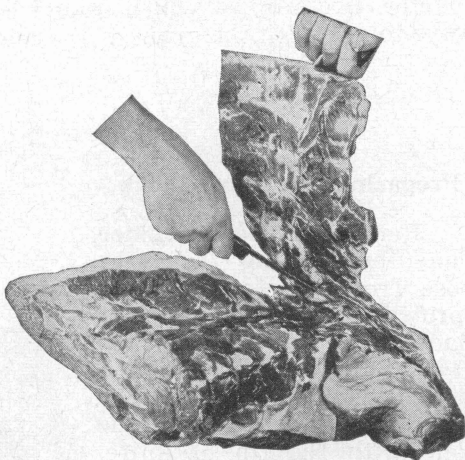
Dividing the Back

Divide the back into rib (A) and chuck (B) by cutting between the 5th and 6th ribs.

Use: The rib furnishes one of the choicest roasts in the beef. For canning the meat should be boned and rolled, making the roll of a size to fit the cans. (For chuck see the following illustration).

Boning the Chuck

Prepare chuck by removing the five ribs and neck bone in one piece. Keep the knife close to the bones when cutting. Next remove the large tendon or back strap found running along the top of the shoulder and neck.



Removing the Neck

Cut the neck off starting at a point several inches from the point of the shoulder blade and cutting parallel with the rib side.

Use: The neck is best utilized in ground beef products.

Separating the Top From the Bottom Chuck



Separate the top and bottom chucks by splitting the piece in half. The shoulder blade is left on the "top" chuck. Cut in from the ends so as to hit the full length of the two edges of the shoulder blade. Score along the two edges of the blade and just back of the knob on the narrow end. "Bottom" chuck (see hook in illustration) can

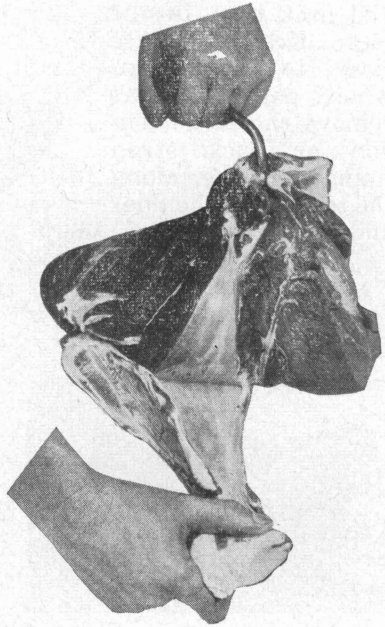
be pulled clean from the bone with ease.

Use: The bottom chuck is the second best piece in the fore quarter. It is a roast which should be rolled, remembering always to roll with the grain of the meat.

Preparing the Top Chuck

Remove the shoulder blade by cutting the meat loose from the feather bone (protruding edge of shoulder blade). Continue cutting until the knife can be run down on the inside edge of feather bone, being sure to score the bone with the tip of knife. By scratching over the end of the bone (under thumb in picture) the meat can be pulled clean from the bone.

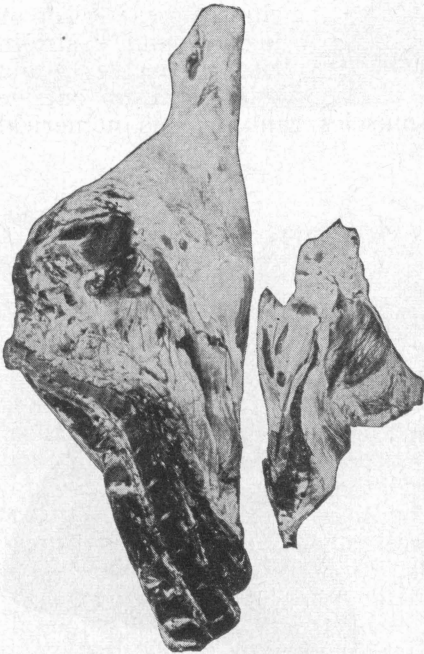
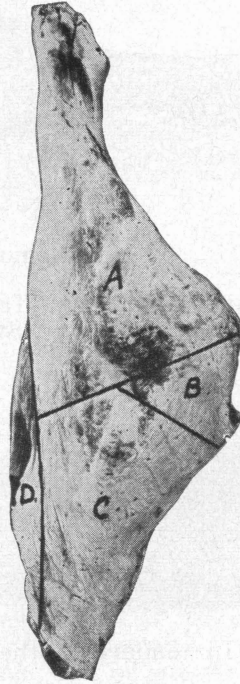
Use: When rolled and tied this piece makes a good roast. For canning, it should be rolled and tied to fit the can. Roll with the grain so that in serving, it can be cut across the grain.



THE HIND QUARTER

Hind Quarter Cuts

- A. Round
- B. Rump
- C. Loin
- D. Flank

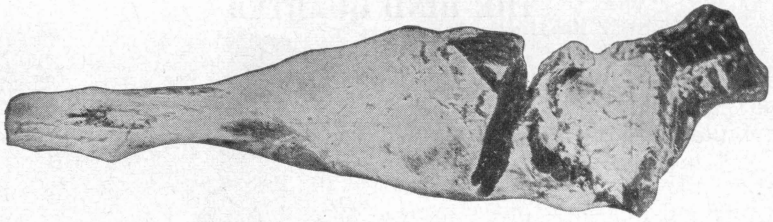


Removing the Flank

To remove the flank start on top of the round, "face" the round free of surplus fat and then cut in a straight line with the shank and continue out to the rib end.

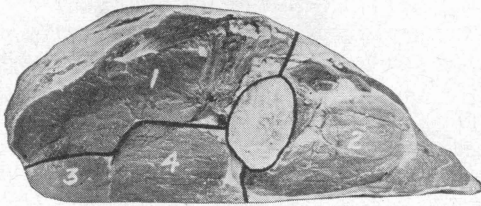
Use: The flank is not a tender piece of meat. The best part of it is the flank steak (on inside) which can be removed and used as a swiss steak. When can-

ning any part of the flank, separate the lean meat from the fat and tough tissue, and grind for chili and hamburger or cube for stew.



Removing the Round

Separate the round from the rump and loin by cutting just behind the pelvic bone. Stay as close to this bone as possible.



Round Cuts

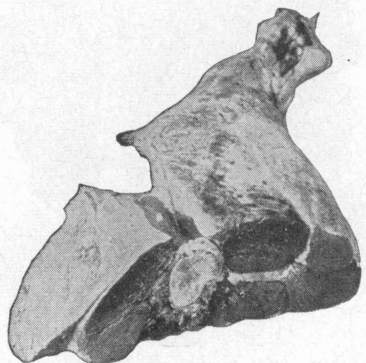
The round has four muscles which are next divided into three pieces: 1, Top or inside round; 2, sirloin tip or knuckle; 3 and 4, bottom or outside

round. In tenderness these muscles rank in this numerical order.

Removing Sirloin Tip

Cut over stifle joint, and then with the round flat on the table cut so as to score the entire length of round bone from the stifle joint to the center of the round bone on the cut surface. Turn the round over and score the other side in the same way. If well scored, the knuckle muscle can be pulled clean from the bone very easily.

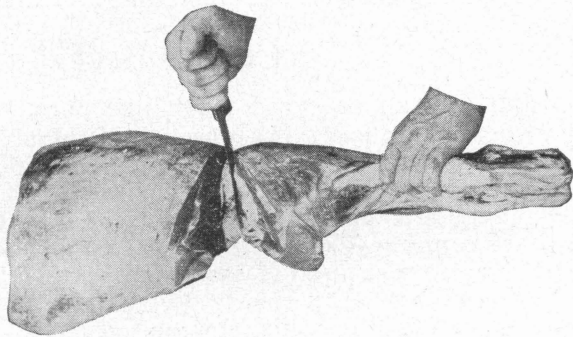
Use: This muscle is second in tenderness of the round cuts. It is usually canned as steak.



Removing the Hind Shank

Remove the lower end of the leg by cutting directly across at the end of the large stifle joint.

Use: Grind meat from the shank for chili and hamburger.



Separating the Top and Bottom Rounds

Remove the bone and follow natural muscle divisions to separate the inside of the round (1) from the outside of the round (3 and 4).

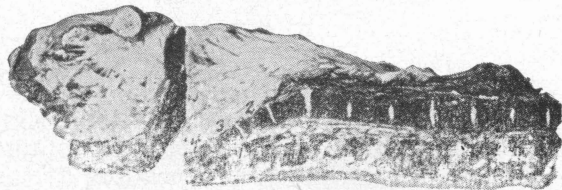
Use: Generally used for steak. Can be cured for dried beef as described later.



Separating the Rump from the Loin

Starting at the rise of the back bone count down four tail bones. Leaving the fourth tail bone entirely on the loin side, saw from this point across to a point about one inch in front of the pelvic bone. This cut should yield the "little round bone" which varies in size from a dime to a dollar—a result of cutting on the very edge of the ball and socket joint. If the loin is to be boned, first remove the tenderloin, then divide the loin in two pieces, cutting in front of the point of the hipbone. Removing the meat in two pieces simplifies the job.

Use: The rump is an ideal pot roast. For canning, bone and tie in a roll. The loin yields the best steaks in the beef, particularly when used fresh. When canning the entire loin should be boned before cutting into roasts or steaks.



Curing Beef

BEEF can be cured much like pork, but cannot be kept as long. The pieces best adapted to cure for drying are the round muscles, generally termed the "dried beef set." The cheaper cuts of beef such as navel, brisket, rump and parts of the chuck are used for canning. These cuts are classed as boiling beef, and should be so used if made into corned beef. If more corned beef than this is desired, any of the tied rolls may be used for this purpose.

Corning Beef

Cure Recipe	{	1½ pounds salt
		1 ounce saltpeter
		¼ pound sugar
		1 gallon water

Pack and weight the meat down in a barrel or stone jar. Cover the meat well with the above mixture. Corned beef will be ready to use from the brine in about 10 days to two weeks, according to size of piece. It can be used direct from the brine as needed, but if left in the cure longer than 30 days parboiling will probably be necessary. On this account it is usually best to can corned beef when cured.

Drying Beef

The same cure recipe is used in preparing dried beef as in corning, and the same barrel or jar may be used. Corning and curing in preparation for drying may be carried out in the same container at the same time. Use only the dried beef set (round muscles) in making dried beef, leaving each piece in the cure 3 days for each pound in the piece. A 10-pound piece should remain in the cure 30 days. When taken out of the cure wash thoroughly and hang 24 hours to dry. Smoke lightly with hardwood smoke and hang away to continue drying. It is ready for use when firm and hard. Its quality is greatly improved by slicing very thin.