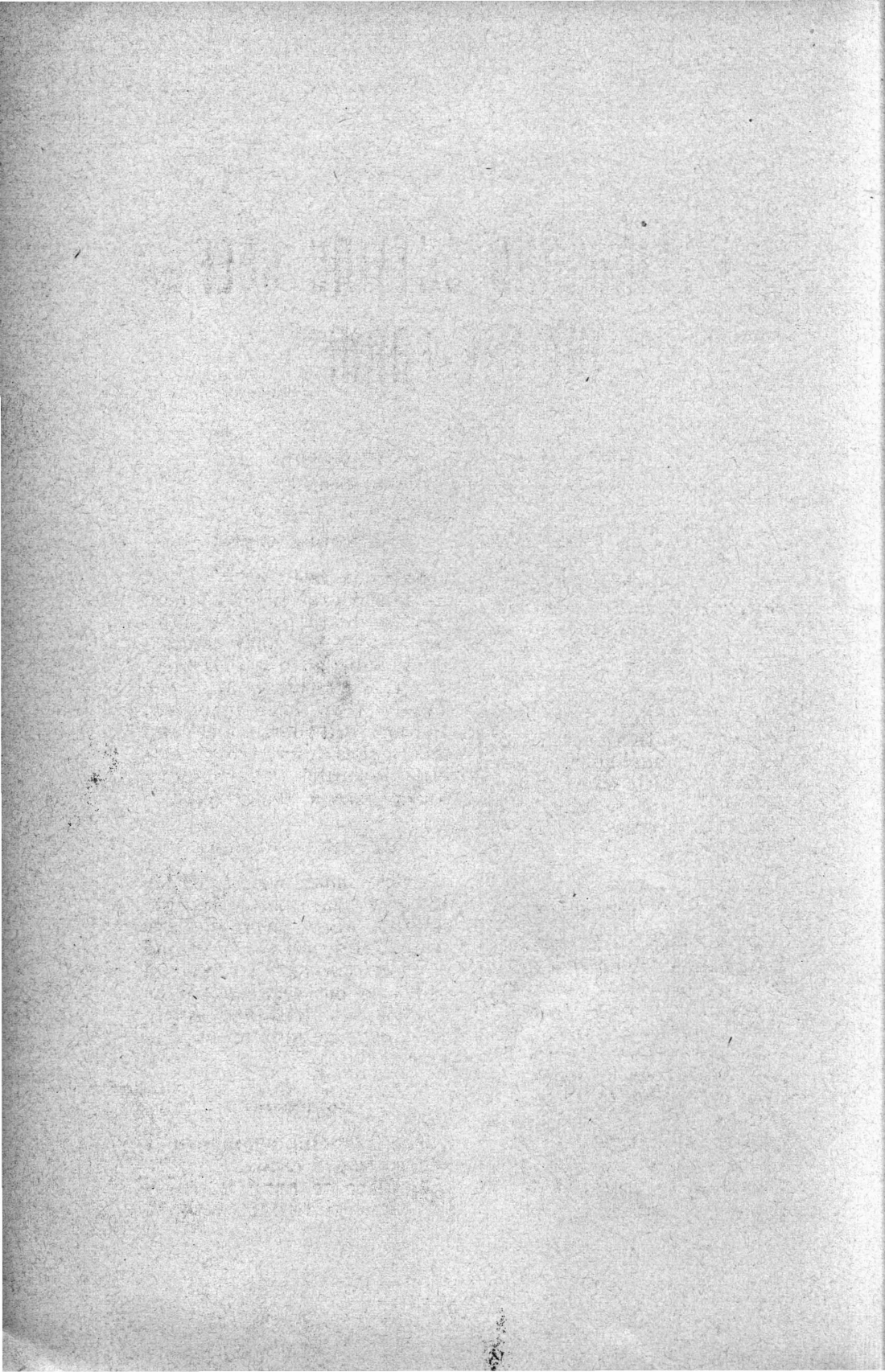


Killing and Cutting Beef **ON THE FARM**





KILLING AND CUTTING BEEF ON THE FARM

by

Roy W. Snyder, Animal Industries Specialist

Texas A. and M. College Extension Service

High quality beef comes only from high quality animals. No magic in cutting and canning changes a scrubby immature, rough, range calf into choice beef. Too often farm killed beef is an immature animal of predominating dairy breeding. There is no objection to this practice, but first the animal should be fed a ration which will put some fat on it at 9 to 12 months, which is a practical age for farm killing.

Dressing Percentage

Beef weighing from 500 to 800 pounds, which was fed on a fattening ration from 4 to 6 months, will dress from 275 to 350 pounds and should produce ideal meat for home use. Beef will dress 48 to 68 percent according to degree of fatness, fill or paunchiness, quality and type. A steer which would grade good should yield from 54 to 58 percent.

Selecting a Beef

Select a beef which is at least moderately fat, looks healthy and gaining in weight. Beef which has some fat covering will age more satisfactorily when hung up, keep longer when held for fresh use, and will show a marbling that makes juicy, tender eating. Generally a yearling is better than a young calf.

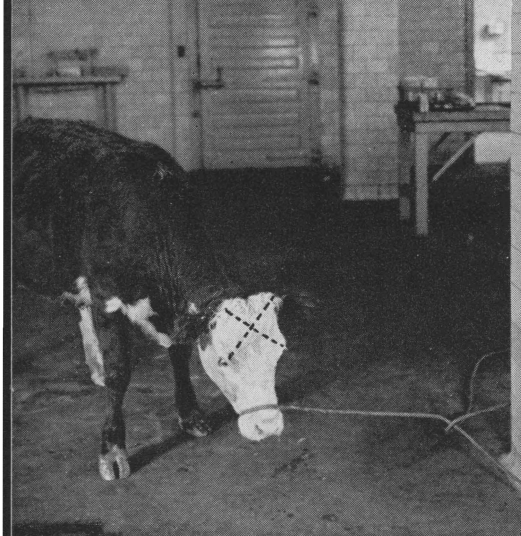
Care Before Killing

Cattle should not be fed for 12 to 24 hours before slaughter, but allow them to have clean, fresh water. It is bad practice to kill an animal which is hot and excited as they do not bleed well. Avoid bruising the animal at any time.

Equipment

The following equipment is needed to kill cattle:

1. Place to hang it up—a tree or tripod 12 to 14



- 1
2. Something to raise it up—a block and tackle, chain hoist or long rope and an 8 foot galvanized pipe.
 3. Spreader—a double tree with clevises or neck yoke with wire is very good when using a tackle.
 4. Two big rocks, chunks or posts to hold the beef on its back when skinning.
 5. An axe or rifle to knock the beef down.
 6. A skinning knife.
 7. A saw.
 8. Two clean containers, a clean cloth and water.
- 2

Stunning or Shooting

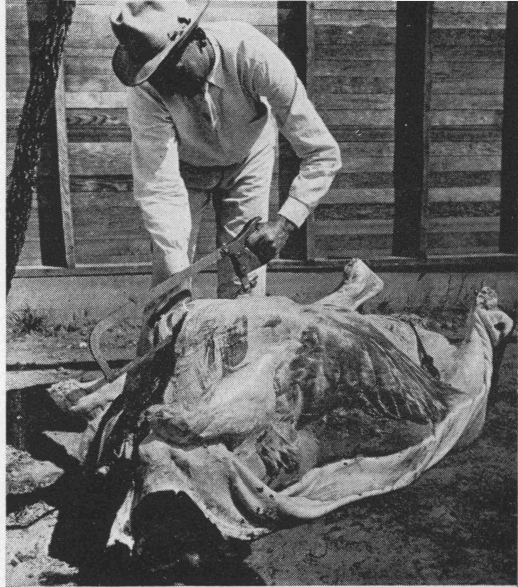
If the animal is quiet enough to rope and move to the place where it will be raised, much hard work can be eliminated. The safest procedure is to snub the animal to a tree or post as shown in picture 1. Stun the animal with a blow from an ax or by shooting with a rifle. The place to strike is a point where imaginary lines cross when drawn from each horn to the opposite eye as in picture 1.

Sticking

- 3
- Wait until it relaxes somewhat before sticking the animal after it falls. The safest way to stand is to push the head back with one foot and the front legs back with the other as shown in picture 2.

Stooping, make an incision through the hide from the jaw bones to the center of the brisket. Next cut through the neck muscles which will expose the windpipe. Run the knife in as deep as possible, avoiding cutting the windpipe, and cut back to the breast bone, keeping the knife about at a right angle to the neck. This cuts the carotid arteries where they fork and may also cut the jugular vein.

4



Removing the Head

Skin out the head by first opening the hide from the horn down over the eye to the nostril. Peel the hide down over the forehead. Then skin down over the cheek to the cut made when sticking and back far enough so the ear may be cut off. This may be done on the other side by raising the head.

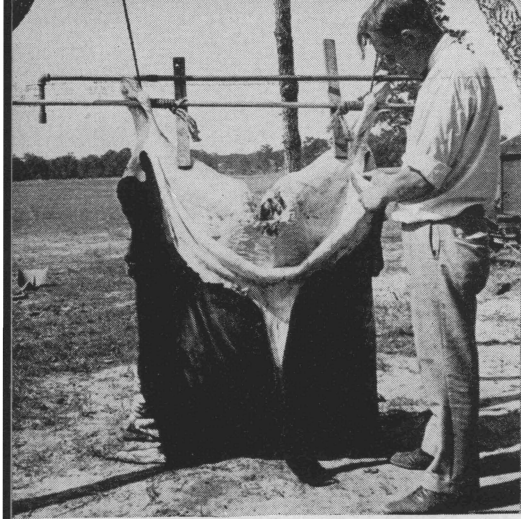
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Then remove the head by grasping the lower jaw and pulling the head around so the jaw bones are upward. Cut just behind the jaw bones and across the esophagus and windpipe down to the neck bone. This will expose the atlas joint, the first joint behind the skull, and make the removal of the head simple. Lay the head on a clean place and remove the tongue and cheek meat. Saw the head in half lengthways starting over the poll so that the brains may be removed in two equal parts.

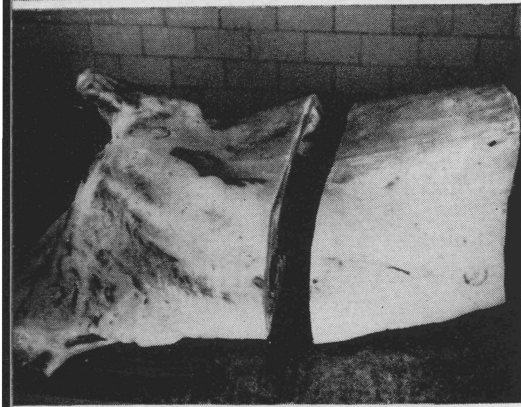
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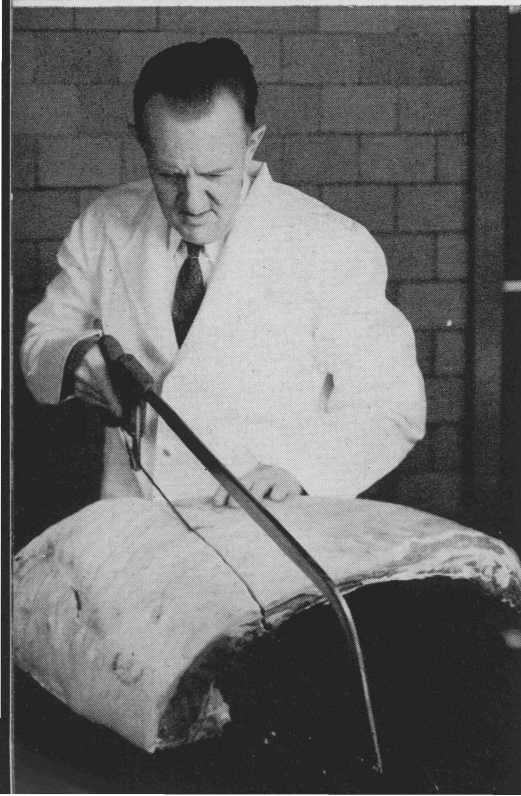
Dropping the Front Shanks

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



Dropping the Hind Shanks

- 8 To remove the hind shanks, first rip the hide down over the back of the leg from the dewclaws back over the hock and down over the round to a point about half way between the bung and the cod or udder. Keep the knife blade flat so it will run between flesh and hide, and prevent it from cutting into the meat. Skin down over each side of the hock. Score the tendons on each side of the hock just above the hind shin bone as shown in picture 3. By pressing on the shank, down and away from the beef, the leg should break off at the straight joint.



Skinning

9 Skin the beef as much as possible while it is on the ground. Open the hide from the center of the brisket to the bung. Skin over the brisket, the middle, the cod or udder, and the inside of the rounds. When skinning over

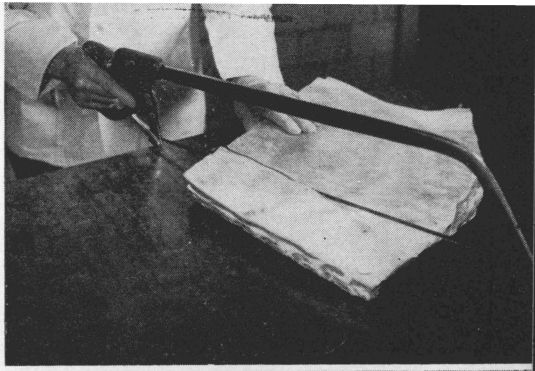
the brisket, continue until the elbow joint is exposed then pull the hide down over the elbow and cut it in line with the fore shank. This will make a cut which will meet the one when the fore shank was dropped. This method of cutting the hide over the brisket avoids cutting into the brisket meat and also gives a squarer hide pattern. Continue removing the hide down over the sides, which is called "siding". Be careful not to cut the hide or meat. By keeping the knife against the hide and not pulling it too tight, a sharp blade will tend to run smoothly between the meat and skin. Continue skinning down as far as possible as the beef lies on its back, as shown in picture 4, but do not loosen it down over the outside of the rounds. It is good to start skinning down over the inside and back of the rounds up to a point where the base of the tail is exposed.

Opening the Beef

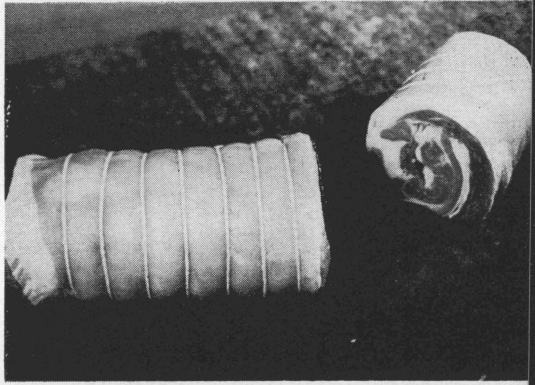
Saw the brisket as shown in picture 4. Then rip open the middle with the knife handle on the inside. This prevents cutting into the paunch or intestines. Separate the rounds by cutting exactly in the center and down to the pelvic bone and then split the pelvic bone with a knife or saw as shown in picture 5. Attempt to cut this where the pelvic bone is joined with a cartilage.

At this point save the caul fat which covers the paunch

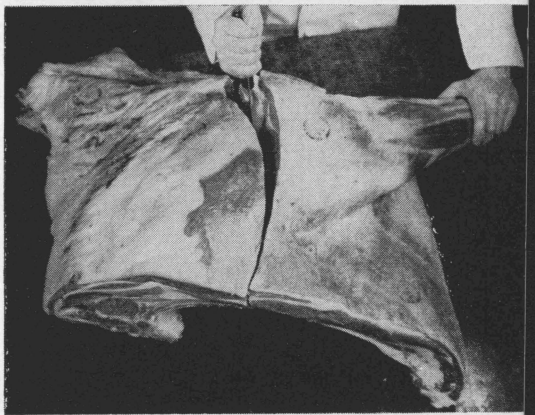
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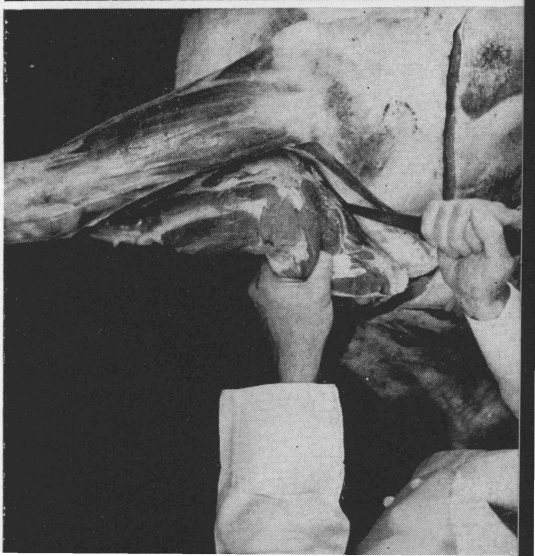
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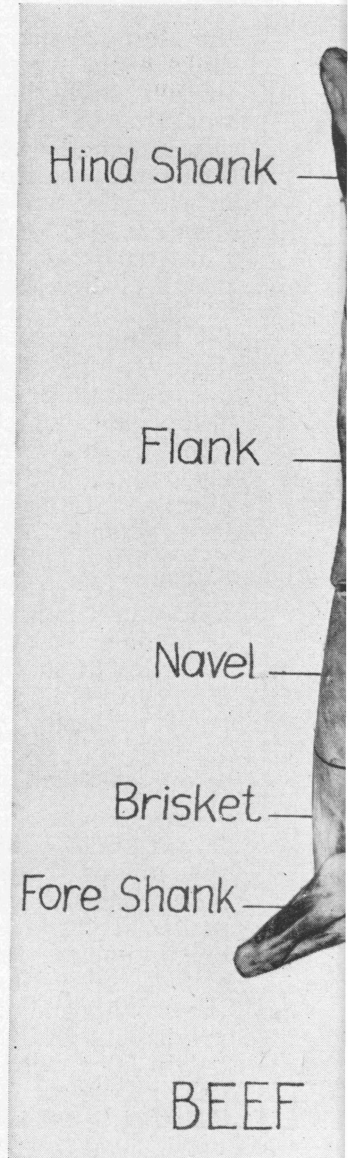


and is attached to the intestines. If kept clean it may be rendered out and used for cooking or for making soap.

Raising the Beef

After the beef is skinned down over the sides as far as possible, the brisket sawed, the middle opened and the pelvic bone split, the beef is ready to be raised. If a block and tackle is to be used, a spreader must be attached to the hind shanks at the hocks. A double tree or neck yoke works well.

Another simple way of raising a beef is shown in pictures 6 and 7. A strong fork or heavy hoe handle, or a 6 foot three quarter inch pipe, or steel bar is slipped through the hole made by cutting an incision at the upper edge of the hock. Two ropes, about six feet apart with the ends just touching the ground, are suspended from the limb of a tree or overhead bar about 12 feet from the ground. Then tie a small loop in each rope end and insert a strong stick about 18 inches long. To raise the beef slip the sticks under the pipe or hoe handle and between the beef's hind legs. Then wind the rope around the pipe, using the 18 inch sticks to twist it up as shown in picture 6. Keep the rope winding on the pipe out against the hock. This will cause the hind quarters to be spread, thus making splitting easier. When the beef is at right height tie the sticks on



each side to the rope suspended from the tree or a long stick or pipe can be laid across between the ropes and sticks to keep it from unwinding as shown in picture 7.

Remove the Tail

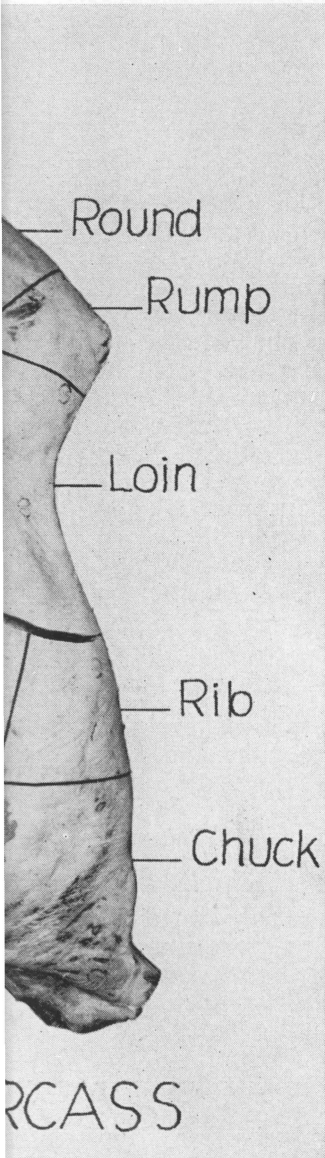
When the beef is raised about half way, or so the tail is about waist high, split the hide of the tail on the inside and skin it out some. Then cut it off close to the carcass, making the knife go through the cartilage of the joints. Loosen the end of the tail closest to the beef by skinning with the knife so that the loose end can be grasped with the hands to pull it out. A dry clean cloth helps to keep a good grip when pulling.

Rumping

With the carcass still about half raised, skin over the rump and rounds as far down as can be done conveniently, according to picture 7. Avoid cutting the hide off of the upper part of the round on the outside as this should be pulled off. The rounds can be made more attractive because the fell is left on and will age more satisfactorily.

Removing the Viscera

The viscera should be loosened so that it will roll out as the beef is raised. The bung first should be cut loose and care taken not to pull out more fat than is necessary.

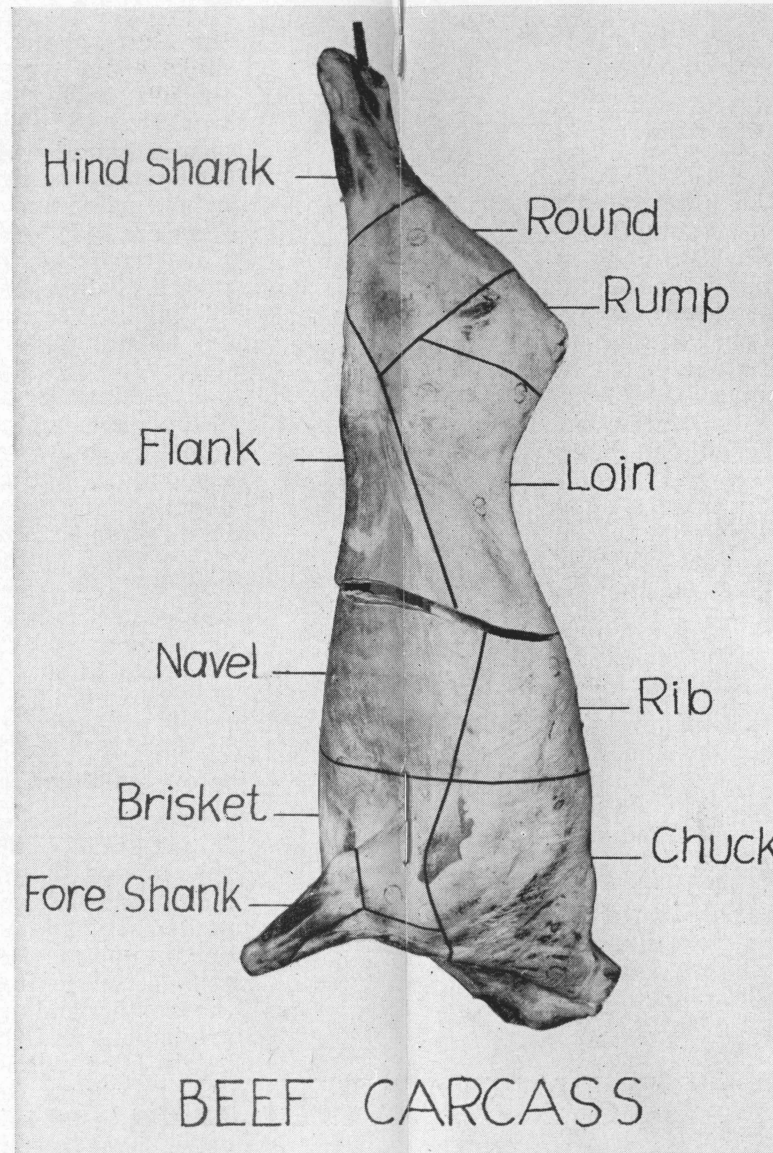


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Next, cut the diaphragm at the junction of the dark and light tissue. Leave the muscle attached to the carcass. Cut across the large blood vessel laying along the back bone and pull it out along with the lungs and heart. Save the heart and sweet breads and liver.

To save the fat around the intestines and the tripe, the viscera should be put in a tub or other container to keep it clean. Tripe is obtained from the first and second stomachs. Usually the second, called the honey comb tripe, is best and most commonly saved.

Splitting

Start splitting the carcass from the inside before it is raised too high. By keeping the front end of the saw lower than the handle and working from the back side when the beef is raised to clear the ground, the splines over the shoulder seem to split more accurately through the center.

Chilling

After the beef has been split, the final job is to wipe it free of all blood spots and other stains which accumulated during killing. A wet cloth is necessary, but the carcass should be wiped dry before hanging it away to cool and ripen. It should hang at least 24 hours before it is cut.

Cutting

Cutting beef as described in the following illustrations,

may be applied to meat intended for use on the farm, either fresh, part canned or even some cured. It also is the most practical way to cut it for the freezer locker box.

Ripening or Aging

The flavor and tenderness of beef can be improved by aging. Aging is nothing more than allowing beef to hang in a clean cold place for several days before it is cut. A refrigerated room with controlled temperature of about 38° F is most desirable. As a general rule the fatter the beef the longer it can hang or be aged. A young calf which is not fat may be aged only two or three days. A 9 to 12 months old fat calf may be aged 4 to 7 days, or even longer.

Quartering or Ribbing Down

The most general practice is to divide the front and hind quarter between the 12th and 13th rib as shown in the picture of the beef carcass. That leaves one rib on the hind quarter and divides the side in about as equal a weight as possible, the fore quarter usually being slightly heavier. In some localities two ribs are left on the hind quarter.

Cutting Fore Quarter

First, count six ribs from the neck end and then run a knife between the 6th and 7th ribs. With the bone surface on the table, use the mark

just made as a guide, cutting across the quarter between the 6th and 7th ribs. Cutting between the 6th and 7th ribs rather than the 5th and 6th avoids having a cartilage in the rib piece. This separates the rib and navel from the chuck, shank and brisket as shown in picture 8.

Next divide the rib from the navel by cutting about two inches from large thick muscle of the rib, as shown in picture 9. The rib may be used for roast or even steak with the bone in or out.

The navel, or thin piece, can be sawed across the ribs, as in picture 10, pieces being about 2 to 3 inches wide, for use as short ribs. If it is boned it may be rolled and tied as in picture 11 for use as a cheaper or lower quality roast. This roll may also be put in brine for corned beef.

Divide the chuck from the shank and brisket by first de-jointing the shank at the ball and socket joint. This is where the shoulder blade attaches to the front leg. Start at the rib side about a hand's width from the cartilage of the shoulder blade, and mark off a line about parallel with the top of the shoulder and neck. To find the point to cut through the shoulder joint move the fore leg up and down. Placing the thumb or fingers on the point of the shoulder above where the knife shows in picture 12 will determine where the joint slips back and forth. When

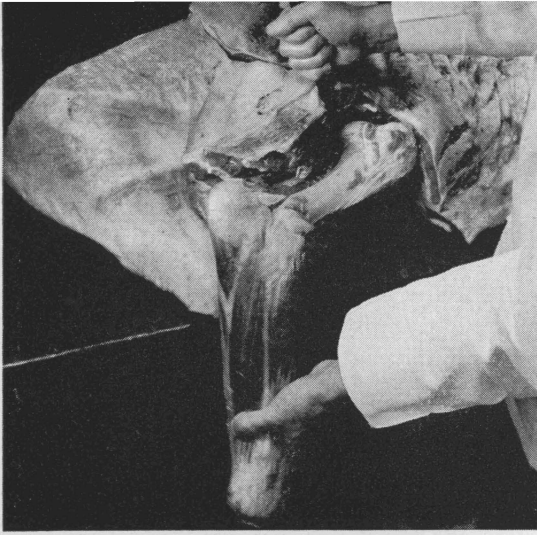
the meat is cut so that the fore leg is loose the actual loosening of the joint is easy.

Next cut off all the meat in front of the fore shank as shown in picture 13. This piece can be used as a pot roast or boiling piece.

Remove the whole fore shank as in picture 14 by first cutting behind the elbow and then peeling the bone out as the shank is pushed down over the side of the table. Cut the large thick muscle, called the clear cut, off the brisket at the natural division of the muscles. This piece can be made into a steak, but makes a very good roast.

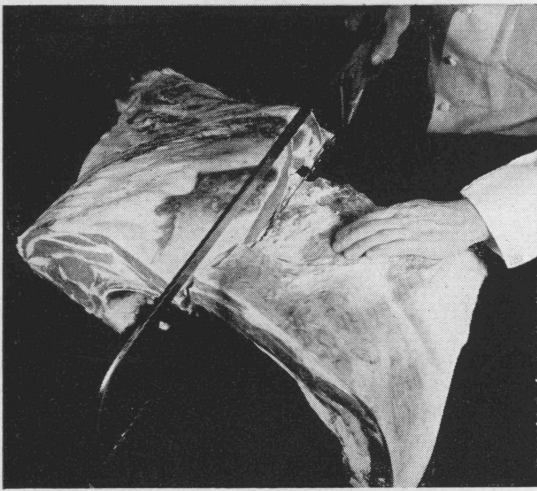
Then divide the brisket and the chuck by cutting through the meat and sawing across the 6 ribs as shown in picture 15. The brisket may be used the same as the navel, or can be boned and made into corned beef. Next remove the 6 ribs and neck bones from the chuck in one piece as shown in picture 16. Then cut off the neck, making the cut parallel with the rib surface as shown in picture 17. The chuck can be cut into some steaks but is not equal in quality to the loin, rib, or round.

If the shoulder blade is removed, two nice rolls can be made, which are easy to cook and carve. To remove the blade, divide the piece in about equal parts, top and bottom, cutting in on the edges and staying just on top of the blade. If the edge of the bone



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is scratched with the point of the knife the meat can be pulled off the bone as shown in picture 18. Then take the knife and starting on the longest edge of the blade, peel the meat off the feather bone which is the portion of the blade sticking up. Like the other side, this bone can be pulled out as in picture 19 if the edge is scratched with the tip of the knife. Roll and tie these two large pieces similar to that shown in picture 11, remembering to keep the muscles running the long way of the roll. This permits cutting the roast across the grain of the meat. The chuck may be cut square style if the pieces can be used with bone in them.



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Cutting the Hind Quarter

Remove the flank by starting on the top of the round and taking off any surplus fat, and the cod or udder. Then cut off the flank by making a cut in line with the shank and as close to the kidney as possible, as shown in picture 20.

The kidney can be removed now or later. Care should be taken not to pull all the kidney fat out of the loin. Allow a small portion to cover the tenderloin, especially if the loin is to be cut in steaks with the bone in.

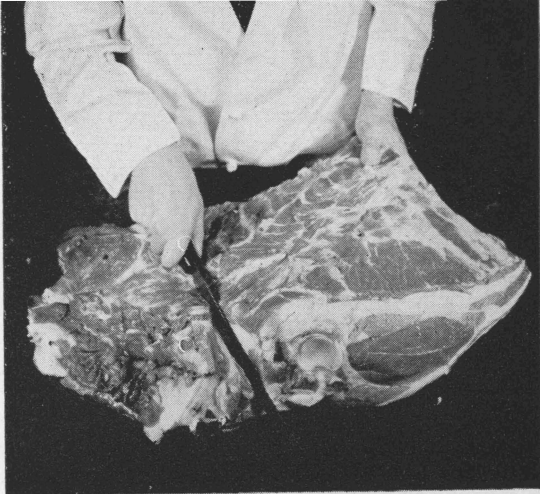


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Next remove the loin by cutting just behind and parallel with the pelvic bone as in picture 21.

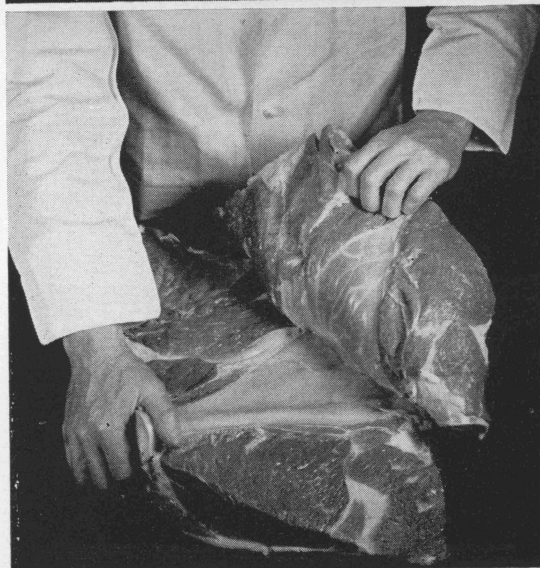
Remove the rump by cutting a triangular piece from the loin as in picture 22. A good starting point is about one inch in front of the pelvic bone and leave 4 tail bones on the loin. The rump should be boned and used as a roast, or it will make excellent corned beef.

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Round steak can be cut across the full round, but a more satisfactory steak can be made if the round muscles are separated into three divisions — 1. top or inside; 2. knuckle; 3 & 4 bottom or outside, as shown in picture 23. They vary in tenderness and are ranked in order of numbering, 1 being the best. This method makes a saw unnecessary and gives pieces which can be cured and smoked, and if dried used for dried beef.

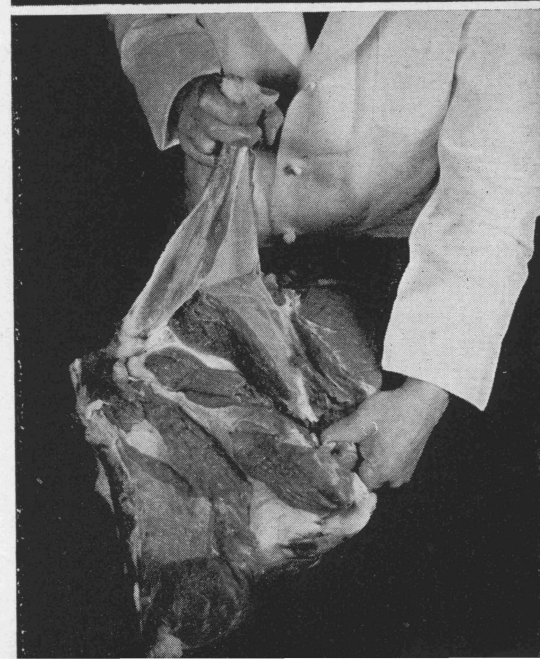
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To separate the round to make the inside, outside and knuckle pieces, first expose the stifle joint and cut down over the center of the bone on both sides as in picture 24. Scoring the bone with the tip of the knife should make it easy to pull off the knuckle piece.

Next remove the shank by cutting across the lower round in line with the stifle joint, as in picture 25. Then cut the round bone from the large thick piece and divide into the inside and outside rounds by separating the piece in about equal parts and at the natural division of the muscles.

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The meat on the shank should be boned out for a boiling piece or ground for hamburger meat.



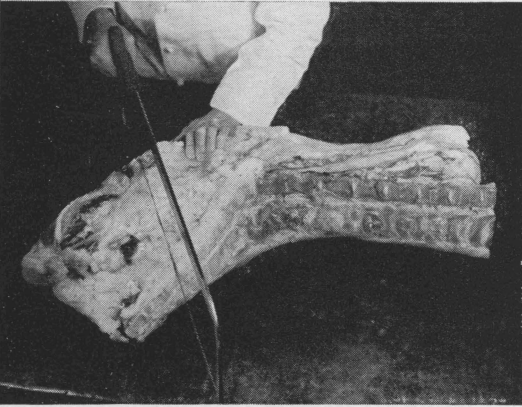
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CURING BEEF

Beef can be cured much like pork but cannot be kept and used in exactly the same manner. The pieces best adapted for curing and drying are the round muscles, generally termed the "dried beef set". Cheaper cuts, such as the navel, brisket, rump and parts of the chuck, can be cured and used as what is commonly called corned beef.

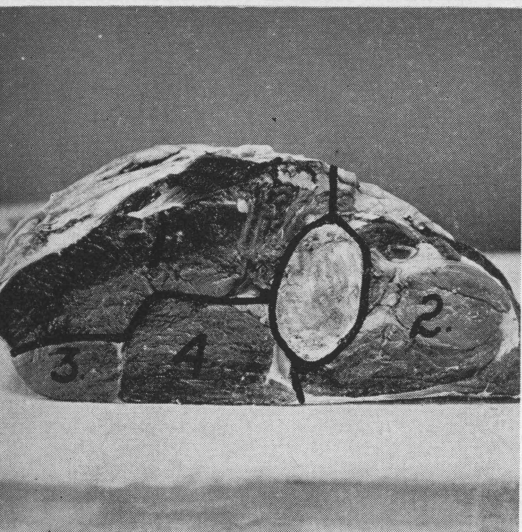
The cure recipe is :

1½ pounds salt
1 ounce saltpeter
¼ pound sugar
1 gallon water



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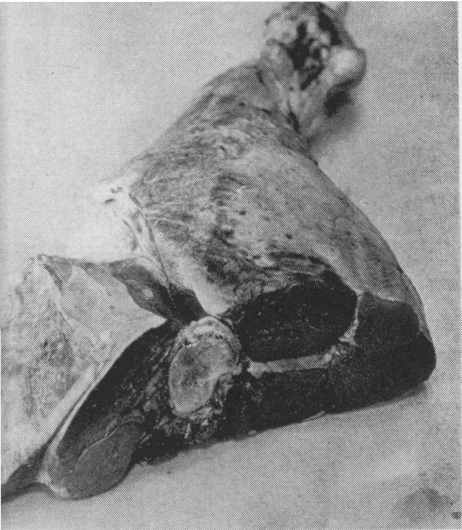
Pack and weight the meat down in a barrel or stone jar, covering with the above mixture. Corned beef will be ready to use from the brine in about a week, according to the size and thickness of the piece. It can be used directly from the brine as needed but if left in the cure longer than 30 days, parboiling may be necessary to eliminate excess salt. It is recommended that a portion of the beef in the brine be canned before it becomes too salty.



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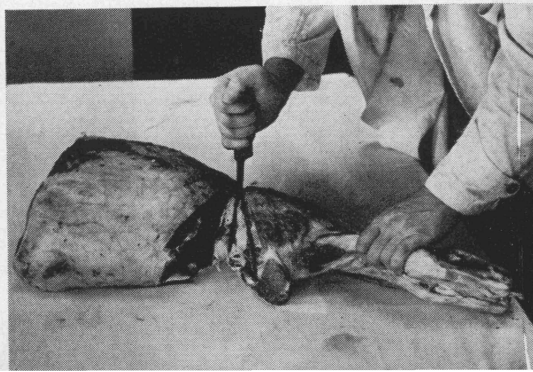
Making Dried Beef

The same cure recipe can be used for corning and curing dried beef, and both can



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be made in the same barrel. Use only the dried beef set for drying. Trim the pieces so that little, if any, fat is left. Leave the pieces in the brine 3 days for each pound, or a 10 pound piece should stay in cure 30 days. When taken out, wash thoroughly and hang 24 hours to drip and dry. Then smoke, handling it exactly as when smoking hams. After it is smoked it should be hung away to dry. It is ready to use when it is firm and relatively hard. When using, slicing very thin improves the quality. If a large quantity is made and cannot be kept from molding it can all be sliced on a commercial slicing machine and canned in glass jars by the vacuum method.



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