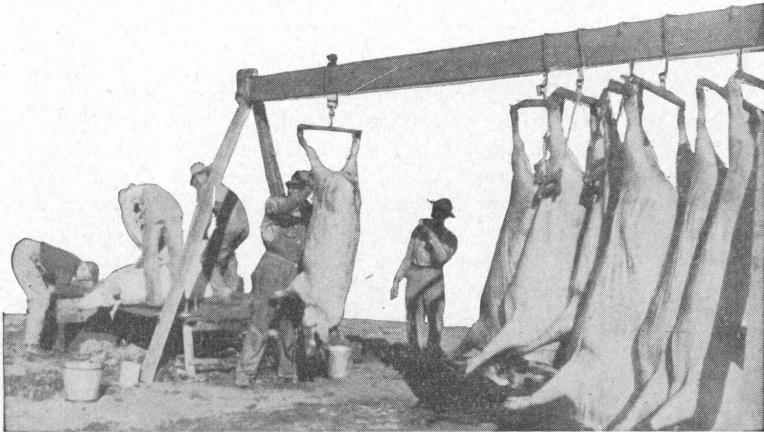


# Killing and Curing Pork



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H. H. Williamson, Director, College Station, Texas

# Killing and Curing Pork

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and

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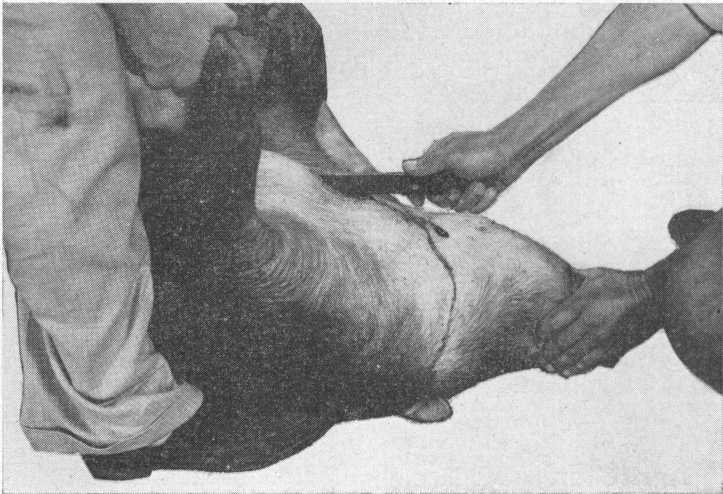
**O**NLY HEALTHY HOGS should be slaughtered. Meat from a diseased animal is not wholesome and frequently spoils in cure. A thrifty, well finished hog weighing 225 pounds when five to six months old yields the most desirable meat.

## Pick a Cool, Dry, Clear Day

Cool temperature is the most important factor in curing pork. A cool, dry, clear day with a light frost early in the morning is the most ideal for hog killing. Temperatures ranging from 32 degrees to 38 degrees Fahrenheit are the most desirable.

## Keep Hogs Off Feed for 12 to 24 Hours

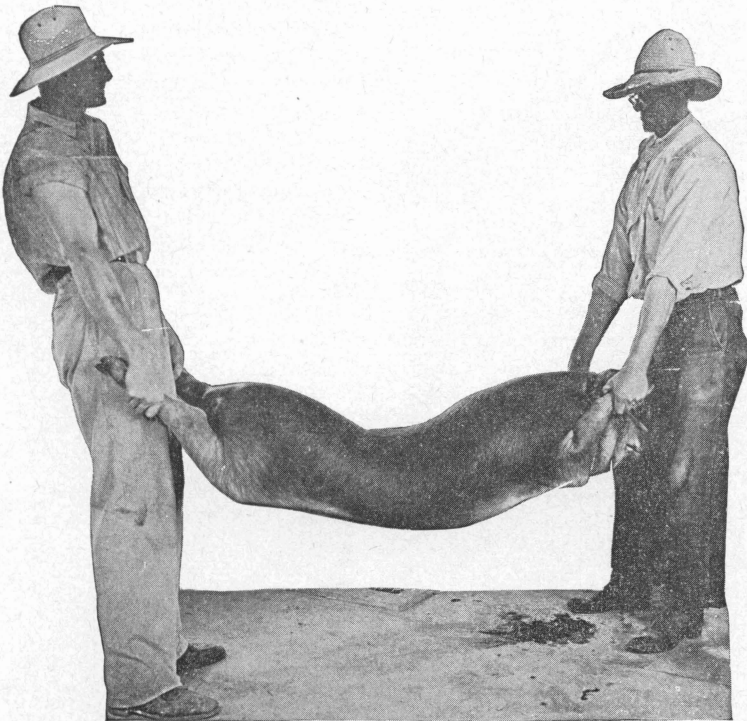
Hogs that are to be slaughtered should be kept off feed from 12 to 24 hours before killing. A hog that has been given a shrink before killing bleeds more thoroughly and is much easier to dress. Do not disturb the hog more than absolutely necessary so that he will not become over-heated, excited or bruised. Meat from an over-heated or bruised hog spoils much more easily in curing.



## Stick the Hog With a Knife

For the best results the hog should be stuck with a knife and allowed to bleed to death. This method is most humane and also insures thorough bleeding. A great deal of souring of hams in cure is due to improper bleeding. Shooting or knocking is not recommended.

A good stick is very important. Hold the hog squarely on its back. By pushing the end of the nose down, the breast will show more pronounced. Hold the head down and in a straight line with the body, and make a slit through the skin just in front of the breast bone. Then by keeping the knife level with the ground (as shown in the picture) push it straight back till the tip touches the breast bone. Then keep ticking the breast bone, working knife downward, until the knife slips back under it about one inch. The final cutting then is straight downward, being sure when the downward cut is made that the point cuts down as far as it will go.



A simple way to carry or lift a hog that has just been stuck is belly down, as shown in the picture.

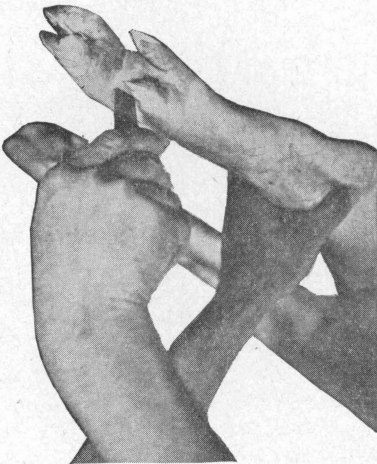
## Scald Slowly and Scrape Quickly

The water for scalding should be at a temperature of 150 degrees Fahrenheit under ordinary conditions. If the weather is extremely cold, 155 to 160 degrees is good. At this temperature it takes about two or three minutes to scald a hog properly. If the water is too hot the hog scalds more quickly and as a result there is danger of cooking the skin or getting an irregular scald. Slow scalding gives more time for the water to soak through and soften the scurf, which makes scraping easier. The scraping should be done as quickly as possible. The feet and head should be cleaned first, as they are the hardest to clean.

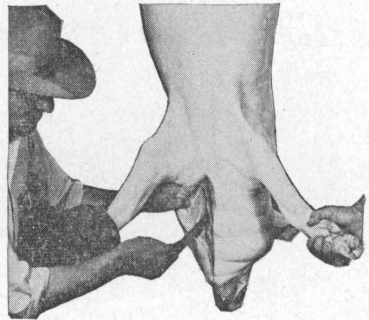
## Clean and Dress the Hog Like This

After the hog has been scraped it should not be allowed to touch the ground or a muddy table. Keep muddy feet off the scraping table. It is practically impossible to clean the skin if it becomes soiled after scraping. After scraping, cut the gambrel as shown in the picture and

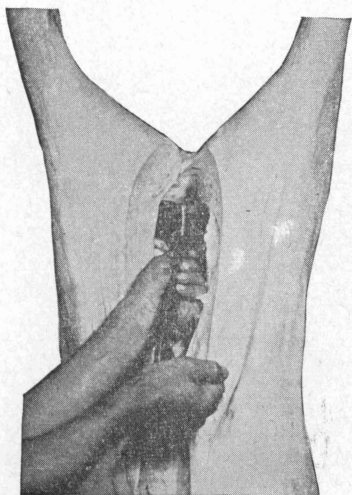
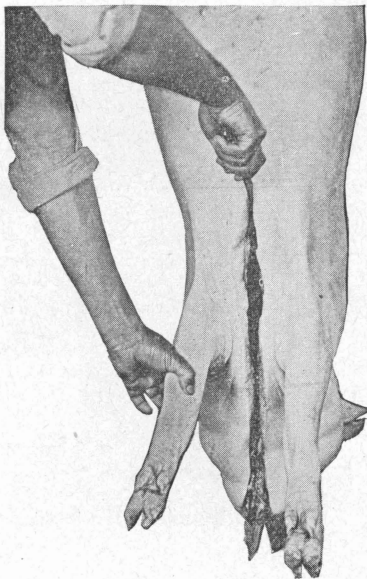
hang up the hog. Then wash off with hot water and scrape down toward the head. Shave or singe the hair that was not removed by scraping. After the hog has been gone over thoroughly in this manner, rinse with cold water. Again scrape, but this time scrape up so as to squeeze the water out of the pores of the skin. When the hog has been thoroughly cleaned it should be opened up and the entrails removed.



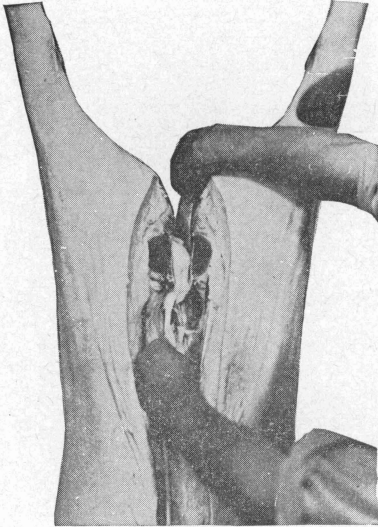
A simple procedure is to remove the tongue first by running the knife clear into the roof of the mouth and cutting down to the joint of the lower jaw. This should be done on both sides. The hand can be inserted in the cut and the tongue pulled out, but still left hanging, if it is completely cut loose.



Next open the breast bone by inserting the knife into the same hole made when sticking. Then cut up, aiming to stay a little on one side of the center of the breast bone. It is a good idea to keep the point of the knife down when cutting up through the breast bone.



Next divide the hams, cutting squarely in the center and down to the pelvic bone. Then split the pelvic bone by placing the knife exactly in the center and jarring the knife upward by a bump on the end of the handle. Hold the blade as shown in the picture. To find the exact center it is a good idea to feel for the ridge which is located where the pelvic bones are joined by a cartilage.

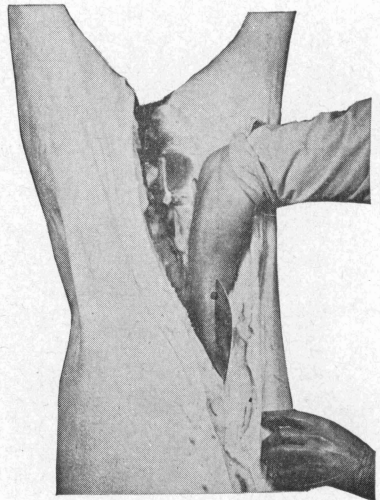


The bung is easily removed by cutting on each side and backward first. Then bring these two cuts together by cutting crossways. It is a good practice to pull the bung loose from the backbone and pull outward while cutting.

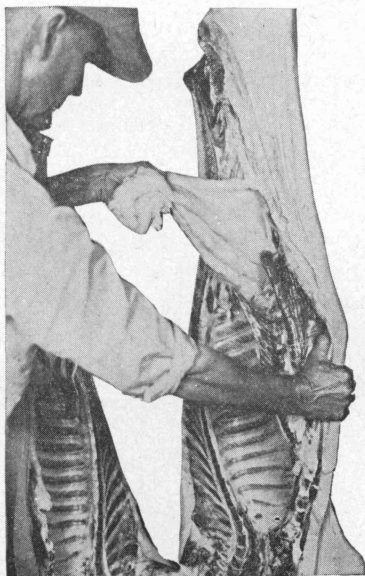
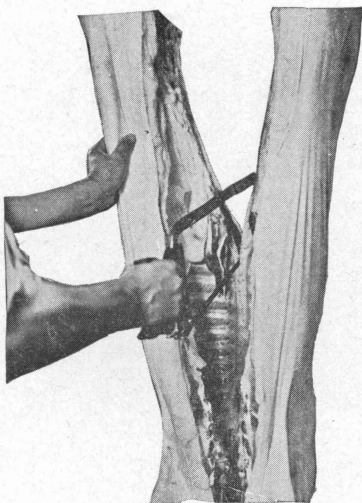
A simple way to open the belly is to slip the knife handle down along the inside to avoid cutting the viscera.

Remove the intestines, paunch, and liver. If the liver is healthy and normal, save it for later use. Then cut the diaphragm and remove the lungs, heart, and tongue, cutting on each side of the esophagus and trachea to have the tongue come out with the lungs.

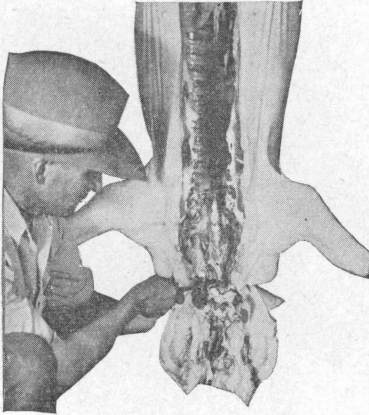
If the inside has become bloody in the operation, it should be washed and cleansed with cold water.



Next split the carcass, sawing directly down through the center of the backbone. Continue sawing so as to saw through the skull, thus making it easy to remove the brains later.



The leaf fat should be loosened while the hog is still warm. Start to pull it loose at the lower end of the diaphragm and pull upward.



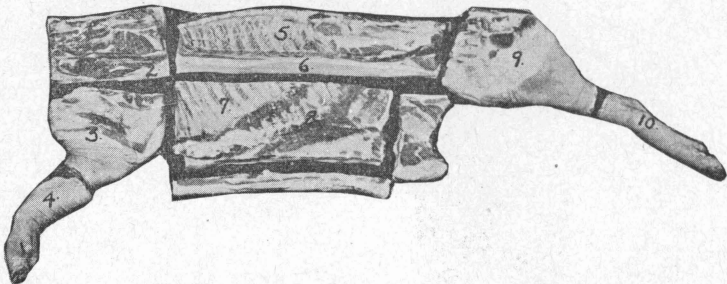
Before hanging the two sides of the carcass away to cool, remove the head by cutting just behind the ears, making a cut clear around the head. This should expose the atlas joint, the first joint behind the skull. If the head is not extremely clean, now is a good time to drop it in a tub of water and perfect the job.

### Chill Meat Rapidly

The meat should be chilled as rapidly as possible. Hang the carcass in a cool place until the following day. Do not allow the meat to freeze solid.

### Cool Meat Before Cutting

Do not cut the meat when still warm if it is at all possible to avoid it. A sharp knife is important.

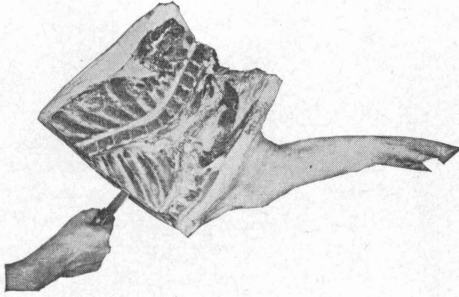


- 1. Butt
- 2. Clear plate
- 3. Picnic

- 4. Front foot
- 5. Loin
- 6. Fat back

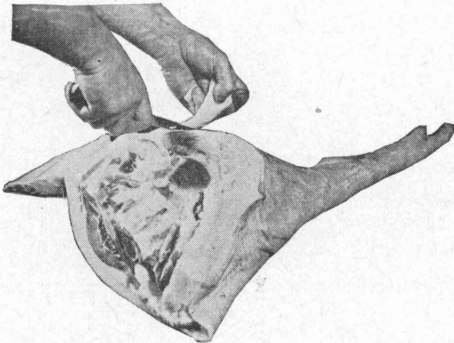
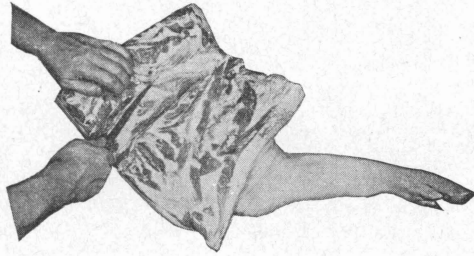
- 7. Spare ribs
- 8. Bacon
- 9. Ham
- 10. Hind foot



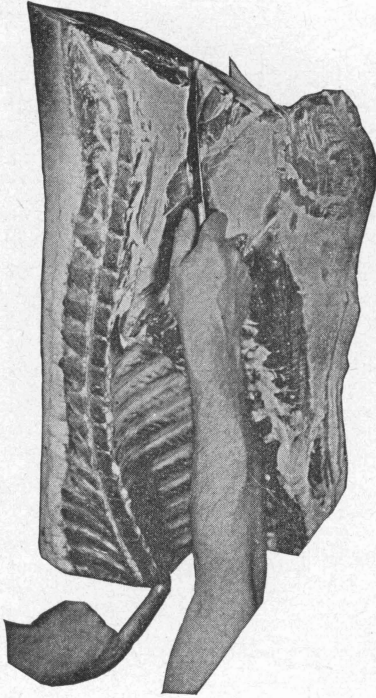


**Shoulder** — Remove the shoulder at a point between the fourth and fifth ribs, cutting at right angles to the back bone. In sawing down the carcass, one often cuts through one or more ribs. Next bone out the neck and spare ribs from the shoulder. Divide the shoulder into picnic and butt by cutting across the shoulder, starting at a point where the neck bones were attached. Cut down to the scapula or shoulder blade. Peel out

the butt following the natural division of the muscles as shown in the picture. Then saw through the shoulder blade. This piece can be cured after the top of the blade is removed or can be made into sausage or lard. Trim the picnic by cutting off the excess lean and fat, shaping it as much like a little ham as possible.

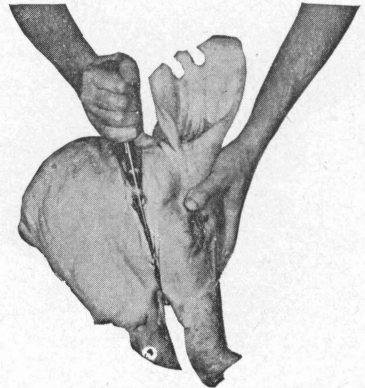


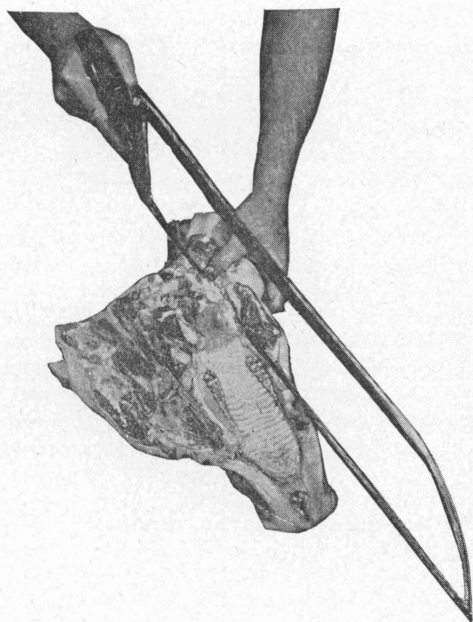
**Ham**—Remove the ham on a line half way between the pelvic bone and the rise in the back bone. Make this cut at right angles to the hind shank. Trim the ham by cutting from the center and around on both sides, always keeping the shank away from you when trimming.



**Side**—Divide the rough side into back and belly by cutting on a line from the edge of the tenderloin muscle to the point of the chine bone. Remove the fat from the back to make a loin. Remove the ribs from the belly and trim for bacon.

**Head**—A very practical way of preparing a head which has not been divided into half when the carcass was split, is to divide the lower and upper jaws first, by cutting in line with the mouth as shown in the picture. To separate it completely a saw or ax must be used to break the jaw bone. After the lower jaw is free from the top, it is simple to remove all the meat from the bone. The thick cheeks can then be squared and cured for a cheaper class of bacon or salt pork.





Preparing the top part of the head is somewhat harder. First place the skin side down on the table. Then saw through the cheek bones keeping the saw in line with the teeth but away from them far enough so that they or the tusk will not be hit with the saw blades. After both sides have been sawed so that they will break loose from the skull, start peeling the meat off, beginning at the nose end and on the inside. Use a knife until the meat is well started down over the nose. If the meat has been removed so as to clean the bone well, the remaining part will readily pull off except for cutting around the eyes. The head prepared in this manner has no bone in

it such as the nasal cavities or sinus pockets—places that cannot be cleaned if the whole head is put into a kettle to be cooked.

### **Trim All Pieces Carefully**

In trimming all pieces that are to be cured, avoid exposing lean meat. Always leave a one-fourth inch layer of fat covering the lean when possible. (This prevents the meat from drying out and prevents molds from forming on the cured meat after smoking and storing).

It is very difficult to cure hams that weigh more than 20 pounds. If the hams are very large, skin and trim them until they do not weigh more than 20 pounds, or if oil is used when storing, divide the hams in two parts to cure.

### **Use These Materials for Curing**

The following materials are needed in curing pork:

Salt—In curing, salt removes moisture and preserves the meat.

Sugar—Sugar softens the tissues and improves the flavor.

Saltpeter—(Potassium nitrate)—Saltpeter speeds up the curing process. It also improves the color of the cured meat.

### Dry Cure

For 100 lbs. of meat to be cured use:

8 lbs. salt

3 lbs. sugar

3 oz. saltpeter (potassium nitrate)

Rub slightly more than half of this mixture on the meat and pack it down in a barrel or stone jar. Save the remainder of the mixture. At the end of seven days repack the meat and rub on the remainder of the curing mixture. Let the bacon, Canadian bacon, and shoulder butts, cure one and one-half days per pound per piece. For example, if pieces of bacon weigh 10 pounds each, they should be cured not to exceed 15 days.

Let the hams and shoulders cure three days per pound per piece. For example, 15 pound hams should cure for 45 days.

### Brine Cure or Sweet Pickle

For 100 lbs. of meat to be cured use:

12 lbs. salt

3 lbs. sugar

3 oz. saltpeter (potassium nitrate)

6 gal. water

Dissolve the curing mixture in the water and bring to a boil. This should be done on the day the hog is killed. Allow the brine to get thoroughly cold. Never pour warm brine on the meat. Pack the meat in a clean oak barrel or stone crock. Hams should go in first, with the skin side down; next the shoulders, skin side down; then the bacon, the last one, with skin side up. Weight the meat down so it will not float in the brine. Use a hard, flinty rock for this purpose. Now pour cold brine over the meat. All the meat should be covered with brine. Place the curing barrel in a cool, well-ventilated place. After seven days the meat should be repacked to insure a uniform cure.

The bacon, Canadian bacon, and butt should remain in the cure not to exceed one and one-half days per pound per piece. For example, if the pieces of bacon weigh 10 pounds each they should be cured not to exceed 15 days. The hams and shoulders should remain in the cure three days per pound per piece. For example, if the hams weigh 15 pounds each they should remain in the cure for 45 days.

## Cold Storage Curing

It is very practical for farmers to cure their meat in cold storage where such facilities are available at reasonable prices. Cold storage curing is much safer and far more satisfactory than curing pork under uncertain weather conditions. If the weather is warm, precautions should be taken to prevent flies from getting on the meat during slaughtering, and the carcasses should be rushed to the cold storage vault as quickly as possible. The carcass should be chilled for the first 24 hours at a temperature ranging from 28 to 38 degrees—a temperature of 28 degrees is preferred. After the carcass has been chilled for 24 hours it should be cut in the cold storage room or in an adjoining room that is fly-proof. The cut pieces should be returned to the cold storage room as quickly as possible to prevent their getting warm. Curing in cold storage should be done at a temperature ranging from 32 to 38 degrees—36 degrees is preferred. All instructions given in this bulletin apply to cold storage curing as well as to curing pork under ordinary weather conditions.

## Mild Cures

The above recommendations for length of time to cure pork for both the dry cure and the brine cure are maximum and assure thorough and complete penetration of the cure. Some people prefer milder cures. To produce the milder cures, the time that the meat is left in cure can be reduced by one-third.

## Soak Before Smoking

When the meat has cured the proper length of time, it should be removed from the curing vessel and thoroughly washed so as to remove all excess salt. After it has been washed it should be soaked from one to three hours. For soaking and washing use fresh clean water—do not use hot water. Soak bacon, Canadian bacon and shoulder butts one hour. Soak hams and shoulders three hours.

## Smoke Meat for a Quality Product

For the best quality product the cured meat should be smoked. However, smoking is not necessary and can be omitted if the smoke flavor is not liked.

Reasons for smoking are as follows:

1. Smoke dries the meat.
2. The creosotes deposited on the meat act as a preservative.
3. The smoke imparts a very desirable flavor.
4. Smoke tends to prevent molds from forming.
5. Smoking tends to prevent an oldish flavor from developing.

Green hickory wood gives the best flavor. Green pecan also is a very desirable wood to use. Any hard wood such as oak, maple or mesquite can be used with good success. Corn cobs or even maize heads have given satisfactory results. Do not use pine because it gives a very objectionable flavor to the meat.

After the meat has been soaked, hang it up in the smoke house and allow it to dry 24 hours before starting the smoke. Let the fire burn with a very small flame so as to provide live smoke. Live smoke gives a brighter color and improves the flavor. Do not let the meat get hot enough to cause the fat to drip. The temperature should not go above 120 degrees Fahrenheit.

It takes about 30 hours of continuous smoking to finish the job for hams and a little less for bacons, loins and butts. A small fire can be started every morning and allowed to die down during the afternoon, or the smoking can be done in one continuous process. Either method gives good results. Smoke the meat until a medium brown color is obtained.

To produce a quality smoked product, no special type of smoke house need be constructed. A barrel with both ends removed and the smoke transmitted through a pipe or tunnel to the barrel has been made to work very satisfactorily. An ideal smoke house may vary in size from 3 x 4 x 8 feet high to as big as 8 x 8 x 9 feet high. A ventilator should be provided for at the top and made fly proof. The walls should be tight to prevent any fly contamination.

### **Meat Deteriorates When Stored Wrong**

When cured pork is kept any length of time, mold usually develops, the pieces dry out and become extremely hard. When not kept in a fly-free place, the pork will often be infested with the skipper or maggot. Many times the fattier pieces become strong and rancid—a condition that cannot be completely controlled without refrigeration. Rancidity is usually caused by a combination of four things: light, heat, air, and time.

### **Store Cured Meat in Oil**

Of the above conditions, the first three can be readily controlled by storing all cured products in the right kind of oil. Experiment work conducted by the Texas Agricultural Experiment Station at Lubbock conclusively proved that refined cottonseed oil is one of the best oils to use, although peanut oil will work almost equally as well.

The advantages of using refined cottonseed oil are:

1. It retards mold growth 100 per cent.
2. It reduces evaporation and shrinkage—thus eliminating a hard dry piece of meat.

3. It eliminates fly and skipper contamination 100 per cent.
4. The oil being a liquid makes it possible for pieces to be used from and then returned to the oil for perfect keeping.
5. The meat will not become more salty.
6. The meat will not absorb flavors from the oil.

It is highly recommended that only refined cottonseed oil be used. If a good grade of oil is obtained it may be used for several years. Under special conditions it may be most practical to refine it, although this can be done in the home. The use of refined oil is recommended because a crude product will become more rancid than a refined one.

There are no special secrets in using cottonseed oil. Any container that will hold oil will do, although a large earthen jar is best. So as to reduce the amount of oil necessary to cover the meat, pack all pieces tightly. With average packing it will take about three gallons of oil to cover 100 lbs. of cured meat. For sanitary purposes cover the container.

Other methods such as packing in lime or salt, wrapping thoroughly, or even hanging in the smoke house may be used for keeping cured pork although none are equal to the method of packing in oil. Meat to be held any length of time should always be placed in the coolest, darkest, fly-proof place available on the farm.

Regardless of what method of storing cured pork is used, the meat may become rancid, and such pieces having excessive fat such as bacon should be used reasonably early. This is true even of meat stored in oil.

### Season Sausage This Way

All the lean meat trimmings can be used for sausage. Never use anything but clean, fresh meat. Use about four parts lean and one part fat. Avoid getting the sausage too rich in fat. The following seasoning will suit the average person.

50 lbs. meat

1 lb. salt

2½ oz. black pepper

If the taste of sage and red pepper is desired, add three ounces powdered sage, three tablespoonfuls red pepper and one cup of sugar.

The seasoning should be mixed with the cut meat before it is ground. This sausage can be used fresh, canned, or stuffed in casings and smoked.

## Render Lard Carefully

The leaf fat and the fat trimmings make the best lard. The ruffle or gut fat makes the poorest. They should never be rendered together. Be sure all the lean is trimmed out. It is not necessary to remove the skin, but the fat should be cut in cubes. Cook over a moderately slow fire and stir frequently to prevent the fat from sticking to the bottom of the kettle. Cook the lard slowly until white blisters form on the cracklings and they begin to brown. At this point most of the cracklings will float. When these signs show up it is about time to take the lard off the fire. As an accurate test, dip up some of the cracklings and if they fry themselves dry when lifted out of the lard, the lard is ready to come off. Press out the cracklings and strain the lard through a cloth. The lard should be stirred occasionally as it is cooling, because this stirring will make the lard whiter and give it a finer texture.

## Surplus Fat May Be Used for Soap

Surplus fat and fat that has become old and rancid can be used for making soap. Heat the fat until it is all melted. To every seven pounds of melted fat add one pound of lye dissolved in three pints of water. The fat should not be too hot—about 150 degrees Fahrenheit is good. The water and lye should not be over 80 degrees Fahrenheit. Pour the lye and water mixture slowly into the fat and stir constantly until the mixture resembles honey. Pour the hot soap into a granite pan or into wooden or cardboard boxes, and allow to cool until almost hard. Then cut into squares. The soap should ripen for at least a month before it is used.

## PRECAUTIONS

### That Prevent Ham Souring

1. Don't overheat the animal before killing.
2. Bleed well.
3. Chill meat thoroughly before curing.
4. Use pure salt, sugar and saltpeter.
5. Boil brine before using.
6. Scald utensils before using.
7. Do not puncture pieces of meat to admit cures.
8. Cure in a cool, dry place.
9. Examine meat and brine frequently.
10. Cleanliness in handling meat is always important.

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