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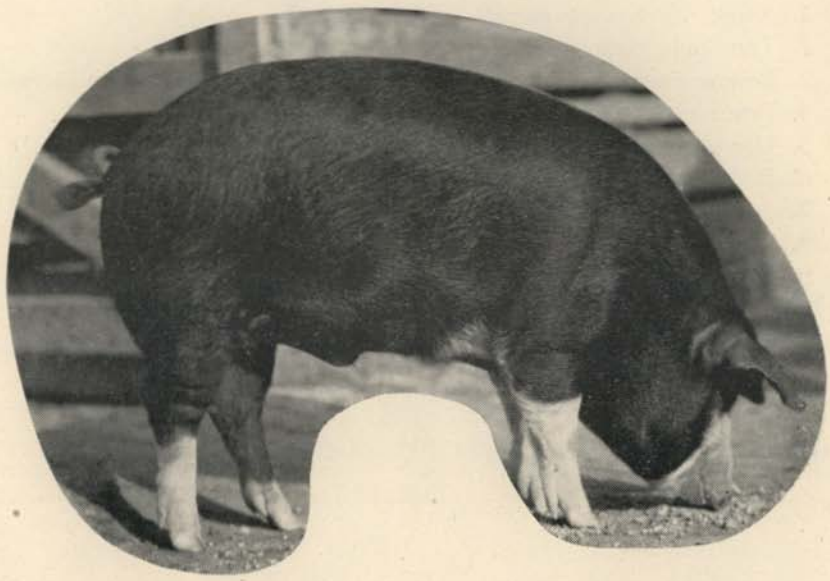
EXTENSION BULLETIN NO. 144

UNIVERSITY OF IDAHO
COLLEGE OF AGRICULTURE
Extension Division

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LET'S BUTCHER A HOG

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COOPERATIVE EXTENSION SERVICE IN AGRICULTURE AND HOME
ECONOMICS OF THE STATE OF IDAHO, UNIVERSITY OF IDAHO
EXTENSION DIVISION AND UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING.

Printed and distributed in furtherance of the purposes of the Cooperative
Agricultural Extension Service provided for in Act
of Congress May 8, 1914.

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Ten Points To Prevent Meat From Souring

1. Avoid overheating animals before killing.
2. Thorough, complete bleeding is necessary.
3. Follow dressing with prompt and thorough chilling of the carcass.
4. Practice cleanliness in handling meat.
5. Use pure, clean ingredients in sausage and all curing processes.
6. Boil pickle water before using.
7. Scald curing receptacles.
8. Cure meats at low temperature.
9. Store fresh meats under refrigeration.
10. Handle cured meats properly.

Let's Butcher a Hog

W. P. LEHRER, JR.*

YOUR family needs and desires will determine the weight and finish of the hogs you kill for farm pork. Hogs weighing 180 to 225 pounds offer the best cuts in size and proportion of fat and lean. Heavier hogs produce more lard and bigger cuts which will be difficult to handle.

Tools for Hog Killing

You do not need expensive equipment to do farm butchering, but good practical tools will save time and labor and make meat cutting more pleasant. Tools you will need for slaughtering and cutting are a bell scraper, hog hook or hay hook, gambrel or singletree, saw, steel or sharpening stone, sticking knife, skinning knife, boning knife, steak knife, cleaver, and thermometer.

Before Killing Your Hog

Keep the hogs which you intend to slaughter off feed for 24 hours but allow them free access to water. Handle animals this way and they will bleed more freely and the intestines will be easier to remove. Confine hogs in small quarters and avoid over-exercising, excitement or heating before killing.

Getting Ready for the Scald

Perhaps you own a flat, metal scalding-vat or are able to borrow one in your community. Such a vat is probably the most convenient vessel for hog scalding. In it, animals of any weight are handled easily. If the hog is too heavy for you to lift or roll out of the vat when you are through scalding, have a block and tackle ready for the job. Such rigging is much safer to use with animals of much weight and may avoid a bad accident. Incidentally, play safe all through butchering operations.

If you are not able to find a flat type scalding-vat, a barrel will do very well. Set the bottom of the barrel into a shallow hole at one end of your scraping table or platform. Set it at such an angle that you can handle the hog easily while he is in the water and remove him readily when the scald is done. If you intend butchering more than one hog, you may want to use a metal barrel with a fire under it. This will keep the water hot between scaldings and prevent a delay. Use the same block and tackle arrangement for handling heavy hogs in the barrel as you would for handling them in the flat vat.

Killing

When you are all ready to kill your hog, drive him into a small pen and stun him with an axe or other heavy blunt instrument or shoot him with a rifle. Aim the blow at the center of the forehead and about 1 inch above the eyes. Sticking the hog without first stunning or shooting causes the blood to drain more freely and will help in producing more palatable pork products.

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Complete bleeding is essential to good meat. A good "stick" is important (*Figure 1*). To stick the hog properly, take a six-inch sticking knife, sharpened on both sides of the point, and push it into the neck cavity, 2 inches down from the front end of the breastbone. As you push the knife into the neck cavity direct the blade toward the tail and then withdraw with a downward stroke, keeping the point close to the backbone. By following this method you will avoid shoulder sticking. Make no attempt to reach the heart with the sticking knife. The heart must remain whole to pump out the blood. Stick your hog while it is suspended, or while it lies on its side or back.

Now for a Good Scald

Water of the right temperature is important for scalding hogs. The best temperature is 145 to 160 degrees F. Keep the hog in motion while it is in the water and remove it when the hair pulls easily. High water temperatures will "set" the hair and make it more difficult to remove.

A 50-gallon barrel with 25 to 30 gallons of water is generally enough to scald a hog. You can easily handle a hog in a scalding barrel, by placing a hog hook or hay hook through the lower jaw, or into the roof of the mouth. Scald the rear end this way, remove from the barrel and scrape. Now turn the animal around and scald all front parts left unscalded in the first operation.

When submerging the front end, catch the hook in the gambrel tendon of one rear leg, or insert the gambrel in both legs. The gambrel tendons are easily lifted out by cutting lengthwise on the back side of the hind legs between the dewclaws and the hock joint.

If you add wood ashes, lye or borax to the scalding water it will soften the water and help loosen the dirt, thus making a cleaner, whiter carcass.

The faster you can scrape your hog the less danger there will be of the hair setting (*Figure 2*). Medium-size bell scrapers are good for removing the hair and scurf from hogs.

It is advisable to follow scraping with a sharp knife and shave off any remaining bristles. Apply additional hot water when needed.

After scraping and shaving the carcass, raise the hog on the gambrel to a position convenient for removing intestines. When raised wash the carcass with warm water and remove all loose hair, blood and dirt.

Eviscerating (Removing Internal Organs)

If the hog has been off feed for 24 hours before killing, removal of the internal organs is simplified (*Figure 3*). If, however, the intestines are full at the time of killing, you will have to take every precaution not to cut into them.

If you are a beginner, you will find it is easier to split the breastbone before removing any of the internal organs. Take care not to extend this opening beyond the chest cavity. To extend the opening farther will allow the intestines to protrude and interfere with other operations.

After splitting the breastbone, the next step is cutting down between the hams. Take care to keep the knife in the center and to follow the white membrane which marks the middle of the carcass to the pelvic bone. This



Figure 1.—Showing position of knife for proper sticking and bleeding.



Figure 2.—Thorough scraping is important.

Figure 3.—Opening the carcass. (One of several approved methods of handling the knife.)



4.—Splitting the carcass.



membrane will lead to the point where the bone is fused together and can be easily split with the knife. Open the carcass down the middle of the belly and avoid cutting into the stomach and intestines.

Before removing the internal organs, loosen and tie off the bung and remove the gall bladder from the liver to prevent contaminating the carcass. Save edible organs such as the liver, kidneys, heart, and tongue. The small intestines can be washed and cleaned and used for sausage casings or cooked for chitterlings.

After removing the internal organs, split the carcass down the center of the backbone (packer style) with a saw (*Figure 4*). "Farmer style" is different from "packer style" in that the carcass is split by cutting on each side of the backbone. You will have to use the backbone separately if you choose this method of splitting. If you did not remove the head before the carcass was opened split it through with an axe or cleaver now or remove it at the atlas joint (first vertebra back of the head).

Now you can loosen the leaf fat (fat over ribs in loin region). Leave it attached at the butt of the ham. You will find it easier to remove this fat when the carcass is warm than when it has chilled.

Pump shoulders now to remove any blood and wash the entire carcass.

Chilling Pork

Do your butchering during cool weather and chill the carcass as quickly as possible to prevent souring and spoilage. Usually it is safe to butcher in the afternoon and let the split carcass cool out at night. When possible, chill the split carcass at a temperature of 33 to 38 degrees F. for 36 to 48 hours before you cut it up.

Cutting

There is no one best method of cutting a pork carcass. Choose the method best suited to you and adapted to the manner in which you will use your pork. The method discussed here is merely presented as a suggestion. (*Figure 5*).

If you have split the carcass down the backbone (packer style) the following cutting procedure is easily mastered.

Remove the shanks (feet), above the knuckle to help prevent souring during curing and to make handling the carcass easier (*Figure 6*).

To remove the ham, cut and saw through the side back of the curve (pelvic arch) in the backbone. For a long ham make the cut just behind the pelvic arch. For shorter hams, the cut is made farther back and nearer the "aitch" bone (*Figure 7*).

Remove the shoulder by cutting and sawing through the backbone between either the second and third, or third and fourth ribs, depending on the size of the loin and shoulder you want (*Figure 8*).

For separating the loin and belly, use both a knife and saw. On the ham end make a cut about $\frac{1}{2}$ inch from the tenderloin muscle and from this cut score the ribs with your knife in line with the backbone to the last rib. With the saw, cut along the scored line through the ribs and complete the job with the knife. Now closely trim the ribs away from the bacon side and flatten the bacon with the flat side of the cleaver or a mallet

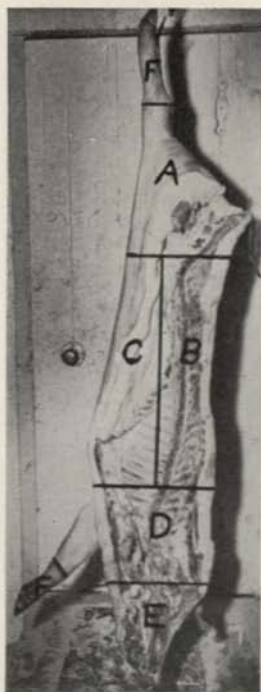


Figure 5.—Cuts of pork: A, ham; B, loin; C, bacon (side or belly); D, shoulder; E, head; F, shank (feet).

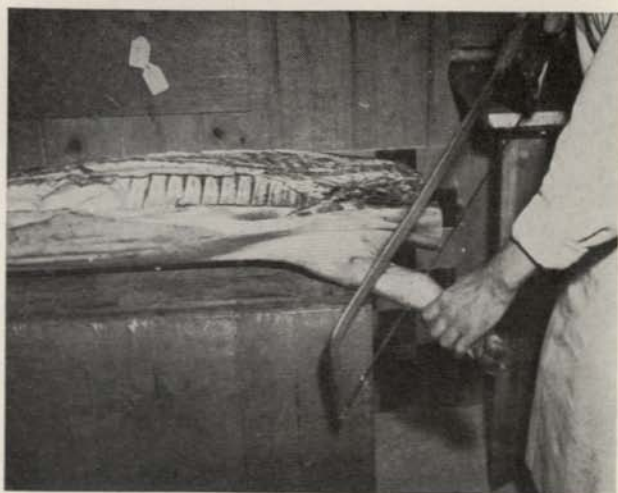


Figure 6.—Removing the shanks (feet).

Figure 7.—Removing the ham.

Figure 8.—Removing the shoulder.



(*Figure 9*). Trim the bacon by squaring up the ends and removing the teat strip (*Figure 10*).

Trim the shoulder by cutting out the neck and rib bones, leaving very little meat on the bones (*Figure 11*). The shoulder, after it has been trimmed, can be divided into a fresh shoulder butt and a cala or picnic by cutting in half. Make the cut parallel to the top or back line.

Now remove the back fat from the loin (*Figure 12*). If you plan to make salt pork, remove the back fat in one piece and pack it in salt. Skin the back fat and cut into small pieces for future lard making. Now divide the loin into either chops or roasts with a knife and cleaver.

Trim the ham so that a coating of fat is left over the lean meat. Remove excess fat and square the ham neatly (*Figure 13*). A "skinback" ham is made by removing some of the excess fat and skin (*Figure 14*).

Rendering Lard

Leaf fat produces the best grade of lard. Probably the most practical method on the farm is to combine the leaf fat, back fat, and fat trimmings. It is advisable to cook the intestinal fat separately as lard from it is darker in color and of lower quality. Skin the pork fat and cut into small pieces, about 1 inch square. Skin left on the fat lowers the quality of lard.

Start rendering the lard with a slow fire and a small amount of fat, adding additional fat as the grease melts out. A small amount of water may be added at the start to avoid scorching. Do not scorch lard by overheating. Stir frequently while the lard is cooking. When the cracklings turn brown and no more steam rises, the lard is ready to be drawn off. Be sure the lard press used for pressing oil from the cracklings is clean and free from odors. Strain the lard through several thicknesses of cheese cloth, to remove sediment. Pour the hot lard into clean containers. To prevent lard from becoming grainy and to improve its appearance, stir it thoroughly just before it sets. Store lard in a cool, dark place.

Remember, the longer you hold fat before rendering the poorer the lard quality will be.

Sausage

Use only clean wholesome trimmings in making pork sausage. Muscle meat with some fat makes the most desirable type. About one-third fat and two-thirds lean is a good proportion. Seasoning is a matter of individual taste. The following recommendation has proved to be satisfactory and is offered here as a suggestion. This mixture will season 100 pounds of ground pork.

Sausage Seasoning Mixture

- 2 pounds of table salt
- 6 ounces of black pepper
- 2 ounces of ground sage.

Mix the above seasoning and spread over the sausage meat which you have already cut into small pieces or ground coarsely. After thoroughly mixing the seasoning into the ground meat, regrind the seasoned pork



Figure 9.—Trimming ribs from bacon side.



Figure 10.—Squaring bacon side.

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Figure 11.—Removing neck and rib bones from shoulder.



Figure 12.—Removing back fat from loin.

through the fine plate of your grinder. If you put your sausage into casings, stuff them immediately after grinding.

Sausage may be kept in bulk or stuffed into medium or large sheep casings, small hog casings, or synthetic casings. Muslin bags make very fine sausage containers. Scrub and chill the stuffed bags and dip them in paraffin. This is not entirely necessary but such protection helps to keep sausage at its best.

Warning: Because of the danger of contracting trichinosis, never taste raw sausage to regulate seasoning. Trichina are destroyed by cooking, so, if tasting is practiced in regulating seasoning, make a small sausage cake and cook thoroughly before tasting. *All pork should be thoroughly cooked before eating.*

Methods of Curing

It is easy to cure hams, bacon, and shoulders on the farm. Most people prefer the sugar cure to the plain salt cure. Sugar curing can be done by either the "dry cure" or the "pickle" method.

The Dry Sugar Cure

The following formula thoroughly mixed is enough to cure approximately 175 pounds of trimmed, chilled meat.

- 8 pounds of table salt
- 3 pounds of granulated sugar
- 3 ounces of saltpeter

To dry-cure bacon, use 1 ounce of the "dry sugar cure" for each pound of meat. Rub the cure well into the bacon and sprinkle the remainder over the rib side. For hams and shoulders under 20 pounds, use 1 ounce of cure for each pound of pork. If the hams weigh more than 20 pounds, use $1\frac{1}{4}$ to $1\frac{1}{2}$ ounces of cure for each pound of meat. Hams and shoulders require several rubbings at 3 to 5 day intervals to use the allotted cure. Be sure to use all the required cure on each individual cut.

To determine the length of time to leave the meat in cure, measure the bacon just a few inches from the shoulder end and let the side cure 7 days for each inch of thickness. For hams, cure 7 days for each inch of thickness measuring just back of the "aitch bone." Measure shoulders at the thickest point and let cure 1 week for each inch of thickness.

Store curing meats at a temperature below 40 degrees F. but above freezing. Place your meats on shelves, tables or boxes having perforated bottoms. This allows the juices to run off and prevents over-curing and unwanted flavors.

The Sweet Pickle Cure

A "Sweet Pickle Cure," enough to cure 100 pounds of meat, can be made from the "Dry Sugar Cure" formula by adding 4 gallons of cold or warm water that has been boiled. Cure bacons, hams, and shoulders in this pickle 9 days for every inch of thickness of the individual cuts. In using pickles for curing, place the meats in either wooden or crockery containers—never in metal. Cover the meat with the pickle and weight the lid to keep the meat well-covered with the liquid at all times. A clean hard stone



Figure 13.—Trimming ham.



Figure 14.—Making a skin-back ham.

makes a good weight. Rearrange order of meats in the curing container several times during the curing period.

You can shorten the curing time of your hams by injecting the pickle into the ham with a pickle pump or gun. Pickle injected this way, around the bone and into the center of the ham and pumped through the shank end along the bone, will reduce the curing period. Use no more pickle for pumping than 8 per cent of the ham's weight. After the hams are pumped, place them in the pickle and handle them the same as in ordinary pickle curing. Hams treated in this way will require only 7 curing days for each inch of thickness.

Smoking Meats

Now that your meat has been properly cured, smoking is the next and final step. First it is essential to soak bacon and shoulders in cold water for 1 hour and hams 3 hours. Then hang them up and let them drain for 24 hours before you put them in the smokehouse. In hanging meats in the smokehouse, you must be careful to hang the meat so that one piece does not touch another. This permits thorough smoking of all cuts.

In choosing woods for smoking, use the non-resinous types such as hickory, cottonwood, apple, and plum, but never pine, fir, spruce, or other resinous types. Corn cobs or hardwood sawdust makes a good smoking fuel.

The temperature of the smokehouse will govern the time necessary to give your meat the desired chestnut color. A temperature of 100 to 120 degrees F. will require 30 to 40 hours, while a temperature of 150 to 160 degrees will require only about 18 hours. There is no particular advantage in smoking meats long periods of time.

You can produce a good grade of smoked sausage by smoking link sausage for 3 to 4 hours at a temperature of 90 to 100 degrees F. This low temperature prevents wrinkling and shrinking of the product.

Storing Smoked Meats

Store your smoked meats by wrapping the pieces separately in parchment paper. Place them in muslin sacks if you like; this is a good method. Store them in a semi-dark, cool, well-ventilated room that is dry and well screened. Hang your cuts so they do not touch, thus allowing free air circulation. What little mold that forms on the cuts is easily removed before cooking. This mold does not affect the quality of the meat.

