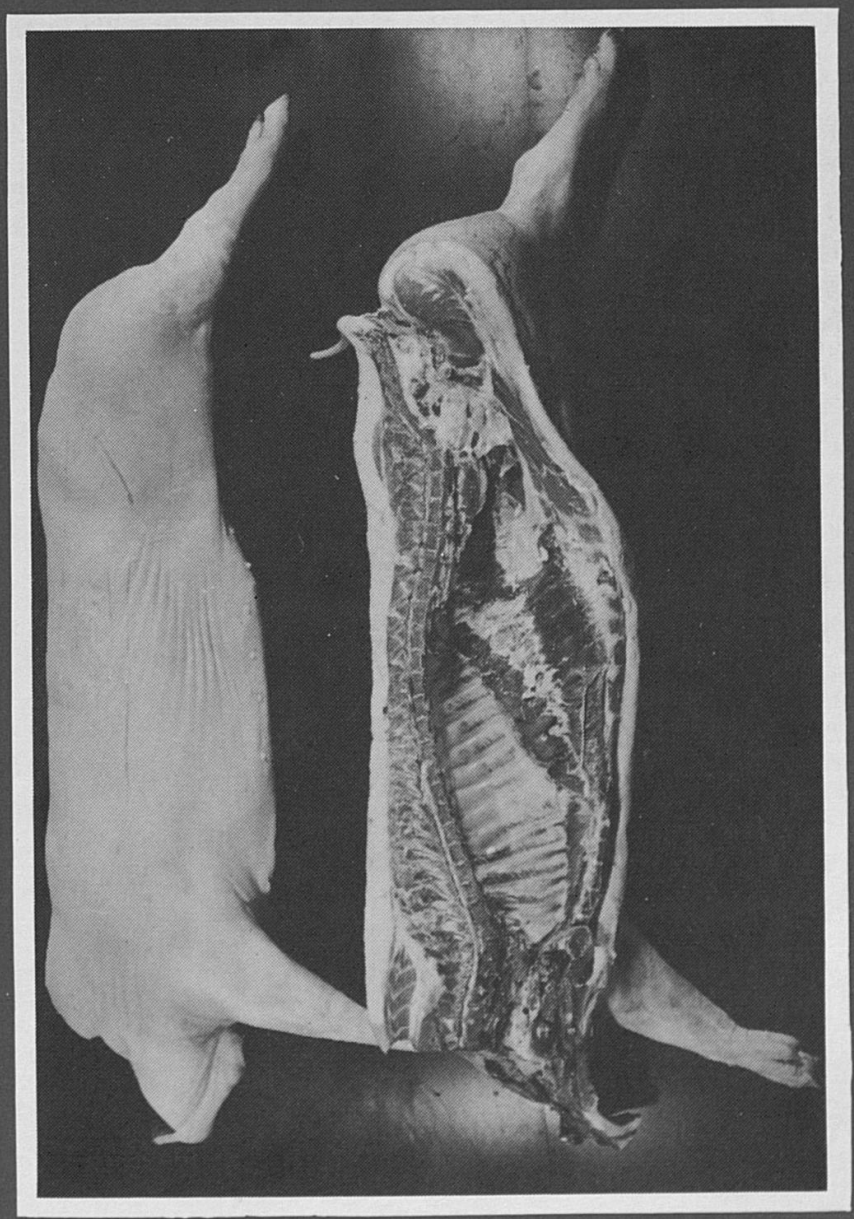
Pork Processing on the Farm



UNIVERSITY OF KENTUCKY
COOPERATIVE EXTENSION SERVICE
AGRICULTURE AND HOME ECONOMICS

Circular 621

CONTENTS

This circular replaces Circular 458-A, "Hog Killing and Cutting and Curing the Meat."

Pork Processing on the Farm

By W. Y. VARNEY and JAMES D. KEMP

Pork produced and processed on the farm can be an economical and satisfying source of high quality protein food. However, it does require some planning and time to do a good job.

Type of Hog to Slaughter

A young, healthy, meat-type hog weighing about 200 pounds is an ideal size and kind to slaughter. It produces moderate sized cuts with the leanness most people like. The meat-type hog produces enough pork and lard for two people for one year. Fat hogs produce less lean meat and more lard.

A meat-type hog, when cut and trimmed according to the methods described in this circular, will yield over half of its live weight in hams, shoulders, lard, and bacon. The lard from this meat-type hog will amount to 9 to 13 percent of its live weight, while that from a fat hog will be 14 to 18 percent.

Care of Hogs Before Slaughter

The care of an animal just before it is slaughtered has much to do with getting a good "stick." Meat from a well-bled hog looks and keeps better than meat from a hog that has not bled well. Pen the animal by itself, if possible, the day before butchering. A hog bleeds more thoroughly and dresses more easily after a 24-hour fast, during which it is given all the water it will drink. Do not run the animal or wrestle with it; this can cause a temporary fever. If the animal is killed before it becomes quiet, the meat is likely to be bloody (sometimes referred to as fiery). Such meat looks bad and spoils easily. Bruises and whip marks cause bloody spots which must be trimmed out of the meat.

Slaughtering

Equipment

To process pork on your own farm you do not need elaborate or expensive equipment, but you will need certain essential tools. You can use a curved 6-inch skinning knife for shaving and dressing the carcass, for raising the gambrel tendons, and for trimming the meat. You will need a narrow-bladed knife for general boning and trimming.

Your knives should always be sharp and properly beveled. Use a good oil stone occasionally, and a smooth, high-quality, 9- to 14-inch steel to keep your knives sharp. Form the habit of steeling your knife briefly but frequently while using it.

Use a 24- to 28-inch meat saw for splitting the hot carcass and cutting the chilled carcass.

Bell-shaped hog scrapers are the best hand instruments for removing hair, scurf, and dirt. A fairly heavy steel scraper is the most efficient. You can handle a scraper 4 inches in diameter more easily than a larger one. Scrapers much smaller than 4 inches are usually too light and do not hold their shape.

Commercial meat gambrels are preferable to notched sticks for hanging the carcasses because there is less danger of the carcass slipping off.

You will need a block and tackle, a ladder, and a rack or some other device for hanging the carcasses that are to be dressed and chilled.

A convenient scraping table is 4½ feet wide, 2½ feet high, and 4 to 8 feet long. On a table of this width, you can lay the hog cross-wise so that one man can scrape the rear while another scrapes the head.

Use a small blowtorch for singeing the head and feet and a wire brush for scrubbing these parts.

You can scald a hog weighing up to 250 pounds in a 50-gallon hardwood or metal barrel. A watering tank may be used as a scalding vat, too.

Sticking

Kill the hog as humanely as possible and in a way that will insure thorough drainage of the blood. If you have kept the hog in a small pen the day before slaughter, the job of stunning or catching it without exciting it will be easier.

Stun the hog by striking it one sharp blow with a mechanical stunner or by shooting it in the forehead midway between and slightly above the eyes. Make the first attempt successful; improperly placed blows or bullets that do not stun can cause the animal much pain. Because bullets sometimes glance from a hog's skull or miss the mark, take care to prevent injury to persons or to other livestock.

The blood will drain out more completely if the animal is stuck immediately after being stunned. There are two ways you can restrain the animal for sticking after stunning:

1. Shackle the hog's hind leg with a chain or rope and hoist it with a block and tackle fastened securely about 10 feet above the ground, or
2. Roll the hog on its back and hold it firmly by the front feet. The helper holding the hog stands astride it, facing forward, with his feet and knees pressed firmly against the shoulders of the animal to prevent it from rolling.

A 6-inch sticking knife, sharpened on both sides of the tip, is preferable; however, a boning knife or a skinning knife may be used. If the hog is suspended, steady it by placing the flat of your hand on the hog's shoulder (do not grasp a leg), and insert the knife in front of and under the breast bone. With the point of the knife directed toward the tail, give an upward thrust (dip the point) and then withdraw it. Care must be taken in keeping the knife midway between the shoulders to avoid a shoulder stick. No twisting or cross-cutting of the knife is necessary.

Scalding

Slow scalding usually is best. Packing houses usually keep the scalding water at 140° to 144° F. With these temperatures it will take 3 to 6 minutes to loosen the hair and scurf, but there is little or no danger of setting the hair or cooking the skin. In the fall, when the winter hair is beginning to grow and most hogs are difficult to scald, temperatures as high as 146° to 150° F sometimes are used.

On the farm, where it may be difficult to reheat the water promptly, temperatures of 155° to 165° F often must be used at the beginning so that the water will not become cold before the hog is completely cleaned. When the water is as hot as this, keep the hog in motion and pull it from the barrel or vat several times. This cools the hog and lessens the danger of setting the hair. If you have plenty of boiling water available, you can start scalding with water heated to about 150°, then add hot water if necessary.

Twenty-five to 30 gallons of water ordinarily are enough to scald a hog in a 50-gallon barrel. You can practically immerse lightweight or mediumweight hogs in the barrel. Hold the animal with a hook in the lower jaw. When scalding large hogs, scald the ham end and then the head end. When the head end is immersed, hold one leg of the hog with the hook caught in the gambrel tendon. At this time, another man can remove most of the hair from the hot legs and flanks even when the animal is kept in motion.

The scurf may be loosened more readily by adding an alkali to the scalding water. This may be a shovelful of wood ashes, a handful of borax, a teaspoon of lye, or a half-pound of lime added to a barrel of scalding water.

Scraping

When the hog is completely scalded, turn it crosswise on the table. Grip the hind legs with both hands and twist to pull off the hair. Using a hook, pull off the dew claws and toes while they are hot. Scrape the hind quarters. Another man can scrape the hair from the forequarters, feet, and head. If

patches of hair are not thoroughly scalded, loosen them by covering them with sacks or hog hair and pouring hot water on them. Dehair the hot carcass as rapidly as possible because there is a tendency for the skin to "set" and make the hair difficult to remove.

After the hair and scurf are scraped off, remove much of the dirt by rinsing with warm water and by scraping with the bell scraper pressed flat against the carcass instead of tipped on its edge as before.

Singe the carcass with a blowtorch and scrub the head and feet with a wire brush.

Rinse the scraped, singed carcass with cold water and shave it. The carcass is now ready to hang up. To insert the gambrel or hook, open the skin at the center of each hind leg just above the foot and directly over the tendons. Push the skin aside with the knife and cut down to the bone at the side of the tendons. Make a similar cut on the other side of the tendons. Use your fingers to raise the tendons and slip the gambrel under them. Be sure the gambrel engages both tendons. Wash and shave the carcass again after suspending it.

Removing the head

The head may be removed before or after, but preferably before, the intestines are taken out. Remove the head just back of the ears. If the jowl is left on the carcass, the cut is made down the side of each jaw; if left on the head, the cut is made straight around the neck. In either case, the head is removed at the atlas joint by cutting all the muscles which support it and by separating the atlas, which is the joint next to the head. In severing the atlas joint, use the cutting edge of the knife, not more than 1 inch back of the point, pulling down on the head at the same time. If the cut is made straight around the neck, a twist of the head will usually separate the joint.

Removing internal organs

Grasp a sharp, narrow-bladed knife as you would a dagger. Place the knife directly between the hams and cut down to

the pelvic bone, which is easily split with the same stroke if the cut is made through the center. Be careful not to cut deep enough to puncture the colon (large intestine). Continue the cut down the midline of the belly to the breast bone, cutting through the fat and exposing the thin membrane which covers the intestines. This is called "marking the belly." Don't cut through the thin membrane covering the intestines as this would cause them to fall down and be in the way. Insert the knife a little to one side of the center of the point of the breastbone, being careful not to go deep enough to pierce the paunch with the point of the knife. If you cut to the right of the breastbone, the knife should point toward the left. With a quick downward pressure, cut through the breastbone. With some practice you will be able to cut between the hams, split the pelvic bone, mark the belly, and split the breast bone with a continuous movement. If the hog is a barrow, strip out the penis and leave it attached to the intestines.

Next, grasp the knife, thumb up, with the point of the knife down and the sharp edge toward the carcass. Pull upon the penis or uterus to bring tension on the colon. Cut around the left side to the tail bone, then go to the right of the "bung" and cut back to the tail bone until the two cuts meet. Since the colon is very close and parallel to the backbone you must use care in making the cut betwen these two parts. Pull the"bung" down through the pelvic cavity before completing the opening of the belly. If the membrane which covers the intestines is too tough to split with the fingers, use the point of the knife with the edge outward. Cut between your forefinger and middle finger so that you won't cut the intestines. Then by pulling gently on the large intestine and using a sharp knife lightly and carefully, strip out the intestines to the stomach, leaving the kidney fat in the carcass. Grasp the entrails where the gullet comes through the diaphragm. Before continuing the cutting to loosen the lungs and trachea, loosen the liver and cut around the diaphragm, making sure it is not attached to the breastbone. All the entrails may be removed in one mass, as described above, or in two operations by first removing all

the organs in the abdominal cavity and then the pluck (heart, lungs, esophagus, and trachea). Remove the tongue from the head. Rinse the carcass with cold water. Remove the gall bladder from the liver and separate the heart from the pluck.

Splitting the carcass

The carcass should be split, so that it will chill rapidly. Although other tools are often used for splitting, a meat saw is preferable. Starting the cut at the rise in the backbone which is about 6 inches below the root of the tail, split down the middle of the backbone.

Removing the leaf fat

The leaf fat (kidney fat) can be removed much easier when the carcass is warm. Grasp the lower end of the kidney fat with one hand; then give the hand a twist upward. With the other hand, half clinched, "fist" off the fat, being careful not to tear the bacon muscles. This operation hastens the chilling of the carcass, which is important in preventing spoilage of fresh or cured cuts and is also necessary in making attractive looking pork cuts.

Facing the hams

Some of the skin and possibly some of the fat should be removed from the inside of the hams. This is known as "facing the hams." A thin covering of fat should be left for protection from excessive drying and hardness on the surface of the ham cushion after curing.

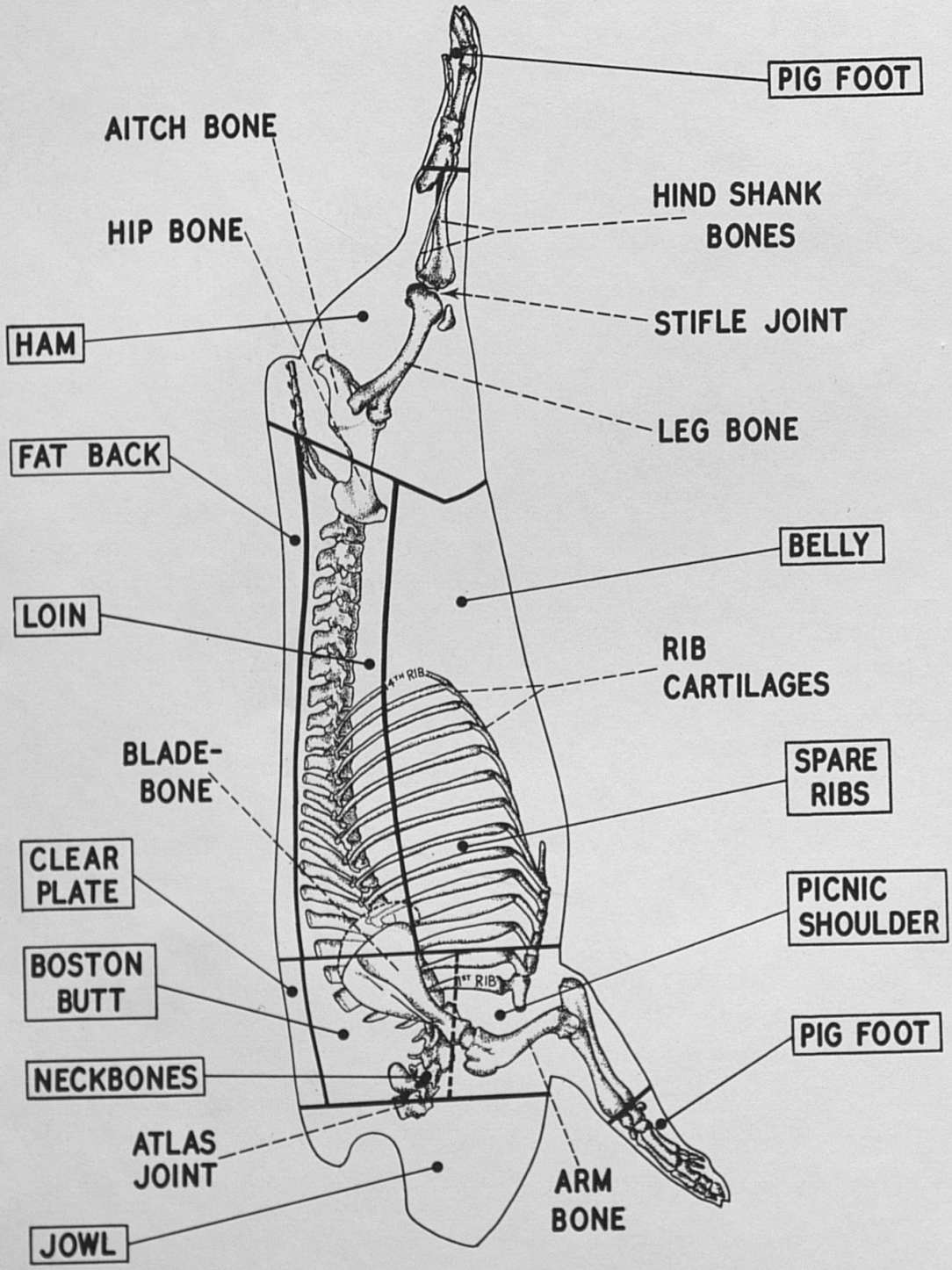
Chilling

Neater cuts can be made from carcasses that have been thoroughly chilled. If a chill cooler is not available, try to do the butchering when the temperature is likely to be just above the freezing point. Or, if it is below freezing, protect the carcasses in some manner so that they do not freeze.

Cutting the carcass

There is no one best method for cutting pork carcasses, because people differ in their preferences for different types of

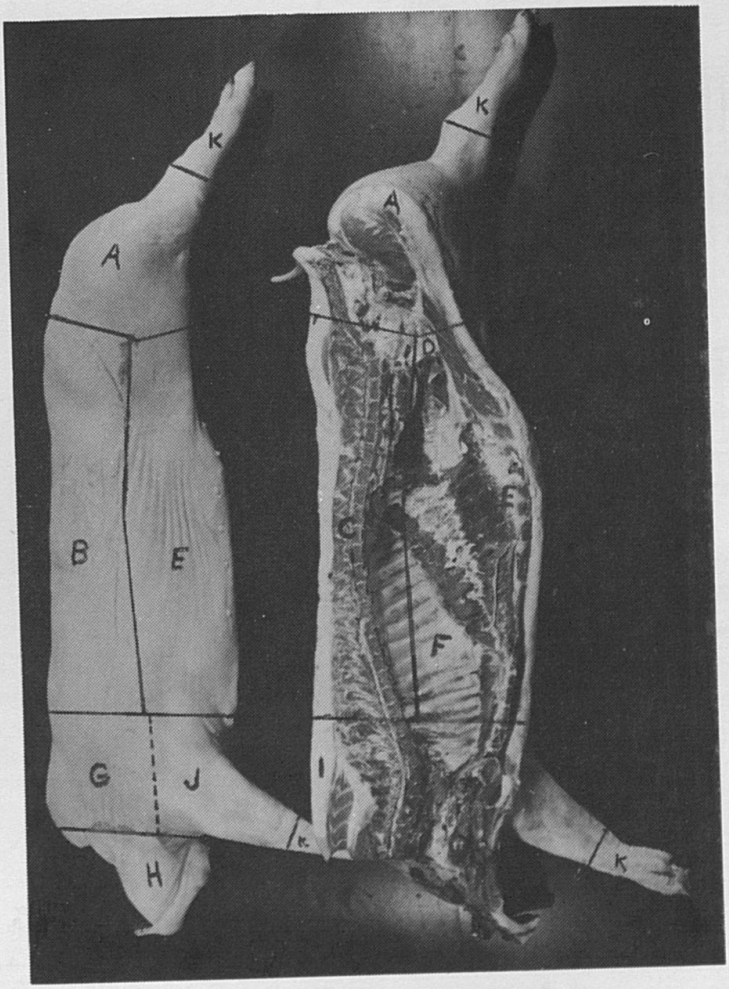
PORK CHART


PIG FOOT
AITCH BONE
HIND SHANK BONES
HIP BONE
STIFLE JOINT
HAM
LEG BONE
FAT BACK
BELLY
LOIN
RIB CARTILAGES
14TH RIB
BLADE-BONE
SPARE RIBS
CLEAR PLATE
PICNIC SHOULDER
BOSTON BUTT
1ST RIB
PIG FOOT
NECKBONES
ATLAS JOINT
ARM BONE
JOWL

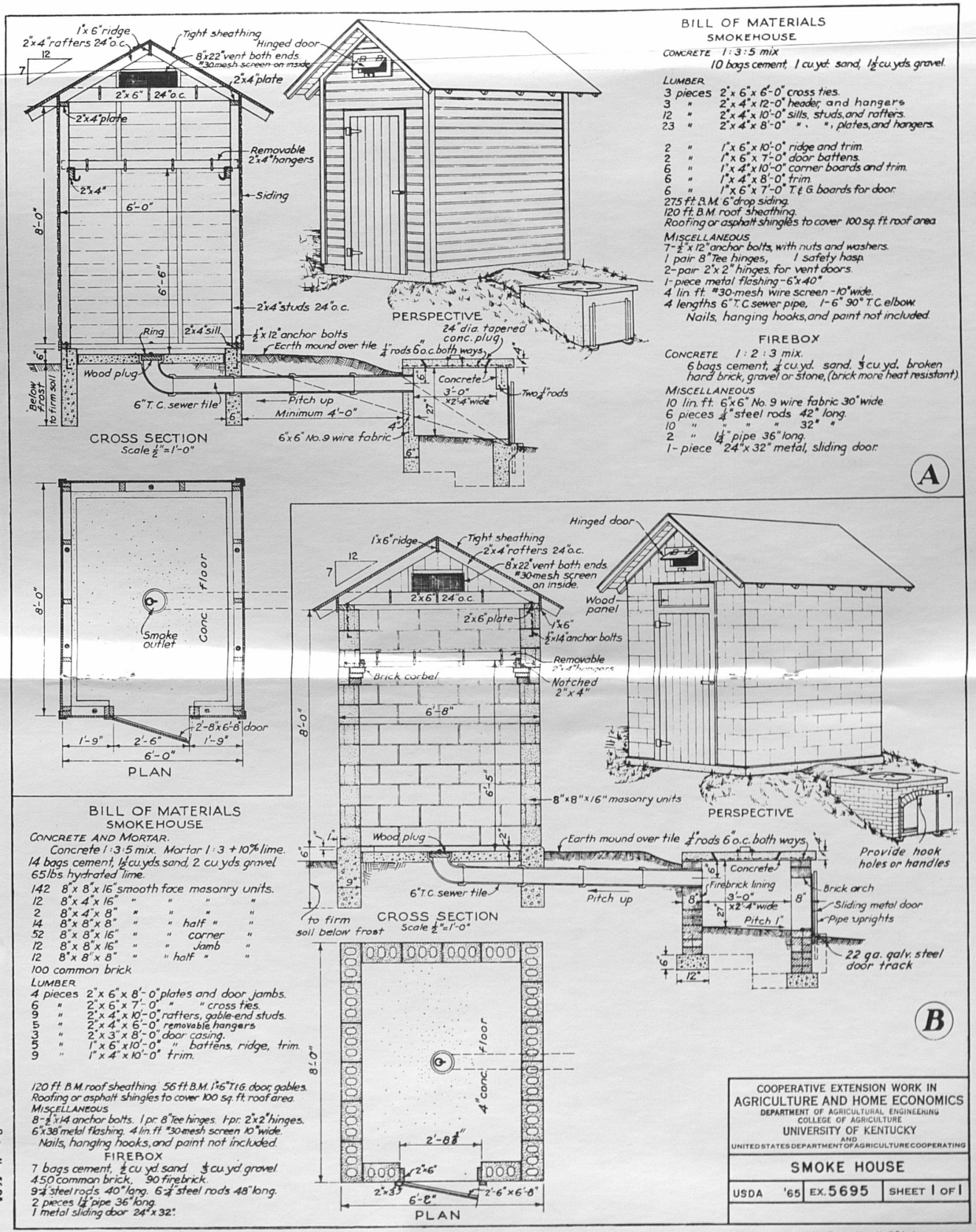
cuts. However, the following method is quite popular and is simple to do.

Place the side of pork on a meat block or heavy table with the skin side down and the feet toward you. Proceed according to the following outline: (Important note: For safety and neat cuts, a good cutting saw and a sharp knife are necessary. A boning knife with a 6- to 8-inch blade is preferable.)

I. Rough Cuts
   1. Remove the hind foot at the hock joint.
   2. Remove the fore foot one-half inch above the knee.



Cuts of pork: A—Ham, B—Fat back, C—Loin, D—Kidney fat, E—Bacon, F—Sparerib, G—Shoulder butt, H—Jowl, I—Clear Plate, J—Shoulder (California ham), K—Feet

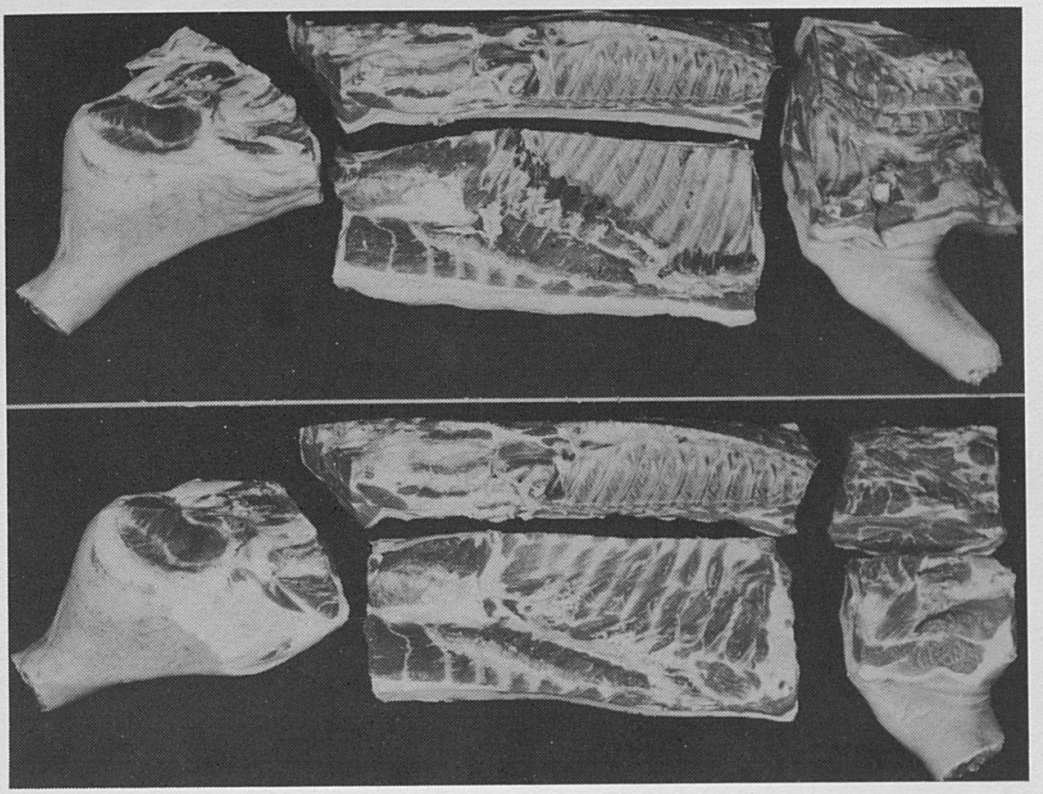


Smokehouse: Drawings and bill of materials for frame construction (*A*) and for cement-block construction (*B*).

3. Cut the shoulder between the second and third ribs, or larger if so desired. Make the cut perpendicular to the midline of the carcass.
4. Remove the ham between the second and third sacral vertebrae (2 to 3 finger widths in front of the aitch bone). Make the cut perpendicular to the center line of the ham and angle it back slightly the other way at the belly pocket.
5. Separate the rough loin from the rough belly by dividing along a straight line made by snuggling the tenderloin muscle at the rear end of the loin and cutting the rib about one-half inch from the backbone at the front end of the loin. Make this cut letting the side lie flat on the block. It may be necessary to follow the natural curvature of the backbone to avoid having the ribs too long in the center of the loin.

II. Trimming Cuts

1. Shoulder
   (a) Remove the neck bones.
   (b) Cut off the jowl parallel to the shoulder cut.
   (c) Flatten and trim the jowl.
   (d) Separate shoulder into picnic and shoulder butt by cutting one-half inch below the exposed blade bone at right angles to the shoulder cut.
   (e) Remove the clear plate (fat and skin) from the shoulder butt.
   (f) Trim the picnic. If a whole shoulder is desired, trim the edges but do not separate it into picnic and butt.
2. Ham
   (a) Remove the tail bone and the flank corner. Follow the natural seam on the flank. Bevel the fat about one inch back from the butt end.
   (b) For skinned ham: Collar the ham, leaving about one-third of the skin up from the hock joint. Leave approximately three-eighths inch of fat on the ham.



Top: rough cuts; bottom: finished cuts

3. Loin
   (a) Remove the backfat from the loin.
   (b) Divide the loin into roasts and/or chops, as desired.
4. Belly
   (a) Remove the spareribs. Be careful not to cut too deep as this would cut away lean meat that should be left on the bacon. However, take care to remove all the soft cartilages toward the flank end.
   (b) Flatten the belly.
   (c) Remove a strip by cutting just above the teat line.
   (d) Cut the other side just enough that the two sides will be parallel.
   (e) Square the ends.
5. Separate the fat and the lean trim.

Curing the Meat

(Note: The curing methods described below are intended for use at home or on the farm, where curing facilities are limited. It is suggested that University of Kentucky Cooperative Extension Service Circular 617 be consulted for commercial ham curing methods.)

Important precautions

Since blood in meat causes spoilage to set in quickly, it is imperative that the animal be bled thoroughly. Another important factor in preventing spoilage is thorough chilling before putting it into cure. Neglect of this may cause loss during the curing process. Splitting the carcass, facing the hams, and removing the kidney fat are aids to the chilling process. It is rarely desirable to put meat into cure until after it has been chilled for at least 24 hours. On the other hand, it should not be allowed to freeze. If there is a sudden drop in temperature, it may be advisable to divide the carcass into the rough cuts and rub some of the curing mixture on them. The trimming could be done later. However, you should not stack the cuts until they are thoroughly chilled. Stacking could hold the animal heat too long and cause spoilage.

Curing ingredients

Salt, sugar (white or brown), and saltpeter are the ingredients generally used in pork curing recipes. Salt draws water from meat; therefore, when salt is used alone it tends to harden the muscle fibers. Sugar has an opposite effect in that it preserves the juiciness and helps keep muscle fibers soft. Saltpeter is more astringent than salt and only enough of it should be used to maintain the rich, red color of meat.

Pork may be cured either in a "dry" or "brine" cure, or a combination of the two. Dry curing is by far the most popular on Kentucky farms. The term "sugar-cured" is sometimes used. This sounds very appetizing but is somewhat misleading, because in all cases salt is the primary curing ingredient. As

indicated above, sugar is added to counteract the hardening effects of salt and to add some flavor.

Dry-curing hams and shoulders

A good curing mixture can be made of 7½ pounds of salt, 2½ pounds of sugar, and 2 ounces of saltpeter, this being the amount of mixture for 100 pounds of meat. For best results both meat and curing ingredients should be weighed. Divide the curing mixture into three equal portions. Rub one portion on the meat and stack on a table or shelf; three to five days later, rub on the second portion. Let the meat cure three to five days, then put on the remaining portion of the curing mixture. By the sixth to tenth day after the pork is put into cure, the final portion of curing mixture should be applied. Let the meat remain in cure for 40 days. Then, remove any remaining salt pockets and hold in a cool, dry place an additional 14 days. Now wash the meat in lukewarm water, allow it to dry and smoke it with a cool smoke (hickory or other hardwood) until a "pecan" brown is attained. Smoking may be delayed or not done at all according to the preference of the individual. Most people feel that smoking adds substantially to the attractiveness of a meat cut and it also serves as an anti-oxidant (prevention of excessive rancidity). However, the aroma of smoked meat attracts skipper flies more readily than does that of non-smoked meat.

Don't allow the meat cuts to freeze while they are in cure. Alternate freezing and thawing periods wash the curing ingredients away and increase the possibility of spoilage. More care in curing and handling home-cured meat products means better products for the family to eat.

Dry-curing bacon

An excellent sweet bacon can be made by using a mixture of 3 pounds of salt, 1¾ pounds of sugar, and 3 ounces of saltpeter per 100 pounds of trimmed sides. Rub each piece thoroughly and stack on a table or shelf, skin side down (place the last piece skin side up). Leave in cure two weeks. Remove,

wash in lukewarm water, allow to dry, smoke, and store in a cool, dry place.

Preserving Cured Meat

After they have been cured (and smoked if this is to be done) all meat cuts should be wrapped in two layers of butcher paper and placed in heavy cloth bags and securely tied. (Do not use plastic or any other material that will exclude air.) Wrapping greatly aids in keeping out skippers and other insects. A wire or string should not extend through the wrapper because insects may enter through this opening. Instead of attaching a wire or string to the ham or other meat cut, fold and tie the bag. All cloth coverings should be examined carefully to see that there are no holes in the fabric.

The skipper fly becomes active when the weather turns warm. If the wrapping has not been done before these insects become active, they may deposit their eggs on the cuts of meat, the result being that the larvae hatch and get in their damaging work under the wrapper. Thus the wrapping may prove of little or no value.

Stored cuts should be unwrapped frequently and examined for the presence of insects since they may appear mysteriously even in cuts well wrapped. If insects are present, apply scalding water liberally. It may be necessary to slice the meat and salvage as much as possible if deep-feeding insects are well established.

If aging rooms are well screened and routinely fumigated, the meat cuts need not be sacked.

Cleaning the Smokehouse

Remove all scraps of meat and refuse from the previous season. Scrub the floor thoroughly, using strong, soapy hot water. Rinse thoroughly with boiling water, make certain you clean all cracks or other points that might harbor insects. If the building can be tightly closed, it may be well to fumigate with methyl bromide gas as directed by the distributor. This

is the same product that is used in fumigating tobacco beds. Handle it with extreme caution because it is just as deadly to humans as it is to insects.

Insect Pests

Insect infestation can be very costly if proper control measures are not consistently used. The most common pests include the following.

Skipper

The eggs are laid by a small, two-winged fly which is about half the size of the housefly. The eggs hatch in about 36 hours into small, cylindrical, white maggots which are called "skippers" because of their leaping power. The larva completes its growth, under favorable conditions, in 7 to 10 days. Then it moves to some dry spot, contracts in length, and becomes yellowish. The outer skin separates from the body and gradually hardens and darkens into a golden brown. This resting stage lasts about 10 days, when the adult insect, the fly, emerges. The fly lives about 10 days in the summer. Its entire life cycle may be concluded within three weeks, under favorable conditions.

The smallness of the fly requires that the room be screened with 30 to 32 mesh screen. The fly is not active at night but is able to perform its life work in a partially darkened room. It does not often attack fresh meat or meat that has been salted and not smoked, but the odor of smoked meat attracts it. The larvae feed on the soft, lean tissue of the meat and are referred to as deep feeders.

Red-legged ham beetle

This beetle is rather slender and of a dark bluish color, with reddish legs. The larva is a slender grub, covered with scattered hairs. At first, it is white with a brown head and two small hooks at the end of the body. As it matures it becomes darker, and when full-grown it is grayish white with a series of brown patches above. The life cycle may be completed in 45

to 50 days. This beetle appears about the first of May. The larvae usually eat the fat near the surface and so are referred to as surface-feeders.

Larder beetle

This beetle is dark brown with a yellowish-brown band across the front half of its wing covers. On the band are six black dots, three on each side of the middle line. The larva is small, brown, hairy, and has two short, curved spines on the top of the last abdominal segment. Its habits are similar to those of the red-legged ham beetle.

Cheese or ham mite

This mite is whitish at first, with six legs, but the adult has eight legs. It is so small that it can barely be seen by the naked eye. It frequently attacks hams, eating great holes in them and leaving material of a powdery consistency. Infestation may be detected by the presence of this material on the surface around the aitch bone. It is sometimes mistaken for mold. It seems that the longer hams are aged, the more susceptible they become to infestation by this pest.

Blow fly

There are several species of this fly and they vary in size from that of a housefly to two or three times as large. The adult fly is metallic blue, metallic green, coppery green, or greenish black according to the species. The larva (maggot) is white and varies in length from extremely small to one-half inch or longer. The egg hatches in one to two days. The developmental stage, from egg to adult, is 16 to 35 days and averages about 22 days. The adult fly lives about 35 days.

This pest lays its eggs on hams and seems to prefer those that are fresh or nonaged. However, the possibility of infestation in aged hams should not be ruled out. The larva feeds for three to nine days, eating large holes in the ham and creating a disagreeable odor.

Mold

Mold develops on practically all cured meats, the amount varying widely with the season and the length of time the meat is kept. In damp weather, mold develops in greater abundance than in dry weather. It does not greatly impair the flavor or quality of meat, unless the cured product is stored in a damp place. Mold can readily be removed by scraping with a dull knife and then by rubbing melted lard or vinegar over the moldy surface and removing the mold with a cloth.

Special Meat Products

Fresh pork sausage

There are hundreds of recipes or formulas for making pork sausage and it is difficult to select any one and say "this is the best one." However, the formulas given here have been used many times and are popular with many people. Both of these recipes are for mild sausage. If you want to make hot sausage, simply add more black and/or red pepper to the extent that you think it is right and try it. This is suggested because hot sausage that is right for some people is too hot for others.

Formula No. 1

25 lbs pork trimmings (⅔ to ¾ lean is suggested for best results)
6 oz salt
2 oz black pepper
1 oz finely ground sage

Formula No. 2

25 lbs pork trimmings
7 oz salt
1¼ oz white pepper
⅓ oz finely ground sage
½ oz ginger
2 oz sugar

Add all the seasonings and mix well before grinding. Grind through a ½-inch plate, then regrind through a 3/16-inch plate. Stuff into natural casings or cloth bags, which may have grease-proof liners.

Smoked fresh pork sausage

Use one of the formulas given for fresh pork sausage. After the sausage has been stuffed into natural casings or cloth bags (without grease-proof liners), let it stand in a cooler or refrigerator (38° F) overnight. Then let it stand at room temperature for one hour. Smoke at 90°-100° F for four hours. Place the sausage in a cooler or refrigerator and keep it refrigerated until it is used.

Pickled pigs' feet

Remove the toes from well-scraped pigs' feet. Then soak them in cold water overnight. The next morning put them into a kettle containing enough water to cover them. Cook until soft. This requires about 5 hours. Add salt to the water during cooking. When the pigs' feet are soft, remove them from the kettle and split. Pack in an earthen jar and cover with hot vinegar. Spices may be added to the vinegar if desired.

Head cheese or souse

Head cheese is made from the part of the hog that would otherwise be wasted. Feet, tongue, and heart may be used in addition to the head. When properly prepared, head cheese is a delicacy. Before cooking the head be sure it is thoroughly clean. The eyes and brain should be removed, and the nostrils and ears thoroughly cleaned. Split the head lengthwise between the jaw bones. Usually the jowls are removed and cured or made into sausage. Put the pieces of head into a cooker and add enough water to cover the meat completely. Boil the meat until it can readily be separated from the bone. Remove the meat, separate it from the bones, and chop it fine. Remove the liquid from the kettle and save it for future use. After the meat has been chopped, return it to the kettle and pour on enough of the liquid to cover the meat. Allow it to cook for 10 or 15 minutes. While this final cooking is taking place, season the mixture with salt and pepper to suit the taste. Pack the cooked meat into jars, pans, or a cold meat press. Any liquid resulting from cooking the meat should be stored with the meat. Place

a weight on top of the containers and allow the meat to cool. It will soon solidify and be ready to use.

Scrapple

Scrapple usually is made from the heads and feet of hogs, but it may be made from any part of the pork carcass. If the recleaned heads are used, they should be split through the center and the brains removed. The heads are placed in a cooker or kettle containing enough water to cover them, and cooked until the meat separates from the bone. Take out the meat and bones and save the broth for future use. Pick all the bones from the meat, chop the meat fine, add this to the broth, and place the mixture on the stove to boil. Add enough of a mixture of cornmeal and buckwheat flour to make it as thick as mush. To prevent lumpiness, the meal and flour should be mixed dry (9 measures of fine-ground meal to 1 measure of buckwheat flour) and the mixture added gradually while the broth is being stirred. Stir the mixture for 15 minutes; then allow it to cook slowly for an hour, when it should be of the consistency of thick mush. Pour the scrapple into shallow pans and allow it to cool. It may then be sliced and fried. Season to suit the taste before putting the thick mass into pans.

Lard

There are three principal grades of lard: leaf, the kind obtained from back fat and trimmings, and the type obtained from intestinal fat. Usually, on the farm the first two grades are rendered together, while the intestinal fat is rendered separately.

Rendering

Preparatory to rendering, the fat should be cut into small pieces or coarsely ground. To prevent scorching, be sure that the fat is free from all lean meat. As a further precaution against scorching, it is well to put a pint of water or lard into the kettle. This prevents the fat from sticking to the bottom

of the kettle. Render the fat over a slow fire, and stir the mass continually. Rendering will be complete when the temperature reaches 265° F. A thermometer for determining when this temperature is reached is of great convenience, but brown, floating cracklings are a safe indication. When such cracklings are skimmed off, they fry themselves dry. The fire should be withdrawn when the lard has reached this stage. The lard should be strained through muslin, and the cracklings pressed. The lard should be cooled almost to the solidifying point before it is poured into containers since very hot lard may melt solder or crack earthenware.

Storing

Lard should be stored in a cool, well-ventilated place. Two prominent and avoidable causes of loss of lard are moisture and udder glands. Moisture is no problem in lard that has been cooked until thoroughly done. Udder glands should never be rendered with the better grades of lard. Instead, render them with the intestinal fat. Another precaution to take in storing lard for a long time is to avoid rusty containers. Lard may be kept much longer if an antioxidant, a substance which retards the development of oxidative rancidity, is added. Commercial antioxidants, usually mixtures of two or more individual antioxidants, may be obtained from packing house supply companies. They are inexpensive, and are sold under different trade names, with directions for their use printed on the label.

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