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EC228 Farm Slaughter of Hogs

W. M. Loeffel

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Farm Slaughter of Hogs



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FARM SLAUGHTER OF HOGS

WM. J. LOEFFEL *

Slaughtering hogs and curing the meat on the farm is a common practice which makes available a palatable and nutritious food. It utilizes labor at a season of the year when usually there is no great rush of work.

As a general rule, farm slaughter is not to be recommended until cold weather is a certainty, for warm weather is apt to cause heavy spoilage. Meat is a highly perishable food product, therefore absolute cleanliness should prevail in its handling. Contamination of meat by soiled hands, clothing, tools, or containers is not only insanitary but actually lowers the keeping quality of the meat.

SELECTION OF THE ANIMAL

Above all things, the hog to be slaughtered should be healthy. An animal that is "off feed" should never be used for meat. Thrifty, well-finished pigs weighing 200 to 250 pounds are most satisfactory for farm slaughter, as they can be handled with less effort and produce cuts of more desirable weight. Occasionally a family very desirous for lard is justified in slaughtering a heavy fat sow. Cuts from such a hog, being very large, are more likely to spoil in the curing process. Animals should be kept off feed for twenty-four hours prior to slaughter but given plenty of water. This shrinking facilitates bleeding and dressing.

EQUIPMENT

Little equipment is necessary for hog slaughter:

A rack, pole, or tree on which to hang the hogs.

A low table or bench for scraping.

A barrel for scalding.

A light block and tackle or wire stretcher is not essential but saves time.

An abundant supply of clean hot and cold water.

Clean tubs, buckets, cloths.

A short cultivator single tree makes an excellent gambrel.

A good knife (SHARP).

* The writer is indebted for suggestions and assistance to M. B. Posson, A. K. Hepperly, and Florence J. Atwood, State Extension Agents of the University of Nebraska Agricultural College.

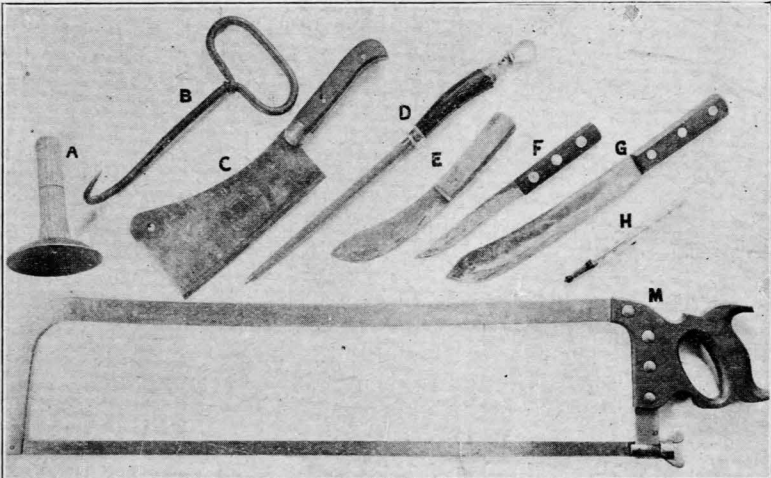


Fig. 1.— Handy slaughtering equipment. A — Bell scraper. B — Hook. C — Cleaver, D — Steel. E — Skinning knife. F — Boning knife. G — Steak knife. H — Dairy thermometer, M — Meat saw.

A steel.

Bell hog scrapers are worth many times their cost.

A meat saw, although a wood saw may be used if necessary.

A dairy thermometer.

A stout hook.

SLAUGHTERING

Shooting or knocking is unnecessary, dangerous, and often cruel unless the hog is in a large pen, wild or vicious. Shooting may actually retard bleeding.

The hog should be rolled squarely on his back, one man standing astraddle him holding his fore-legs. Bearing down on the point of the chin, the sticker makes a short incision in front of the breast bone. The point of the knife is slipped back under the point of the breast bone, then the cut is made downward, and forward. This severs the forks of the vein and artery which carry blood between the heart and the brain. Care must be taken to keep squarely in the center. It is unnecessary to twist the knife. It is not desirable to stick the heart. If properly stuck, the hog may be released and he will not go far.

If a quick-acting hoist is available the hog may be shackled by one hind leg and hoisted for bleeding. Quicker and more thorough bleeding is thus accomplished.

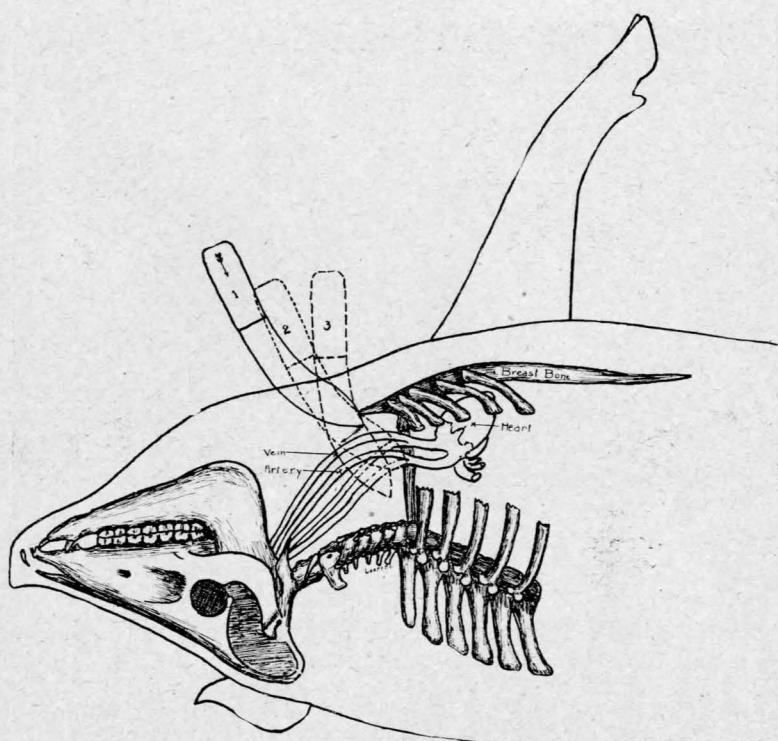


Fig. 2.—The knife slips under the point of the breast bone and splits the forking vein and artery. Follow knife positions, 1, 2, 3.

Sticking on either side of the center results in "shoulder sticks" and heavy loss in trimming. Sticking too far back allows the animal to bleed internally and causes imperfect drainage and slow death.

SCALDING

If the hoist is to be used for scalding, the barrel may be set upright. If the hog is to be scalded by hand, the barrel should be set at an angle against the scraping bench. For large kills, a stock tank may be used with a fire underneath or a steam line run into the tank from a boiler.

Before scalding, clotted blood and mud must be removed with cold water as these substances prevent scalding. Slow scalds are best. Temperatures as low as 140° F will scald

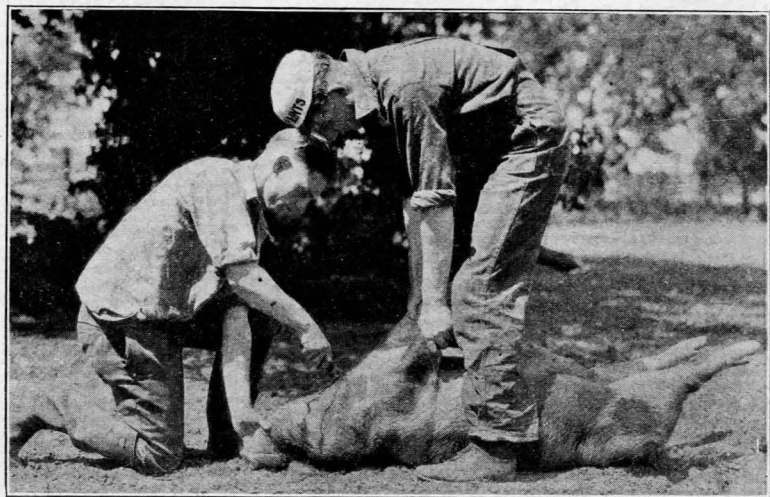


Fig. 3.—Keep the hog square on his back and the knife in the center.

beautifully if sufficient time is allowed. Under farm conditions with a cold barrel, cold day, and cold hog, higher temperatures must be used. Temperatures as high as 160° F may be used with safety if the hog is kept moving in the barrel. The head end of the hog is scalded first while the hind legs are dry. The hog is reversed, the hook placed in the lower jaw, and the rear quarters scalded. A little lye, soap, wood ashes, or lime added to the scalding water aids in cutting the scurf and a cleaner skin results. Too much of these agents is objectional for it will turn the skin of the hog yellow.

The bell scraper makes short work of scraping. The head and feet need first attention as these parts cool rapidly. By the use of hot water and a sharp knife stray bristles may be shaved off. This can be done most easily while the carcass is still on the bench.

An incision should be made in the back of the hind legs from the foot well toward the hock. The tendons are dissected out and hooked on the gambrel or single tree and the hog hung up. The hog is washed with hot water and finally with cold water.

DRESSING

A slight incision is made down the center of the body from between the hams to the point of the jaw. Care should be exercised not to cut through the belly wall into the abdominal cavity.

The knife is placed into the sticking cut, cutting edge up, with the point against the back bone. Using the knife as a pry, the breast bone is split using care to divide the first pair of ribs. Caution must be exercised in splitting the upper portion of the breast bone, for the stomach lies adjacent and is easily cut. Splitting the breast bone allows the blood which accumulates in the chest cavity to drain out.



Fig. 4.—Scald the head end first while the hind legs are dry.

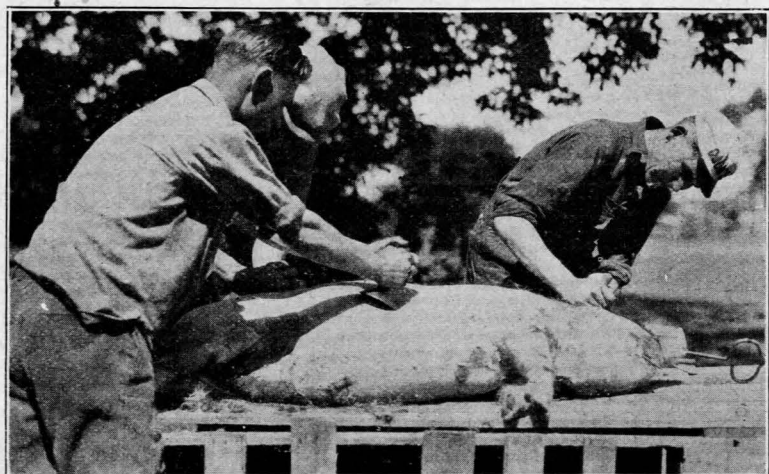


Fig. 5.—The bell scraper scrapes and cleans.

By careful dissection, the abdominal cavity is opened at the top. Taking a firm hold on the knife, the fist is placed within the body cavity. By bearing down, the belly wall is cut through with the heel of the knife, the fist serving to crowd the intestines away from the cutting edge. The cut should be continued downward through the diaphragm.

As quickly as the belly wall is cut through, the intestines fall forward and downward, but this need cause no alarm. By cutting squarely between the two hams the pelvic or aitch bone is split. With old hogs, a saw is sometimes necessary, although with young pigs, a knife may be used.

By standing on a box or bench, it is quite easy to loosen the "bung gut." With the knife, the attachments holding the intestines to the back bone are carefully severed allowing the intestines to fall forward. The leaf fat and the kidneys should be left in the carcass. A firm hold should be taken of the viscera with the left hand to prevent the intestines tearing loose. The paunch or stomach will be found on the left side. This is rolled out. The liver lies on the right side. After its attachments are cut, the liver is rolled forward and supported with the left hand along with the intestines. The diaphragm is now exposed. This sheet of tissue divides the body cavity from the chest cavity. The diaphragm should be cut through where the white tissue joins the red "skirt"

muscle. With a little knife work the lungs and heart are loosened, pulling down with them the gullet and windpipe. A cross cut at the throat severs these organs and permits the viscera to come free.

CARE OF THE VISCERA

The viscera should be placed on a clean table and the liver removed. The gall bladder should be carefully dissected out and the liver washed in cold water and hung up to drain. The heart is removed and washed and the lungs discarded.

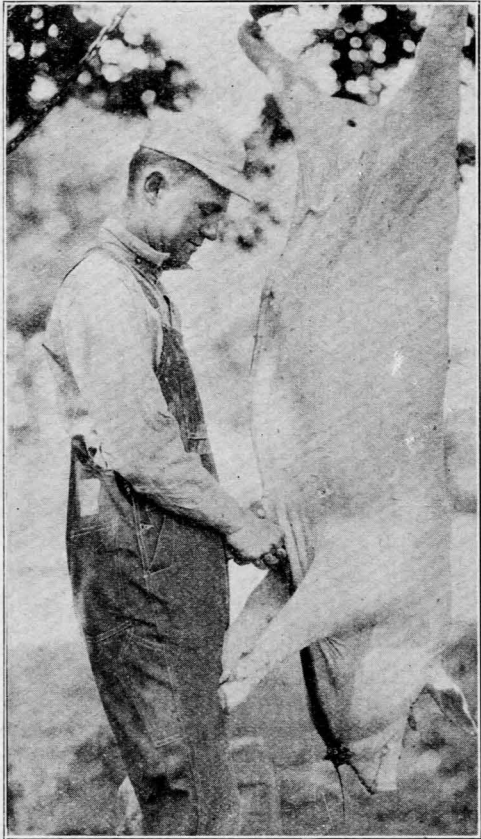


Fig. 6.—Splitting the breast bone first, permits the blood to drain out.

The caul fat or "web" will be found around the stomach. Attached to it is the spleen or melt. Spleens are considered delicacies by some, but generally are discarded. The caul fat is removed and, if clean, may be used for lard, but usually it is used for soap grease.

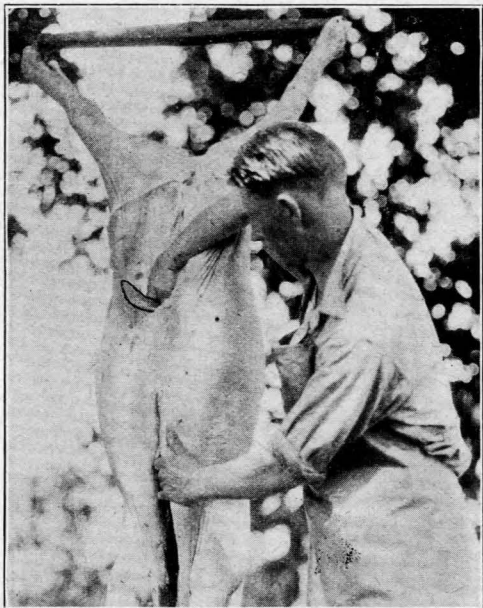


Fig. 7.—Safety for fingers and intestines.

There is generally enough fat on the intestines to justify "running" them even though they are not to be used for casings. Intestines must be run while they are warm. One should begin at the stomach where the small intestine begins. Following the small intestine carefully until it passes through the "loop" of intestine, the balance is easy. By working over the edge of a table there is little danger of smearing the fat should an intestine break. The left thumb and fingers are placed along the mesentery or fatty tissues which holds the intestines in loops. By pulling the intestines with the right hand the casings are torn loose from their fatty tissues. Unless the large intestine is wanted for casings, it does not pay to run it. On reaching the end of the small intestines, the gut fat is torn loose and used for soap grease.



Fig. 8.—Fasting before slaughter makes this step easy.

If the intestines are to be used for casings, great care must be exercised to keep the containers and the intestines absolutely clean. After they have been "run," the contents must be stripped out. The casings are reversed by turning up a fold like a cuff on a pair of trousers. Tepid water is poured into this cuff and the casings "fed in." The weight of the water will turn the intestines wrong side out. The slime or mucous coat which is now on the outside must be scraped

off with a sharpened stick, an old tablespoon, or a dull knife. Casings must be "slimed" several times until perfectly clean. Cleaned casings may be packed in salt and kept in a cool place until needed.

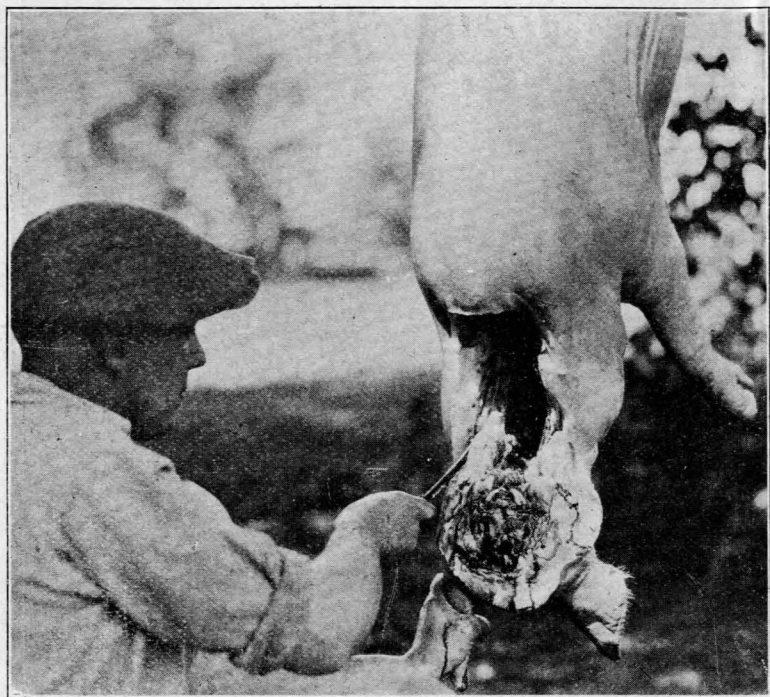


Fig. 9.—Removing the head hastens chilling.

CARE OF THE CARCASS

Thorough chilling is essential for the proper preservation of meat. Animal heat must be removed completely and rapidly. The carcass should be prepared for rapid chilling. The removal of the head aids greatly in the circulation of the cold air through the carcass. Beginning at the poll, a cut is made to the back bone unjointing at the first joint or "puzzle bone." By pulling down on the ear the cut is kept open. The cut is carried around the ears to the eyes and then to the point of the jaw, leaving the jowls or cheeks on the carcass. After the tongue is removed from the head, the head is washed in cold water and hung up to drain.

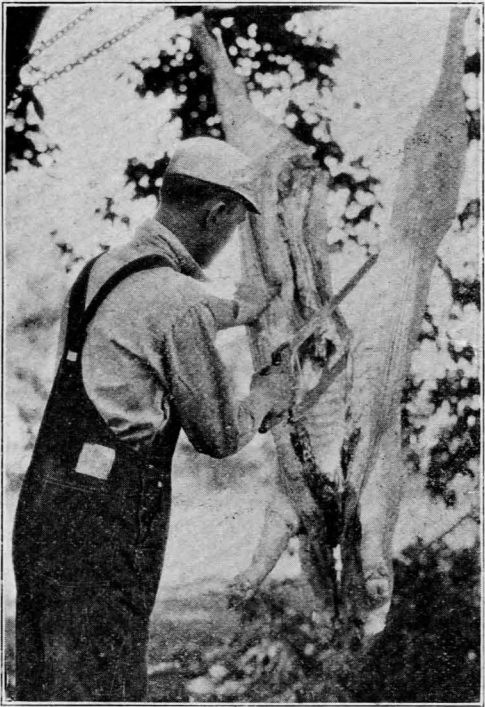


Fig. 10.— Center splitting means less waste and more attractive cuts.

The carcass should be split to facilitate chilling. While an expert may use a cleaver or ax, the saw is safer for the beginner. Some prefer to split the hog on both sides of the backbone to produce "back bone," but splitting in the center is preferable from the standpoint of cutting up the carcass into useful cuts. With an ordinary gambrel, a foot of skin must be left at the shoulder to keep the carcass from "flipping off." To further hasten chilling, the leaf lard should be "fisted" out with the half-clenched fist. Care must be taken not to tear the muscles of the bacon. If possible, the leaf should be entirely removed, but, if this is not advisable the leaf may be left hanging by its upper attachment. The leaf may be removed more easily and completely while the hog is warm, and the removal hastens the chilling of the carcass.

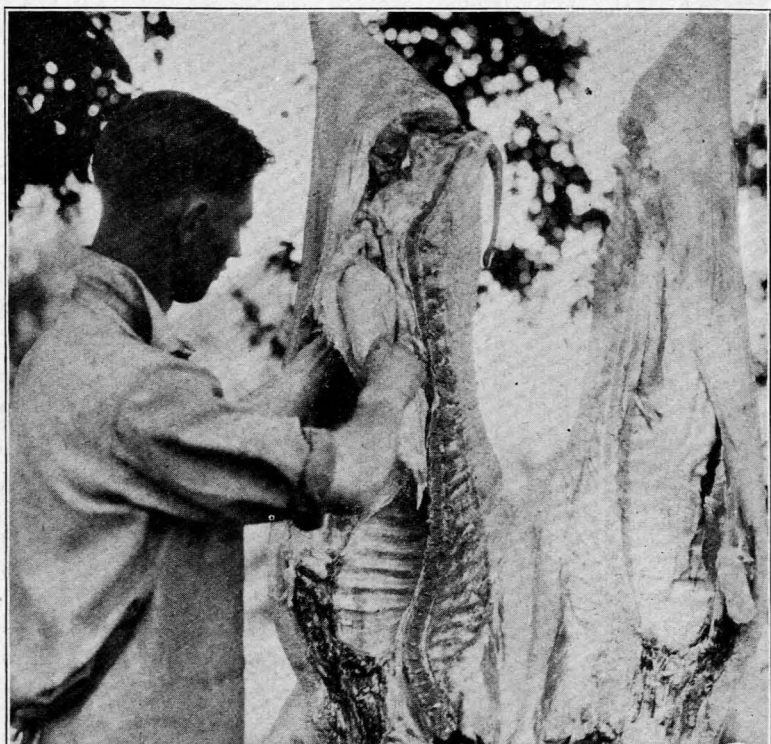


Fig. 11.— It is easy to fist out the leaf while warm.

Hams spoil at the hip joint. Anything which accelerates the chilling of the ham reduces the chances of spoilage. The ham may be faced more neatly while the hog is warm, since the removal of the blanketing fat permits the animal heat to pass from the carcass more readily. This also permits the cure to penetrate the meat more readily.

The carcass should be chilled for twenty-four to forty-eight hours before it is cut up. It is impossible to trim warm cuts to attractive appearance and the likelihood of spoilage is greater if the animal heat is not allowed to pass off. The temperature should be near freezing, yet the meat should not be allowed to freeze since freezing spoils the texture of the meat. Meat which has been frozen can be cured only with difficulty.



Fig. 12.—Facing the ham while warm reduces chances of bone-sour.

CUTTING PORK

There are many methods followed in cutting up hog carcasses. There is no one best way. The method which most nearly meets the needs of the family should be used. The following method yields the maximum amount of meat for curing and the minimum amount of sausage trimmings and lard. If more of these products is desired the cuts may be trimmed more closely or entire cuts like shoulders and jowls worked up.

The jowl is cut off at the neck crease where it joins the shoulder. The glandular cheek meat may be removed and the jowl squared up. These cuts are known as bacon squares. They may be cured up and used for boiling with vegetables. Bacon squares are too fat to fry. Jowls are frequently used for sausage and lard, especially if the shoulders are used for that purpose.

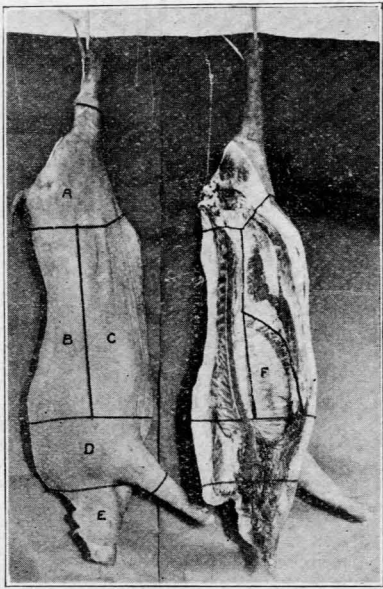


Fig. 13.—The carcass should be thoroughly chilled before cutting.

The shoulder is cut off three ribs wide at right angles to the back. In the shoulder cut is the breast bone, neck bone, and back bone. These should be removed as "spare" as possible without mutilating the piece. The shoulder is then trimmed to an attractive appearance and some of the fat cut off of the top. The shank is sawed off one-third of the distance to the foot.

The long cut shoulder may be cured up by the man who wants the maximum amount of cured meat. Some work the entire shoulder into sausage. A very satisfactory method of handling the shoulders is to short cut them, that is, to cut them in two at the "neck" or smallest part of the shoulder blade. The top portion of the shoulder is skinned out of the fat and known as a shoulder butt or Boston butt. The lower portion of the shoulder is rounded up somewhat and is known as a picnic shoulder. The picnic shoulder may be cured and smoked while the butt is best used fresh as a roast, or canned.

The ham is taken off at right angles to the hind shank from one to three inches in front of the pelvic or aitch bone.

The tail bone is removed and the ham is trimmed to an attractive rounded appearance. The shank is taken off at the hock.

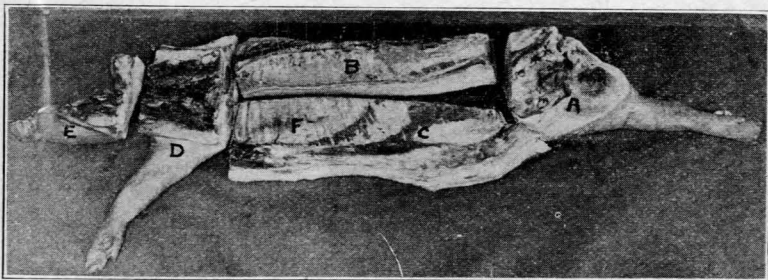


Fig. 14.—Pork cuts untrimmed, A—Ham, B—Loin, C—Bacon, D—Shoulder, E—Jowl, F—Spare rib.

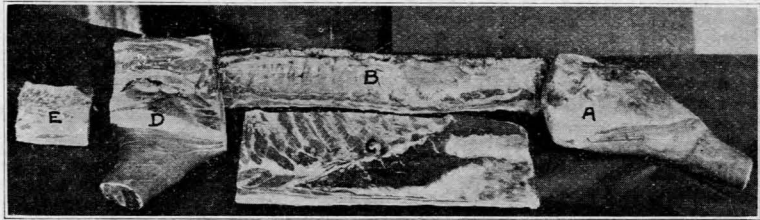


Fig. 15.—Trimmed pork cuts, A—Ham, B—Loin, C—Bacon, D—Shoulder, E—Jowl.

The loin is sawed from the belly at the great curvature of the ribs. With the knife, the cut is completed, taking off the muscular loin from the bacon piece. The loin is placed skin side down and the knife set along the muscle. The knife is drawn through, the piece reversed and the process repeated, separating the loin from the fat back. The loin must be smoothed up so that one-fourth inch of fat is left on the loin. This cut is used for pork chops, roasts, or may be boned out for canning. It is one of the choice cuts of pork.

The belly is laid on the table skin side up. By beating with the flat side of a cleaver or hatchet, the ribs are sprung loose. The piece is laid skin side down, and the breast bone loosened. Setting the knife at the top of the ribs, it should be carried around permitting the knife to slip out as soon as possible. Care should be taken to keep the knife flat to avoid gouging the bacon. The bacon is turned over and flattened. The

lower edge should be trimmed first to a straight line. If the bacon is from a gilt, care should be taken to trim off the udder glands since these turn black in curing. The top is next trimmed parallel to the underline. It should be trimmed to a good streak. Both ends should be squared to an attractive streak.

All pork cuts intended for curing should be smoothly trimmed. Loose tags of meat should be removed while fresh and used for sausage. If left on the piece, these tags dry out so that they are discarded as total waste.

Heavy fat shoulders and hams may be skinned, thereby increasing the yield of lard. The skinning should be smoothly done leaving one-fourth of an inch of fat over the cut. Enough skin should be left on the shank to leave a good place to string up the piece.

MEAT CURING

Salt is the principal agent used in meat curing. Not only is it a good preservative, but it also withdraws water from the tissues so that bacteria are unable to break it down. Salt has the objectionable feature of hardening the meat. To counteract the hardening effect of salt, sugar or syrup is frequently added to the better cures, producing sweet pickles or sugar cures. For good results, a high grade salt must be used, such as special meat curing or buttermakers' salt. Either granulated or brown sugar may be used as desired. Syrup may be used at the rate of three pounds for every two pounds of sugar called for. Salt petre is frequently used in the curing formulae to retain the red color of meat. Pepper is sometimes included in dry cures for its flavor. Since pepper is not soluble, it cannot be used in brine cures.

In curing meat, it should be remembered that uniform temperatures are desirable for the uniform penetration of the salt. A temperature of 36° F or slightly above freezing is preferable. Meat absorbs flavors and taints readily so should be kept in a dry, well ventilated place. Direct exposure to sunlight discolors meat.

THE DRY CURE

The advantage of the dry cure lies in the fact that it is more rapid than the brine cure. There is no danger of the brine spoiling and less equipment is required. With the dry cure, pepper can be used for flavoring.

The principal dry cure is dry salt. The meat is rubbed thoroly with a high grade of salt, taking special pains to cover the lean tissues and also to crowd the cure into the shanks of hams and shoulders. The meat may be piled on a bench or table or packed in a box or barrel. Pieces should be packed to retain their shape. For the same reason shoulders or hams should never be piled more than thirty inches deep.

Within a short time after the meat has been rubbed for the first time the cure will be absorbed and a bloody liquor will run off the meat. Six days after the first rubbing the meat should be rubbed again and "overhauled." The meat should be entirely repacked so that no two pieces remain in contact in the same way too long. Overhauling insures a uniform cure. In seven or eight days the bulk should be broken and the pieces overhauled again. For best results, the pack should be overhauled three times. Meat should be left in the dry cure two days per pound-weight of piece. For instance, fourteen pound hams should be cured twenty-eight days.

For those who prefer a sugar cure, one-fourth as much sugar as salt should be added. An excellent curing formula known as the Virginia Dry Cure is made up as follows for one hundred pounds of meat:

4 pounds salt
1 pound sugar
1 oz. red pepper

This formula is rubbed on the meat and overhauled as suggested.

THE BRINE CURE

The brine should be made up a day before it is to be used. If water is heated, approximately two pounds of salt can be dissolved in a gallon of water. This is known as a 100° pickle or a saturated solution. Four to five gallons of pickle are required for every hundred pounds of meat. Should a sweet pickle be desired, one-fourth as much sugar as salt should be added.

For best results, the brine should be boiled, skimmed and allowed to cool. Boiling sterilizes the brine. Clean, hard-wood barrels or stone jars make excellent containers for meat curing. Containers should be thoroughly scalded the day before they are needed.

Meat to be brine-cured should be thoroughly rubbed with dry salt, placed in the containers and allowed to stand over night. The salt will draw a bloody fluid from the meat which should be drained from the containers. If the meat is not rubbed with dry salt as suggested, the meat juice will dilute the brine to such an extent that spoilage might occur. After pouring off the bloody fluid, the cool brine is poured on and the meat weighted down. Care should be exercised that the meat is all covered with brine. Meat should be overhauled in the brine cure similar to the manner suggested for the dry cure if a uniform, high grade product is desired.

Brine must be watched carefully. Sometimes without warning, it becomes sour, slimy, or ropy due to bacterial action. At the appearance of this trouble, the meat should be removed from the brine and each piece thoroly scrubbed. The brine should be boiled, skimmed, and cooled, or, better still, a new brine should be made. The container must also be sterilized. Brine should be tested from time to time to see that it is sufficiently concentrated. It should be "strong" enough to float a fresh egg.

The brine cure requires about twice as long as the dry cure, consequently pieces should be left in the brine three to four days for every pound-weight of piece. Fourteen pound hams must stay in the cure from seven to eight weeks.

In curing meat, it is always necessary to overcure the outside of the piece in order to get the cure into the center of the cut. Consequently it is recommended to soak cuts in tepid water to remove this excess. Four hours of soaking is necessary provided several changes of water are used. After soaking, pieces are strung for the smoke house, and hung up to drain.

Many are inclined to leave all the meat in the cure long enough to cure the heaviest pieces. This means that the lighter cuts are over salted. To make a high class product, the lighter cuts should be removed from the cure at the proper time as indicated by their weight.

Meat cured in the packing house is cured under ideal conditions due to refrigeration. Hence, it is frequently more palatable than country cured meat, being less salty. It is spoken of as "mild cured" and generally cannot be held for long periods of time. Country cured meat is cured under less favorable conditions and is usually stored for a year,

hence heavier salting is necessary. The recommendations given above are for country cured meat. Higher quality although more perishable products can be produced by shortening the curing period.

Occasionally a spell of warm weather endangers a quantity of meat which has been in the cure for a short time. As an emergency measure, it is sometimes necessary to bone out the hams and shoulders to hasten the cure. After curing, the boned cuts may be corded up for smoking. Such cuts, however, should be used up as soon as convenient, for the mould penetrates the piece and necessitates heavy trimming if kept too long.

Meat is smoked primarily for the flavor imparted, although the creosote compounds formed on the meat do have some preservative action. Properly cured meat will keep without smoking and those who dislike the smoke flavor need not follow this step which is frequently considered essential.

Any tight building or room may be used for a smokehouse. The building should preferably be of fireproof construction. A barrel set on a bank connected with a fire box by means of drain tile or spouting will suffice. The smokehouse should be as tall as possible so that the heat may be dissipated before it strikes the meat. An old stove used for the smudges will make it simpler to control the fire and lessens the danger of fire.

Pieces to be smoked should be spaced well apart so that no two pieces touch. The meat should be as high above the fire as possible, a piece of wire netting stretched above the fire may prevent some piece of meat from falling in the fire.

Any non-resinous wood may be used for smoking. Wood of the pine family will coat the meat with soot. For this reason very little pine kindling should be used. Hickory shavings or sawdust are ideal, but in their absence, Nebraska farmers must rely upon apple, maple, or corn cobs.

Meat may be smoked steadily or occasionally at the convenience of the farmer. Meat should be smoked till it is of good "chestnut" color. A smudge rather than fire is desired, since a hot fire fries out the grease and may crack the pieces.

There is on the market a brand of salt smoked with hickory whereby meat may be cured and smoked at one operation. A liquid smoke preparation is also available which is said to give good results.

KEEPING CURED MEAT

If the smoke-house is absolutely tight, the smoked meat may be left hanging. Cured meat may be packed in barrels in salt, packing alternate layers of meat and salt.

Well cured meat will absorb no more salt and the salt keeps away insects and rats. Others follow the practice of packing meat similarly in a grain bin. Perhaps the simplest means of preserving cured meat is to wrap it in muslin carefully turning in the strings. The meat should then be wrapped in several thicknesses of paper, tied up, and hung from a rafter. Muslin should be used first because much of the mould which forms on the piece can be removed with the cloth. Paper, on the other hand, would stick to the meat very tightly.

In using cured meat, the shoulders should be used first for they are the most apt to crack open leaving the mould to penetrate into the pieces. Bacon should be used up before it is a year old for it turns yellow and becomes strong. Hams are said to improve with age if properly cured. Mould which forms on cured meat need cause no alarm. It may be scrubbed off with warm water.

RENDERING LARD

Lard is rendered to reduce it to a uniform mass for the housewife and also to drive off the water. If the moisture remained in the lard, the lard might mould or become rancid quickly. Leaf lard is best, being the "shortest" and most flaky. Back fat and trimming fats are more oily and less desirable than leaf fat. The most practical plan is to mix all the different kinds of fat and to render them together. If the hog is scalded clean, the lard stock need not be skinned. The lard stock should be cut into pieces of uniform size. Uniformity of size is essential, for small pieces would render out before the large ones are cooked through. Thin slices render out more rapidly than cubes. Skinned lard stock may be ground through a sausage mill. The ground lard stock renders more quickly and also yields a higher per cent than lard stock cut into pieces.

A little water placed in the bottom of the kettle will keep the lard from sticking in the early stages of the rendering process. The lard must be stirred continually while rendering. The melted mass will boil vigorously at about the boiling point of water and much steam will be seen arising. The temperature increases slowly at first, then more rapidly as

the water is more completely driven off. When the cracklings turn brown and float, or when they fry themselves dry when skimmed off, the lard is done and no time should be lost in taking the lard off the fire or to withdraw the fire. The most accurate means of determining when the lard is done is by the thermometer. The fire should be withdrawn when the temperature reaches 265° F. The lard should be ladled off and strained through muslin. The cracklings may be pressed in a jelly press lined with muslin. A colander and potato masher may be used in the absence of a press.

As much as ten per cent clean beef suet may be rendered with the lard thereby cheapening it and also producing a lard that stands up better during the hot summer weather. Whenever any other substance than pork fat is used the product cannot be sold as lard, but as lard compound.

As the lard is setting up in the containers, it should be stirred from time to time. This mixes the different fats, producing a more uniform and whiter lard. Lard is inclined to become rancid. By using air-tight containers and keeping the lard in a cool place, it is less likely to become rancid.

SAUSAGE MAKING

There are many different kinds of sausage and much might be written about their manufacture. It is the purpose here to discuss only a few of the simpler kinds. Only high-class meat should be used in sausage. Blood clots and gristle should be carefully removed. Sausage should be seasoned to taste. Where sausage is made for sale, it should be seasoned mild, for the customer can add more seasoning if desired although he can remove none if there is too much. The seasoning should be uniform so that the customer is insured a uniform product. Meat and seasoning should be weighed, or measured and not estimated.

Pork Sausage

Pork sausage should contain one-fourth fat. The general run of trimmings usually contains sufficient fat. Two per cent salt or two pounds of salt per hundred pounds of meat gives a mild sausage. This is very little salt and, if sausage is to be kept for any length of time, the per cent of salt must be increased. The following represents a satisfactory pork sausage:

- 10 pounds Sausage Trimmings
- 6 Tablespoons Salt
- 4 Teaspoons White Pepper
- 2 Tablespoons Ground Sage

If desired, a little red pepper may be used, as well as a light sprinkling of ground cinnamon, ground cloves, and ground allspice.

The sausage trimmings should be cut up into uniform size and the seasoning sprinkled over one-half the trimmings. The balance of the meat is now added and the meat worked back and forth several times to thoroughly mix the spices with the meat. The meat is then ground. By seasoning before grinding a more uniform product is obtained. Pork sausage may be kept in bulk or cased. For the latter, a sausage stuffer is needed. It is sometimes necessary to add a little water so that the meat will work through the stuffer. The small intestine of the hog is usually used for casing pork sausage. It may be given a light smoke.

Muslin casings, made from a strip of muslin eight inches wide and sewed up the side, may be stuffed with a spoon. When filled, these bags may be plunged into boiling water for an instant to melt the grease, then plunged into ice water to "set" the grease on the outside. This protects the sausage from the air. One inch slices make patties of proper size. It is better to can pork sausage or to fry it down than to make it excessively salty for long keeping.

Head Cheese

Cleaned heads, feet, hearts, and tongues are cooked until the meat may be separated from the bones. The bones are carefully picked out. The cooked meat is seasoned as for pork sausage except no sage is used. Season to taste. Add some of the gravy in which the meat was cooked and put into moulds to cool. Head cheese may be stuffed into hog paunches, sewed shut, and cooked in the gravy to cook out some of the fat.

Liver Sausage

One-fourth cooked liver is added to head cheese stock and seasoned to taste as suggested for head cheese. Cloves are the predominating spice. The mixture should be ground several times, some of the gravy stock added, and the mixture stuffed in pork or beef casings. The liver sausage may be smoked if desired.

Scrapple

The grease may be skimmed off the gravy remaining from the cooking of the meat. Corn meal and a little flour may

be stirred into the boiling gravy and cooked as for corn mush. It is turned into moulds and when cool sliced and fried.

PORK CANNING

The cold pack method of canning offers a happy solution of the meat preservation problem. Canned meat is a very palatable variation in the diet. It is economical of time and fuel. The following method may be used.

Cold Pack Method

After the meat has been thoroly cooled, cut into small pieces and remove gristle, large bones and excess fat. Pork chops may be canned whole, either with or without the bone.

Raw Pork

Pre-cook pork 5 minutes then pack solidly in hot jars to within $\frac{3}{4}$ inch of the top. Add 2 teaspoonfuls salt to each quart, place on the rubber and lid and make a partial seal. Process 3 hours in water bath or 2 hours under pressure of 5 to 10 lbs.

Cooked Pork

Cut the meat into convenient pieces for handling, then roast, bake, broil, or stew until three-fourths done. Remove gristle, large bones, and excess fat. Pack solidly in hot jars to within $\frac{3}{4}$ inch of top, add 2 teaspoonfuls salt to each quart. Fill jars with stock to within 2 inches of top of jar, place on rubber and lid and make partial seal. Process $1\frac{1}{2}$ hours in water bath or 40 minutes under pressure of 5 to 10 pounds.

Fresh meats or sausage may be kept for considerable time if fried down, that is fried and placed in stone jars in layers and covered with hot lard.

SOAP

Waste fat may be made into excellent soap. One twelve-ounce can of lye is dissolved in two and one-half pints of soft water in an iron, enamel, or earthen vessel. This should be allowed to cool to about 100° F or about body temperature. Five and one-half pounds of clean, rendered grease should be melted. When the grease reaches about body temperature, the cool lye water is stirred in. The mixture

should be stirred until it is about the consistency of extracted honey when it can be turned into moulds. When hard, the soap should be cut up and piled to cure or dry.

The following method is recommended in Extension Circular No. 1117 for making crackling soap.

Ingredients:

4½ pounds of cracklings
1 can lye
3 quarts water
½ cup ammonia
½ cup borax
2 T.citronilla

Dissolve in three quarts boiling water in a large granite dishpan. Add cracklings and boil until a good soap test is obtained. Time varies from one to three hours. (Frequently one hour is sufficient to give a soap test, but it should be boiled at least one and one-half hours.)

Soap Test

Put a small amount of the boiling mixture in a glass, add an equal amount of hot water and stir. If the mass becomes like strained honey, and if the dip threads off in hairs, the soap has come.

It is a good plan to let a little of this mixture harden in a sauce dish. Touch the tip of the tongue to the hardened mixture. A sharp bity taste indicates the presence of free lye. Make other tests at succeeding intervals until the taste of free lye disappears from the hardened sample.

The soap is now ready to blend. Remove from the fire and add luke warm water gradually, stirring continually. From six to eight quarts of water will be needed to blend the soap. When the dark lye-water at the bottom and the fatty substance on the surface combine and the mass becomes like strained honey, the soap is done. Add ammonia, borax, and citronilla, just before pouring in the mold.

Molding

The soap may be molded in the pan in which it is made but it is better to pour it into a mold. Wooden or paste board boxes lined with damp cloths make very good molds. A more elaborate one may be made of galvanized tin in the form of a tray. This sheet will need to be 24 inches by 36 inches or 54 inches by 30 inches, 2½ inches being

allowed for the depth and rolled edge. The edge may be rolled over wire.

Whatever is used for a mold should be lined with damp cloths. As the soap hardens, the entire mass of soap may easily be lifted from the mold by pulling on the cloth.

Cutting

The soap can be cut more easily if removed from the mold. It may be cut into bars by means of a fine wire or a string. Mark the large cake off into the desired divisions, then place the wire around the cake and pull it thru. This makes a more evenly trimmed bar than can be made with a knife.

Curing

It is beneficial to cover the soap with a blanket or old carpet when first poured so as to retain the heat. Soap is ruined by freezing while green. In cold weather, salt may be added before cooling to hasten the curing process. Salt also helps to separate the water used during the boiling.

Manufacturers do not allow their soap to be used until about four weeks old. Cured soap will not wash away so rapidly. This applies to homemade soap as well as to commercial soap. Curing six months is not too long. Lard soap and soap made by the boiling process require longer ageing before they become hard and ready for use.

Helpful Hints

Excess of lye forms a hard crumbly soap. Hard, vigorous stirring will cause separation of the lye and fat in the cold process. Stir slowly and evenly. Greasy soap shows lack of lye. If grease comes to the top of the soap, it may be heated slowly by placing on an oven door and stirring until it thickens and looks like honey.

An insufficient amount of water in the blending process will result in soap being dark on the bottom. It may also result in a dark liquid settling out in the mold.

LAWS AND REGULATIONS

Meat offered for sale must come from healthy animals and be prepared in a sanitary manner. Meat and meat products must be free from harmful preservatives. Where meat products such as sausage or lard is offered in con-

tainers, the containers must show plainly the contents and also the net weight.

Federal regulations prohibit the interstate shipment of meat not prepared under government inspection. Exception is made, however, to farm killed meats. Where such shipment is offered the shipper must present to the carrier two copies of the following statement, 5½ by 8 inches, properly filled out: (FARMERS BULLETIN 1186.)

Shipper's Certificate

Date....., 19....

Name of carrier.....

Shipper

Point of shipment

Consignee

Destination

I hereby certify that the following described uninspected meat or meat food products are from animals slaughtered by a farmer on the farm, and are offered for transportation in interstate or foreign commerce as exempted from inspection according to the act of Congress of June 30, 1906, and at this date they are sound, healthful, wholesome, and fit for human food, and contain no preservatives or coloring matter or other substance prohibited by the regulations of the Secretary of Agriculture governing meat inspection.

Amount and weight

Kind of product.....

.....
(Signature of shipper)

.....
(Address of shipper)

THE PROOF OF THE PUDDING

Credit is hereby given the Departments of Home Economics and Nutrition of the Institute of American Meat Packers for the following suggestions and recipes.

What Vegetables to Serve with Pork

Select from the first group one starchy food, such as potatoes, or macaroni, and two from the second group of succulent and green vegetables, such as lettuce, spinach, and onions. One of the latter may be served in the form of salad.

Roast Pork — Potatoes, boiled, riced, or mashed. Cabbage, tomatoes, spinach, turnips, squash, onions, parsnips, or apples.

Pork chops — Potatoes, boiled, mashed or baked. Brussels sprouts, onions, celery, tomatoes, turnips, corn, or apples.

Salt Pork, Pork Hocks — Potatoes, boiled, mashed, or riced; baked beans or split peas. Turnips, rutabagas, beans, spinach, or cabbage.

Ham, Baked — Potatoes, mashed, au gratin or escalloped; macaroni, spaghetti, corn, string beans, spinach, beet greens, cauliflower, squash, or onions.

Ham, Boiled — Potatoes, baked, in half shell, creamed, or escalloped and browned. Spinach, beet greens, Brussels sprouts, cauliflower, or cabbage.

Sausage — Potatoes, mashed, baked, or potato balls; macaroni, spaghetti, or bananas. Tomatoes, apples, peppers, cabbage, or string beans.

Recipes Using Pork Cuts

Pork owing to the amount of fat it contains, lends itself especially well to ways of cooking and serving which bring out the desirable flavor of the fat, and to combining with foods, such as vegetables, to give them flavor. A number of very appetizing dishes are described below:

Pork Shoulder Roast.—Select a shoulder of pork weighing 4 to 5 pounds. If so desired, this cut may be boned and in that case filled with bread or raisin stuffing. Sprinkle with salt and pepper, rub on a little mustard paste, and place on the rack in a roasting pan. Roast until done, allowing about 25 to 30 minutes to a pound. Baste every 10 minutes if an open pan is used. Remove from the pan, skim off most of the fat from the bottom of the pan and make gravy of the liquid and fat left, using 2 tablespoons of flour. Season with salt and pepper. Serve the roast on a large platter and garnish with slices of fried apples.

Braised Pork Steaks.—Select pork steaks from the shoulder. Wipe the meat and sprinkle well with salt and pepper and bread with fine crumbs. Lay the steaks in a well greased shallow baking dish or casserole. Brown the steak on one side; turn and brown on other. Add $\frac{1}{2}$ cup of water, put in oven and bake slowly for one hour. More water should be added if needed, but allow it to cook down at the end of the roasting so as to make a brown gravy. The steaks

may be braised also by using a deep frying pan on top of the stove. If the flavor of apples is desired, several thick slices of tart apples may be added with the steak. When the steak is done, remove it from the pan and thicken the liquid with flour to make a gravy. Season and serve with the steak.

Pork Chops en Casserole.—Select 2 pounds of shoulder pork chops. Roll the chops in fine bread crumbs which have been seasoned with 1 teaspoon salt, $\frac{1}{8}$ teaspoon pepper, $\frac{1}{8}$ teaspoon sage. Place the chops in a low roasting pan or baking pan which has 2 tablespoons of fat melted in it. Brown on one side then on the other. Add 3 apples pared and quartered, placing them around and on top of the chops, and just enough water to cover the bottom of the dish. Bake in a moderate oven for 35 minutes. Serve on a platter with the apples as garnish. Make a gravy from the juice in the pan.

Baked Spare Ribs.—Rub the surface of 3 pounds of fresh spare ribs with salt. Place in a shallow baking or roasting pan. Roast in a moderate oven. Cover part of the time or baste every 15 minutes. Serve with mashed potatoes and boiled yellow turnips or rutabagas. The rutabagas are very delicious if mashed in combination with the potatoes.

Ham

Baked Ham.—If the ham is very salty, soak it for several hours in cold water. Ham that is sweet cured need not be soaked. Wash thoroughly and place it on the rack in a roasting pan. Brown in a hot oven for fifteen to twenty minutes, then add 2 cups of cider or hot water and $\frac{1}{2}$ cup vinegar. Bake in a slow oven for five hours. Take the ham from the oven, remove the skin from three-fourths of the ham, leaving the skin around the shank bone. Spread with a mixture of $\frac{1}{2}$ cup of fine crumbs, $\frac{1}{2}$ cup of brown sugar, $\frac{1}{2}$ teaspoon of pepper, and insert cloves one inch apart. Return the ham to the oven and bake for one hour or until the crumbs are brown. Place on a large platter, and garnish with candied sweet potatoes. Serve with raisin sauce.

Boiled Ham Shank with Vegetables.—Cover the shank with cold water, bring to a boil, then simmer until tender, allowing about 25 minutes to the pound. One hour before the ham is done, add $\frac{1}{2}$ dozen potatoes, a small head of cabbage cut in pieces, 4 carrots cubed, 3 small onions, and 1 pint of string beans in season. Cook until tender.

Place the ham in the center of a platter, arranging the vegetables around it. A fireless cooker, pressure cooker, or Dutch Oven is excellent equipment to use in preparing this dish.

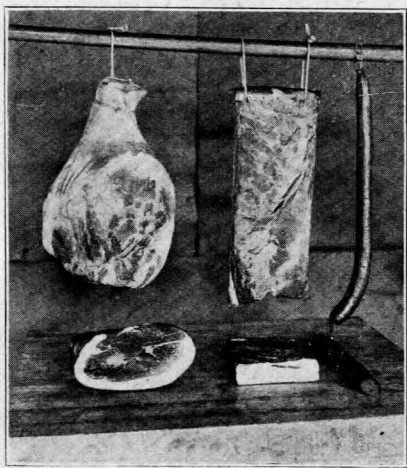


Fig.16.
"Some hae meat and canna eat,
And some wad eat that want it,
But we hae meat and we can eat,
Sae let the Lord be thankit."
— Burns.

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(6-25-15M)