FACT SHEET

L-941

CURING MEATS

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Proper handling is the key to meat curing on the farm. Curing is actually a race between the growth of spoilage bacteria in fresh pork and the penetration of preserving salt. If an adequate salt concentration is reached before rapid growth of bacteria occurs, the curing operation is successful. Custom curing of meat products is available at local meat processing firms which have adequate refrigeration.

Before cutting, thoroughly chill pork carcasses or any meat cuts to be cured. If night time temperatures fail to chill the inside of a ham to 45 degrees F., move the dressed carcass to a refrigerated plant for proper chilling. This is extremely important since warm meat is more likely to start spoiling before the salt penetrates to the center of the cut.

Pork cuts most commonly cured are the ham, shoulder and bacon while jowl and loin are sometimes cured. Most commonly cured beef cuts are briskets, strip of round or chuck and plates which can be cured as beef bacon.

In most areas of the state the middle-of-winter temperatures will range above 40 degrees F. during the 2 to 5-week period required for curing, making bacterial control hazardous. Under these conditions speed up salt penetration by:

- Salting lightly and spreading the fresh, warm cuts. (Never pile warm meat or blanket it with salt.)
- Applying salt directly into the joints.
- Pumping ice-chilled brine into the meat.
- Boning or slicing cuts into smaller, more quickly cured pieces.

These operations are satisfactory but are less desirable than curing the meat at the proper temperature of 36 to 40 degrees F.

CHOOSING CURING RECIPES

Use any preferred curing recipe as personal taste and conditions vary. Tips to remember are:

- Salt preserves meat.
- Sugar improves flavor.
- Saltpeter (in small amounts) produces the red color in the lean.

Most people prefer a combination of salt, sugar and saltpeter (the popular sugar cure). Under Texas conditions the dry cure is usually the best and safest method. A cure mixture for 100 pounds of meat follows:

8 pounds of salt
3 pounds of sugar
3 ounces of saltpeter

Mix ingredients well, applying one-half the mixture to the cuts. Rub all surfaces well; avoid blanketing the meat with the mixture. In 3 days again rub all the pieces being cured. At the end of 7 days rub the remaining cure mixture on the hams and shoulders only; the bacon has a sufficient amount. While curing, put meat in a wooden barrel or stone crock. This keeps the meat's surface from becoming dry and retarding the curing process.

A number of commercial curing mixtures are available. Use the same rubbing procedure for commercial preparations.

CURING TIME

Bacon thoroughly cures in 12 to 14 days. At the end of the curing period, remove cuts from the cure barrel or containers and wash well with cold water. This eliminates excess salt. After being hung and dried, bacon is ready for smoking.

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Under average curing conditions, hams and shoulders cure in 2 to 2½ days per pound per piece. A 15-pound ham or shoulder will cure in 30 to 35 days depending upon the desired degree of dryness and saltiness. In order to reduce surface salt, it is recommended that hams and shoulders be soaked in cold water for 2 hours following removal from cure. After soaking, hang and dry for 3 hours; then begin smoking.

Store the curing pork in a refrigerated place where a constant temperature below 42 degrees F. is maintained. Bacteria grows rapidly in unsalted meat when the temperature rises above 50 degrees F.

THE BRINE CURE

Pork can be cured with brine as well as the faster dry cure; however this process involves a somewhat different approach.

Fit cold, smoothly-trimmed cuts into a barrel or stone crock. Cover with a cold brine (36 to 40 degrees F.) made by dissolving 8 pounds of salt, 2 pounds of sugar and 2 ounces of saltpeter in 4½ gallons of water. Weight the meat to keep it from floating above the brine. Use enough brine to cover the meat thoroughly. If possible keep the pork at 36 to 40 degrees F. throughout the curing period.

Change the brine solution on the seventh day after putting the meat in cure. Remove the meat from the brine; then pour the brine out and stir. Repack the meat in the container and cover with the same stirred brine. Overhaul the brine again on the fourteenth and twenty-eighth days.

Curing time for hams and shoulders in brine is 3½ to 4 days per pound per piece of meat, with a minimum of 28 days for the lightweight cuts. Thus, a 6-pound shoulder, 28 days in cure; a 15-pound ham, 60 days; a 10-pound bacon, 15 days; heavier bacon and loins, 21 days.

If the brine sours or becomes ropy or syrupy, discard it. Scrub the meat in hot water, scald the barrel, rechill it, repack the meat and cover with new cold brine. Make brine using the same procedure, except dissolve the salt, sugar and saltpeter in 5½ gallons of water rather than 4½ gallons as recommended above.

PUMPING HAMS AND SHOULDERS

To speed up curing, most commercial packers pump brine into the hams and shoulders. The brine solution is prepared using the 8-3-3 mixture previously explained. Two pounds of the cure mixture are dissolved in 1 gallon of cold water and the ham or shoulder pumped with brine equivalent to 10 percent of its weight (a 10-pound shoulder requires 1 pound of brine and a 15-pound ham, 1.5 pounds of brine). Pumping is done with a stitch needle being sure to insert the needle in each joint. When pumping is being done place the meat on a scale to determine when the proper amount of brine has been pumped into the meat.

Purchase pumps, either hand or power, through retail outlets. Power pumps should produce at least 30 pounds of pressure. Hand pumps also can be purchased but these are more difficult to operate.

From this point the curing process is the same as the dry curing process.

SAUSAGE MAKING

There are probably as many different sausage recipes as there are sausage makers in the nation. However, a recipe which has proven to be satisfactory for both fresh and smoked sausage follows:

50 pounds pork trimmings
17 ounces salt
4 ounces black pepper
3 ounces rubbed sage

Many variations can be made in this recipe such as the addition of 1½ ounces saltpeter to the formula, if one desires the red, cured color, or the deletion of the sage, if the taste of sage is objectionable. This sausage formula is mild. If one desires a product with more heat, 2 ounces of red or white pepper can be substituted for one half of the black pepper.

In order to assure even seasoning distribution, season the meat before it is ground and then allow to stand for 8 to 10 hours at 36 degrees F. before stuffing into natural or artificial casings.

CORNED BEEF

Corned beef is generally made from the cheaper cuts and those that have considerable fat, such as the plate, rump, chuck and brisket.

Remove all bone from the cut and, to facilitate packing, cut pieces for uniform thickness and size. For each 100 pounds of meat, use 8 to 10 pounds of coarse salt. Spread a layer of salt on the bottom of a sterilized wooden barrel or stone crock. Next, place a meat layer in the container; sprinkle with salt and add additional layers of meat and salt. Lightly rub each piece of meat with salt before packing. Allow the packed meat to stand for about 24 hours. Then cover with a brine made up as follows: for each 100 pounds of meat, use 4 pounds of sugar, 4 ounces of saltpeter and 2 ounces of

baking soda dissolved in 4 gallons of water. After covering with brine, weight the meat down.

High-quality corned beef requires from 30 to 40 curing days. At the end of the curing period, remove the corned beef from the cure as needed. Wash and dry or smoke.

Inspect the brine closely as it may become ropy, especially if temperatures rise much above 38 degrees F. When this happens, remove the meat, wash thoroughly in warm water, repack in a new clean container (or in the original container, thoroughly washed and sterilized) and cover with new brine.

JERKED BEEF

Dried beef is made from the heavier-muscled cuts, especially the round. Cut the muscles lengthwise or prepare as a whole muscle. The curing procedure is the same as that used for corned beef, however, add an extra pound of sugar for each 100 pounds of meat. After the meat is cured, remove it from the brine, wash and hang to dry for 24 hours. Smoke the cured meat in the regular manner at a temperature of 130 to 140 degrees F. for 70 to 80 hours or until quite dry. The dried beef is ready to be used or it can be hung for storage. Dried beef is usually cut very thin for use.

SMOKING

Properly cured meat does not need to be smoked to insure good preservation. Smoking improves flavor and aids in reducing mold, as well as helps retard old and rancid flavors.

If smoking is desired use a bed of coals and sprinkle with any hardwood (hickory, oak or pecan) sawdust which has been dampened. Never use pine sawdust. Its smoke is sooty and strong smelling. The smoke house should have some ventilation to allow the moisture to escape.

Smoke hams and bacon 1 or more days, or until the meat has the desired color. A thin haze of smoke is as effective as a dense cloud. Avoid overheating and scorching the meat. If the smoke flavor is not desired, hang cured meat to dry for about a week before bagging. Smoke sausage for approximately 12 to 15 hours or until the desired color is attained.

STORING SMOKED PORK

Protect meat from insects with a strong muslin or paper bag.

- Cool smoked meat to air temperatures.
- Wrap in grease-resistant paper to prevent grease softening the protective outer bag.
- Bag and hang in a dark, dry, ventilated, rat-free place.

MOLD GROWTH

Surface mold will not affect the meat's wholesomeness, even if it adds a moldy flavor. Most mold and mold flavors can be eliminated by scrubbing or trimming since mold grows only on the surface in the presence of oxygen or in meat crevasses. Oiling smoked meat with an edible oil, such as lard, will delay mold growth. Re-oil in a month if needed.

PREPARATION OF CURED PRODUCTS BEFORE EATING

Cook all products discussed thoroughly before consuming them in order to insure that any trichnae larvae have been destroyed, since smoking temperatures normally are not high enough to destroy these pests if present.

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