Curing Pork Products at Home

When you process any muscle food, remember the three C's: clean, cold, and covered. Food safety is very important wherever food is processed, but home processing can be especially challenging. Home-processed products can be very flavorful and enjoyable for the entire family if they are handled, stored, and prepared correctly.

Curing Ingredients

You'll need salt, sugar, sodium nitrate, and sodium nitrite.

Here is a common recipe:
8 lb salt
3 lb sugar
2 oz sodium nitrate
½ oz sodium nitrite

Mix thoroughly. Use 1 ounce of mixture per pound of meat. Too much nitrate and nitrite can be toxic. USDA does not allow sodium nitrate in bacon products.

If you need more cure mixture, simply multiply the recipe ingredients by 2, 3, 4, or more to obtain the desired amount of mix.

Also, many seasoning and flavor companies sell prepackaged cure or modern cure.

Weighing the Cut

In order to apply the appropriate amount of cure, you must weigh the cuts of meat. For hams weighing less than 24 pounds, you may use a kitchen scale or any other scale that has an appropriate capacity and is accurate.

Curing Procedure

If the cut of meat weighs 20 pounds or less, use 1 ounce of curing mixture per pound of meat. If the cut of meat weighs more than 20 pounds, use 1½ ounce of mixture per pound. When applying the mixture, do not try to rub the mixture into the meat, but do rub thoroughly enough for the cure mixture to cling. Rub extra cure around any exposed bones to prevent bone souring.

Ham

For a ham that weighs 20 pounds or less, make three separate rubbings. For a ham that weighs more than 20 pounds, make four separate rubbings. Divide the total amount of curing mix equally among the number of rubbings. Allow 3 to 5 days between rubbings. Force some of the mixture into the hock end and other exposed bones to prevent bone souring.

Picnics and Butts

Apply two rubbings of the curing mixture. Wait 3 to 5 days between rubbings.

Bacon

Use only half as much nitrate and nitrite called for in the recipe listed here. For example, one recipe of the mixture for bacon would contain only 1 ounce of sodium nitrate and ¼ ounce of sodium nitrite. Rub curing mix thoroughly on all sides of the pork belly. After rubbing, add a light sprinkling of the mix on the flesh (non-skin) side.

Curing Schedule

Rubbed meats should be placed skin-side down in wooden boxes, on shelves, or on nonmetal tables to cure. Do not place them in tight barrels or boxes where they could rest in their own brine. Moisture removed by the cure mixture should be allowed to drain from the meat.

For dry-cured products, cure 7 days per inch of thickness. For example, if the thickest part of the ham measures 5 inches, then the ham will take 35 days to cure (7 days per inch × 5 inches = 35 days). The best temperature for curing meat is 32 to 40°F.

If the meat is to be frozen after curing and smoking or if you want to reduce the salt content, products can be cured for just 2 to 3 weeks. During the shorter curing process, the temperature must be kept between 32 and 40°F. Products cured in this way will not be totally dry cured.

Letting Salt Equalize

At the end of the curing period, remove the meat from the cure. If the hams or other cuts are not to be smoked, simply rub off the excess salt. If you are going to smoke the meat, rinse or soak it in cold water before exposing it to smoke. Soaking before smoking removes the excess salt on the outside and eliminates salt streaks.

Smoking

Natural wood smoke is generally produced from hardwood sawdust, wood chips, or logs. It is important to use hardwoods such as hickory, oak, maple, ash, or mesquite. Do not use resinous woods, such as pine, or other soft woods.

Hot Smoking

It takes about 24 hours to hot smoke and cook a ham. Smoking is usually done in three stages. During the drying phase, the smokehouse is heated to approximately 125°F. All dampers are opened to allow all excess moisture to escape. No smoking occurs during this period. The surface of the meat should be slightly moist and tacky before it is smoked so that the smoke will stick to the surface. If the surface is too wet, the meat may become streaked, and if it is too dry, the meat may become pale in smoke color.

The second stage lasts about 8 hours. During this time, the dampers are partially closed, and the temperature of the house is increased to approximately 135°F. Smoke is generated and applied in this phase.

In the third and final stage, all dampers are closed. The smoke continues, and the temperature of the house is raised to approximately 180°F. Hold this temperature until the internal product temperature reaches 142°F. These hams must be cooked further in the home so they will be fully tender and safe to eat. Hams sold as "fully cooked" have been cooked to an internal temperature of at least 148°F.

Pickled bacon should be smoked for 1 to 4 hours. Typically, pickled hams and other cuts should be smoked for 3 to 8 hours.

Cold Smoking

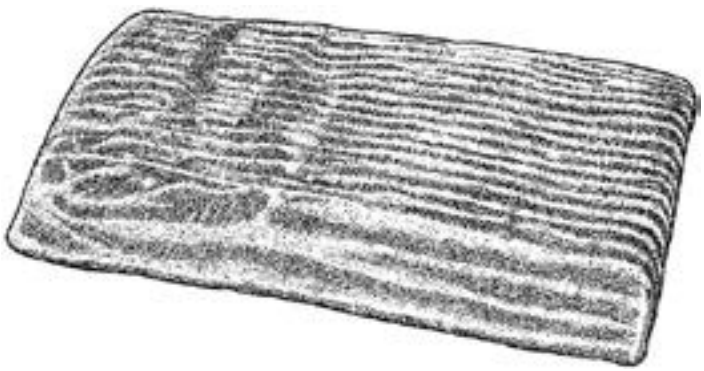
You can also further process cured meat by cold smoking it. In cold smoking, the temperature of the smokehouse should stay below 100°F. A good temperature range is between 70 and 80°F. There should be enough heat to generate smoke but not enough to cook the meat. Cold smoking lasts anywhere from 1 to 5 days and requires a steady supply of smoke.

Cold-smoked meats have more salt and less moisture than hot-smoked meats. You can cold smoke for a shorter time, a longer time, or even stop and start the smoke to achieve the desired color and flavor. However, it is very important to keep the product cold; growth of spoilage bacteria is rapid from 80 to 110°F.

Products that are not completely dry cured and aged must be frozen quickly. Immediately after smoking and cooling these meats, package them in airtight materials and freeze them.

Storing Ham, Bacon, and Other Cuts (Dry Cured ONLY)

You can use several methods to protect the meat from insects while it is in storage. One good method is to wrap the ham or shoulder in a heavy brown grocery bag. Fold the bag and tie the top. Place the bag in a cloth sack. Hang the meat in the smokehouse or another convenient place to age.



To age a ham or shoulder product, attach a string to the shank and hang the product by the string. Let the product age about 6 months. Be sure the temperature remains between 70 and 75°F with a relative humidity of 55 to 65 percent. The ham or shoulder product should be stored in a dry, well-ventilated, protected room free of all insects. This aging process results in a typical dry salt-cured product.

You can produce similar products in a shorter period of time. However, products cured a shorter time should be refrigerated at 40°F during the curing cycle and frozen immediately after smoking, slicing, and packaging.

Bacon does not require aging.

Mississippi State University does not promote aging dry-cured meats at home because the weather conditions in the southeast United States may cause aged products to be unsafe to eat.

Remember: handle all products and equipment with care and cleanliness.

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