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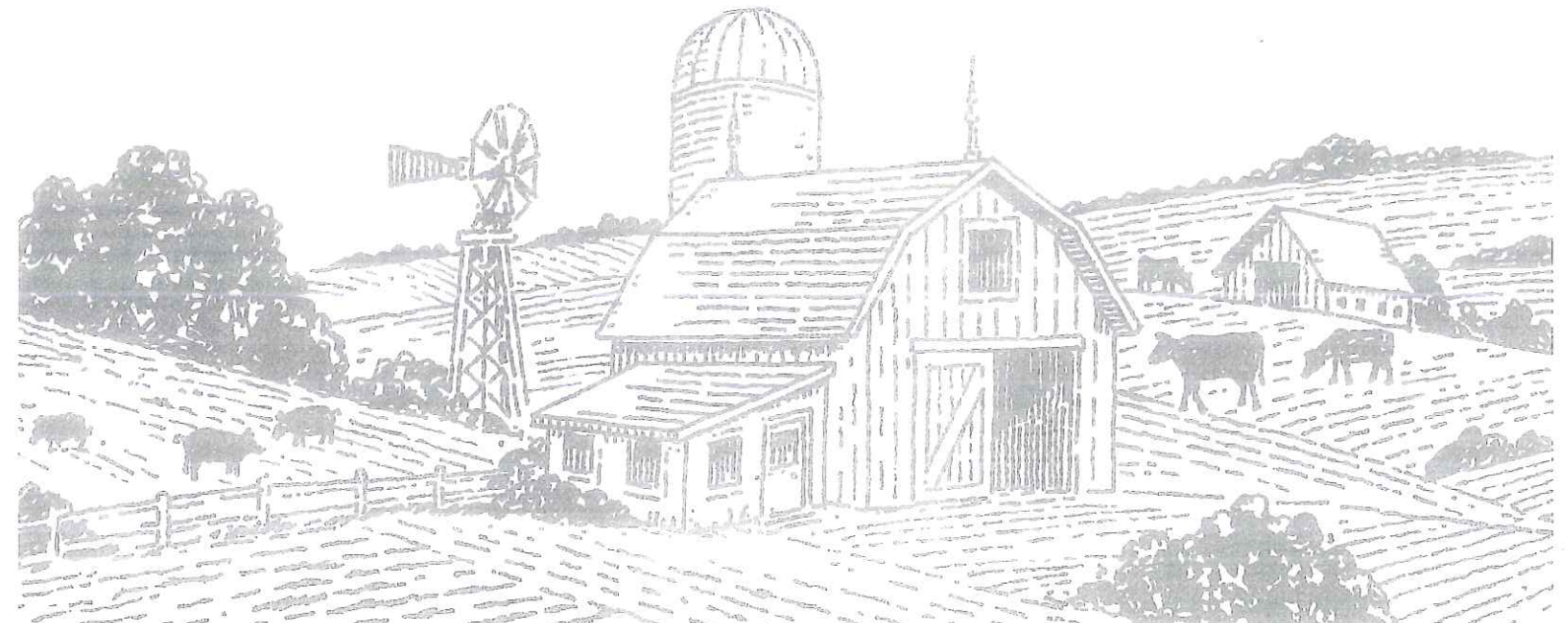
MEAT CURING

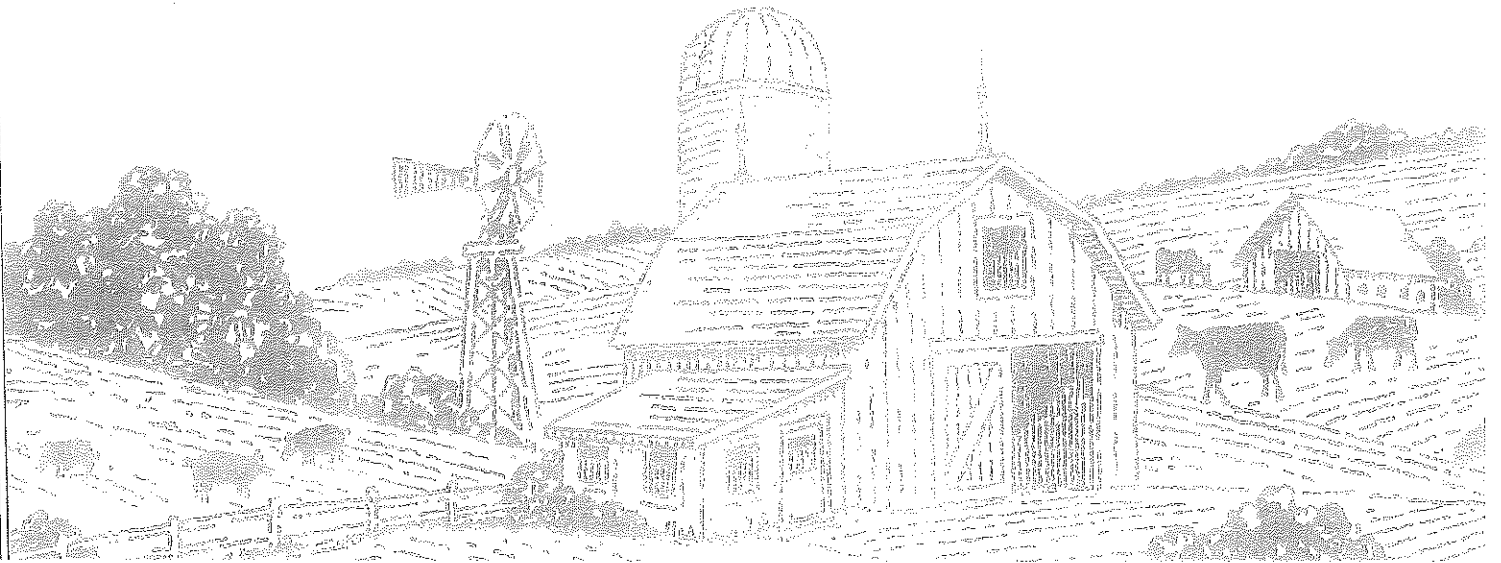
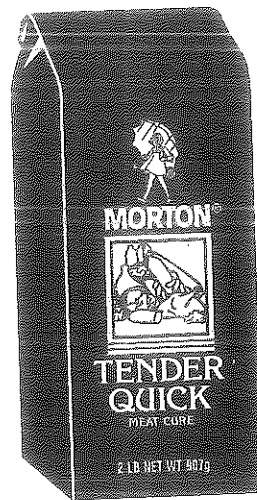
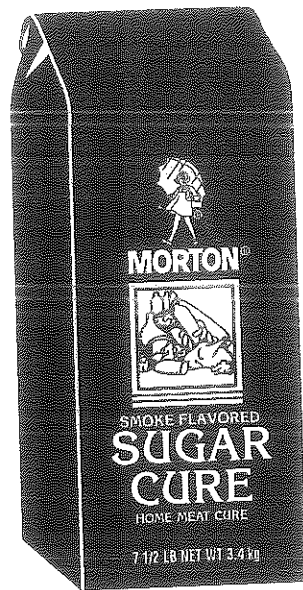
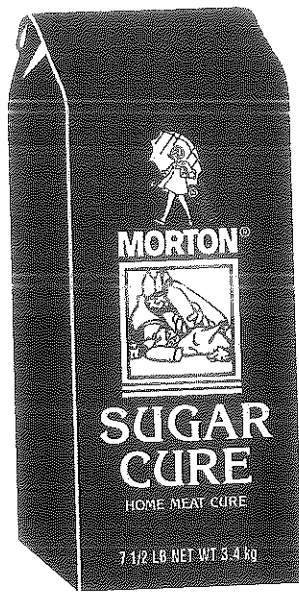
Guide

*An Illustrated Guide to Curing Ham,
Bacon, Small Cuts, and Sausage Making*

Morton International, Inc., • Chicago, IL 60606-1743

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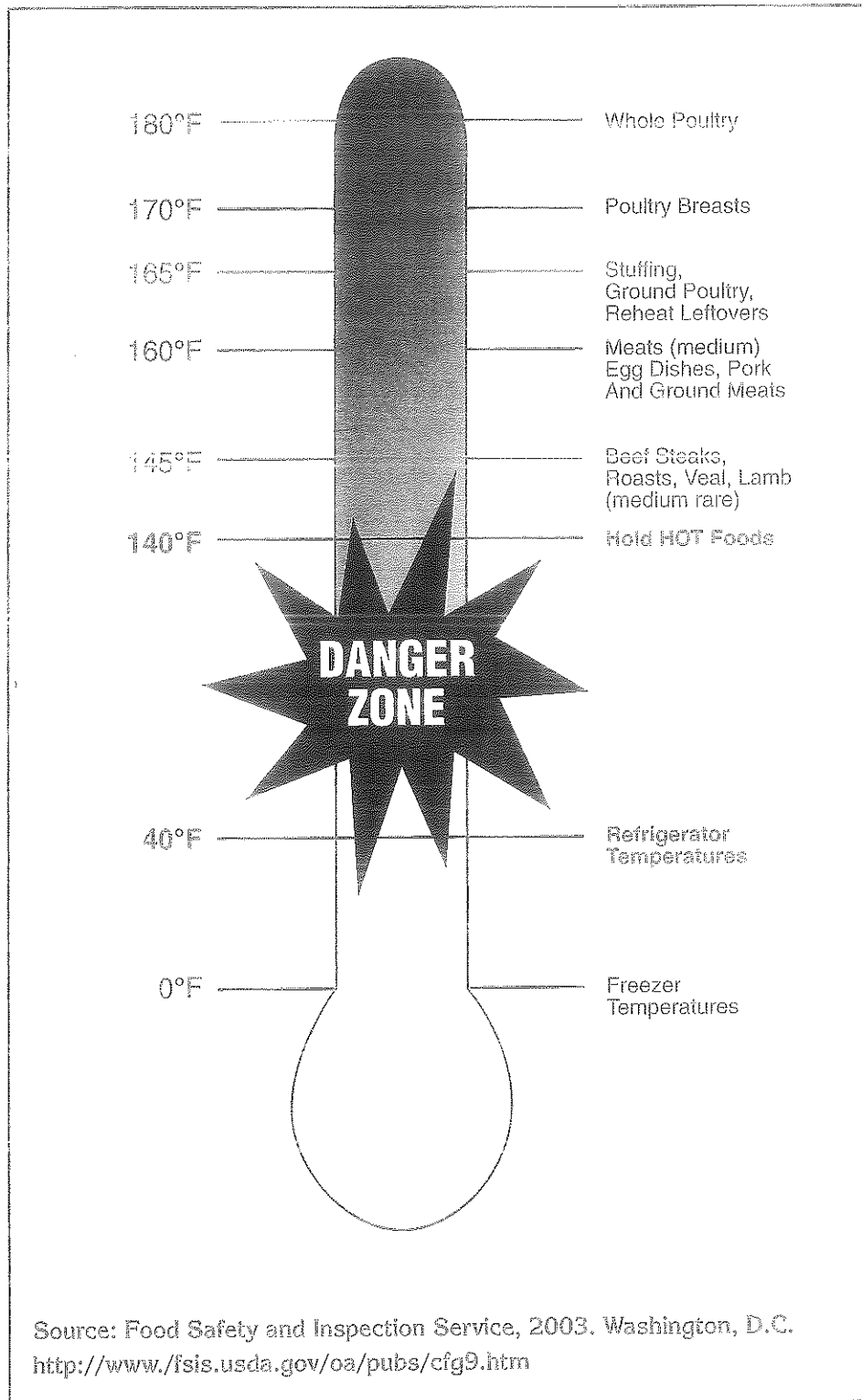
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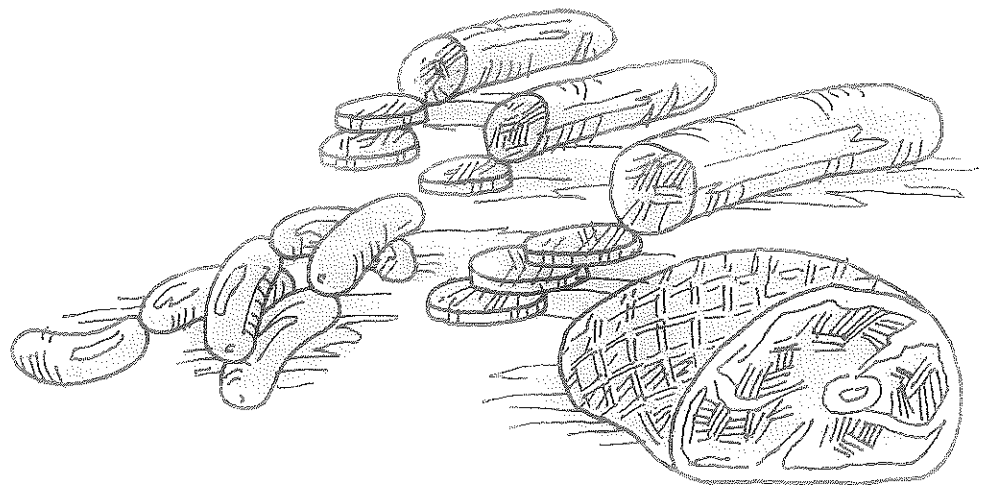
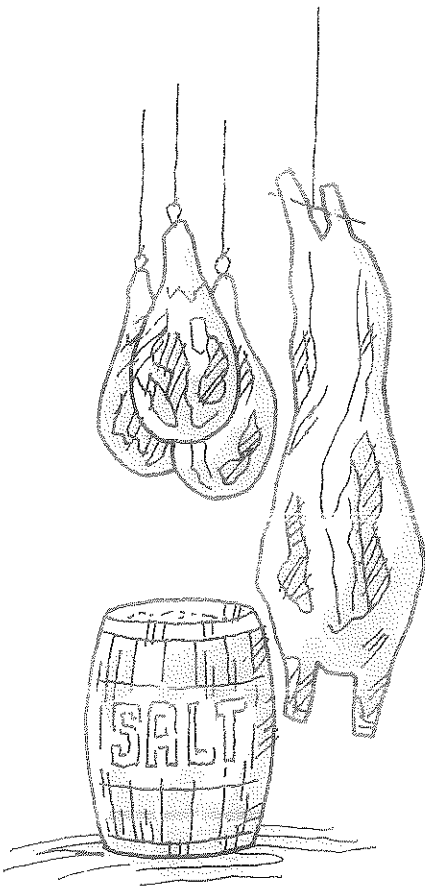
Chapter 1

Curing Meat, a Glance at History

Meat has been preserved by drying, salting, and smoking for centuries. The Chinese have used salt to cure and preserve meat since the 13th century B.C. Greeks and Romans of the pre-Christian era were known to be cured meat makers. The Roman word for sausage was “salsus”, the prefix for which was “sal”, for the word salt. Sausage meant, therefore, salted or preserved meat. Around 1608 the Indians taught the people of Jamestown, Virginia their methods of salting, smoking, and aging venison, which were adapted by the colonists to preserve the meat of the then-plentiful razorback hog.

Preserving through a variety of curing, seasoning, and smoking methods remains so popular even in the last decades of the 20th century — after more than 3,500 years of practice— that it is estimated nearly 1,000 different commercial varieties of sausages and specialty meats are available in the world today. These actually might be numbered in the tens of thousands if one were to count as different each of the “recipes” that processors, both large and small, guard jealously. Each brand of bologna, salami or corned beef, for example, can boast its own distinctive character.

So cured meats clearly continue to be a “specialty of the house” from all of civilization’s kitchens in every country, from camps and cookfires to sophisticated modern kitchens. You can find cured meats distributed and consumed with equal gusto, whether from an English pub, an Austrian wurst-macher’s shop, an American farm kitchen, or an Australian aborigines’ camp.



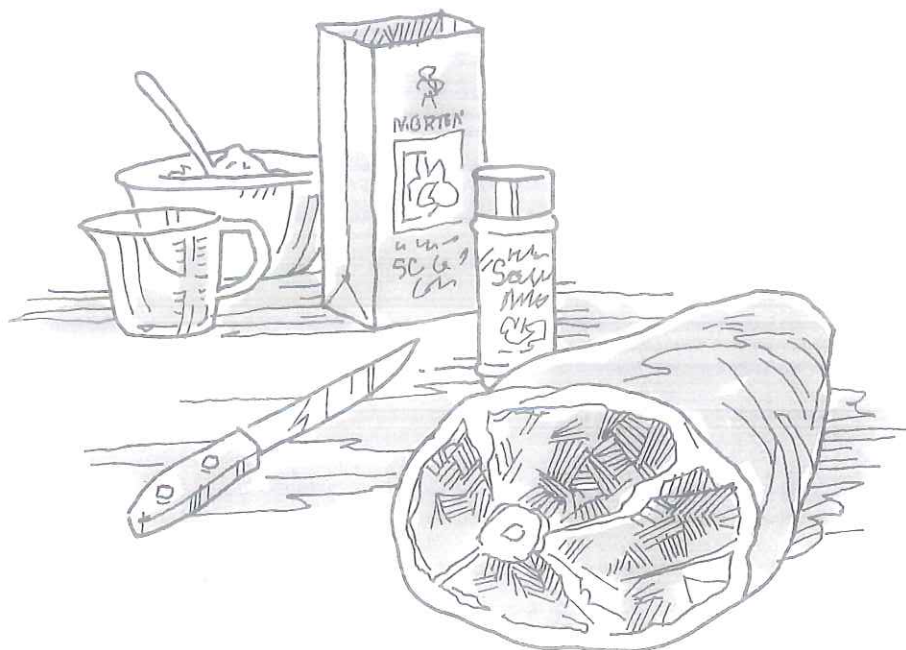
But perhaps none is ever so good — whether robust or delicate of flavor and texture — as that turned out from one's own labors. The pursuit of that goal is the purpose of this guide.

This guide has been written to provide basic information required to cure your own hams, bacon and other cuts of meat in the home. It includes recipes for several types of sausage which can be made from the trimmings generated from farm-slaughtered livestock or from the results of a good hunt. However, home butchering is not necessary to cure meat or make sausage. One can purchase fresh meat and still enjoy the satisfaction of curing meat or sausage-making in the home.

Throughout this guide you will find some words pertaining to curing with which you may not be familiar. These words are *italicized in bold face type* for easy identification and are defined in the glossary of terms starting on page 31.

The recipes in this guide have been collected from many sources and have been revised and tested. The intent is to keep the process simple and still produce quality products. You will note there is no mention of smoking or fermentation of dry summer sausage. These are special applications requiring proper equipment to be certain of success; they go far beyond the scope of this guide. Ours is a simple basic approach that can be achieved by anyone with a kitchen, a refrigerator and a desire to have foods that are "home cured".

But whatever heights you may eventually reach in home meat curing, the family of Morton Salt curing products is guaranteed to ease the process. Let's take a look at these.



Chapter 2

Perfect Curing Partners

Salt is used to preserve meat by penetrating into the tissue and drawing out moisture. Decreasing moisture and increasing salt concentration inhibit the growth of microorganisms. This preserving action allows the meat to be stored with reduced threat of spoilage. Salt also adds flavor to the meat.

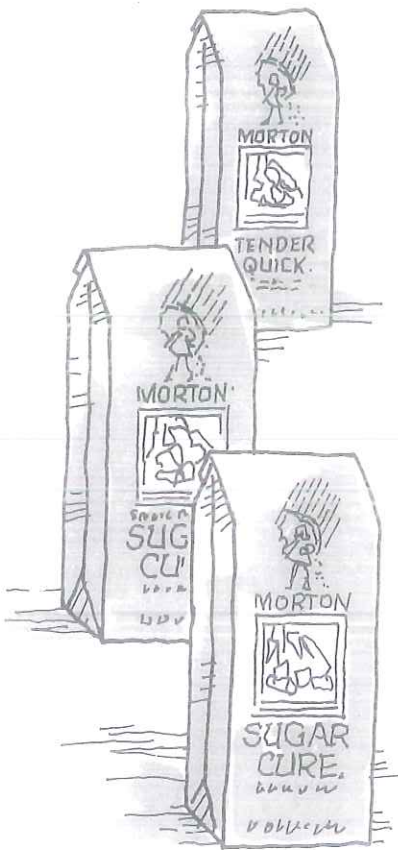
When salt alone is used to cure meat, it gives a harsh, dry salty taste that is not very palatable. Salt-cured meat usually has an objectionable dark color. Consequently, sugar, curing agents (nitrate and nitrite) and sometimes spices are used in combination with salt to produce the characteristic cured meats familiar to all of us.

Morton Salt has developed a family of curing salts especially designed for curing meat in the home. A brief description of these products follows:

Morton® Tender Quick® mix is a fast cure product that has been developed as a cure for meat, poultry, game, salmon, shad, and sablefish. It is a combination of high grade salt and other quality curing ingredients that can be used for both dry and sweet pickle curing. Morton® Tender Quick® mix contains salt, the main preserving agent; sugar, both sodium nitrate and sodium nitrite; curing agents that also contribute to development of color and flavor and propylene glycol to keep the mixture uniform. Morton® Tender Quick® mix can be used interchangeably with Morton® Sugar Cure® (Plain) mix. It is **NOT** a meat tenderizer.

Morton® Sugar Cure® (Plain) mix is formulated for dry or sweet pickle curing of meat, poultry, game salmon, shad and sablefish. It contains salt, sugar, propylene glycol, sodium nitrate and sodium nitrite, a blend of natural spices and dextrose (corn sugar). Morton® Sugar Cure® (Plain) mix can be used interchangeably with Morton® Tender Quick® mix.

Morton® Smoke Flavored Sugar Cure® mix is formulated only for dry curing large cuts of meat like hams or bacon. It contains salt, sugar, sodium nitrate, propylene glycol, caramel color, natural hickory smoke flavor, a blend of natural spices and dextrose (corn sugar). The cure reaction takes longer with Morton® Smoke Flavored Sugar Cure® mix than with plain Morton® Sugar Cure® mix, so the smoke flavored product should be used only for dry curing and not for making a brine (pickle) solution.



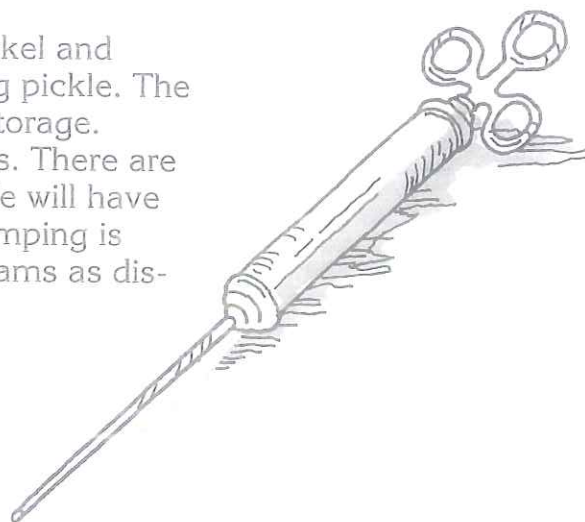
CAUTION: These curing salts are designed to be used at the rate specified in the formulation or recipe. They should not be used at higher levels as results will be inconsistent, cured meats will be too salty, and the finished products may be unsatisfactory. The curing salts should be used only in meat, poultry, game, salmon, shad and sablefish. Curing salts should not be substituted for regular salt in other food recipes. Always keep meat refrigerated (36° to 40°F) while curing.

Spice Mix

The spices used in both Morton® Sugar Cure® Mixes (plain or smoke flavored) are packaged separately from the other ingredients. This is to prevent any chemical change that may occur when certain spices and the curing agents are in contact with each other for an extended period of time. If you do not need an entire package of Morton® Sugar Cure® mix for a particular recipe or must make more than one application, prepare a smaller amount by blending 1-1/4 teaspoons of the accompanying spice mix with one (1) cup of unspiced Morton® Sugar Cure® mix. If any portion of the complete mix with spice is not used within a few days, it should be discarded. It is not necessary to mix the spices with the cure mix if spices are not desired. The Sugar Cure mixes contain the curing agents and may be used alone.

Morton® Sausage and Meat Loaf Seasoning Mix is not a curing salt. It is a blend of spices and salt that imparts a delicious flavor to many foods. The seasoning mix can be added to sausage, poultry dressing, meat loaf and casserole dishes or it can be rubbed on pork, beef, lamb, and poultry before cooking. Just follow the instructions on the package, use in recipes, or add to taste.

The **Morton Salt Meat Pump** is made of nickel and chrome plated metal and holds 4-ounces of curing pickle. The six-inch needle unscrews from the tube for easy storage. When attached, the overall length is 15-1/2 inches. There are 12 holes drilled into the needle so the curing pickle will have good distribution when pumped into the meat. Pumping is used in the combination cure method for curing hams as discussed in Chapter 4.



The products described above may be purchased in select stores throughout the country. If these products are not available in your area write to: Morton Salt, Consumer Affairs-CGS, 123 N. Wacker Drive, Chicago, IL 60606-1743 or check our website: www.mortonsalt.com for mail order information for these products.

Chapter 3

Selection, Handling and Preparation of Ham and Bacon

It is not necessary to raise and slaughter your own hogs to *cure hams* and *bacon* in your home. Fresh, uncured cuts can be purchased from a slaughter house generally located away from the larger cities. Of course, home slaughtering is an option for some who do live in the country and grow their own hogs.

Regardless of the source of meat, proper selection and handling are necessary to produce high-quality products. When curing pork, select a meat-type hog with good muscling that is void of excess fat. Generally, lighter weight hogs of 200 to 250 pounds produce the most satisfactory results. A hog this size yields uncured hams that weigh 15 to 18 pounds and bellies that weigh 11 to 17 pounds of *green weight*. If you purchase uncured cuts to cure in your home, be sure the meat is fresh, clean and properly chilled. Don't start out with poor quality meat.

If you will be doing your own slaughtering, plan well in advance how and when it will be done. Unless a walk-in mechanical refrigerator is available, do the butchering and curing late in the fall or early winter, when the days are cool and night-time temperatures are near freezing. Chill the carcass to an internal temperature of 40°F or less within 36 hours after slaughter — but do not allow the carcass to freeze. Rapid chilling is critical to reduce the growth of bacteria, which are always present (Figure A). Quick chilling is especially important for the larger cuts, like hams, where *bone sour* can occur. Once bone-sour starts, the meat will spoil and must be discarded. Always remember the three C's for handling meat:

Keep it Clean. Keep it Cold. Keep it Covered.

Ham Selection and Preparation are critical factors for successful curing. Decisions must be made early to determine how the ham will be cured. Do you want the quick, easy short-cut method or the slow, but more flavorful long-cut aged *country-style ham*? The type of ham desired will affect how the ham will be cut and cured. Table 1 lists the four types of ham curing methods that are discussed in this manual. This will help you make your decision before procuring your hams and starting the curing process.

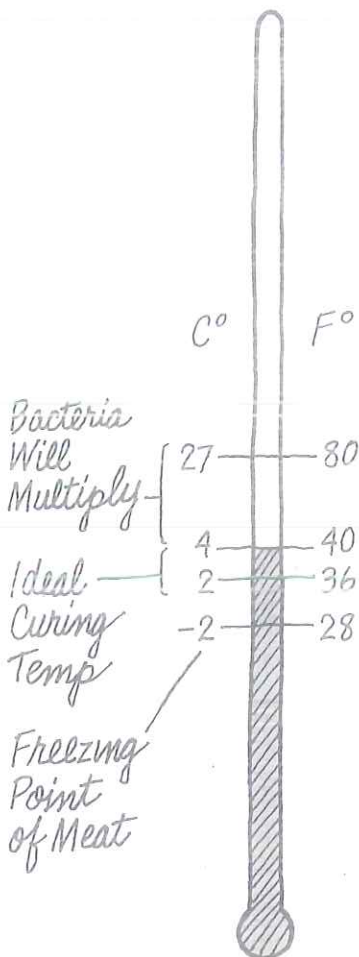


Figure A

Cutting the Ham

A *short-cut ham* is typical of hams found in grocery stores and has not gone through the *aging* process. It requires less salt and curing time than the aged ham. This ham is separated from the side by a cut approximately halfway between the pelvic arch and the end of the pelvic bone at a right angle to the shank (Figure B). Remove five or six inches of skin from the ham by cutting under the skin approximately half the distance between the butt edge and the hock. Smoothly taper the exposed fat to a thickness of about one-half inch at the butt end (Figures C, D, and E).

Hams larger than 25 pounds require special care. To accelerate curing and reduce the chance of developing bone-sour, hams this size should be deboned or split in half.

A *picnic ham* is taken from the front shoulder of the hog and trimmed similar to the short-cut ham. It generally has more fat than regular hind leg hams and is somewhat smaller. The picnic ham should be cured the same as the short-cut ham.

A *long-cut ham* is generally used to make the aged country-style ham. It is cut off perpendicular to the length of the side at the pelvic arch (the bend in the back) (Figure F). Also, greater protection from bone-sour may be given if the ham is cut extra long so the shank bone is left intact. Bacteria cannot invade the bone marrow so readily if the sponge bone and marrow are not exposed by cutting. Extra length also makes it easier to hang the ham.

Trim the ham to remove the tail bone and flank but do not remove the skin. The skin protects the ham from insects and excess drying during aging. However, to insure good cure penetration, cut away excess fat, especially over the cushion area. Give the butt end a short bevel (Figure G).

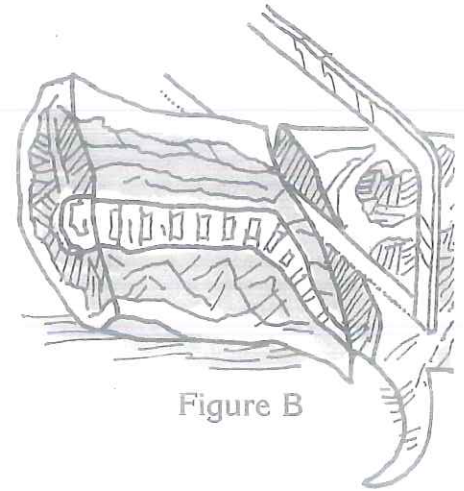


Figure B

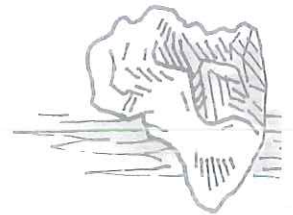


Figure C



Table 1: Summary of Ham Curing Methods

TYPE OF HAM	SHORT-CUT	SHORT-CUT	LONG CUT	LONG CUT
Aged	No	No	Yes	Yes
Type of Cure	Combination	Dry	Combination	Dry
Number of Dry Cure Applications ¹	2	2	2	3
Day of Application	0,7	0,7	0,7	0,7,14
Days of Cure Time per Inch of Thickness	5	5	5	7
Days for Salt Equalization	14	20	14	20

¹ See Table 2 for amount of cure to use.