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FROM THE EDITORS OF HOBBY FARM HOME® MAGAZINE

thank
you for

smoking

Used together with curing, smoking preserves meat and imparts flavor.

B y N a n c y M a n n J a c k s o n


meat has been preserved in various ways and places for centuries, but smoking meat stands out as a quintessentially American method. While colonial Americans brought many of their cooking and preservation practices with them from Europe, smoking meat was a process that they discovered after living on American soil.

"Europeans typically didn't smoke meat," says Rhett Rushing, a food historian and professor at the University of Texas at San Antonio's Institute of Texan Cultures, who has been butchering animals and curing and smoking meat since childhood. "The idea of smoking meat came from Native Americans. Originally, smoke was a tool to keep the flies away from the meat. Early Americans learned that they could put hams in the smokehouse outside to curtail the flies. The smoke also gave it an

unbelievable flavor, and that smoky flavor is distinctly American."

In addition to reconnecting with the experiences of early Americans, today's backyard grillers are "definitely more interested in smoking meat because it is the next challenge," says John Rivers, pit master and owner of Four Rivers Smokehouse in Orlando, Fla. "Grilling has evolved from smoking."

Along with accepting a new challenge for backyard barbecues, more people are interested



*Low heat and slow
smoking create a
delicious preserved
product with
unmatched flavor.*



Free-standing smokehouses allow you to smoke several batches of meat or fish at once.

in smoking meat today because they are committed to eating local foods and avoiding waste, says John Stewart, chef and co-owner of Zazu Restaurant & Farm in Santa Rosa, Calif., and Black Pig Meat Co. in Healdsburg, Calif. Stewart and his family live on a small farm where Stewart raises turkeys, chickens, rabbits, sheep, pigs and goats. “Along with raising animals comes the responsibility of slaughter and the responsibility of preserving the meat for future use,” he says. “This responsibility is not as dire — life or death — as on farms of the past, but it is a responsibility to completely utilize the animal.”

Thanks to the growth of community-supported agriculture, in which consumers pay a membership fee to receive a basket of farm products each week, “people are being given pieces of the animal that they never would have seen before,” Stewart adds. “If they don’t use it or preserve it in some way, they see that they are throwing money away.”

Smoking and curing meat can be ideal options for serving the meat now or preserving it for later. The process as a whole can be a creative outlet. “What I love most about smoking and curing meat is the craft and art involved in the process, and the end results are delicious,” Stewart says.

How Does Smoking Work?

This is a unique process of flavoring, cooking and preserving food. “Smoke emits a number of acids that will cling to the meat and form an outside layer,” says Kay Tomaszewski, who, with her



PHILIP SCALIA/ALAMY

husband, Bill, has been preserving meat and fish for more than 20 years. "The acids perform a role in preserving meat by preventing the growth of surface mold and bacteria."

Rivers says the process of smoking meat requires a cook to finesse four essential elements that affect the final outcome. The four elements include:

1. the rub
2. the grade and aging of the meat
3. the time and temperature of smoking
4. the wood, which influences the flavor

Each element makes a difference in the final product. "The toughest part of smoking is preparation," Rushing says. "Meat needs to be brined, and it needs enough time so osmosis will occur and the meat will suck in the salt and flavoring from the outside. When you have a salt solution outside the meat, all membranes in the meat recognize that and want to equalize. They will suck the salt and flavor into the interior cells; that's why a brined turkey is so much more flavorful. Fish complete the osmosis process in minutes, while a pork roast or turkey will take overnight."

Instead of cooking the meat at high temperatures — as with grilling, baking or other methods of preparation — smoking requires heating at lower temperatures to achieve a smoky flavor. Heating meat at low temperatures can be dangerous, however, if the meat is not first cured correctly. "I can't say enough about preparation," Rushing says. "Once the meat is already brined, you have taken a giant step toward curing it. You can leave the temperature lower than what the United States Department of Agriculture recommends [between 225 and 300 degrees Fahrenheit], because you've already solved the bacteria problems by brining the meat, which eliminates bacteria growth."

Gathering Equipment

The most important piece of equipment needed to smoke meat is a smoker, which comes in all shapes, sizes and various levels of sophistication. When Rushing was a college student, he purchased a Smokey Joe, an electric smoker that simply requires a pan of wood chips placed under the burner. Now, he has a large pit cooker with a firebox at one end. He's even built extensions onto his cooker so he can "absolutely control the heat," he says.

Rushing says he'll never forget the Food Network's "Good Eats" episode in which Alton Brown built a smoker out of unconventional materials. "He smoked bacon and salmon in a cardboard box," Rushing says. "You really can use anything; you just need a hot plate, wood chips



which wood chips?

Wood chips are the fuel that makes smoking work, and a variety are available. The type of wood you use depends on the type of smoker you have as well as the type of meat you're smoking. (See "The Right Wood for the Job" on page 28.)

For instance, for grill smoking, "soaked chunks of wood are the most effective because they burn slower at a higher heat or indirect heat," says Margaret Mott, a partner in Smokin' Mamas Fish Co., a Pasadena, Calif.-based smoking business featuring hand-cured and smoked meat and fish.

For her electric smoker, Mott prefers to use "a chunky, sawdust-type of wood, which works better than large chunks," she says. "There also are a variety of flavored wood pellets available for electric auger-driven smokers like the Traeger grill."

In addition to various kinds of wood chips, cooks use different types of wood to create different flavors in their smoked meats. John Stewart, chef and co-owner of Zazu Restaurant & Farm in Santa Rosa, Calif., and Black Pig Meat Co. in Healdsburg, Calif., usually smokes with apple wood, which has a softer, sweeter smoke. "Hickory is what's mostly used in the South, and it's smokier," Stewart says. "I have used other fruit woods, such as cherry and almond, and they seem to have the softer wood characteristics. It's all a personal choice as to flavor, but I think the fruit wood gives you a more versatile product for cooking in general."

Many cooks use different wood for different meats. For instance, Mott uses three or four types of wood for smoking meat and fish. "With my smoked salmon, I use apple and alder wood," she says. "For my apple-chardonnay smoked sturgeon, I use only apple wood. For my jerky, I use hickory wood. For my smoked and baked Thanksgiving turkey, I use apple and cherry wood. Cherry also would be good with duck or wild birds." — N.M.J.



Fish should be smoked until the inside is flaky and white.

and a box. It's common along the Gulf Coast of Texas for people to use old refrigerators with an intake valve for the smoke."

While almost anything that can contain smoke will work as a smoker, most home cooks who are serious about smoking meat choose to purchase a commercial smoker. "Most smokers are similar," Stewart says. "A Smokey Joe is just a small version of the large commercial smoker I have, but some grills have a smoke box to one side and they are great all-around grills and hot smokers."

For beginning backyard grillers, Rivers recommends a Weber dome smoker. "I prefer to use Southern Pride, as it can smoke large amounts of meat and always is consistent," he says.

In addition to a smoker, Stewart recommends gathering plastic tubs in which to salt your meat before smoking. (Some meat, like bacon, can salt for a week or two before smoking.) You also need wood chips and a place to cool hot smoked items such as ham and bacon; Stewart recommends a separate refrigerator or cooling area other than your home refrigerator because "it can get smelly," he says.

"Smoking is simple and does not require a lot of equipment," Rivers adds. "The most important pieces of equipment are a temperature gauge for the meat, the right type of wood and, of course, the perfect rub."

Creating that perfect rub depends on your individual tastes and the type of meat you use. Numerous cookbooks include recipes for various

stay safe

As with any form of cooking, pay attention to safety when smoking meats. These tips will keep you on the safe side.

■ **Follow recipes.** "People attempting to preserve food like this need to be aware that there are dangers and they need to follow recipes," says John Stewart, chef and co-owner of Zazu Restaurant & Farm in Santa Rosa, Calif., and Black Pig Meat Co. in Healdsburg, Calif. "They should follow recipes and weigh all the ingredients, because the ratio of salt and curing salt to meat is critical for everything to go properly."

■ **Store carefully.** "Smoking does not preserve the meat such that it can stay out at room temperature for extended periods of time," says Shellie Kark, a chef, culinary educator and owner of "Kitchencue," a culinary DVD series. Smoked meat should be refrigerated if not used immediately.

■ **Watch for mold or other signs of decay.** "Some salami or even bacon takes weeks or months to cure, and [the cooks] have been looking at it and are committed and excited," Stewart says. "If a product seems off, is not pink or seems strange in any way, you need to throw it out; something is probably wrong. In this case, look at your notes and see what you did that possibly made the product go bad. Problems could include the growth of bad molds; green and blue are bad, orange is really bad, and white is good. Most of the mold is surface-related and can be cleaned off with wine; the alcohol will sterilize the surface. Most importantly, the meat should be sweet-smelling; it should not have a bad odor." — N.M.J.



Smoking rigs can come in many sizes and shapes, and they're made out of various materials.

rubs, but the most important ingredients are usually simple ones like salt, sugar and spices.

Hot and Cold Smoking

There are two main methods of smoking meat: hot smoking and cold smoking. Hot smoking is "actually cooking the meat to eat that day," Rushing says, while cold smoking is "for preservation — to keep the flies away. My grandparents would cold smoke their meat for weeks."

Cold smoking was the method typically used by early Americans when they would leave meat out in the smokehouse to preserve it. Most home cooks today use hot smoking. "Both methods instill flavor and a unique texture to meat," Tomaszewski says. "Hot smoking takes less time, and the finished product is cooked and ready to eat when it comes out of the smoker. The hot-smoking process cures the meat, creating less chance of bacterial contamination, thus the ability to store in varied conditions.

"Cold smoking can take days or weeks, and many cold-smoked foods have to be cooked before eating because cold smoking doesn't actually cook the meat," Tomaszewski continues. "There are many uses for cold-smoked meats, and they play an important role in many dishes. Lox, best if made with salmon, is a cold-smoked fish. It is not cooked, but it is ready to eat after this process is finished. It has to be cold smoked to achieve the very definite and unique flavor."

How to determine which method to use for a particular meat depends on personal preference. "The general rule of thumb with all meats is low temperature and a slow process," Rivers says. "The thicker the meat, the more patient a person needs to be."

Smoking Problems

When attempting smoking projects, keep a record of each step, including measurements of ingredients, smoking temperatures and lengths of time. "Records are critical for being able to reproduce your results or troubleshoot your mistakes," Stewart

smoking temperatures

According to the United States Department of Food Safety, smoke-cooked meats should reach the following internal temperatures:

Meat	Temperature (in degrees Fahrenheit)
beef, veal, lamb	145
pork	160
poultry	165
seafood	fin fish: cook until opaque and flaky shrimp, lobster, crab: should turn red clams, oysters: until shells open scallops: should turn milky-white



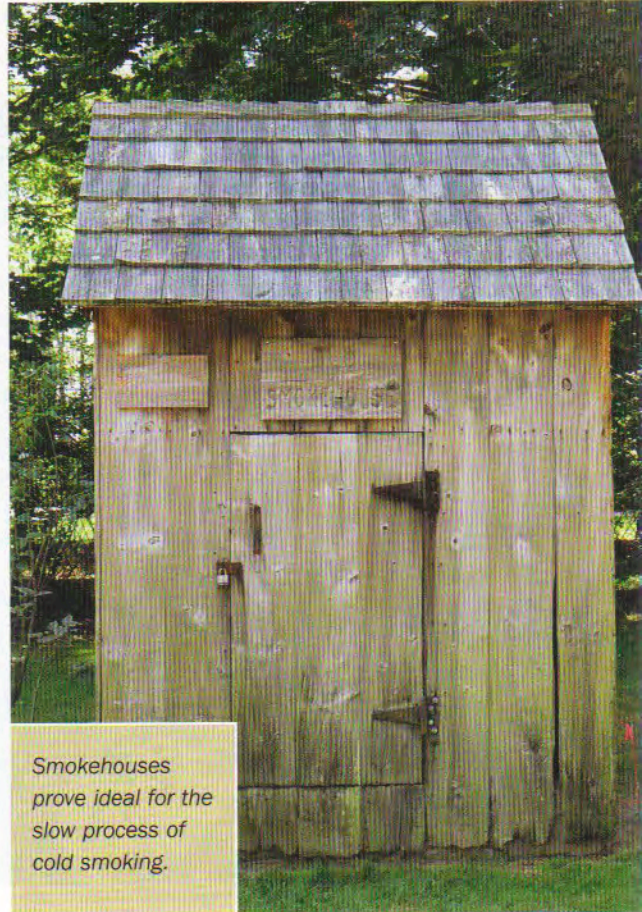
WITTRY PASCAL/ALAMY

Keep a lookout for the growth of bad molds, usually orange, green or blue in color.

says. "Take temperatures along the way, and record the types of wood you used and how often you added chips."

Overseasoning is one common problem that cooks run into when smoking meats, Rushing says. "People have a difficult time realizing that a tablespoon of this or that mixed into 10 pounds of meat will actually season it," he says.

Another issue is temperature control. It's important to keep the temperature low but still high enough to cook the meat safely. Rushing recommends at least 200 degrees F. "If you're slow smoking at 225 degrees F or higher, you have absolutely nothing to worry about," he says. "You can go for 10 to 12 hours [for some meats; turkey, for instance, would be overcooked after that length of time]. A lot of people get nervous about smoking and raise the temperature at the end, and they end up with meat that's about the consistency of a school desk."



Smokehouses prove ideal for the slow process of cold smoking.

In addition to choosing the right smoking temperature, it's vital to maintain that temperature consistently, Rivers says. "The best way is by using natural charcoal, which burns longer," he says. "The thickness of the smoker also affects the consistency of the temperature: The thicker the walls of the smoker, the more heat that is maintained."

the right wood for the job

ALDER

Flavor: delicate and slightly sweet
Good for: fish, pork, poultry and game

ALMOND

Flavor: sweet
Good for: most meats

APPLE

Flavor: mild, subtle and slightly sweet; gives off less smoke than most wood
Good for: poultry and pork

CHERRY

Flavor: mild and fruity
Good for: poultry, pork, beef and game

GRAPE VINES

Flavor: rich and fruity; gives off dense smoke
Good for: game, lamb and poultry

HICKORY

Flavor: sweet and strong, with a baconlike smoke flavor
Good for: pork, ham and beef

MAPLE

Flavor: slightly sweet and mild
Good for: pork, poultry and game

MESQUITE

Flavor: strong and earthy but can be mellowed by combining with mild

woods like apple or cherry
Good for: beef, fish, chicken and game

OAK

Flavor: very heavy smoke flavor
Good for: red meat, pork, fish and game

PEAR

Flavor: subtle, mellow and sweet
Good for: poultry and pork

PECAN

Flavor: sweet and mild; great when used with mesquite or hickory
Good for: poultry, beef and pork

To make it easier to monitor the meat temperature inside a hot smoker, Tomaszewski recommends using a dual-remote thermostat, such as Redi-Check from Cabelas.

Storing Your Meat

After smoking meat to the desired internal temperature, Rivers recommends tightly wrapping it in cellophane or aluminum foil. "The meat needs to rest for a period of time, depending on the thickness of the cut," he says. "For long periods of storage, it is important to wrap the meat tightly to prevent any exposure to the air and then store it in the refrigerator."

If smoked meats won't be eaten immediately, Stewart recommends storing them in the freezer. For a small family, "a ham could be cut off the bone and stored as pieces and the bones saved for soup or stew," he says.

Traditionally, smoked meat was considered preserved, and there was no option to refrigerate it. While smoked meat might be able to last longer than our modern, refrigeration-minded society seems to think it will, it's better to be safe than sorry. "A properly smoked, cured, dry sausage could hang for awhile; hams hang for six months to a year,"

Rushing says. "Prosciutto hams in Europe hang for two years. The American pioneers who went west had pork in barrels of salt, and by the time they got to Oregon, the stuff in the bottom was two to three years old, and it was fine. Today, I will smoke meat and usually eat it in about a week."

After investing the time and energy to select a cut of meat, prepare the meat with a rub or brine, monitor the lengthy smoking process, maintain the right temperature for just the right length of time, and smelling the smoky aroma of the slowly cooked meat, chances are that storing the meat won't be one of your top priorities. Most likely, you and your family or friends will be more interested in eating the meat. As you sample that smoky flavor from your grill or smoker, take a moment to remember the early Americans who developed the process. You'll be thankful for the flies that led them into the smokehouse. **PK**

Freelance journalist Nancy Mann Jackson writes regularly about gardening, preserving and cooking homegrown produce, and blogs about it at GrowingFoodandKids.com. Contact her through her website, www.NancyJackson.com



As American as
mom and apple pie,
smoking long has
been a popular
and tasty way to
preserve meat.