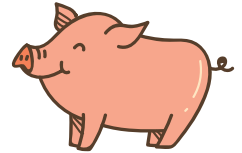




Pork

Theme Overview: Pork is the most consumed meat in the world and the third most consumed meat in the U.S. Pigs were among one of the first animals domesticated – around 6,000 years ago. Oklahoma’s swine industry is the second-largest agricultural enterprise in the state, valued at \$574 million per year. It has been debated whether pork is a red meat or white meat, but it is considered a red meat. Pork contains all nine essential amino acids necessary to maintain your body’s health. Pork is particularly high in thiamine, which converts carbohydrates into energy.



According to Pork Checkoff, no animal provides a wider range of products than pigs. Hogs are a source of nearly 40 prescription drugs and pharmaceuticals, including insulin. Pig heart valves have even been used to replace damaged human heart valves. Pig fat can be used in weed killers, chalk, cosmetics, floor wax, crayons, antifreeze, cement, and much more. Pigskin is commonly used for high-quality leather.

Food allergies: Recipes can be modified to accommodate food allergies and preferences. The recipes included in Food, Fun, 4-H are intended to introduce new recipes and food combinations to participants.

Recommended Preparation Order: 1. Honey Pork Kabobs 2. Classic Deviled Eggs 3. Peach Pecan Crisp 4. Cucumber Tomato Salad 5. Grilled Veggie Packets

Reporting: To receive the August Food, Fun, 4-H utensil kit, we need you to report back about your July experience by August 10. Reporting is easy and takes less than 5 minutes. Email the following to healthyliving@okstate.edu:

- 1 photo preparing a Food, Fun, 4-H dish from
- 1 photo of family meal

Complete and include in the email the following statements about this month’s theme, activities and recipes:

- “I like...”
- “I wish...”
- “I wonder...”

Dinner Conversation Topics:

- What is a skill you would like to learn? (How to: paint, bake, surf, etc.)
- If you could eat dinner with a celebrity, dead or alive, who would it be?
- How were you a good friend today?

Family Challenge:

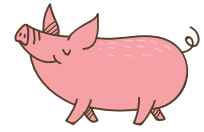
- Enjoy a meal outside or go on a family picnic
- Visit a park
- No phones during dinner
- Try at least one bite of everything



Fair Entry Idea: Pecans are a yummy addition to lots of desserts and other foods. Complete the Pecan Information Exhibit in section 4324 and use the appropriate grade division: grades 3-7 is class 19 and grades 8-12 is class 20. Learn more about this wonderful Oklahoma commodity and the pecan industry.

Oklahoma Fun Fact: Oklahoma's Cimmaron county in the panhandle is bordered by more states than any other U.S. county: Oklahoma, Texas, New Mexico, Colorado and Kansas.

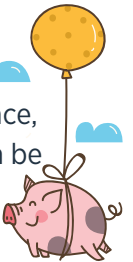
Let's Learn About Pigs!



Number of Pigs: According to the USDA National Agricultural Statistics Service, Oklahoma's hog inventory increased 5% in 2021, totaling 2.20 million hogs. Market hogs, pigs raised specifically for pork production, accounted for 1.73 million hogs in Oklahoma. As of 2021, Oklahoma ranks 9th in the U.S. in pork production.

About Pigs: Hogs are highly intelligent animals and have excellent memories. Most learn to push a lever to access drinking water and food. They have been taught to hunt, race, pull carts, dance, and tumble. Pigs have even been trained for war, where they served as mine sniffers on battlefields. Pigs are brave animals, and a pig named Priscilla has even saved a boy from drowning. They are curious animals and like to keep busy. Some farmers entertain pigs with beach balls or old tires. Pigs also enjoy listening to music.

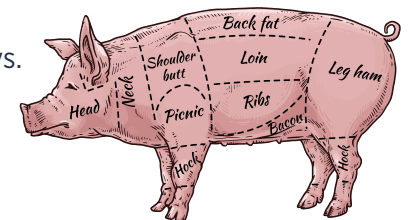
They have poor eyesight, but a great sense of smell. Pigs cannot sweat, so to cool down they enjoy playing in the mud. Apart from playing in the mud to cool down, pigs are very clean animals. When given enough space, a pig will not soil areas where they sleep or eat. They are social animals and prefer to be in groups rather than be alone. They may not be able to fly, but pigs can swim and run a seven-minute mile.



Raising Pigs: Hogs are one of the fastest reproducing mammals. Their gestational period is 3 months, 3 weeks, and 3 days. Sows can give birth to a litter twice a year. Litters typically range from 8 to 12 pigs. Piglets weigh around 2.5 pounds at birth and are weaned between two to four weeks old. Hogs are referred to as piglets or nursery pigs when they weigh less than 40 pounds. Once hogs weigh over 40 pounds, they are referred to as growing or finishing pigs. Hogs usually go to market when they weigh between 240 to 280 pounds.

Pigs can be referred to as barrows, boars, gilts, or sows. All male hogs are born boars. A barrow is made by castration. Female pigs are referred to as gilts until they give birth. After giving birth, a female is called a sow. When fully grown, a boar can weigh more than 500 pounds and a sow weighs between 300 to 500 pounds.

Cuts of Pork: Hogs have four primal cuts: pork shoulder, pork belly, pork loin, and leg ham. Pork shoulder is fattier than most other primal cuts and is often used to make sausage. Pork belly is the fattiest primal cuts and comes from the pig's underside belly area. Popular belly cuts include bacon, spareribs, St. Louis ribs, and pancetta. Pork loin comes from the pig's back, starting just behind the shoulder and ending at the hip. The loin yields some of the most tender cuts of pork. It is commonly split into three sub-primal cuts: ribs, sirloin, and loin center. Cuts from the loin are ideal for dry heat cooking methods. Leg ham refers to the rear leg and rump area of the hog. The meat here is very lean and can be cut in a variety of ways. When cured and smoked, the leg ham produces ham; when dry-cured and aged, it produces prosciutto. Other sub-primal cuts include ham steak, schnitzel cutlets, shank ham, rump ham, and pork hock.





Safely Handling Pork

Selecting the Best Pork

Fresh is Best: When buying pork, look for cuts with small amounts of fat, has a grayish-pink color, and feels firm. For the best flavor and tenderness, look for cuts with a small amount of marbling. Packages should be cool to the touch and have no wear or punctures. Grab meat last at the store, just before checking out. Fresh meat can contaminate other grocery items. To prevent this, separate fresh meats from other items. Place raw meat in the plastic bags available in the meat section to contain any juices that may leak out. Pack raw meat in a cooler if it takes more than an hour to get home. Take meat straight home and immediately refrigerate or freeze.



Product Dating: Applying “sell-by” or “use-by” dates is not required by federal regulations. Instead, many stores and processors voluntarily choose to date packages. Use or freeze products within three days to five days of the “sell-by” date. If manufacturers determine a “use-by” date, observe it. Expiration dates after the pork is frozen are not important. All foods stay safe while properly frozen.

Product Inspection and Grading: All pork sold retail is inspected for wholesomeness by either the USDA or a state system that has standards equal to the federal government. Each animal and its internal organs are inspected for signs of disease. The “Passed and Inspected by USDA” seal ensures that pork sold is wholesome and free from disease. Unlike the inspection which is mandatory, quality grading is voluntary, and plants pay to have its pork graded. Pork has two different USDA grades, “Acceptable” grade and “Utility” grade. All fresh pork sold in U.S. grocery stores has the “Acceptable” grade. It should have a high proportion of lean meat to fat and bone. Pork graded as “Utility” is mainly used in processed products and is not available at grocery stores to purchase.



How to Store

Keep pork stored below 40°F. Store raw pork together and separated from cooked foods. Refrigerate or freeze fresh pork immediately after bringing it home. Never leave meat in a hot car or sitting out at room temperature.

Refrigeration: Packaged whole cuts of pork can be refrigerated up to four or five days after purchase. Ground pork can be stored in the refrigerator for up to two days after purchase. Cooked pork is best if used within four days.

Freezing: Freeze whole cuts of pork if you are not planning on cooking it within four days of purchase. Wrap cuts of pork separately in freezer bags and remove air from the package before freezing. If freezing pork in its original packaging, overwrap with a freezer bag or paper. Cooked pork cuts can be frozen the same way as raw pork unless it was made with a sauce or gravy. In that case, store in a rigid container with a tight-fitting lid.

Preparation

Wash hands with hot, soapy water before preparing foods and after handling raw meat. Do not let raw meat or juices touch foods ready-to-eat. Never put cooked foods on the same plate that held raw pork. Always wash utensils that have touched raw meat with hot, soapy water before using them for cooked meats. Clean counters, cutting boards, and any other surfaces raw meat touched.





How to Thaw

Pork can be safely thawed using three different methods: in the fridge, in cold water, or in a microwave. Never thaw meat at room temperature. Pork can be cooked frozen in the oven, on the stove, or on the grill without defrosting first. Estimate one-third to one-half more cooking time depending upon the size of the meat. Broil frozen pork farther away from the heat source; preheat the skillet when pan-frying or pan-broiling. Do not cook frozen pork in a slow cooker.



Thawing in a fridge: Allow a 24-hour thawing period in the refrigerator. After properly thawing pork, it will be safe in the refrigerator up to five days before cooking. If you decide not to use the pork, you can safely refreeze it without cooking it first.

Thawing in cold water: Leave pork in its original wrapping or place it in a watertight plastic bag. Drain and change the water every 30 minutes. The time for thawing varies based on the size and cut of pork.

Thawing in a microwave: Pork thawed using this method must be cooked immediately after. Some areas may begin to warm up or cook while in the microwave, and any bacteria present would remain. Use the defrost or medium-low setting on your microwave, according to the manufacturer's directions. Turn meat and separate parts as it thaws, keeping an eye on it to ensure the meat does not begin to cook. Thawing times may vary.

Meat thawed by the cold-water method or in the microwave should be cooked before refreezing. It may have been held at temperatures above 40°F, meaning new bacteria may be present.

Cooking Pork Safely

Do not rinse raw pork before cooking it. Any bacteria that might be present will be killed during cooking. One of the critical factors in controlling bacteria in food is controlling temperature. Pathogenic microorganisms grow very slowly at low temperatures, multiply rapidly in mid-range temperatures, and are killed at high temperatures. For safety, foods must be cooked thoroughly. Using a meat thermometer is essential to prevent under-cooking and food-borne illness. Research has shown color and texture indicators are not reliable when determining doneness.

- The FDA recommends cooking ground pork patties and other ground mixtures to 160°F.
- Cook whole muscle meats and fresh cured ham to 145°F for medium-rare with a 4-minute rest before carving or eating, 160°F for medium, or 170°F for well done.

Cooked muscle meats can be pink even when the meat has reached a safe internal temperature. If fresh pork has reached 145°F throughout and is given a 4-minute rest, it will be safe to eat even if the center is pink. The pink color can be due to the cooking method or added ingredients.

Partial Cooking: Never partially cook pork, then refrigerate and finish cooking later. Any bacteria present would not have been destroyed. It is safe to partially pre-cook or microwave pork and lamb immediately before transferring it to a hot grill or oven to finish cooking.



Source: Baxley, R. (2021). Schmutz, P. and Hoyle, E.H. (1999). Safe Handling of Pork. Clemson Cooperative Extension. Home and Garden Information Center. Retrieved from <https://hgic.clemson.edu/factsheet/safe-handling-of-pork/>





Using Marinades

Marinades are used to add flavor and tenderize meat. A proper marinade includes three essential elements: flavor, acids, and salt. Marinades need time to work. Suggested marinating times vary based on the meat's size, kind, and cut. Denser meats like pork and steak can marinate for 24 hours or more. Lighter meats like chicken can marinate between 2 to 24 hours. Seafood marinating times range from 15 minutes to 1 hour.

Three Essential Marinade Elements:



- **Flavor:** Add seasonings and spices to heighten the flavor of the meat or give it a unique flavor. You can completely transform a dish by adding or changing the seasonings and spices used. Make it your own and identify which flavor combinations you enjoy best.
- **Acids:** A marinade must contain an acid, otherwise it is not considered a true marinade. Acids tenderize meat by breaking down the connective tissue over time. The longer you marinate your meat, the more tender it becomes. Effective acids can be found in tomato products, lemons, fruit juices, and vinegar.
- **Salt:** Acids may cause the meat to lose its ability to retain water. Adding salt improves juiciness and allows meat to retain the marinade's flavors.

Other Marinade Tips:



- Do not marinate in a metal container because acids can react with metal. Use a sealable plastic or glass container and cover. During the marinade period, occasionally turn the food over so all sides are evenly coated. You can also place food in a resealable plastic bag, close and refrigerate, turning the bag over from time to time to evenly coat food.
- Always marinate food in the refrigerator. Harmful bacteria can begin to grow and may cause food-borne illnesses if left out. Place marinating meat on the fridge's bottom shelf to prevent any potential leaking from contaminating other food.
- Discard marinade after use. The marinade contains raw juices, which may contain harmful bacteria. If you want to use the marinade as a dip or sauce, reserve a portion before adding raw food. If it has touched raw meat, bring the marinade to a rolling boil for one minute, stirring constantly, before using it for basting.
- Never place cooked meat on a dish that held raw meat. Bacteria in the raw juices can transfer to cooked foods.
- Use a meat thermometer to determine if meat is done. The USDA recommends the following minimum internal temperatures: steak, roast, and fish 145°F; ground beef and egg dishes 160°F; poultry 165°F.

Sources:

Plesa, Aimee (2016). Use Marinade to Add Flavor to Summer Meals. Penn State Extension. Retrieved from <https://extension.psu.edu/use-marinades-to-add-flavor-to-summer-meals>

Christensen, Darlene (2011). Tips on Marinating Meat. Utah State University Extension. Retrieved from <https://extension.usu.edu/archive/tips-on-marinating-meat>.