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Home Canning of Meats

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FORT COLLINS, COLO.

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Home Canning of Meats

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Good-quality meat is a highly palatable and easily digested food. It is a rich source of protein and furnishes some minerals and vitamins. Liver and other internal organs are good sources of vitamins A and B₁ and the minerals, iron and phosphorous. Lean pork muscle is a good source of vitamin B₁ or thiamin.

Many farm families include meat in their meals once a day and sometimes twice. When food costs are being cut, meat may be served every other day or combined with cereals in other dishes to give flavor. Home-butchered and canned meat can be quickly and easily prepared.

Canning is one of the satisfactory ways of preserving meat for future use. For people living in rural districts away from marketing centers it provides a quicker and more economical way of procuring meats. Farm families have reported substantial savings with home butchering and preservation. Culls from the poultry flock—poor layers and extra roosters—require little more work to can in quantity than to prepare singly for a meal.

Most vitamin losses in canning are due to oxidation. Consequently the aim in canning to preserve vitamins is to exclude air from the hot food just as much as possible.

Equipment

Good equipment lightens canning troubles. The following are essential for any method where food is cooked in jars:

1. The processor. A processor is any utensil holding water in which jars containing food may be placed for heating, or processing. **A pressure cooker is the only type of processor recommended for meat.**
2. Lids and jars.
3. Utensils required for pre-heating are spoons, knives, long-handled fork, jar lifter, and pans.

Care of Equipment

Processor.—The care of a pressure cooker is most important. There is no danger in using one if directions are carefully followed. It is necessary that the safety valve always be kept clean and in good condition. Remove the ball or weight and the spring in the safety valve. See that these are dry and do not stick. Do not scour the ball with steel wool or any other scouring material. When not in use the spring over the ball should be released.

After each using be sure to wipe all moisture and grease from the inside of the lid. In removing the lid from the cooker, never turn it upside down, as this allows grease to collect in the gage and valve.

Jars and Lids.—Examine all glass jars and lids for cracks, nicks, and rough edges. Run your finger along the edge to see that no rough projections will cut into the rubber. Test jars for air-tight seal. It is best to use new lids. If old rims are dark, boil them in a weak soda-solution. In nearly all cases of glass jars having lacquered lids, the seal is made by a gummed edge which must be soft and springy. The screw rims are merely to hold lid in place during processing. The rim may be removed when jars are stored as they sometimes rust on standing in storage room. **Follow directions accompanying lids to secure satisfactory sealing results.** Tin cans and pint glass jars are best for canned meats.

Pans, jar lifters, spoons and forks should be in good condition and clean. Utensils for meat are enamel ware, aluminum, or stainless metal. Copper and iron utensils discolor meat and should not be used. Wooden utensils should be scrubbed with soapy water and disinfected with a hypochlorite solution.

Summary of Steps in Using a Pressure Cooker for Canning

1. Place the false bottom in the cooker.
2. Pour about 1 inch of water in the cooker.
3. Set the jars in the cooker carefully without crowding. Tin cans may be stacked.
4. Adjust the lid on the cooker. Different makes of cookers have indicating marks or arrows on both cover and base to be matched.
5. Partially tighten clamps on opposite sides at the same time, then continue tightening evenly. Do not use a wrench since this will break the threads. A clothespin may be helpful in tightening or releasing the clamps.
6. Leave the petcock open from 5 to 10 minutes after the steam begins to escape. This allows all the air to be driven out and creates a higher temperature than would be possible in a mixture of air and steam.
7. Close the petcock and watch the pressure gage carefully.
8. Begin counting the time when the pressure gage registers the desired temperature.

9. Keep the pressure uniform.
10. Process the desired length of time.
11. Allow the pressure to drop slowly to zero and let stand 3 to 5 minutes.
12. Open the petcock carefully.
13. Remove lid.
14. Remove the jars or cans.
15. Cool according to directions.

Method for Canning Meats

General Directions.—Cleanliness is important. Everything which has to do with canning should be clean—the room, the food, the utensils, and the person who is doing the canning.

Meat to be canned should be fresh and unspoiled. It should hang long enough after butchering so that it is thoroughly cooled.

Heat must be applied at the proper stage, and of the right intensity to make the food safe and yet not alter its quality. This application of heat to food which has been packed in a container is called processing. Meat is usually pre-cooked in water or by dry heat before it is processed in the container. (See chart for detailed directions.)

Selection and Preparation of Meat.—Well-finished, healthy animals provide the best quality of meat. A good “finish” of fat on an animal helps give flavor and good texture to a cut of meat.

When slaughtering is done on the farm, select a cool time and a clean place. Chill rapidly just above freezing (34-36° F.). Avoid freezing. Frozen meat may be canned but it does not make a high-quality product. Cut or saw the frozen meat and plunge into boiling water.

Beef, Lamb, Pork, Veal, Game.—Wipe meat with a clean, damp cloth. Cut across grain of meat. Make pieces of a size suitable for serving and that will fit into the jar well. Left-over and small pieces of meat can be canned for stew or soup, or used for ground-meat mixtures. Remove bones except when needed for good structure of the meat.

Poultry.—Proper killing and bleeding are essential for good-quality canned poultry. Pick, draw, and clean carefully. Remove oil sac, lungs, and kidneys. Cut into usual pieces. Trim off wing tips and bony ends. Wash, drain, and chill. Trim off large pieces of fat. Bone breast if pieces are large. Can giblets separately. Necks and bony pieces may be cooked and canned for soup stock or creamed chicken.

Game and Fish.—The same general methods as for meats and poultry are recommended. The freshness of fish is important. Fish should be processed within five hours after being caught. Clean as soon as taken out of water. Remove head and tail. To scale, dip in hot water, then remove scales. Cut fish into correct lengths to fit jar. Soak in brine for 10 minutes to 1 hour, depending on the thickness of the fish. Drain.

Everyone who hunts or fishes in Colorado should be familiar with the booklet, *The Game and Fish Laws of Colorado*, published by the Colorado Game and Fish Commission.

“It is necessary to have a license to hunt or fish for any species whether protected by law or not. There is no restriction on possession of White Salmon, Suckers, Carp, or Squawfish, but if a person intends to can or in any manner keep possession of Trout or Grayling longer than five days after the close of the open season thereon, he must have a storage permit as required by law. This applies to deer, elk and bear, or any big game species brought into this State from any other state, and other state game must have a legal clearance from the state where it was obtained.”

Beef, Hash, and Stew Meat.—One way of utilizing small pieces of meat is to can it for combining later with potato in hash. Cut or chop the meat into uniformly small pieces. Add sufficient water to cover, bring to simmering, and cook for several minutes. Pack hot and process as directed in table.

For use in making stew, cut the meat into 1-inch cubes, cover with boiling water or broth, and simmer until the meat is shrunken and heated through. This requires about 8 to 10 minutes. The color of raw meat will have almost disappeared from the center of the pieces. Pack the drained meat closely into containers, add salt, and cover with boiling concentrated broth. Process immediately as directed in table.

Beef, Heart and Tongue.—The tongue and heart are generally used as fresh meat, but they may be canned as follows: Wash the tongue, drop into boiling water and simmer for about 45 minutes, or until the skin can be removed. Skin and cut into pieces that will fit into the containers. Reheat to simmering in broth, pack into containers; add salt and broth to cover. Process as directed in table.

Wash the hearts, remove the thick connective tissue, and cut into pieces suitable for packing. Drop into boiling water and simmer for 15 to 20 minutes. Pack at once; add salt and broth to cover. Process as directed in table.

Beef, Corned.—Wash the corned beef, cover with cold water, bring to the boiling point, and drain. Cover the meat again with cold water, bring to the boiling point, then lower the heat and simmer until the meat is thoroughly heated through. Remove the meat from the broth a piece at a time, and while it is still hot cut into smaller pieces, and pack into the containers. Season the broth as desired, with bay leaves, cloves, or nutmeg. Sometimes gelatin softened in a little cold water is added. Pour boiling broth over the meat to cover. Process as directed in table.

Chicken Sandwich Spread.—This is a good way to utilize the small bits of meat stripped from the bony pieces.

4 pounds cooked chicken, chopped or ground	1 quart chicken broth
1½ pounds olives, chopped	½ teaspoon curry powder
1 pound pimientos, cut in small pieces	1 teaspoon ground mace
	1 teaspoon ground mustard
	Salt and white pepper, to taste

Combine all of the ingredients; stir and heat gradually to simmering. Pack hot and process immediately as directed in table.

Chicken-Liver Paste.—Chicken livers may be made into a paste for sandwiches. Simmer the livers for 10 minutes and drain. Mash with a fork and remove any stringy tissue. Then add a small quantity of finely chopped olives, mayonnaise, and dashes of tabasco sauce and paprika. Stir while heating carefully to prevent scorching. Pack hot and process as directed in table.

Chili Con Carne.—Use 2 pounds of chili beans or some other pink or red variety. Pick over the beans, wash, and soak overnight in a cool place. Remove thick connective tissue from 5 pounds of lean beef, or beef and pork mixed, and grind coarsely or chop. Add a little chopped garlic, 3 to 5 tablespoons of chili powder, 3 tablespoons of salt, and one-half cup of wheat flour, and mix well with the meat. Cook the mixture in 1 cup of hot beef fat until the red color of the meat disappears. Add 2 quarts hot water, cover, and simmer for about 10 minutes. Drain the beans and blanch for 5 minutes in boiling water. Drain. Fill cans or jars about one-third full of the hot beans. Add the hot meat mixture to about seven-eighths of capacity, then hot water to fill. Process immediately as directed in table.

Pork and Beans.—Pick over beans, wash, and soak in a cool place for about 16 hours, or overnight. Drain. Prepare liquid to cover the beans, using the proportion of 1 quart of water, 1 tablespoon of salt, and 1 tablespoon of sugar (or molasses) to

each pound of dry beans. Or prepare an equal quantity of tomato sauce, using 3 cups of tomato pulp to 1 cup of water. Add ground spices, cayenne pepper, and chopped garlic or onion, as desired. Cook until thick.

Blanch the beans for 2 minutes in boiling water, and drain. Place small pieces of salt pork in a bean pot or other container for baking. Add the beans and additional pieces of salt pork, and cover with the prepared liquid or tomato sauce. Cover the pot and cook the beans in a slow oven (about 250° F.) about 1½ hours. Remove the lid and combine all of the ingredients; stir, and heat gradually to simmering. Pack hot and process immediately as directed in table.

Pork, Headcheese.—Headcheese may be made from a hog's head, tongue, and heart, according to any good recipe but omitting the sage. Pack the headcheese hot into containers and process as directed in table. It is better to use tin cans so that the product can be removed in a single piece.

Pork Sausage.—Follow any tested formula for preparing the sausage, but omit the sage for that gives the sausage a bitter flavor after processing. See that the seasonings and meat are well mixed together.

Mold the sausage into cakes and precook in a moderate oven (350° F.) for 10 to 15 minutes, or until the cakes are slightly browned and the color of raw meat has almost disappeared. Pack into the jars and cover with the drippings or with hot water. Process as directed in table.

Precooking and Packing.—Meat precooking may include roasting in oven or cooking in water. Precooking is done to help develop flavor and color, to reduce processing period, and to obtain a full pack because meat shrinks during cooking.

Frying is not recommended because it makes the meat hard and dry and may give a disagreeable flavor.

Precooking in Oven.—Cut meat into uniform pieces weighing about a pound and cook in a moderate (350° F.) oven until the pink or red color almost disappears at the center. One-pound pieces require about 30 minutes. Cut the meat into smaller pieces. Pack closely and cover with pan drippings or water to within ½ inch of the top.

Chicken can be handled in much the same way except that the smaller pieces require less time for precooking.

Precooking in Water.—Cut meat into uniform pieces weighing about a pound and place in boiling water. Partly cover the kettle and simmer for 12 to 20 minutes, until the red color almost

disappears at the center. Cut into smaller pieces and pack at once into containers. Cover with broth, leaving $\frac{1}{2}$ inch at the top and process at once. For chicken, 8 to 10 minutes is sufficient for simmering. Meat is often packed raw, especially in tin cans. Processing time is longer.

Care of Canned Product

Jars should be kept under observation at room temperature for about a week. If any signs of spoilage are apparent, examine the whole lot carefully. Causes of spoilage can be traced much more readily if this week of observation is allowed. If spoilage occurs there is always a reason. A poor product, over-development of bacteria before processing, insufficient sterilizing time, or a faulty seal will always give trouble. Bulging or evidence of leaking may indicate spoilage in glass jars. When air bubbles come to the surface the can leaks.

Store in a cool, dry place in temperatures from 45 to 60 degrees Fahrenheit.

How to Use Canned Meat

Inspect canned meat before preparing it for the table. There should be no bulging or signs of leakage. The odor should be characteristic of the product. The broth over canned meat may not always be jellied. The quality of connective tissue and cartilage may be a factor.

Freezing does not cause spoilage of canned foods unless it breaks the seal and permits contamination. Check jars or tins closely for leakage.

When opening for use, cover with liquid and boil vigorously in an open pan for 15 minutes before tasting.

Serve in an appetizing manner.

Scoring Canned Meat

Color.—Natural, clear, jellied, meat covered with liquid.

Solid Contents.—No sediment, layer of fat $\frac{3}{4}$ to 1 inch thick, all meat edible, firm, cut across grain, cut in appropriate-sized pieces.

Packing.—Well packed, filled to shoulder of jar.

Container.—Perfect seal, complete seal, jar sparkling.

Timetable for Processing Meats and Chicken in the Steam Pressure Canner*

At altitudes over 2,000 feet, add 1 pound of pressure for each additional 2,000 feet.
250° F., or 15 pounds pressure at sea level (17 pounds at 5000 feet altitude)

Product	Pint glass jar Minutes	No. 2 tin can Minutes	Quart glass jar Minutes
Beef:			
Fresh	85	85	120
Ground (hamburger)	90	90	120
Hash	90	90	120
Heart and tongue.....	85	85	120
Stew meat	85	85	120
Corned	85	85	120
Chicken and other poultry:			
With bone	65	55	75
Boned	85	85	120
Giblets	85	85
Sandwich spread	½ pt. 65 pt. 90	90
Liver paste	½ pt. 65 pt. 90	90
Lamb and mutton.....	85	85	120
Pork:			
Fresh	85	85	120
Headcheese.....	90	90
Sausage	90	90	120
Veal	85	85	120
240° F., or 10 Pounds Pressure			
Chili con carne.....	120	120	150
Pork and beans.....	80	70	90

*From U.S.D.A. Farmers' Bulletin no. 1762.

Planning the Family Meat Supply

Hogs and chickens dress out approximately 75 percent of live weight.

Beef animals and lambs dress out approximately 50 percent of live weight.

A 200-pound hog will yield approximately 50 pounds lard and bacon and 100 pounds of other pork cuts.

A family of five needs from 400 to 750 pounds of meat, poultry or fish, yearly.

This amount might include: 1 beef or veal, 2 or 3 hogs, 1 lamb, some poultry and fish.