

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS

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HOME CANNING OF MEAT

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HOME CANNING OF MEAT

The cheapest foods for the farm family are those produced on the farm. This applies to the meat supply as well as other food products. Each farm family should can and cure enough meat at butchering time to supply them until the next meat killing season; supplemented, of course, with fresh meat, particularly chicken. One serving of meat for each member of the family per day is quite enough in addition to the use of milk, eggs and cheese.

The home canning of meat is a rather recent accomplishment, when we consider how long we have been canning fruits and vegetables. However, it is fast being recognized as an important practice in many of our rural homes and is easily done.

The Home Canning of Meat Means:

Fresh meat for the family throughout the year. Too much cured meat is considered unwholesome.

Variety. Variety is an essential of a good diet. Variety can be secured by canning fried chicken in season for use in winter time, and roast beef, pork, or fresh sausage in winter to use during the summer months.

Less overeating of meat at killing time. It is poor economy from a health standpoint to eat too much meat at killing time in order to save it. It is much better economy to eat some certain parts that are less readily cured, such as spareribs, backbone, and heart, and can what remains.

Economy. Chickens or other animals need not be held over for table uses during the year. Can them when they reach prime condition and save the feed bill. Money saved is money made.

Readiness for emergencies. A variety of canned meats on the emergency shelf means that you are prepared for Sunday dinner, unexpected company, harvest hands, or wash day.

ESSENTIALS FOR SUCCESS

Good meat, proper equipment and canning methods, tested rubbers, good containers, thorough processing and a perfect seal are necessary for success.

Good Meat:

1. Only animals which are known to be healthy should be slaughtered for canning. A bright eye, sleek coat of hair, and vigor are indicative of health. Cattle should be at least moderately fat, as the meat from a thin animal is less palatable. The meat from a well conditioned animal will usually be marbled. This means that each of the bundles of muscle fibers will be surrounded by a covering of fat and there will be a rather smooth, even layer of fat over the outside of the carcass just under the hide.

Meat from aged animals is more likely to be tough than that from growing animals; however, the former, properly fattened, is preferable to that from young ones in poor condition.

2. Meat should be fresh and thoroughly cooled. Can meat as soon after chilling as possible (probably the next morning) unless held in a refrigeration plant. When cooled in a refrigeration plant, 24 hours at 36 degrees, or 48 hours at 40 degrees, is recommended.
3. Meat must be clean. In a dressed carcass bacteria spread rapidly, therefore, handle meat in a very cleanly manner, both while it is being dressed and while it is being canned.

Proper Equipment.

A pressure cooker is necessary for success and safety in the canning of meat.

Good Containers.

Meat may be canned in either glass or tin. When canning meat in metal topped jars, use new lids; new rubber rings should always be used. Prepare containers for canning just as you would for the canning of fruit or vegetables. Plain or enamel-lined tin cans may be used.

Thorough Processing.

Thorough processing is the most important step in meat canning. Meat which is insufficiently processed may keep, at times, if held at low temperatures, but the chances are that the percentage of spoilage will be greater; and even if there are no visible signs of spoilage, certain bacteria may be present which would cause food poisoning. Processing time tables should be carefully followed.

A perfect seal.

Before placing rubber rings and lids on containers, wipe the top of the jar clean so that it is free from fat and liquids. This is important for a good seal. Inspect for a good seal before and after processing.

STEPS IN MEAT CANNING

It is a matter of personal preference whether meat is packed raw in containers for canning or whether it is precooked before canning.

The same general principles and directions, with a few exceptions, apply to the canning of meat whether it is placed in the can raw or precooked. A very important factor in either case is a **thorough exhaust of air.**

Cutting.

Cut meat into suitable pieces for cooking. (See chart)

Washing:

Wipe meat off with clean, damp cloth. If necessary, wash it.

Preparation for the Can.

1. Uncooked (raw). Cut meat into convenient size pieces for packing. When using tin cans or wide mouth jars, larger pieces may be used. (One to three pieces to the container.) Serving size pieces should be used for small mouth jars. Remove all bones except in frying chickens.

2. Precooked. Prepare as for immediate use and cook only partly done, just until hot through to the center. Do not over-cook. However, when packing preheated meat in containers to be sealed before processing, such as tin cans, the meat should be steaming hot to the center of pieces. It should be packed while hot and be sealed and processed immediately. The bones should be removed before precooking, especially large bones. The smaller bones are sometimes more easily removed after being heated. Heating loosens the tissues adhering to the bones, making it possible merely to lift them out. Cut for packing as described for raw meat in the above paragraph.

Packing.

Pack both raw and precooked meat fairly tight on the outside and next to the can, leaving it somewhat looser in the center of can for the penetration of liquid to the center of can. Liquid carries heat penetration quickly to the center of the can, which is necessary for thorough processing.

After the meat is packed, add seasoning near the top (but not on top) when metal tops are used. Salt next to tin lids sometimes causes rust on the lids. Add liquid except when packed raw, wipe mouth of jar or can with clean cloth, and adjust lids.

1. Uncooked (raw).

When glass jars are used for raw meat, do not complete the seal until removed from the canner at end of processing period (except Kerr Self Sealing jars). This provides for the exhausting of air.

When tin cans are used for raw meat, the air must be exhausted before sealing the cans. This may be accomplished by one of the following methods:

a. Place cans filled with raw meat in a pressure canner and cook for 15 minutes at 10 pounds pressure. Remove and seal immediately.

b. Place the filled cans in a hot water canner with the boiling water coming within 1 or 1½ inches of the top of the cans, or heat in steamer from 35 to 60 minutes. Remove and seal immediately. In all instances, meat and liquid must be hot when packed in containers that are sealed before processing. This is very important.

2. Precooked.

When glass jars are used, fill with meat to within a half inch of the top of the jar, but do not fill the liquid above the turn (1½ inches from top). This will prevent the liquid from cooking out over top of jar, which is very undesirable because of its fat content.

3. When rolled roasts are used, they should be well seared either in a hot oven or frying pan before being packed in the can. To more completely exhaust the air place the cans before sealing in a pan of hot water and heat for 10 to 15 minutes. Remove and seal.

In all instances meat and liquid must be thoroughly hot when packed in containers that are to be sealed before being processed. This is very important.

In reality, in the home canning of meat, there is no such thing as canning meat raw in tin cans because the exhausting of air in home canning must be accomplished by some method of preheating.

Seasoning.

When the precooked method is used, the seasoning may be added at the time of precooking, but seasoning will be more uniform if added to each container as filled. Use ½ to 1 teaspoon of salt, or salt and pepper mixture, to each pint jar and No. 2 tin can; and 1 to 2 teaspoons to quart jars and No. 3 cans. A teaspoon of sugar added to quart containers of pork is considered a good addition. Leave sage out of sausage for canning. It gives a bitter taste. This is true of too much pepper. Liquid (which should be meat broth) should be added to all precooked meats except fried chicken fish, and possibly sausage used for exhibit purposes. Broth that is too brown should not be used. Use clear broth, or water, in place of it. Do not add liquid to raw meat. It will make its own liquid. Do not flour meat for canning. It retards heat penetration and gives the meat a warmed-over flavor.

Processing.

Never allow containers packed with meat to stand very long before being processed. In home canning, a good practice is to have the pressure cooker on the stove and set each container filled into the cooker as filled. If this cannot be done, either do not fill containers until near time for pro-

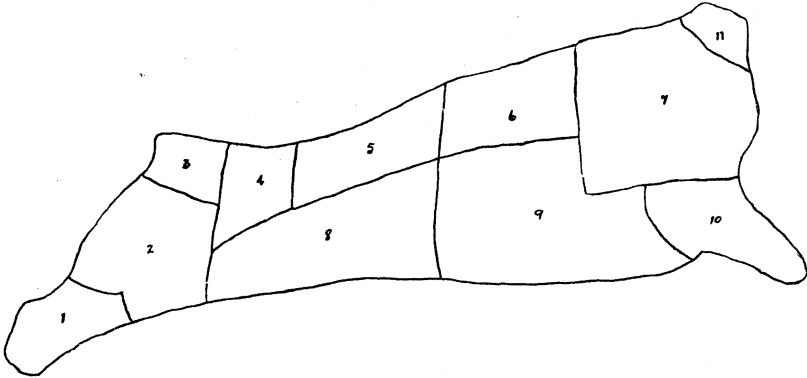
cessing; or if filled, keep containers hot by placing in a kettle of boiling water until ready for processing.

If the hot meat, which was packed in the jars, cools down to too low a temperature and is held at a low temperature for a period of time before processing, spoilage may start before the processing is done. Processing time tables should be carefully followed.

TIME TABLE
Pressure Cooker

	NO. MINUTES		NO. MINUTES		Pressure (lbs.)
	Pints and Quarts		No. 2 Cans	2½ and 3 Cans	
	Preheated	Raw	Preheated	Preheated	
Beef, Veal Mutton and Lamb	50	60	50	60	15
Ground Meat (Chili, Ham- burger, etc.)	60	75	60	75	15
Pork	55	65	55	65	15
Chicken without bones	55	65	55	65	15
Fried Chick- en with bones	55	60	55	60	15
Fish with some bones	90	120	90	120	15
Soup Stock	45		45	45	15

NOTE: Add 15 to 30 minutes to above time table for solid tight packs, also for meat that is not, in every way, in prime condition for canning.



1 Soup	2 Round steak Swiss steak Beef rolls Roasts	3 Roasts Stews Ground meat	4 Steaks Roasts
5 Steaks Roasts	6 Steaks Roasts	7 Rolled roast Stews Ground meat for chili, sandwiches, meat loaf, etc.	8 Stew Rolled roast Ground meat
9 Stews Hamburger Short rib Roast Rolled roast	10 Stews Soup Chili	11 Ground meat Stews Soup Chili	

This same chart may be used for cutting up veal, mutton and pork. Many people prefer curing most of the pork. However, there are some parts that cannot be cured—such as backbones, spareribs, heart, liver, sausage and loin. These parts may be canned.

The dressing percentage (per cent of dressed beef to live weight of animal) for beef cattle varies from 45 to 68 per cent. Steers grading from medium to good should yield from 53 to 56 per cent dressed meat.

QUANTITY CANNING

Day of Actual Canning

Cutting Carcass for Canning. Cut up the dressed animal. Sort as you cut, laying roasts together, steaks together, and so on. The man of the family might do this while breakfast is being prepared.

Start Cooking Early. If the precooked method is to be used, get roasts in the oven and in pressure cookers early—before breakfast if possible, so they will be heating while you are having breakfast. By the time the breakfast dishes are finished, these roasts are ready to be sliced and packed and put on to process. Getting your processing started early will keep you from running into the night with the last processing.

Limit Methods of Preparation. Do not make the mistake of attempting to prepare meat in too many ways when canning in quantity. Choose three or four ways for preparing the greater part of it. The favorite methods of preparation are: Roasts, stews, ground meat (for meat loaf and sand-

wiches), steak in some form as plain, fried, beef rolls, or Swiss steak, and soup stock. (See chart.)

Division of Work. Divide the work. The canning of meat in quantity is a task at which a number of people can work together to advantage. However, two people can manage quite well by taking a longer time for doing the work.

1. One person may be responsible for sorting, washing, seasoning and precooking the meat. This person should plan to keep ahead of those who are carving and packing the meat in the jars.
2. One person should be responsible for slicing the meat for the cans. Slice across the grain.
3. Another person may be responsible for packing in jars.
4. Another may add seasoning and liquid and prepare jars for processing.
5. Another may start the processing and watch the cookers during the processing period.
6. Another should keep time, remove jars from cooker at end of processing period, and see that a good seal is secured. The timekeeper should be provided with a pencil and paper on which to record the beginning and finishing of the processing period of the various cookers, etc.

CANNING FOR EXHIBIT

When canning meat for exhibit purposes it is necessary to observe the following suggestions in order to show up the real quality of the product. With these exceptions the work is done exactly as when canning for home use.

1. Do not use flour on fried meats. Flour hides the real quality of the product and also flakes off and falls to bottom of jar, which makes an unattractive product.

2. Keep product as free from fat as possible. Cold fat on meat is unattractive and also hides the quality of the meat. Besides, too much fat is considered unwholesome.

3. Use liquid on all meats except fried meats. The jars should be from one-half to three-fourths full of liquid. Jellied liquid is desirable.

4. Pack meat in jar so that it shows the quality and grain of meat. It should also be arranged so that it is neat and attractive.

METHODS OF PREHEATING

Beef, Pork, Mutton, Lamb, and Chicken.

Method I

Cut into desired size pieces. Place meat in boiling water to cover, or, in case of chicken, in a small quantity of water. Lower the heat and simmer until the pieces are white all the way through. Pack in tin or glass. Add seasoning. Bring broth to boiling point and pour over the meat. Fill tin cans to within one-half inch of top. Fill glass jars just to within 1½ inch of top. Completely seal tin cans and partially seal glass jars. Place containers in pressure cooker to keep hot until cooker is filled. Process immediately.

Method II.

Place meat in baking pan, add a small amount of water, and heat in a

moderate oven until the pink stage disappears. Cut into desired size pieces and pack in containers. If the drippings are not too dark a brown, dilute with boiling water or broth and pour over the meat.

Method III.

Pack raw meat directly in containers. Add seasoning, but no water. Leave three-fourths inch head space. Preheat tin cans by processing for 15 or 20 minutes at 10 pounds pressure, or by setting cans in a bath of boiling water which comes to within one or one-half inches of top of can. Preheat for 30 or 40 minutes. Remove cans and seal immediately. Glass containers packed with raw meat need not be preheated provided the seal has not been completed.

RECIPES

Roasts and Roast Cuts. Roast and roast cuts may be prepared by any of the above methods. Roast cuts are small cuts of roast meat. In canning, several of these cuts are needed for filling a can or wide mouth jar, and are ideal for canning because they may be arranged to give space in the center of cans for the penetration of liquid and heat.

Rolled Roast. Season, roll, and tie. Cut it to fit can, allowing for some shrinkage. Sear in hot fat until nicely browned. Place in No. 2 can, and never larger than No. 2½, for it is difficult to thoroughly process solid packs of meat. Set the filled cans into a hot water bath for 20 or 30 minutes to further exhaust air. Remove, seal, and process.

Stew. Cut meat into inch or inch and a half cubes and prepare by Method I, described under methods of preheating. If vegetables are used they should be added about five minutes before stew is finished for packing.

Brown Stew. Cut as for plain stew. Sear in hot fat, (preferably beef fat) until lightly browned. Finish the preparation by Method I, described above. The meat may be floured only slightly, if floured at all, before searing.

Hamburger, coarse. Hamburger is ground with five-eighths inch plate, or smaller plate. Add meat slowly to boiling water and simmer until the color change indicates the cooked stage. Fill cans with drained meat, using spoon to pack meat in can. Season and cover with boiling broth. This meat may be used for making chili when opened, as well as for many other dishes such as baked hash, meat loaf, meat cakes, soup, sandwiches, etc.

Beef Rolls. Take round steak or other cut of lean beef, cut in slices about four inches wide and six inches long. Sprinkle with salt, a little pepper; cut some bacon in strips, and put a piece of bacon in each piece of meat. Roll each piece up tight and tie with a string. Brown in hot fat on all sides, then add water or stock and let smother for about 20 minutes. Remove the strings and pack.

Swiss Steak:

Salt and pepper	1 cup ham or bacon drippings
Mix	Few slices onion, chopped fine.
2 lbs round steak or sirloin steak,	½ green pepper, chopped fine
cut 1 inch thick	2 cups boiling water or 1 cup
½ cup flour	water and 1 cup tomato juice.

Pound flour into meat with wooden potato masher or edge of heavy plate. Heat fat. (Preferably beef fat.) Cut meat into pieces size for serving. Brown on each side. Sprinkle each piece with salt and pepper. Chopped onion and green peppers may be added. Pack in jars flat, one

piece on top of the other. Add the water or tomato broth. Other vegetables may be added if desired. When canning in tin, the meat may be cut with a circular cutter to fit the can. A can with a sharp edge might be used for this purpose.

Steak. Brown steak slightly, and do not cook too done. It may be browned a deeper brown when opened for use. Place the steak in jars while hot. Add the pan gravy and process.

Chili Con Carne (Mexican Style.) This product is often called Mexican chili, and the following recipe for making and canning is typically Mexican:

10 lbs beef, cut up in small pieces, or coarsely ground

3½ gals. of water (for meat and beans)

5 to 10 lbs of Mexican beans

(Some prefer more, some less.)

1 ounce of chili pepper

7 teaspoons salt

Small piece of garlic

Suet—about 1 pound

Brown the beef in hot suet fat. The beans and meat are first boiled separately until tender. However, it is best to leave beans out when canning. Add beans when opened for use. The amount of chili pepper and spice added depends entirely on the consumer's taste. Do not use too much fat in canned chili.

Canned hamburger meat may be made into chili when opened for use. In such a case, fry out fat and brown the meat in the fat. Then add cooked beans and seasoning.

Liver Sausage. Use beef, veal, or hog liver. Remove the membranes and cut away the large blood vessels. Wash the liver thoroughly. Simmer for a short time. When cooled put through a food chopper or grate finely. Take half as much boiled fat pork as liver. Divide this fat into two portions, chopping one portion into one-fourth inch cubes, and passing the other portion through grinder. Mix liver and pork together thoroughly, add salt, ground cloves and pepper. A little grated onion, thyme, and marjoram may be added to suit taste. Stuff the mixture in large casings which may be made of clean muslin. Cover the sausage with boiling water, bring to a boil and boil ten minutes. Pack in jars, fill in with the water in which they were boiled. If tin cans are used, sausage does not need to be put in casings.

Fried Liver. Slice the liver, flour slightly, and brown in hot fat. Do not fry it done—just enough to brown it. Place in jars while hot. Add the pan gravy and process.

Canned Heart. Cook the heart in pressure cooker at 15 pounds pressure for 30 minutes. Cut in slices, pack in jars while hot. Add some meat broth and process. Onions, carrots and celery may be added.

Mincement

2 lbs. lean beef, boiled and chopped fine.	1 grated nutmeg
1 lb. suet—chopped fine	2 tablespoons ground mace
5 lbs. chopped apples	1 tablespoon allspice
1½ teaspoons cinnamon	1 tablespoon ground cloves
1 pt. boiled cider	1 tablespoon fine salt
1 lb. seeded raisins	2½ lbs. brown sugar
2 lbs. currants.	1 pt. grape juice
	¼ lb. sliced citron

Mix all ingredients thoroughly and cook 30 minutes. Fill jars and seal while hot. Process pints 30 minutes and quarts 45 minutes in a hot water canner.

Sausage. No. 1. Shape sausage into cakes. Fry or bake until cakes are browned. Add small amount of water to fat in pan and pour this over the sausage. The amount of liquid for home use is a matter of personal preference. Add only two tablespoons of liquid to exhibit jars. Leave sage out of sausage for canning.

No. 2. Fill solid into tin cans. Exhaust 10 to 15 minutes, or until contents are steaming hot. Seal and process immediately. Process No. 2 cans 70 minutes at 15 pounds pressure, and No. 3 cans 90 minutes at 15 pounds pressure.

Tenderloin. Cut into pieces of desired size. Saute in hot fat in frying pan until light brown. Pack in jars. Add small amount of water to fat and pour over the tenderloin. Broth may be used.

Ribs and Backbone. Roast as for table use until bones will slip. Cut the inside of each rib or bone and remove the bones. Season and cut in suitable pieces for serving or make into roll. Pack, add meat broth or drippings and process.

Head Cheese. Trim all meat from the head. Boil with heart, tongue tail and feet until meat can easily be separated from the bones. Pour off the liquid and take out all the bones and tear the meat apart. Season to taste, cover with liquid and boil a few minutes longer. Pour the mixture into jars and process. This product jellies when cold, so it is difficult to remove from glass jars because they are small at top. Tin cans are ideal for this product. Process No. 2 cans and pint glass jars 60 minutes at 15 pounds pressure, and No. 3 cans and quart jars 75 minutes at 15 pounds pressure.

Soup Stock. Put all bones and trimmings of meat in pressure cooker and add about 1 or 2 gallons of water. Cook at 15 pounds pressure for about 40 minutes. Seasoning, such as onion and a bit of celery leaf, may be added. Remove meat and bones from cooker and cut off all meat which may be canned for hash. The stock may or may not be strained. Fill cans and process.

CHICKEN

Fricasseed Chicken. Chicken to be used for fricasseed chicken may be placed in the can raw for canning or may be preheated in just enough water to cover. In either case, it is desirable to cut up and bone the chicken, especially the pieces that are thick and compact, such as thighs, drumsticks, and breasts pieces. Pack these pieces to the outside. Make a fairly snug pack, being careful to leave crevices or space through the center for heat penetration. Chicken packed raw will not require liquid. Add salt and adjust lids.

Roast Chicken. Dress fowl, salt inside and out, tie legs down and place wings behind back. Place chicken in roasting pan. Cover bottom of roaster with water in which a little salt has been dissolved. Place in medium oven for 1 to 1½ hours, basting from time to time. Take chicken from pan and cut into pieces for serving. Remove bones, fill cans and add broth.

Fried Chicken. No. 1. Chicken canned raw for frying or browning later is very desirable. Use only young and medium sized friers. Cut into pieces and pack raw placing the thickest pieces, such as thighs and drumsticks, to the outside of the container. Place such pieces as wings and backs in the center. These thin, irregular pieces will allow space through the center for heat penetration. Add salt. Use very little, if any, liquid. If liquid is added, it should be placed in center of jar and should either be water or light broth. When chicken canned by this method is removed from the can, it may be floured and browned in hot fat. This fresh brown flavor is very desirable.

No. 2 (Young and Medium sized) Cut into pieces, add salt and tiny bit of pepper. Sear in hot fat until light brown and can any of the following ways:

- a. Pack dry without removing bones. Add two tablespoons of water or liquid.
- b. Canning with gravy. Pack without removing bones. Fill with boiling gravy made from the pan grease by adding boiling water to the pan grease.
- c. Canning after removing bones. Remove bones and pack in containers. Add boiling gravy made from the pan grease and boiling water added to the pan grease.

All canned meat should be thoroughly heated for ten of fifteen minutes when opened for use.

