Canning Meat, Fish and Poultry

Originally Prepared by
FRANCES SMITH,
Extension Specialist, Foods and Nutrition
Revised by
BESSIE E. McCLELLAND,
Extension Specialist, Foods and Nutrition

BOZEMAN, MONTANA
MONTANA EXTENSION SERVICE
PRECAUTIONS WITH CANNED FOODS

To be sure that food is safe and wholesome, inspect it carefully both before and after opening and always before tasting.

Before opening

Tin cans should be flat or curved-in slightly at the ends. All seams should be tight and clean with no signs of leaks. Ends should not bulge nor snap back when pressed in.

Glass jars should retain a perfect seal.

When opened

1. Neither glass jars nor tin cans should show an outrush of air or gas on opening — rather, air should suck inward, indicating that the “vacuum” has remained unbroken.

2. The contents should appear normal in color and texture.

3. The odor should be characteristic of the product.

4. The interior of the tin can should not appear extensively blackened or corroded.

5. Boil contents of the can at least ten minutes before tasting. Add boiling water if necessary to cover the product. Note the odor of the boiling food. Abnormal odors are sometimes not apparent when cold but show up when boiling. These precautions will lessen danger of botulism or other poisoning from canned foods. Food which appears normal after all these tests may be safely eaten.
Canning Meat, Fish and Poultry

Originally Prepared by
Frances Smith, Extension Specialist, Foods and Nutrition

Revised by
Bessie E. McClelland, Extension Specialist, Foods and Nutrition

I. Why Can Meat?

Meat, fish and poultry are very important items in the home food supply. Canning has become a popular method of preserving these foods, replacing some of the smoking, salting, and drying of former days. Butchering day is followed by canning day in many homes. Canning makes for a better distribution of meat supply throughout the year. The culling season for hens has also become the canning season.

It is sometimes wise economy to buy poultry and meat for canning when there is no home supply because prices of poultry and meat may be lowest during the butchering and culling season. These foods bought in quantity and canned will help reduce the cost of meals during the season when meat and poultry are expensive. It is easier, quicker, and cheaper to cook large quantities of meat at one time than in small installments. Every housewife knows the advantage of pantry and cellar shelves well stocked with ready-made meals.

II. How Can Meat?

Meat may be canned with safety and success in the home by one method—processing under steam pressure. The temperature required for effective sterilization (240° to 250° F.) cannot be obtained inside the can or jar except by the use of the steam pressure cooker. The water bath, the oven and the common steamer without pressure cannot produce this high temperature and therefore cannot be used safely. If a pressure cooker is not available meat should not be canned but should be preserved by other methods.

All meats and poultry for canning should be slaughtered and handled in a strictly sanitary manner. Unless the meat is to be canned immediately it is necessary to chill the carcass after slaughtering, otherwise decomposition will start within a few hours. Chilling makes little difference in the tenderness or flavor of the meat after it is canned, but raw meat is so much easier to handle after chilling that most people prefer to chill it before canning. Meat that is kept thoroughly chilled may be held awhile before canning if that is more convenient.
Frozen meat may be canned, but it does not make a high-quality product. Do not thaw frozen meat. Cut or saw it into uniform strips 1 to 2 inches thick and plunge into boiling water. Simmer until the color of the meat has almost disappeared; then pack and process.

Utensils of enamelware, aluminum, retinned metal, or stainless metal are best for meat canning. Meat may take up harmful quantities of zinc from galvanized iron if allowed to remain in contact with it more than 30 minutes. Copper and iron utensils may cause the canned meat to be discolored. Wooden surfaces are difficult to clean.

Plain tin cans and glass jars are satisfactory for meat canning. Enamel lined tin cans are not satisfactory for meat, especially chicken, since they are likely to peel off and discolor the meat. This discoloration, while unattractive, is harmless.

Small cans or jars are best for canning meat. The most suitable sizes are No. 2 and No. 2½ tin cans, and pint glass jars. No. 3 tin cans and quart glass jars are not recommended because of the much heavier processing necessary.

Have cans or jars and lids clean and in good condition. Discard any jars or caps showing cracks, chips, or dents or lids with loose linings. Discard corroded tin cans. Wash cans, jars and screw lids with soapy water and rinse in clear water. Self-sealing jar caps and tin can lids should be kept dry and be wiped carefully. Dip rubber rings into boiling water before using.

III. Should Meat Be Precooked?

Meat should be precooked. When glass jars are used, meats should be precooked in the oven or in water before being packed in the container. When tin cans are used, the meat may be precooked in either of these ways and packed hot, or it may be packed raw and precooked in the cans while they are being exhausted before being sealed. The latter method gives a little better flavored product and the liquid is all meat juice, but it takes more time and stove space. Frying is no longer recommended as a method of pre-cooking meat for canning because it makes the meat more hard and dry and gives it a less desirable flavor.

The length of processing time remains the same regardless of the method used for pre-cooking. Meat pre-cooked in the oven resembles roasted meat while that pre-cooked in water is more like boiled meat in texture and flavor. The water method of pre-cooking, commonly referred to as parboiling, is the quickest way to pre-cook a large quantity of meat. It is also used with chicken.
The following method is used to exhaust air from tin cans packed with cold meat. Place the filled but open cans in a bath of boiling water that comes to within 1 1/2 to 2 inches of the top of the can. Cover the bath to retain steam and heat, being careful that water from the bath does not bubble into the cans. Heat until the meat is steaming hot (170° F. at center of cans) and has lost most of its raw color. This will usually require 40 to 50 minutes for beef and less for chicken.

IV. Should Liquid Be Added?

Canned meat retains color and flavor better during storage when the meat in each can is entirely covered with liquid. Water or drippings from the pan in which the meat is precooked should be poured over the meat after it is packed into the can or jar. If this is not sufficient to cover the meat, boiling water may be added. Some juice will cook out of meat precooked in the cans but if there is not liquid enough to cover the meat, hot water should be added before the can is sealed.

V. What is “Head Space”?

A certain amount of space should always be left at the top of a jar or can to permit expansion of food during processing. This is known as head space and is measured from a straight edge laid across the top of the jar. Head space is particularly important in canning meat and poultry. The following space should be allowed in packing containers: glass jars, one-half inch; No. 1 tin cans, one-fourth inch; No. 2 tin cans, five-sixteenths inch; No. 3 tin cans, three-eighths to one-half inch. Meat products containing cereal should be packed with more head space to allow for greater expansion.

VI. When Should Jars Be Sealed?

(a) Glass Jars

Glass jars should be only partially sealed before processing except in the case of self-sealing jars. Screw the Mason jar cap on until it is tight and then turn back one-fourth turn. After processing, the cap is immediately screwed down as tightly as possible. With the “lightning-type” modified Mason, the top clamp is snapped into place and the side clamp is left up. After processing the side clamp is pushed down. Both jars should be cooled in an upright position since the seal is formed by the pull of the partial vacuum in the jar during cooling.

The caps should be placed on self-sealing jars and the screw bands or clamps adjusted. These lids automatically complete their seal after processing without further adjustment. Cool in upright position. Do not attempt to tighten self-sealing jars after processing since this will only tend to break the seal.
(b) Tin Cans

Tin cans packed with hot, precooked meat may be sealed immediately. Cans filled with raw meat should be sealed as rapidly as possible after the exhaust and then processed while still hot. Tin cans are never sealed cold.

VII. What Are the Essential Steps in Canning Meat?

(a) Preparation of Meat

1. Use only good clean, sound, fresh meat for canning.
2. All meat should be thoroughly bled and cooled. Allow at least 24 hours after killing for beef, veal, pork or mutton, and 6 hours or more for poultry.
3. Wash meat, if necessary, but never allow it to soak in water. To do so dissolves meat juices and renders meat stringy. Wiping it off with a damp cloth is usually all that is necessary.
4. Cut meat into convenient, uniform pieces for packing in jars. Trim off excess fat. Some fat is desirable; too much is wasteful and unattractive. Small bones may be left in. They seem to improve the flavor and aid in heat penetration.
5. Meat may be precooked in water or a moderate oven. When tin cans are used the meat may be precooked in either of these ways or it may be packed raw and the cans exhausted before they are sealed. (See III).

(b) Packing Jars

1. Have ready a supply of clean, hot, wide-mouthed glass jars or tin cans and lids.
2. Pack meat loosely into containers, either raw or precooked, as explained in III.
3. Add one-half teaspoon salt to a pint jar, three-fourths teaspoon to a No. 2 can, and 1 teaspoon to a quart jar or No. 3 can. When tin cans are used, place the salt in the cans before packing them with meat. If salt is placed on top of the meat, the lids sometimes rust.
4. Add pan drippings or boiling water to fill cans, leaving sufficient head space.
5. Be sure there is no fat or grease on the mouth of the jar or lid. (Grease causes rubber to weaken and thus the seal may be destroyed).
6. If glass jars are used, adjust lid and rubber, seal according to direction in VI (a) above, and put into processing kettle.
7. If tin cans are used, “exhaust” and seal according to directions in VI (b) above and put into processing kettle.
Processing

Pressure cooker processing is recommended over any other method from the standpoints of health, keeping quality and economy of time. Always observe these precautions when using the pressure cooker:

1. Be sure there is sufficient water in the bottom of the cooker—1 pt. for the 12 qt. size, 3 c. for the 18 qt. size, and 1 qt. for the 25 qt. size.

2. Do not close the petcock until steam has escaped for at least 7 minutes from the 12 qt. size, 10 minutes from the 18 or 25 qt. size.

3. Regulate heat to maintain a steady, constant pressure. Fluctuating pressure causes loss of liquid from glass jars and uneven cooking of contents. Time carefully and do not remove from heat till full time is up.

4. For glass jars never open petcock until 5 minutes after the pressure gauge has registered zero. To do so causes loss of liquid from glass jars. For tin cans the pressure can be gradually exhausted by opening the petcock a little way.

5. Never unlock the cooker until after pressure has registered zero and the petcock has been opened wide.

6. Let glass jars stand in the cooker till violent bubbling ceases. Then remove them, complete the seal and set apart to cool away from drafts. Jars sealed with composition self-sealing type of lid should never be tightened either while hot or after cooling.

7. Tin cans may be removed as soon as the cooker is opened and plunged at once into cold water.

8. Process all meat at 15 lbs. pressure:
   - Pint glass jars ................................ 85 minutes
   - No. 2 plain tins ................................ 85 minutes
   - No. 2½ plain tins .............................. 110 minutes
   - No. 3 plain tins or qt. glass jars ....... 120 minutes

These times are for plain meats. For other products see recommendations in individual recipes.

Caution: Pressure corrections should be made for altitude, i.e. increase the pressure 1 lb. for each 2000 feet altitude. Thus at an altitude of 4000 feet, process at 17 lbs. pressure instead of 15 lbs. pressure.
MEAT CANNING RECIPES

1. Roasts—pork, beef, veal or lamb

Large pieces cut from the shoulders, boned rib and loin make good roasts. Cut in sizes which will fit nicely into the can when seared. Boned rolled roasts may be tied and cut into lengths so that two pieces fit a can. Sear the roasts in the oven. Pack into containers. Add some of the pan drippings and boiling water to cover. Add salt (½ t per pt.—1 t per qt.) to each jar. Seal as directed in VI and process under 15 lbs. pressure:

- No. 2 plain tins and pint glass jars............................. 85 minutes
- No. 3 plain tins......................................................... 120 minutes

2. Steaks and Chops—pork, beef, veal or lamb

Bone steaks and larger chops and reserve bones for the soup kettle. Pork and mutton chops may be boned and held in shape with wooden skewers. Sear in the oven or pan broil (do not fry). Season with salt and pack into cans. Cover with pan drippings, adding broth or boiling water if necessary. Process under 15 lbs. pressure:

- No. 2 plain tins and pint glass jars............................. 85 minutes
- No. 3 plain tins and qt. glass jars............................... 120 minutes

3. Stews—lamb, mutton, beef, veal

Cut stew meat into small pieces—1 inch square or less. Dredge them in flour and brown in hot fat. Cover with water and simmer till partially done. Add finely sliced onions, diced carrots and seasoning to suit taste. Allow vegetables to come to a boil. Pack in cans and process at 15 lbs. pressure as follows:

- No. 2 tin cans and pint glass jars............................. 85 minutes
- No. 3 tin cans and qt. glass jars............................... 120 minutes

4. Hamburger or “Lamburger”

Prepare hamburger by putting through grinder twice. Add any preferred seasonings. Mold into smooth flat cakes. Sear in oven or pan broil, pack in containers, adding pan gravy or boiling water to fill jar. The cold raw meat may be packed tightly into tin cans and heated until the meat is steaming hot to exhaust before sealing. One cup of salt is usually required for 25 lbs. of meat. Process at 15 pounds:

- No. 2 plain tins and pint glass jars............................. 90 minutes
- No. 2½ plain tins...................................................... 115 minutes
- Quart glass jars....................................................... 120 minutes

Note: “Lamburger” is hamburger prepared from less tender lean parts of lamb or mutton. It is prepared and canned exactly like hamburger.

5. Sparerib Rolls

Crack ribs evenly in about 4-inch lengths. Boil or cook under pressure until meat will slip easily from bones. Slip out the bones, taking care not to tear the meat. Season lightly with salt and pepper. Roll the strips of boned meat and pack in containers. An average length rib boned will just fill a No. 2 tin can. Pour liquid in which meat was boiled to fill can within ½ inch of top. Process same as for roast. To serve, unroll and broil till golden brown in hot oven—or stuff with sage dressing and brown in the oven.
6. Baked Spareribs

Roast until tender, seasoning to taste. When done, cut down the inside of each rib, remove the rib bone, and cut the meat into pieces suitable for serving. Pack into jars and add boiling pan gravy. Seal and process as for roasts.

7. Backbones

Cook backbones in a pressure cooker with a small amount of water for 15 minutes at 15 lbs. pressure. Remove meat from bones and pack in jars or tins. Add boiling liquid from cooker and ½ t. salt per pint jar. Process at 15 lbs. pressure:

- No. 2 plain tins and pint glass jars............... 85 minutes
- No. 3 plain tins and qt. glass jars.................120 minutes

8. Sausage—pork, lamb or mutton sausage

Use about one-third fat pork and two thirds lean pork. Mix seasonings and sprinkle over the meat before grinding. For a fine even sausage it should be run through the grinder a second time. To make bulk sausage hold together well for slicing and frying, add a scant half cup of cold water to each four pounds of ground seasoned meat, knead until sticky and dough-like. Pack into pans or molds, chill and slice.

For four pounds ground pork use:

- 5 level teaspoons salt
- 2 level teaspoons ground sage
- 1 level teaspoon sugar
- 1 level tablespoon pepper
- 1 level teaspoon ground cloves or
  ½ teaspoon nutmeg, if desired.

For 100 pounds ground pork use:

- 2½ cups salt
- 1 cup ground sage
- ¾ cup sugar
- 1½ cups pepper

Mold sausage into smooth, round, flat cakes of uniform size. Sear in oven or hot skillet till golden brown. Pack into containers. Drain grease from skillet and add a small amount of hot water to dissolve brown drippings. Add enough of this pan gravy to finish filling each can. Process at 15 lbs. pressure:

- No. 2 plain tins and pint glass jars................ 90 minutes
- No. 2½ cans..............................................115 minutes
- Quart glass jars.........................................120 minutes
9. Meat Loaf No. 1—beef, veal, lamb or mutton

- 8 lbs. ground meat (use less tender cuts as round and neck)
- 2 T salt
- 2 t celery salt
- 1 t pepper
- 3 T grated onion (if desired)
- 1 pt. strained canned tomatoes (or milk or meat stock)
- 2 c cracker crumbs
- 4 beaten eggs

Add seasonings to the beaten eggs and combine with other ingredients. Mix thoroughly and pack solidly into plain tin cans. Place filled cans in kettle of hot water till steaming hot. Seal and process at 15 lbs. pressure:

- No. 2 tin cans and pint glass jars: 90 minutes
- No. 2½ tin cans: 115 minutes
- Quart glass jars: 120 minutes

Note: Meat loaf should be canned in tin cans so it can be turned out whole and unbroken. The surface will brown nicely while the loaf is being heated for serving in a moderately hot oven. If tomato sauce is used, can in R-enameded tins.

10. Meat Loaf No. 2—beef, veal, lamb or mutton

- 3 lbs. ground meat
- ¾ lb. ground ham or salt pork
- 4 eggs
- 2 c dry crumbs (bread or cracker)
- 1 pt. strained tomato
- 3 t salt
- ½ t pepper
- ¼ t nutmeg

Add seasoning to beaten eggs and combine all ingredients, mixing thoroughly. If more moisture is needed add more tomato or some meat broth. Pack in cans and proceed as for Meat Loaf No. 1, using R-enameded cans.

11.—Head Cheese—pork

Clean pig’s head thoroughly at the time of butchering by washing and scraping carefully. Split the head to remove the eyes, burr of ears, brains and bones which contain cavities, including teeth. Remove jowls and trim off excess fat. Soak prepared head in cold water over night. Place in pressure cooker with 2 cups of water. Cook 45-60 minutes at 15 lbs. pressure. Strain meat from liquid and carefully remove all bones. Grind meat coarsely. Combine meat and liquid and heat to boiling. There should be just enough liquid to make a soft, not “sloppy” mixture. Season to taste with salt and pepper. Pack in suitable containers for molding. When cold and set, it may be sliced and served or packed in jars and processed at 15 lbs. pressure:

- No. 2 tin cans: 90 minutes

Note: The heart, the tongue, the feet, the cleaned skin stripped off in preparing lard, and all bones with bits of meat left on may also be used. These may be cooked along with the head. The skin is best cooked separately so it will not fall to pieces. It is finely ground when tender and
combined with the other meat. Head cheese should be chilled before opening so it will slice satisfactorily. In order to slice well use only tin cans.

12. Scrapple—pork preferably

Prepare the head as given under head cheese. In addition to the head, the heart, tongue, feet, bones left from boning other cuts and clean skin from trimming lard may be used. Place in the cooker, add water to just cover. Steam for 45 to 60 minutes under 15 lbs. pressure. Drain and strain the stock, let set until the fat rises to the top. Skim off the fat, heat the stock to the boiling point. Add cereal mixture, made by mixing 2 parts of corn meal, 1 part of whole wheat or buckwheat flour and bran middlings. Stir in the cereal mixture until it is thick enough for a wooden spoon or paddle to stand alone. Add the meat scraps which have been removed from the bones and finely divided. Season with salt and pepper. While hot fill cans, seal and process under 15 lbs. pressure:

- No. 2 cans: 85 minutes
- Note: Scrapple should only be canned in tin cans from which it can be unmolded perfectly. If glass jars are used can only the hot broth and meat mixture without adding the cereal. The cereal can be added and cooked later. If broth and meat are canned in glass, process pints 85 minutes at 15 lbs.; No. 2 tins, 85 minutes; No. 3 tins and quart glass jars, 120 minutes.

13. Sandwich Tongue—pork, beef, lamb, veal

Clean the tongue thoroughly and boil (45 min.) till the skin is easily removed. Trim off the skin and pack the tongue in containers. Cover with boiling water or meat broth. Add ½ t. salt per pint. Process at 15 lbs. pressure:

- No. 2 tins and pint glass jars: 85 minutes
- No. 3 tins and qt. glass jars: 120 minutes

Note: The cleaned tongue may be put into brine cure, then lightly smoked before cooking and canning. Some persons prefer the smoked flavor. If tongue is to be cooked fresh it should be thoroughly cleaned as soon as cold, rubbed heavily with salt and left stand with salt sprinkled over for 8-10 hours.

14. Luncheon Tongue—beef, lamb, pork or veal

Cook cleaned tongues in a pressure cooker for 20 minutes at 15 lbs. pressure or parboil for 45 minutes. Trim off skin and stringy portions. Cut and pack into cans adding 1 c. of sauce to qt. and No. 3 cans, and ¾ c. to pts. and No. 2 cans. While tongue is cooking prepare the following sauce:

- ¼ c butter
- ¼ c flour
- 1 pt. strained tomatoes
- 1 c meat broth
- 2 stalks celery
- 1 onion
- ½ t whole peppercorns
- Salt
- 1 carrot

Blend butter and flour and let brown slightly. Add strained tomato and broth. Add finely minced vegetables and the seasonings. Pour boiling hot over tongue in the cans. Seal and process at 15 lbs. pressure:

- No. 2 R-enameled tins and pt. glass jars: 85 minutes
- No. 3 R-enameled tins and qt. glass jars: 120 minutes
15. Canned Heart—beef, pork or lamb

Soak hearts overnight in cold water. Rinse and trim off all cartilagenous parts. Put into a kettle, cover with water and boil 15 minutes. Pack the heart into clean hot jars or cans, add ½ t. salt to each pint and fill space in containers with boiling hot broth in which heart was precooked. Process at 15 lbs. pressure:

<table>
<thead>
<tr>
<th>Cans</th>
<th>Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 2 cans and pint glass jars</td>
<td>85 minutes</td>
</tr>
<tr>
<td>No. 3 cans and qt. glass jars</td>
<td>120 minutes</td>
</tr>
</tbody>
</table>

16. Heart Goulash—pork, beef, veal or mutton

2 lbs. cleaned heart 6 whole peppercorns
2 oz. butter or drippings 1 blade mace
2 onions, medium size, sliced 1 pinch thyme
1 carrot, medium, thinly sliced 6 whole cloves
1 stalk celery cut in small pieces 1 bay leaf broken in pieces
1 T minced parsley Salt and pepper
1 pt. tomatoes (canned or fresh) Paprika

Cut the cleaned and trimmed hearts into 1-inch cubes. Sprinkle with flour mixed with salt and pepper. Melt butter or fat in a frying pan. When hot add the meat and brown well. Add the prepared vegetables, and brown, stirring frequently to prevent scorching. When nicely browned add tomatoes and spices tied up in a little bag of cheesecloth. Simmer for 45 minutes (for 2 hours if it is to be served at once and not canned). Add soup stock or water if more liquid is needed. Remove bag of spices. Season well with salt, pepper and paprika. Soy or Worcestershire sauce may be added in small quantities if desired. Fill hot into cans, seal at once, and process at 15 lbs. pressure:

<table>
<thead>
<tr>
<th>Cans</th>
<th>Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 2 R-enamed cans and pt. glass jars</td>
<td>90 minutes</td>
</tr>
<tr>
<td>No. 2½ R-enamed cans</td>
<td>115 minutes</td>
</tr>
<tr>
<td>No. 3 R-enamed cans and qt. glass jars</td>
<td>120 minutes</td>
</tr>
</tbody>
</table>

Note: The less tender cuts of beef and mutton may also be used for this dish.

17. Fried Liver

Remove the membrane, slice the liver as for frying. Sear quickly in hot fat and fry till golden brown. Pack in clean hot jars. Add pan gravy and boiling water, to cover the meat. Process at 15 lbs. pressure:

<table>
<thead>
<tr>
<th>Cans</th>
<th>Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 2 cans and pint glass jars</td>
<td>85 minutes</td>
</tr>
<tr>
<td>No. 3 cans and qt. glass jars</td>
<td>120 minutes</td>
</tr>
</tbody>
</table>

Calf liver does not need scalding. Beef and pork liver are both improved in flavor by scalding in acidulated water for 5 minutes. Use 1 t. vinegar to each cup of water.
18. Liver Paste—pork, beef, veal

- 3 lbs. liver
- 1 1/2 lbs. fresh pork
- 3 eggs
- 1 c milk
- 1 c crumbs (cracker or dry bread)

1 t black pepper
2 T salt
1 t cloves
1 c chopped onion

Remove all membrane and skin from the liver, slice and parboil 5 minutes. Liver of prime young animals need not be parboiled. Beef and pork liver are improved in flavor by scalding 5 minutes in water with vinegar added at the rate of 1 t. per cup of water. Run the liver and pork through chopper twice. Beat eggs, add seasoning and milk. Mix all together. Pack into cans, leaving 1 inch head space, place in cooker and heat thoroughly. Seal and process at 15 lbs. pressure:

No. 2 cans and pint glass jars................................. 90 minutes

19. Pickled Pigs Feet

Scald, scrape and thoroughly clean pigs feet at time of butchering. Sprinkle with salt and leave 3-5 hours. Wash and place in a pressure cooker on a rack with 1 pint of water in the bottom of the cooker. Process at 15 lbs. pressure for 40-60 minutes. Remove from the cooker and cover with spiced vinegar made as follows:

- 1/2 gal. apple cider vinegar
- 1 1/2 T celery seed
- 1/2 c grated horseradish
- 1/2 stick cinnamon
- 1 c sugar
- 1 T salt
- 1 t whole cloves
- 1 1/2 t mustard seed

Tie spices in a bag. Add spices, sugar and salt to boiling vinegar and let stand at least an hour. Heat vinegar to boiling point and pour over the cooked pigs feet. They may be kept a reasonable length of time in a stone crock or packed in jars and processed at 15 lbs. pressure:

No. 2 enameled tins and pt. glass jars....................... 85 minutes
No. 3 enameled tins and qt. glass jars....................... 120 minutes

Note: Due to their high gelatin content, it is difficult to cook pigs feet in a pressure cooker so they will not fall entirely apart. For that reason it may be preferable to simmer them slowly on top of stove till tender before adding the vinegar.

20. Jellied Pigs Feet

Use only carefully cleaned, scalded and scraped pigs feet. They may be canned fresh or after brine curing. Place on a rack in a pressure cooker with just enough water to cover. Cook 20 to 30 minutes (depending on age) at 15 lbs. pressure. Carefully remove the bones from feet. Strain the liquid and add the meat. Season with salt, pepper, and ground cloves. Pack hot into glass jars or tin cans. Process at 15 lbs. pressure:

No. 2 tin cans and pint glass jars......................... 85 minutes
No. 3 tin cans and qt. glass jars......................... 120 minutes

Note: When ready to serve chill the can before opening. Serve as a cold luncheon meat garnished with parsley and sliced lemon.
21. **Mince Meat**—use any of the less tender cuts of beef

- 2½ lbs. cooked meat
- ¾ lb. suet
- 8 lbs. apples
- ½ lb. citron
- 2 oz. candied orange peel
- 1½ lbs. seedless raisins
- 1 lb. currants
- 1 pt. boiled cider
- 3 lbs. sugar
- 5 t salt
- 1 t mace
- 1 T cloves
- 1 T nutmeg
- 5 t cinnamon
- ½ c vinegar

Cook meat till tender in pressure cooker or an open kettle. Put meat when cold and the suet through the food chopper using the fine knife. Raisins and currants are washed and cut with the medium cutter. The fruit peel may be finely shaved or put through fine knife of food grinder. The peeled and cored apples are put through the coarse cutter. Mix spices and salt with the sugar. Mix all ingredients thoroughly. Add a pint of meat broth and set on heat to cook. Boil while stirring constantly till of proper consistency (about 20 minutes). Put product into clean hot jars. Seal and process pint jars in hot water bath 30 minutes. (Increase time 10% for each 500 ft. rise in altitude above 1000).

**Note:** The proportions and kinds of ingredients may vary greatly. The above recipe gives a very high quality at moderate cost. Juice from canned fruit, preserves, pickled peaches, etc. may be used instead of cider. Brown sugar is preferred by some instead of white.

22. **Corned Beef**—also mutton

To insure keeping through the summer, corned beef or mutton may be canned in the spring. Wash the meat and place it in a kettle and cover with cold water. Bring slowly to the boiling point and simmer until thoroughly heated through. Remove the meat and cut into pieces to fit the container. Pack in clean hot glass jars or plain tins. Keep packed jars hot in kettle of boiling water. Season the broth to taste with bay leaf, cloves and nutmeg. Add softened gelatin, 1 T per quart of broth. Pour the boiling broth over the meat in the jars. Seal and process at 15 lbs. pressure:

- No. 2 tin cans and pint glass jars.................... 85 minutes
- No. 3 tin cans.............................................. 120 minutes

23. **Cured Ham**—canned

Cured ham may be boiled or roasted as for serving at the table and then canned. Use any favorite recipe for baking or boiling the ham. It need not be cooked till entirely done. Cut into suitable pieces and pack in clean hot containers. Add pan gravy to each container. Seal boiling hot and process at 15 lbs. pressure:

- No. 2 tin cans and pint glass jars.................... 85 minutes
- No. 3 tin cans.............................................. 120 minutes
24. **Soup Stock**—chicken and turkey bones, “soup” bones of beef, veal or lamb.

Butchering time is a good time to can soup. The bones and “trimmings” are well utilized in this way. When canning chicken the very bony pieces can well go into the soup kettle. Chicken feet properly scalded and skinned are an excellent addition to the soup kettle since they contain a high percentage of gelatin. Lamb or mutton broth is a particularly nice foundation to have on hand for winter soups.

Crack the bones and place in a kettle. Add small bits of meat which are too small for other uses. Cover with cold water. Add seasoning as desired—celery seeds or celery leaves, onion, bay leaf, sprig of parsley, few peppercorns, etc. Simmer slowly 6 hours or cook in pressure cooker at 15 lbs. pressure for 1 hour. Strain, cool the soup and remove the fat. Heat soup to boiling and pour into clean hot jars or tin cans. Add 1 t. salt per quart. Seal and process at 15 lbs. pressure:

- No. 2 tin cans and pint glass jars .......................... 40 minutes
- No. 2½ and No. 3 tins, quart glass jars .................. 45 minutes

**Note:** The meat removed from the bones may be canned for sandwich meat.

25. **Sandwich Meat**

Meat which falls off the soup bones may be canned separately as sandwich meat. The bony pieces of chicken are especially well utilized in this way. Remove the meat from the bones and pack it into clean hot jars, adding enough of the meat stock in which the bones were cooked to fill spaces in the jar. Add salt, ½ t. per pint of meat, unless meat was salted when soup was made. Process at 15 lbs. pressure:

- No. 2 tins and pint glass jars .......................... 85 minutes
- No. 3 tins ................................................... 120 minutes

26. **Pork and Beans**

Pick over white navy 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.) for 1½ hours. Remove the lid and combine all of the ingredients, stir, and heat gradually to simmering. Pack hot and process:

- No. 2 tins ................................................... 70 minutes
- Pint glass jars ........................................... 80 minutes
- No. 3 tins ................................................... 85 minutes
- Quart glass jars ......................................... 90 minutes
27. 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 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 as follows:

No. 2 tins and pint glass jars..........................120 minutes
No. 3 tins and quart glass jars........................150 minutes

CANNING FISH

An excess quantity of fish caught in spring and summer may be canned for use in other seasons. Fish for canning must be strictly fresh. Fish deteriorates rapidly in quality and flavor, so quick work is essential for a high grade product.

1. Canned Fish—plain

a. Fish for canning should be strictly fresh. It is well to stick fish with a knife to drain out the blood as soon as they are caught. The viscera should also be removed as soon as possible.

b. Scale or wash carefully. Scales are easier to remove if fish are dipped into boiling water and then into cold water. If skins are tough, skin the fish.

c. In order to draw out the blood before canning, place fish in a brine made by using 1 T. salt to each quart of water. Let fish soak 10 minutes to one hour, according to thickness. Small trout need only 10 minutes' soaking. This soaking is not absolutely essential but makes for a better looking product. It tends to make fish firmer.

d. Pack fish into clean hot jars or tin cans, packing in "up and down" or "circular" fashion to make a good looking jar. Large fish will need to be cut into convenient, uniform pieces. No container larger than a pint jar or No. 2 can should be used in the home canning of fish because difficulties in sterilization make the use of larger sized containers unsafe.

e. Add 2 t. salt per quart jar if fish have not been previously soaked in brine. Do not add water. Hot tomato sauce may be poured over the fish in the jars. Pack in glass jars or R-enameded tins if tomato sauce is used.

f. Exhaust tin cans till steaming hot. Process at 10 lbs. pressure:
   No. 2 tin cans........................................... 90 minutes
   Pint glass jars...........................................100 minutes

Note: Fish canned in this manner will resemble canned salmon in texture.
2. Canned Fried Fish
   a.-c. Treat fish as above, following steps a.-c.
   d. Remove from brine, wash and drain on clean towels.
   e. Leave whole or cut into convenient, uniform pieces.
   f. Season fish before frying if they were not soaked in brine.
   g. Fry in deep fat till nicely browned. Drain and place on brown paper to remove excess fat.
   h. Pack into clean hot jars. Add about 2 T. hot liquid. Add hot tomato sauce if desired and in that case use glass jars or R-enameled tins.
   i. Seal and process at 10 lbs. pressure:
      No. 2 tin cans ........................................ 90 minutes
      Pint glass jars ........................................ 100 minutes

3. Tomato Sauce for Canned Fish
   1 qt. canned tomatoes
   1 T chopped parsley
   3 or 4 whole cloves
   Few drops tabasco sauce
   1 medium onion
   Piece bay leaf
   1 T Worcestershire sauce

   Cook all ingredients until reduced to about half the original volume. Put through a fine strainer. May be put over fish in the jars before processing or served with fresh cooked or plain canned fish.

CANNING CHICKEN

Preparation for Canning
   a. Select chickens in good condition. Fairly fat birds are more juicy and flavorful than lean ones.
   b. Chickens are more easily prepared and the flavor is better if they are not fed for 24 hours before killing.
   c. Kill and dress chickens at least 6 hours before cooking or canning. Be sure they bleed well. Do not allow them to flop around and bruise the flesh while bleeding.
   d. Remove feathers and cool chickens thoroughly. Pin feather the birds carefully. Tweezers or a strawberry huller are efficient tools.
   e. Singe carefully, being careful not to char the skin. Wash with mild soap and water or “dry clean” with dampened coarse corn meal.
   f. Rinse carefully to remove every trace of soap or meal.
   g. Cut up by any preferred method, removing viscera carefully. Rinse out body cavity well. Do not allow cut up chicken to soak in water.
   h. In cleaning giblets be sure gall sac and gizzard lining are not broken.
   i. Do not pack giblets with rest of chicken. Can these parts separately or use them immediately.
   j. If several chickens are being canned it may be desirable to can white and dark meat separately or bony and “meaty” pieces separately.
1. Plain Canned Chicken

This method is most suitable for tender young birds. Prepare the birds as outlined above. When using glass jars, precook the chicken in the oven or in water and pack hot. Cover the chicken in the jar with hot pan drippings or broth. Chicken for tin cans may be precooked by either of these methods or it may be packed into the tins raw. Add salt—½ t. per pint. Exhaust tin cans and seal. Partially seal glass jars. Process at 15 lbs. pressure:

- No. 2 tin cans: 55 minutes
- No. 2½ tins and pint glass jars: 65 minutes
- No. 3 tin cans: 70 minutes
- Quart glass jars: 75 minutes

2. Fried Chicken

Use fairly fat young chickens. Sear the chicken in oven till delicate brown or hot through. Use chicken fat preferably. Pack the hot seared chicken into clean hot containers. Add pan drippings and boiling water to fill each can. Process immediately at 15 lbs. pressure:

- No. 2 tin cans: 55 minutes
- No. 2½ tins and pint glass jars: 65 minutes
- No. 3 tin cans: 70 minutes
- Quart glass jars: 75 minutes

3. Boned Chicken

This method is desirable for older birds. Prepare the chicken as directed above. Place in a pressure cooker on a rack and cook at 10 lbs. pressure for about 30 minutes—or cook in an open kettle just long enough so that the meat can be removed from the bones in large pieces. Return the boned chicken to the hot broth and bring to boiling point. Pack into clean hot containers. Fill spaces in jar with boiling broth. Add salt—½ t. per pint. Seal and process at 15 lbs. pressure:

- No. 2 tins: 85 minutes
- Pint glass jars: 85 minutes
- No. 2½ tins: 110 minutes
- No. 3 tins and quart glass jars: 120 minutes

4. Sandwich Meat

Put bony pieces including the cleaned feet, into a pressure cooker. Cover with cold water and cook at 15 lbs. pressure for 1 hour. Remove from cooker and strain off broth. Remove bones and skin. Pack meat into containers. Add boiling hot broth to fill spaces in the jar. Add salt—½ t. per pint. Seal and process at 15 lbs. pressure:

- No. 1 tins: 55 minutes
- Half-pint glass jars: 65 minutes
- No. 2 tins and pint glass jars: 90 minutes

5. Chicken Soup

Strain the broth from chicken prepared for sandwich meat, pour it boiling hot into clean hot containers and add salt, ½ t. per pint. Process at 15 lbs. pressure:

- No. 2 tins and pint glass jars: 40 minutes
- No. 2½ tins, No. 3 tins, and quart glass jars: 45 minutes
Detailed directions for butchering, cutting carcasses and cur­
ing meat, also up-to-date methods of meat cookery will be found in the following U. S. Department of Agriculture Farmers’ Bulletins:

1. Pork on the Farm, Killings, Curing, Canning
2. Pork in Preferred Ways
3. Beef on the Farm, Slaughtering, Cutting, Curing
4. Cooking Beef According to the Cut
5. Farm Slaughtering and Use of Lamb and Mutton
6. Boning Lamb Cuts
7. Lamb As You Like It
8. Home Canning of Fruits, Vegetables and Meats

Secure the above bulletins from your County Extension Agent or directly from the Montana Extension Service, Bozeman.