home canning

Meats
Home Canning—Meats

By RUTH McCAMMON, Extension Nutritionist

In planning meals for her family nearly every homemaker follows some custom or tradition in which she has been raised. Most of these customs include meat at least once daily, but in certain months of the year meat is less plentiful and more expensive to provide than at other times. Home-butchered meat which has been canned will insure a healthful source of supply for the family meals and the cost will be much less than if fresh meat has to be purchased. In addition, home-canned meat means meals easily prepared in the busy season, and a help on the emergency shelf when guests arrive unexpectedly.

To be able to go to a store room or pantry and choose a jar of roast beef, fried chicken, or some good Virginia baked ham with pineapple will put pride in any homemaker's heart.

For people living in rural districts away from centers where cold-storage units are available, canning is the best method of caring for home-butchered meat. Culls from the poultry flock—poor layers, extra roosters, birds that are expensive to feed—require little more work to can in quantity than to prepare singly for a meal.

Meat may be canned with practically no loss of flavor, and canning is especially suited to the less tender cuts. The long processing or cooking time necessary to insure keeping, breaks down the tissues and makes the product more palatable.

General Directions for Canning

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.

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, jars, and rubbers; tin cans, lids and a sealer. Both will give an air-tight seal.

3. Utensils required for pre-heating are spoons, knives, long-handled fork, jar lifter and pans.
Pressure Cooker.—A pressure cooker is a specially constructed closed vessel made of heavy metal which is usually cast aluminum. It has a steam-tight cover which is locked onto the base. It must cook and can at required amounts of pressure.

A pressure cooker will save much time. It may be used for the preparation of entire meals, or for the cooking of individual foods. It is invaluable in canning, in fact it is the only kind of utensil in the home which is safe to use in canning meat.

The size of a pressure cooker is gaged according to its capacity, either jar or liquid. The following table gives the different sizes in which cookers may be purchased and the approximate number of jars which each will hold.

<table>
<thead>
<tr>
<th>Capacity of Pressure Cookers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of liquid</td>
</tr>
<tr>
<td>Number 2 cans</td>
</tr>
<tr>
<td>Number 3 cans</td>
</tr>
<tr>
<td>Pint jars</td>
</tr>
<tr>
<td>Quart jars</td>
</tr>
</tbody>
</table>

In selecting a pressure cooker choose one of a reliable make:
1. In a size suited to the family.
2. That will accommodate the kind and size of jars or cans on hand.
3. That is not too heavy to handle.
4. On which repair service will be easy to secure.
5. Which is simple to operate.

Use of a Pressure Cooker.—Before starting to use a pressure cooker it is well to become acquainted with all its parts, and the manner in which they work.

A petcock, a thermometer or pressure gage, and a safety valve are devices on the cover. The petcock is used to release air and steam in opening and closing the cooker. The pressure gage indicates the temperature inside the cooker. For example, if the gage registers 15 pounds it shows that the temperature inside the cooker is equal at sea level to 250 degrees Fahrenheit.

The safety valve operates automatically, releasing steam when the pressure inside the cooker becomes too high. The pressure gage should be watched carefully as a sudden release of steam will draw juices from the jars.

The top of a pressure cooker must clamp on tightly so that no
steam can escape. A hissing sound during processing indicates leaking steam which will result in lowered pressure and loss of liquid from the jars.

The gages on pressure cookers which have been in use for some time frequently read from 1 to 10 pounds off. When the accuracy of a gage is in doubt it is advisable to have it tested and corrections made. Directions for testing may be obtained from the Extension Service through county or home demonstration agents.

In canning meat a temperature of 240 degrees to 250 degrees Fahrenheit is essential to insure safety against the organism which causes botulism poisoning. The pressure cooker is the only home utensil in which such a temperature can be produced.

The idea that oven-canning provides temperatures comparable to those in the pressure cooker is erroneous. Even though the oven is set at 400° Fahrenheit or higher, the temperature of the food within the jars or cans never exceeds the boiling point which is 203° Fahrenheit in Colorado at 5000 feet elevation. The only way the temperature may be increased is by putting steam under pressure as in a pressure cooker.

To obtain the desired temperature inside the cooker the amount of pressure required will vary at different altitudes. The following table shows the amount of pressure required at various altitudes to obtain the desired temperature.

<table>
<thead>
<tr>
<th>*Altitude</th>
<th>Boiling point of water</th>
<th>Corrected gage pressure to equal 10 lbs. at sea level and 239.6°F.</th>
<th>Corrected gage pressure to equal 15 lbs. at sea level and 249.7°F.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>212.0</td>
<td>10.00</td>
<td>15.00</td>
</tr>
<tr>
<td>3,000</td>
<td>206.5</td>
<td>11.51</td>
<td>16.51</td>
</tr>
<tr>
<td>5,000</td>
<td>202.9</td>
<td>12.42</td>
<td>17.42</td>
</tr>
<tr>
<td>8,000</td>
<td>197.6</td>
<td>13.70</td>
<td>18.70</td>
</tr>
<tr>
<td>10,000</td>
<td>193.6</td>
<td>14.58</td>
<td>19.58</td>
</tr>
</tbody>
</table>

For example, if you live at an altitude of 5,000 feet, use 17 pounds pressure for your meat canning. This pressure corresponds to 15 pounds at sea level, the amount frequently given in directions for the use of pressure cookers.

**Processing with a Pressure Cooker.**—Water to the depth of about 1 inch or extending to the rack should be put in the bottom of the cooker. When the jars are ready, place them in the cooker, then adjust the lid matching the indicating numbers or arrows. Close tightly.

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*This table was compiled by Gestur Johnson, research assistant, home economics section, Experiment Station, Colorado State College.*
Devices for closing pressure cookers vary according to the brand of cooker. Some have only one clamp, others a band to be put in place and screwed firmly, or there may be a set of several clamps. If there are several clamps, partially tighten at the same time those on opposite sides, then continue tightening evenly. Do not tighten with a wrench or pliers. A clothespin is useful in tightening or releasing hot clamps.

The petcock should be left open to allow the steam to escape for fully 5 to 10 minutes, depending upon the size of the cooker; then it is closed and the pressure gage watched carefully. In this way the pressure of the steam only is measured and not a mixture of steam and air.

The presence of air in a pressure cooker allows the gage to register a higher temperature than really exists and this will often cause loss of food. Begin counting the processing time when the gage registers the required pressure. Keep the pressure uniform during the required time as 2 pounds change in pressure may result in loss of liquid from glass jars.

When the processing time is finished, remove the cooker from the stove and allow the pressure to drop slowly to zero, then let it stand 3 to 5 minutes at zero before the petcock is opened. Open slowly, as rapid escape of steam means loss of liquid from jars; release clamps and remove lid carefully.

If small tin cans are being used, the pressure may be decreased rapidly by opening the petcock when the pressure has dropped somewhat. The cans should be cooled at once in cold water, thus stopping the cooking process.

Care of a Cooker.—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.

Keep the cooker clean and well-aired. Food cooked in a well-cared-for utensil will not have an objectionable taste. Learn from your dealer the best method of operating a pressure cooker. Follow the dealers’ directions for care and use, handle carefully, and the cooker will serve you faithfully.
Containers.—These come under two headings, jars and cans; the former are of glass—the latter tin.

Several types of jars are on the market, differing principally in their lids which may be of glass or metal.

The type of jar with a zinc cover which screws down onto a rubber ring has been on the market for many years.

Examine all glass jars and lids for cracks, nicks, or rough edges. The sealing edge or rim is especially important. Run your finger around the edge to see that no rough projections will cut into the rubber.

Be sure that all jars used in canning are capable of an air-tight seal that will keep the product free from contamination as long as it is likely to be stored.

The screw-top lid should fit closely to the jar shoulder or rim when screwed on. It is better to use new lids than old ones which are bent or uneven. The porcelain lining should be free from cracks. If lids are old or dark, boil them in a weak soda solution.

Glass-top lids are held in place by a metal bail which after being placed in position in the notch on the top of the cover is tightened by pushing down on a lever of wire which, as it snaps into place, holds the glass top securely against the rubber sealing ring. If the bail of a clamp-top jar is loose, tighten it by removing the top bail and bending it down at the center while holding in at the sides. If the bail is too tight bend it up in the center.

In nearly all cases of glass jars having lacquered lids, the seal is made by the gummed edge which must be soft and springy to the touch. The metal clamp and screw rim or band are merely to hold the lid in place during processing so that the composition will melt, forming a seal when it cools. The rims may be removed when the jars are stored as they sometimes rust on standing.

A combination jar lid consisting of a screwed-on aluminum rim and a glass top requires a smaller rubber than the average one.

Jar rubbers should be pliable and elastic and capable of standing a pulling strain to about twice their original length. Stretch out and twist with forefingers of both hands. When released the ring should snap back at once to its original shape and size. A ring of live rub-
ber will not crease or break if pinched between thumb and finger. It is not economy to use an old rubber or one saved from a previous year for a poor rubber may cause the loss of an otherwise perfect jar.

Tin cans are finding favor with many for home canning. Danger of breakage is avoided and there is little loss of liquid or flavor from the food during processing since a tight seal is made in the beginning. Tin cans are handled more easily than glass jars and storage is simplified.

A sealing machine is necessary with tin cans. These machines are easily operated and can be adjusted to fit various sizes of cans. With a reflanging attachment on the sealing machine tin cans may be used two or three times. New lids, however, are necessary for each canning. Tin cans may be purchased plain or lacquered. The latter is also spoken of as enameled.

Meat may be canned in plain tin cans although there may be some discoloration of the product. While this discoloration is not harmful it gives an undesirable appearance. A special enamel-lined can which is dull gold in color is used for foods high in protein. There is also an enamel-lined can made especially for meats.

Rules for Opening and Saving Tin Cans.—1. Unless a sealer is available open the can with a type of can-opener which will leave the rim on the can.

2. When the cans are opened clean them thoroughly, scald and dry immediately.

3. Place the cans, bottoms up, in a place where they will dry completely. The warming closet on the stove is an excellent place for drying cans.

4. Store the cans, bottoms up, in a place where they will not rust.

Tin cans may be used as many as four times if proper care is given them. New lids, however, must be purchased each time the cans are used.

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 jars or cans.

15. Cool according to directions.

Method of Canning

Preparation of a Fresh Product.—In canning meat an important point to be remembered is that the animal shall have been properly butchered or killed, and bled, and the carcass allowed to cool until the animal heat is gone. This will require 24 to 48 hours for a large animal and 6 to 8 hours for a chicken or rabbit. Freezing may injure the texture and flavor of meat, although frozen meat which has not begun to spoil may be successfully canned.

Fatten poultry, then keep it from feed at least 12 hours before killing. Remove all the skin, membrane, tough tendons and gristle. Also, remove as much of the bone as is practical.

Wash the meat with a clean cloth wrung out in clean, cold water. Rub the surface of the meat well. The meat should not be placed in the water to wash, as many of the juices may be lost if this is done.

Sterilization of Jars or Containers.—Wash containers in clean, soapy water; rinse, and while the meat is being prepared, heat the jars or cans in the pressure cooker, inverting so they will be filled with steam. Always keep the lids of the tin cans dry.

Pre-cooking of Product.—This term, when used in canning, indicates the partial cooking of the food to be canned before it is packed in containers. Pre-cooking may include stewing or boiling, roasting or baking, and frying. In the case of foods that become more flexible or shrink considerably with heat, a few moments only of pre-cooking is better than a longer period. Meat usually shrinks about 20 percent.

Always use the method best suited to the particular cut or kind of meat. The purpose of pre-cooking is to develop flavor, to heat the meat through before it is packed into the jars, and to take care of shrinkage so that a full pack may be obtained.
Meat packed raw always has the flavor of boiled meat. Avoid overcooking because the meat is to be processed and will be reheated before serving.

Meat for canning should not be dipped in batter, flour, meal or bread crumbs. These methods are believed by some authorities to delay heat penetration and also are apt to give a warmed-over taste when the meat is used.

Water is used in packing only when the meat is fried or seared; meat drippings are then diluted with a small amount of water and poured over the meat in the jar to the depth of 2 to 3 inches.

**Packing and Sealing.**—If meat is pre-cooked, pack it quickly while still hot into hot containers. Containers should be filled but not packed tightly.

If packed in tin, exhausting is necessary. Exhausting is merely creating a vacuum by filling the air spaces in the can with steam. Place cans in boiling water to within 1 inch of the top for 10 minutes or until the cans are filled with steam, then seal quickly.

When canning in glass, wipe all fat from tops of jars. Adjust rubbers. For jars with screw-top lids, screw the lid until it "catches" or screw it tightly, then unscrew one-fourth inch. If a glass-top jar is used, put the top bail in position but leave the lower bail up.

**Processing.**—This is the important step which sterilizes the product in the jar.

When canning meat, close the petcock and allow the pressure to come up to 3 pounds. Open the petcock, allowing the gage to return to zero. This allows undesirable odors and flavors to escape. Again close the petcock and begin counting the time as soon as the pressure gage registers 15 pounds. Process the required length of time.

At the end of the processing time follow directions for opening the pressure cooker; remove jars and complete the seal immediately unless they were entirely sealed before the processing.

The composition of self-sealing tops, sometimes called lacquer, should not be touched until the jars have cooled. An additional screwing or handling while they are hot may break the vacuum seal, upon which the success of this type of jar depends. The screw lid is merely to hold the lid in place. Remove the clamps or rims before the jars
are stored. For screw-top jars, tighten the lid completely. On clamp-top jars, put down the second clamps.

Cool jars quickly by allowing air to circulate freely around them. Avoid placing hot jars in a draft or on a cold surface. Test for leaks, then label and store.

In the use of tin cans, release steam at once, but slowly, then remove cover. Take out cans and plunge into cold water. Test for leaks, label and store.

**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 as do bulging ends of tin cans. Leakage in tin cans may be detected by placing cans in water. When air bubbles come to the surface, the can leaks.

Store in a cool, dry place in temperatures from 45 degrees to 60 degrees Fahrenheit. Canned meat usually is jellied when it is keeping properly unless it has been in too warm a place. There are, however, certain cuts of meat high in fat or low in connective tissue or bone which will not jelly easily. If the meat has been prepared in certain ways previous to canning, as frying, there may not be enough stock for this test to hold true. Liquid stock is one sign of spoilage, however, and should be watched carefully for further evidence.
Chicken, Turkey and Other Poultry

The best time to can chicken is in May or June and from August to October.

Preparation. — Pick, draw and clean carefully. Remove oil sac, lungs and kidneys. Cut pieces as usual, wash, drain and cool thoroughly before canning. Trim off any large pieces of fat. Put all giblets in one pan; feet, neck pieces and wing-tips in another. Never can giblets with the other meat. A 3-pound chicken will pack into a 1-quart jar.

Packed Uncooked.—The pieces of chicken may be salted lightly and packed raw in clean, tested jars without pre-cooking. Use salt in the proportion of 1 to 2 teaspoonfuls to a quart. Avoid a too-dense pack. Adjust rubber and lid, seal according to directions and process according to table. In canning in tin, exhaust before sealing.

There is a system in packing chicken by which an entire bird may be packed into one jar. To pack chicken this way:

1. First, place a drumstick in the jar.
2. Place a thigh next to the drumstick.
3. The two wings are then placed next to the thigh.
4. The place for the neck portion is in the center of the jar with the rib portion down.
5. Cover the neck piece with the back.
6. Place white meat over the back.
7. The remaining pieces should be so placed that the jar is completely filled.
8. The liver and giblets should be canned separately.

Pre-Cooked.—Most people prefer the method of partially cooking the chicken before packing it into jars. Fry, roast, broil or stew all parts except the liver, heart, neck and feet until about one-third done. Frying in deep fat is a desirable method. Chicken which is to be canned should never be floured. Salt, using 2 teaspoonfuls to a quart of chicken. Pack the pieces hot into jars. Add a little pan-gravy or broth. It is not desirable to fill the jar with liquid unless the meat is stewed. Adjust the lid and process according to the table.

Giblets.—Giblets should be canned separately. Add water, and heat to boiling. Salt, using 1 teaspoonful to a pint of chicken; pack
boiling hot into jars and process according to the table. Giblets may 
be used for gravy, dressing or creamed dishes.

**Bony Pieces.**—The bony pieces, or all pieces from larger birds, 
may be cooked until the meat is nearly tender. Strip meat from 
bones. Cut in neat pieces, pack, salt, using 1 to 2 teaspoonfuls to a 
quart, fill jars with hot broth and process according to table. Use for 
creamed chicken, chicken a la King, chicken salad, chicken pie and 
sandwiches.

**Soup Stock.**—Feet, necks and bony pieces may be cooked for 
soup stock. Cover with cold water, salt lightly, add seasonings (as 
onion, parsley, celery or bay leaf,) bring to a boil, simmer until ten­
der. Fill jars with plain hot stock or stock with meat scraps; seal 
and process as for pre-cooked meat. Washed rice may be added to 
boiling broth and cooked a few minutes in the broth before it is 
packed into jars.

Turkey is canned in the same way as chicken.

**Lamb, Beef, Pork**

**Uncooked.**—Wipe meat with a damp cloth and cut into pieces 
that will fit into a jar well. Salt, using 1 to 2 teaspoonfuls to a quart. 
Pack loosely in clean tested jars. Do not add water unless meat is 
quite tough. Adjust lid and process according to the table. If can­
nning in tin, exhaust before sealing.

**Pre-Cooked.** — Wipe 
meat with a damp cloth, cut in pieces to fit the jar eas­
ily. Roast, bake, fry or stew until about one-third done. 
Pack immediately into clean tested jars or cans, and salt, using 1 to 2 
teaspoonfuls per quart. Add a little pan-gravy or broth. Avoid all 
excess fat. It is not necessary that the jar be filled with liquid 
either before or after processing, but meat should be thoroughly hot 
when packed. Process according to the table.

**Stew or Goulash.**—Use your favorite recipe. Cook meat and 
vegetables just enough to develop flavor. Season to taste. Pack into 
hot jars or cans and process according to table for pre-cooked meat.

**Soup Stock.**—Bones, meat scraps, cleaned feet and pieces of head 
may be used for soup stock. Large marrow bones should be split. 
Cover with cold water, salt slightly and season, bring to a boil and 
simmer or cook under pressure until bones are almost crumbly. 
Strain, cook, skim off excess fat. Condense further if it does not 
jelly. Reheat, fill jars, process according to method 
given for pre-cooked meat. Meat from soup bones 
may be seasoned for potted meat, heated, packed 
into hot jars or cans and processed the same as pre- 
cooked meat.
Chili Con Carne.—

10 lbs. lean beef or part beef and part pork or ham
2 lbs. Mexican beans
1 gal. or more water

3 tsp. Chili powder
1½ c. chopped onion
1 gal. canned tomatoes
Salt

Soak beans over night in water. Cook 30 minutes in pressure cooker at 15 pounds pressure. Grind beef through coarse plate of food chopper. Brown half of beef with chopped onion in hot fat. Cook slowly for several minutes. Remove excess fat. Combine tomatoes, meat, beans and seasonings; heat thoroughly and put in glass jars while boiling hot. Process according to pre-cooked meat.

Sausage or Hamburger Cakes.—

Grind meat, season as desired, run through grinder again and shape into cakes. Brown slowly in a hot skillet, cleaning the skillet between every two or three fryings to remove burned particles. Pack into jars or cans and pour in 1 to 2 inches of pan-gravy made by adding water to part of the fat. Partially seal and process according to the table.

Meat Loaf.—A regular meat loaf may be mixed and heated through by steaming or baking slowly for about 30 minutes. Then pack hot in wide-mouthed jars or cans and process according to table. A similar mixture may be shaped into cakes and canned with a hot stock or tomato poured over. Cakes are easier to process than the solid loaf because heat penetration is more rapid. A suggested recipe is as follows:

1 lb. lean beef round or chuck, ground
½ lb. salt pork or
¼ lb. ham, ground
2 eggs, slightly beaten

¼ c. tomato juice
¼ small onion, chopped
1 tsp. salt
½ tsp. pepper
1/16 tsp. sage

If desired, 1 teaspoonful mixed herbs may be substituted for the onion. Mix ingredients lightly. Shape into a loaf of a size suitable for the container, handling as little as possible. Place on a rack in a pan. Bake in a moderate oven (350°F.) one-half hour, basting as needed with the fat that cooks out of meat. Pack in container and process.

Game and Fish

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. The mention in this bulletin of fish for canning has to do particularly with mountain trout.
The following quotation from the laws should be observed carefully: "Section 78. Possession After Close of Season.—No game or fish shall be held in possession by any person for more than five days after the close of the season for killing the same, except as in this law otherwise provided.

"Section 133. Storage Permit—Form.—Any person having the lawful possession of game or fish killed within this state, may, upon proof of such fact, have issued to him by the Commissioner (Commission), a storage permit which shall authorize storage, possession and use of the same not longer than ninety days next ensuing the open season therefor.

"Such permit shall be substantially in the following form:

Form 12

STATE OF COLORADO
Department of Game and Fish
Storage Permit

No........................ Denver.................................19.....

Mr.............................................................residing at..........................

being in the lawful possession of.......................killed within this State is entitled to have the same kept in storage until...........................next.

This authorizes storage, possession and personal use until the date last mentioned above, but not transportation or sale.

..............................................................Director.

Game and Fish Commission.

The above quoted sections were further interpreted for this bulletin by the Director of the Game and Fish Commission as follows:

"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 is 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, they 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."

Fish.—The freshness of fish is important at any time and fish for canning should be processed within about 5 hours after being caught.

Fish should be cleaned as soon as they are taken out of the water. Remove the head and tail. To scale, dip the fish in hot water, then remove the scales. If the skin is tough it should be removed. If the fish are small the backbone may be left in, but for larger fish it should be removed.
Cut fish into correct lengths to fit the jar, and soak in brine for 10 minutes to 1 hour, depending on the thickness of the fish, then drain.

**Packed Uncooked.**—When the fish is drained, pack in hot jars. Add 1 level teaspoonful salt per quart but do not add water. Adjust rubber and lid, seal according to directions and process according to table.

**Pre-Cooked.**—Fry in deep fat until nicely browned. Baking, steaming or boiling may also be used. Pack in hot jars. Salt, using 1 level teaspoonful to the quart. Do not add water. Adjust the lid and process according to table.

**Pheasants, Prairie Chickens and Other Fowl.**—Prepare for canning in the same way as chicken.

**Rabbit.**—Skin and clean thoroughly. Wash in salted water. Unless the rabbit is young and tender, it is best canned as a stew.

**Venison.**—Prepare for canning in the same manner as beef.

**Processing Table for Meat and Chicken**

<table>
<thead>
<tr>
<th>Process at 15 Pounds Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw, uncooked</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Partially cooked and packed hot, or pre-heated in jars.</td>
</tr>
</tbody>
</table>

**Standards.**—A good jar of meat should be well filled without crowding. Jars in which the sections of meat are fairly large rate better than those filled with many small pieces. The meat should appear firm and smooth, not coarse and stringy. Fat should be clean, white or cream-colored. In the case of chickens, the fat is usually a clear yellow. Fat should not be more than one-half inch in thickness except in the case of pork, and should be on top the liquid.

**What Causes Defects in Canned Meat**

<table>
<thead>
<tr>
<th>Fault</th>
<th>Cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Liquid not jellied.</td>
<td>Temperature too high.</td>
</tr>
<tr>
<td></td>
<td>The stock on some meat congeals less readily.</td>
</tr>
<tr>
<td></td>
<td>Spoilage.</td>
</tr>
</tbody>
</table>
Fault                  | Cause
---|---
                        | Improper sealing of jar.  
                        | Uneven pressure in processing.  
                        | Releasing steam of cooker.  
                        | Cooker not level.
                        | Poor quality.
                        | Floured meat.  
                        | Too much fat.

Why do Foods Spoil.—1. Poor food product.  
2. Failure to sterilize food or utensils with which foods come in contact.  
3. Containers with faulty seals, either not tightened or because of food, grease or juices which have lodged between the lids and jars.  
4. Use of poor rubbers.  
5. Delay in sealing after the food is packed.  
6. Storage at incorrect temperatures, as below 45 degrees or above 60 degrees F.  
7. Food packed too tightly.  
8. Food allowed to stand too long before canning.  
9. Length of processing period counted incorrectly.  
10. Pressure used too low.  
11. Jarring of containers so that the seal is broken.  
12. Jars opened to refill with liquid.  

How Can Loss of Liquid in Jars be Prevented?—1. Screw the lid until it "catches," then unscrew one-fourth inch.  
2. Keep the pressure even.  
3. Prevent escape of steam from the safety valve during processing.  
4. After processing allow the pressure to reach zero slowly. Leave the petcock closed for a few minutes until the steam has condensed, and temperature dropped.  
5. Keep the cooker level so jars will not tip.

Foods Which May Be Served with Meats.—Beef Steak.—Tomato sauce, fried onions, French-fried potatoes, string beans, mushrooms, carrots, tomatoes, broccoli.  
Roast Beef.—Tomato, horseradish, cranberry or chutney sauce, vegetables, as spinach, sweet corn, beans, egg plant, squash, browned potatoes.
Boiled Beef.—Horseradish, tomato or brown sauce, mashed turnips, root vegetables, any kind of greens.

Boiled Tongue.—Tomato or raisin sauce, horseradish with whipped or sour cream, boiled rice, carrots, potato salad, and cucumbers.

Roast Veal.—Tomato, cranberry, mushroom or chili sauce, spinach or any other fresh vegetable, rice balls, currant jelly.

Roast Pork.—Apple sauce, mustard, cranberry sauce, currant jelly, cabbage relish, fried apples, pineapple, root vegetables, greens, squash, and browned, mashed or riced potatoes.

Baked Ham.—Cider, horseradish or other acid sauce, sour jelly, pineapple, sweet potatoes, squash, spinach, corn, mustard pickles.

Lamb Chops.—Creamed potatoes, peas, squash, fresh lima beans, cauliflower, Brussels sprouts, green vegetables.

Roast Lamb.—Mint or sorrel sauce, currant or mint jelly, asparagus, cucumbers, green peas, lettuce or other delicate vegetables.

Chicken.—Cream gravy, glazed sweet potatoes, rice croquettes, corn fritters, squash, summer vegetables.

Turkey.—Cranberry jelly or cranberry sauce, onions, celery, cauliflower, Brussels sprouts, sage, chestnut or oyster stuffing.

Fish.—Tartar, Hollandaise, drawn butter, egg, parsley, or caper sauces. Thousand Island dressing. Baked, boiled, mashed, or French-fried potatoes. String beans, onions, sliced cucumbers, grilled tomatoes, Harvard beets, broccoli, asparagus.

Rabbit.—Caper sauce, cream gravy, French-fried potatoes, string beans, Brussels sprouts.

Venison.—Currant or other tart jelly or sauce, French-fried potatoes, string beans, green vegetables.

Summary of Points to be Remembered in Canning

1. Always use fresh products.
2. Be clean, use clean utensils and clean products.
3. Follow the correct methods given for canning. Only canning by steam pressure is recommended for meats.
4. Use only good containers. Even a poor rubber may cause 25 cents worth of food to spoil. Test containers, jars, rubbers, lids or tin cans before using.
5. Know how to use the containers selected.
6. Know the method of preparing the food.
10. Label. A suggested form is as follows:

<table>
<thead>
<tr>
<th>Beef, round</th>
<th>Nov. 20, 1937</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure Cooker Method</td>
<td>Mary Smith</td>
</tr>
</tbody>
</table>
11. Store in a cool, dry place having a temperature of 45 degrees to 60 degrees F.

**Suitable Methods of Cooking for Various Cuts of Meat**

<table>
<thead>
<tr>
<th>Roasting</th>
<th>Frying or Broiling</th>
<th>Stewing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ribs</td>
<td>Tenderloin</td>
<td>Rump</td>
</tr>
<tr>
<td>Sirloin</td>
<td>Porterhouse steak</td>
<td>Round</td>
</tr>
<tr>
<td>Short loin</td>
<td>Sirloin steak</td>
<td>Shank</td>
</tr>
<tr>
<td></td>
<td>Hamburg steak</td>
<td>Flank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tail</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chuck</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Neck</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Plate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Brisket</td>
</tr>
<tr>
<td>Veal</td>
<td>Loin</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Leg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shoulder</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>All cuts</td>
</tr>
<tr>
<td>Lamb or Mutton</td>
<td>Leg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shoulder roll</td>
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</tr>
<tr>
<td></td>
<td>Crown ribs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Loin</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Shoulder</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Breast</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Neck</td>
</tr>
<tr>
<td>Pork</td>
<td>Loin</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Boston butt</td>
<td>Cured ham</td>
</tr>
<tr>
<td></td>
<td>Shoulder</td>
<td>Cured bacon</td>
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<tr>
<td></td>
<td>Tenderloin</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fresh or cured ham</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Crown ribs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>All cuts</td>
</tr>
</tbody>
</table>

**Suggested Ways of Using Canned Meat**

**Oven-browned Canned Meat.**—One of the simplest ways of preparing canned meat for the table is to remove the meat from the jellied stock, place the meat in a pan and brown it in the oven or in a slightly greased frying pan. When heated through and well browned, place on a platter and pour over a gravy made from the jellied stock. Tomato sauce will add much in the service of canned meats as will peppers, onions and celery cooked with the meat.

When using canned meats for stews, the vegetables should be parboiled before adding to the meat, because the time required for the entire cooking of the vegetables would result in over-cooking of the meat.
Shepherds' Pie.—Line a casserole, mold, or deep baking dish with boiled rice or mashed potatoes. Fill the center with canned meat, cut into small pieces. Cover with rice or potato and dot the top with butter. Heat thoroughly, then brown the top.

**Meat Pie**

1 qt. 1-inch cubes cold, cooked meat
1 medium-sized onion, sliced
Boiling water to cover

Simmer meat with onion in water to cover, for about 1 hour or until tender. Add potatoes for last 8 minutes of cooking. Thicken liquid with flour, allowing 1½ tablespoonfuls to 1 cupful liquid. Season to taste. Put into greased baking dish, cover with small baking-powder biscuits or a perforated crust made of same mixture. Bake in a hot oven (400°-450° F.) until biscuits are done—about 15 minutes.

The diced potatoes may be omitted and mashed potatoes or boiled rice used on top instead of biscuits.

**Jellied-Meat Loaf**

2 c. cooked meat, diced or chopped
1 c. stock
1 tb. gelatin soaked in
½ c. cold water
1 tb. catsup

Add seasonings to stock, bring to boiling point, add gelatin, stir until dissolved. Strain. Add meat and mold. Serve on a bed of lettuce leaves or garnish with parsley. 6 servings.

**Chicken-a-la-King**

This is one of the most satisfactory ways of using canned chicken which has been stripped from the bones.

Use a quart jar of canned chicken, stripped from the bones, but left in fairly large pieces.

1 small onion chopped
1 tb. chopped red pepper
1 tb. chopped green pepper
6 mushrooms, chopped, if desired

Melt fat, add onion, peppers and mushrooms, and brown. Add flour and blend. Add stock slowly, stirring until smooth, and cook until thickened. Add carrots and chicken, bring to the boiling point and then keep hot over boiling water until time to serve.