

# MEAT CANNING

MICHIGAN STATE COLLEGE :: EXTENSION DIVISION

EAST LANSING

## PREPARATION OF MEAT

Meat may be canned as soon as the animal heat has disappeared, but since raw meat is easier to handle after chilling, it may be allowed to hang a few days if the weather is cold. Frozen meat may be canned, but it does not make a high-quality product. It should not be thawed before canning. Cut the most tender parts, such as the loin and ribs, into roasts or chops which will just fit the can. Other parts may be cut into smaller pieces suitable for individual servings. Trim off excess fat, leaving only enough to give flavor, and remove membranes and any discolored portions. Small bones may be retained as they improve the flavor and hasten heat penetration. Trimmings and tougher cuts may be ground for patties or meat loaves or may be used with the larger bones for soup stock. Add salt in the proportions of one teaspoonful to the quart. If tin cans are used, place the salt in the cans before packing.

## PRE-COOKING AND PACKING

When glass jars are used, meat should be pre-cooked in water or in the oven before packing. If tin cans are used the meat may be pre-cooked or packed raw and the meat then heated in the cans before sealing. A better flavor results when the latter method is used but more time is required.

(a) **Pre-cooking in Water**—Cut the meat in pieces weighing about one pound. Place in kettle and simmer in boiling water for 12 to 20 minutes until the raw color has disappeared from the center of the pieces. Cut the meat into smaller pieces, pack into jars, press down, and

cover with hot broth to within  $\frac{1}{2}$  inch of the top. Do not use iron or copper utensils as they may discolor the meat.

(b) **Pre-cooking in Oven**—Cut the meat into one-pound pieces and cook in a moderate oven until the red color almost disappears from the center. Cut the meat into smaller pieces, pack closely, cover with pan drippings or boiling water to within  $\frac{1}{2}$  inch of top.

(c) **Pre-cooking in Tin Cans**—Pack pieces of meat into cans, and place the open cans in a bath of boiling water that comes up to within 2 inches of the top of the cans. Cover the kettle to retain steam and heat until meat is steaming hot and has lost its red color. About 50 minutes are required. Press the meat down until covered with broth and seal while hot. Leave  $\frac{1}{2}$  inch head space.

## SEALING CONTAINERS

(a) Glass-top jars which seal with a wire clamp may be completely sealed if the contents are hot.

(b) Screw-top jars should be partially sealed—as completely as can be accomplished using only thumb and little finger, and not exerting force. Be sure tops are undamaged and rubbers new.

(c) Metal tops with composition seals should be handled according to the exact directions of the manufacturer. Usually they are turned down tightly and the metal rim removed after 24 hours.

(d) Plain tin cans should be used for meats rather than the enameled ones and should be carefully sealed. All sealing machines should be tested before each use, using a can partly filled with water.

# TIMETABLE FOR PROCESSING MEATS AND CHICKEN IN THE STEAM PRESSURE CANNER\*

250° F., OR 15 POUNDS PRESSURE

Product	No. 2 Can	No. 2½ Can	No. 3 Can	Pint Glass Jar	Quart Glass Jar
	Minutes	Minutes	Minutes	Minutes	Minutes
<b>Beef:</b>					
Fresh .....	85	110	120	85	120
Ground (hamburger) .....	90	115	—	90	120
Hash .....	90	115	—	90	120
Heart and tongue .....	85	110	120	85	120
Stew meat .....	85	110	120	85	120
Stew with vegetables .....	85	110	120	85	120
Corned .....	85	110	120	85	120
<b>Chicken and other poultry:</b>					
With bone .....	55	65	70	65	75
Boned .....	85	110	120	85	120
Giblets .....	85	—	—	85	—
Sandwich spread .....	No. 1, 55	—	—	½ Pint, 65	—
	No. 2, 90	—	—	Pint, 90	—
	No. 1, 55	—	—	½ Pint, 65	—
	No. 2, 90	—	—	Pint, 90	—
<b>Liver paste.</b>					
Lamb and mutton .....	85	110	120	85	120
Liver paste .....	90	—	—	90	—
<b>Pork:</b>					
Fresh .....	85	110	120	85	120
Headcheese .....	90	—	—	90	—
Sausage .....	90	115	—	90	120
<b>Rabbit, domestic.</b>	85	110	120	85	120
<b>Soups:</b>					
Broth, clear .....	25	30	30	25	30
Broth with rice or barley .....	35	40	40	35	40
Chicken gumbo .....	65	75	80	65	80
Soup stock .....	40	45	45	40	45
<b>Veal.</b>	85	110	120	85	120

240° F., OR 10 POUNDS PRESSURE

Chili con carne .....	120	135	150	120	150
Pork and beans .....	70	80	85	80	90

\*Table from Farmers' Bulletin No. 1762, United States Department of Agriculture.

## PROCESSING

The water bath or oven should not be used for processing meats or poultry. A pressure-cooker makes a higher temperature possible and, when correct processing times are used, insures keeping quality and the prevention of food poisoning. If a pressure cooker is not available, other methods of preservation\* should be used.

The pressure cooker should be exhausted before allowing the pressure to rise to 10 or 15 pounds, that is, the steam should be allowed to escape in a steady stream from the open petcock for 10 minutes before processing is begun. Care should be taken in regulating the heat under the cooker so that the pressure does not fluctuate. The petcock should never be opened until the pressure has dropped to zero when glass jars are in the cooker.

## STORAGE

After removing from the cooker, tin cans should be cooled in running water or in several cold water baths. Glass jars should be set far apart to cool as quickly as possible. Glass jars should not be allowed to stand inverted while one watches for possible poor seals.

Store all canned goods in a cool, dry place.

## SPECIAL DIRECTIONS

**Chili Con Carne**—Use 2 pounds of chili beans or some other pink or red variety. Pick over the beans, wash, and soak over night 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.

**Corned Beef**—Remove from the brine. Soak two or three hours in clear water. Simmer for 30 minutes. Pack while hot.

**Ground Meat**—Season ground meat, pork, beef, lamb, or mutton or combinations and mold into cakes. If using tin cans, shape meat by packing into a can which has had both ends removed. Slip the molded cylinder out of the can and slice with sharp knife. Brown the cakes quickly in hot fat, turning with a spatula. Three or four tablespoons of hot tomato juice may be poured over the meat after packing.

**Heart**—Simmer the heart in one quart of water to which whole mixed spices have been added. Cook until partially tender. Slice or pack whole.

**Liver**—(a) Slice and brown quickly in hot fat. (b) Drop into boiling water for five minutes. Put through a food chopper. The ground liver may be seasoned and shaped into balls and browned in hot fat, or it may be shaped into a loaf which will fit the can and then seared in the oven, or it may be seasoned highly and packed in half-pint cans to be used as sandwich filling. (c) Another method is to cook the whole liver in simmering water. When partially tender, slice and pack with three or four tablespoons of hot water, meat stock, or tomato juice.

**Meat Loaf**—Season ground meat according to any favorite recipe. Shape into a loaf which will fit the can (see directions for ground meat) and brown in the oven.

**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 cook one-half hour longer. Pack hot in the containers and cover with the liquid or sauce.

**Roasts**—Cut tender parts into large pieces which will fit the cans. Brown in an uncovered pan in a hot oven or sear in a small amount of fat on top of the stove. The roast should not be sliced before packing.

**Sausage**—Mix seasonings and ground pork together well. (It is wise to omit sage since it produces a bitter flavor after processing.) If glass jars are used, mold the sausage into cakes and pre-cook in a moderate oven (350° F.) or in a frying pan until the cakes are slightly brown. Pack into jars and cover with drippings or hot water.

**Soup Stock**—Saw or split large bones into smaller pieces. Cover with cold water, add meat scraps and simmer until fairly concentrated. (Avoid too long cooking, since it will cause loss of flavor. If meat bones are cooked for a long time under pressure, the broth will have a disagreeable gluey flavor.) Strain, cool, and skim off fat.

If the addition of cereal is desired, 1 cup of rice or barley may be added to each gallon of broth. Boil the cereal for 15 minutes in salted water, drain, and rinse with cold water. Bring the broth to the boiling point before adding the cereal.

Diced vegetables also may be added if desired.

**Spareribs**—Saw into pieces which will fit the can. Roll tightly and pack. The strip may be browned before rolling.

**Stew**—Cut less tender parts into inch cubes. Dredge lightly with flour and brown in a small amount of hot fat. Add liquid to the pan and simmer the meat in the browned liquid until almost tender. Pack while hot, adding the liquid. Vegetables may be added just before packing.

**Swiss Steak**—Cut meat into pieces one and one-half inches thick. Dredge lightly with flour and pound. Brown in a small amount of hot fat. Add water and simmer until partially tender. Pack while hot and add gravy.

**Sweetbreads**—Soak for one hour. Cook in acidulated water (one tablespoon lemon juice to one quart water) for 5 minutes. Pack in jars, add hot water.

**Tongue**—Cook until almost tender. Remove skin, cut in slices and pack. Spices may be added to the water in which the tongue is cooked.

# CANNING POULTRY

For canning, select plump, 2-year-old hens, preferably when they are culled from the flock. Young birds may be canned, but the texture and flavor of the meat is not so good as that from mature birds.

Dress the chickens as for cooking, and take particular care not to break the gall bladder because the meat is then unfit for canning. Also remove the lungs, kidneys, and eggs. Cut the chicken into the usual-sized pieces for serving and separate into three piles—the meaty pieces (breasts, thighs, legs, and upper-wing joints), the bony pieces (backs, wings, necks, and perhaps the feet after they have been skinned), and the giblets.

The giblets should not be canned with the other meat as they will flavor and discolor it. Also it is better to can the livers alone, and the gizzards and hearts together. Remove the chicken skin (or not as desired), and trim off lumps of fat. Too much fat makes chicken difficult to process.

Make broth with the bony pieces. Cover with lightly salted cold water, simmer until the meat is tender, and drain off the broth to use as the liquid in canning the meaty pieces. Strip the meat from the bones and can as small pieces or use in making sandwich spread.

If desired, add 5 tablespoons of granulated gelatin to each quart of broth. Moisten the gelatin first with a little of the cold liquid and dissolve in the hot broth.

The meaty pieces of chicken may be canned either with or without the bone. With the bone the product is better flavored. Pre-cook in the oven, in water, or exhaust in tin cans, and pack hot as directed for meat. Add salt in the proportions of one teaspoonful to the quart.

Pre-cook giblets in water and pack hot, or exhaust in tin cans.

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

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

Combine all of the ingredients, stir, and heat gradually to simmering. Pack hot and process immediately.

**Chicken-liver Paste**—Simmer the livers for 10 minutes and drain. Mash with a fork and remove any stringy tissue. Then add a small quantity of finely chopped olives, mayonnaise, and dashes of tabasco sauce and paprika. Stir while heating carefully to prevent scorching. Pack hot and process.

\*See "THE HOME MEAT SUPPLY," Michigan Extension Bulletin 151.