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EC9928 Canning Meat

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Nebraska
COOPERATIVE EXTENSION WORK
1939 IN AGRICULTURE AND HOME ECONOMICS Extension
U. of N. Agr. College & U. S. Dept. of Agr. Cooperating Circular
W. H. Brokaw, Director, Lincoln 9928

CANNING MEAT

(See Extension Circular 9925 for general directions and methods)

Home butchered meat may be canned for use in the family meals with a high degree of success. Meat for canning should be slaughtered and handled in a strictly sanitary manner. The canning may be started as soon as the carcass is completely chilled. To prepare the meat, cut off the surplus fat and bone. Wipe meat carefully with a clean, damp cloth.

Frozen meat may be canned but meat which has been frozen slowly will not be as juicy as that which has been frozen quickly. Frozen meat may be thawed slowly at 50° F. before canning so that canning time may be more accurately computed. It would be practical to can the less tender cuts of meat. The tender cuts are apt to become over-cooked when canned so could be kept in freezer lockers if desired.

Precooking Meat

Meat is precooked to heat it thoroughly. If it is to be canned in glass jars, the precooking may be done in the oven or in water before being packed into the container. When frying meat as a method of precooking for canning, do not flour the meat as the flavor is not so good.

To precook the meat in the oven, cut it into uniform pieces weighing about one pound each. Place in the baking pan and cook in a moderate oven (350° F.) until the red or pink color of the raw meat almost disappears at the center. This requires about 30 to 40 minutes. Cut the meat into pieces that will fit easily into the jar and are suitable for serving. Pack at once. Closely cover with the pan drippings or with boiling water leaving ½ inch head space. Add one teaspoon salt per quart and process immediately.

To precook in water, cut the meat into about one pound pieces of uniform size and place in boiling water to cover. Lower the heat and simmer for 12 to 20 minutes until the color of raw meat has almost disappeared from the center of the pieces. Cut the meat into smaller pieces and pack into jars. Reheat the broth, strain, and pour over meat to within ½ inch from the top of the jar. Add ½ teaspoon salt per pint. If desired, one tablespoon of gelatin per pint of liquid may be added to the broth so that spoilage may be more easily detected. Partially seal and process at once.

When canning in tin cans, pack the raw meat into the cans leaving 3/4 inch head space at the top. Add salt but no liquid. Place the cans in a boiling water bath deep enough to come within about two inches of the top of the cans. Keep the water boiling and cover the bath to keep in the steam. Continue heating until the meat in the cans become steaming hot. Cover with hot broth allowing one-fourth inch head space for No. 1 tin cans, one-third inch for No. 2 tin cans, and one-half inch for No. 3 tin cans. Seal the can while the food is steaming and process at once.

A steam pressure cooker is preferred for canning meat, but the boiling water bath has been used with success by careful workers. For altitudes of 2000 feet and above, the pressure cooker method should be followed. Temperatures of 240° F. to 250° F. are recommended for adequate sterilization of foods low in acidity. The

water of the hot water bath never reaches a temperature above the boiling point (212° F. at sea level) and the contents of the jars will not be hotter than the water around them. Research has shown that some bacterial spores may survive 212° F. for six hours or longer. The spores of "clostridium botulinum", the toxin of which may cause food poisoning, are not destroyed at a temperature of 212° F. unless this temperature is maintained for at least six hours. It is for these reasons that the Bureau of Home Economics, Washington, D. C., does not recommend the boiling water bath method for canning of non-acid foods and meats. If the boiling water bath is used, it is particularly important to boil the canned meat, poultry and non-acid vegetables uncovered for at least five minutes before tasting.

Foods processed for six hours in the boiling water bath would obviously be overcooked. If a pressure cooker is not available and the water bath is risked for canning meat, the Bacteriology Department of the University of Nebraska, has approved the processing time given in the table below. After the meat has been precooked, packed and sealed, it should be processed immediately. The time periods given below apply to meat which is steaming hot when packed and sealed.

Product	Water bath		Steam pressure 15 pounds *		
	No. 2 tin, pint glass	No. 3 tin, quart glass	No. 2 tin, pint glass	No. 2½ tin	No. 3 tin, quart glass
BEEF					
Fresh	3 hr.	3 hr.	85 min.	110 min.	120 min.
Ground	3 hr.	3 hr.	90 min.	115 min.	120 min. Glass qt. only
Hash	3 hr.	3 hr.	90 min.	115 min.	120 min. Glass qt. only
Heart and tongue	3 hr.	3 hr.	85 min.	110 min.	120 min.
Stew meat	3 hr.	3 hr.	85 min.	110 min.	120 min.
Stew with vegetables	3 hr.	3 hr.	85 min.	110 min.	120 min.
Corned	3 hr.	3 hr.	85 min.	110 min.	120 min.
LAMB AND MUTTON	3 hr.	3 hr.	85 min.	110 min.	120 min.
PORK					
Fresh	3 hr.	3 hr.	85 min.	110 min.	120 min.
Head cheese	3 hr.	3 hr.	90 min.	---	---
Sausage	3 hr.	3 hr.	90 min.	115 min.	120 min. Glass qt. only
VEAL	3 hr.	3 hr.	85 min.	110 min.	120 min.

*At altitudes over 2,000 feet add 1 pound of pressure for each additional 2,000 ft.

Cooling

When using glass jars or No. 3 or larger tin cans, allow the pressure canner to cool until the gauge registers zero before opening the petcock and then open gradually.

Remove glass jars one at a time and complete the seal at once. If liquid has been lost, do not open jars to add more.

When No. 2 or 2½ tin cans are used, open petcock on the pressure cooker gradually at the end of processing and allow the steam to escape. Tin cans are cooled by placing them in cold running water. Glass jars are placed in open air protected from a draught.

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