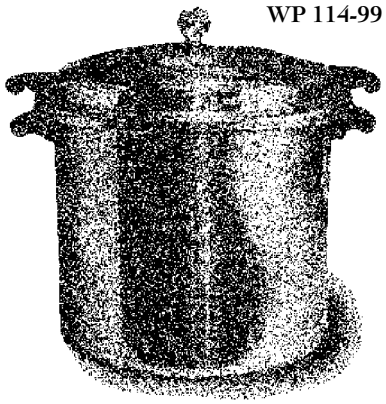
Extension Service
West Virginia University

WP 114-99



Pressure Canners

Canning meats and vegetables takes higher than boiling temperatures to kill the bacteria that cause botulism, which can be fatal. Pressure canning is the only way to reach these temperatures.

Know your pressure canner and how it works. Whether you have a small-capacity pressure canner holding only 4 quarts or the largest canner, which can hold 18 pints in two layers, all are treated in the same manner and should be vented using the typical venting procedures.

A loaded pressure canner requires about 12-15 minutes of heating before it begins to vent; another 10 minutes to vent the canner; another 5 minutes to pressurize the canner; another 20-90 minutes to process low acid food; and, finally, another 20-60 minutes to cool the canner before removing jars.

Essential Parts

Closures or covers of pressure canners lock in place so that they cannot be lifted by steam. Older canners are closed with a thumb-screw type closure. Covers on newer canners usually have turn-on lids.

Pressure gauges record the pressure. The dial or the weight with a sliding core shows the pressure within the canner; you must adjust the heat to keep the pressure steady. The weight type permits pressure to rise to a definite point and then releases excess steam by rocking or jiggling to keep pressure from going higher.

Gaskets of rubber or rubberlike compounds keep steam from leaking out around the cover. Handle canner lid gaskets carefully and clean them according to the manufacturer's directions. Nicked or dried gaskets will allow steam leaks during pressurization of canners. Keep gaskets clean between uses. Gaskets on older model canners may require a light coating of vegetable oil once a year. Gaskets on newer model canners are prelubricated and do not benefit from oiling. Check your canner's instructions if there is doubt that the particular gasket you use has been prelubricated.

Vents allow steam to escape from the canner. To vent a canner, leave the vent port uncovered on newer models or manually open petcocks on some older models. Heating the filled canner with its lid locked into place causes the water to boil and generates steam that escapes through the petcock or vent port. When steam first escapes, set a timer for 10 minutes. After venting 10 minutes, close the petcock or place the counterweight or weighted gauge over the vent port to pressurize the canner.

Safety fuses are thin metal inserts or rubber plugs designed to relieve excessive pressure from the canner. Do not pick at or scratch fuses while cleaning lids. Use only canners that have the Underwriter's Laboratory (UL) approval.

Replacement gauges and other parts for canners are often available at stores offering canning equipment or from canner manufacturers. When ordering parts, give your canner model number and describe the parts needed.

Operating the Pressure Canner

1. Put 2 to 3 inches of hot water in the canner. Place filled jars on the rack, using a jar lifter. Fasten canner lid securely.

2. Leave weight off vent port or open petcock. Heat at the highest setting until steam flows from the petcock or vent port.

3. Maintain high heat setting, exhaust steam 10 minutes, and then place weight on vent port or close petcock. The canner will pressurize during the next 3 to 5 minutes.

4. Start timing the process when the pressure reading on the dial gauge indicates that the recommended pressure has been reached, or when the weighted gauge begins to jiggle or rock.

5. Regulate heat under the canner to maintain a steady pressure at or slightly above the correct gauge pressure. Quick and large pressure variations during processing may cause unnecessary liquid losses from jars. Weighted gauges on Mirro canners should jiggle about 2 to 3 times pre minute. On Presto canners, they should rock slowly throughout the process.

6. When the timed process is completed, turn off the heat, remove the canner from heat if possible, and let the canner depressurize. DO NOT FORCE-COOL THE CANNER. Forced cooling may result in food spoilage. Cooling the canner with cold running water or opening the vent port before the canner is fully depressurized will cause loss of liquid from jars and seal failures. Force-cooling may also warp the canner lid of older model canners, causing steam leaks. Depressurization of older models should be timed. Standard-size heavy-walled canners require about 30 minutes when loaded with pints and 45 minutes with quarts. Newer thin-walled canners cool more rapidly and are equipped with vent locks. These canners are depressurized when their vent lock piston drops to a normal position.

7. After the canner is depressurized, remove the weight from the vent port or open the petcock. Wait 2 minutes, unfasten the lid, and remove it carefully. Lift the lid away from you so that the steam does not burn your face.

8. Remove jars with a lifter and place them on towel or cooling rack, if desired.

Process the jars using the correct time and pressure specified for your altitude. Allow canner to cool at room temperature until it is completely depressurized. Proper processing times for vegetables are available in *Canning Vegetables,* WP 390-99, and for *Home Canning Meats and Poultry,* in WP 400-99.

This publication was adapted from USDA's *Complete Guide to Home Canning*, revised edition, September 1994, and reviewed by Sheila Rye, Graduate Student, and Guendoline Brown, Ph.D., Nutrition and Health Specialist, 1999.