

the food will survive. In the absence of air, a condition found inside a vacuum-sealed jar, the spores will germinate into living bacteria. As the bacteria grow, they produce botulism toxin. Consuming just a minute amount of this potent neurotoxin (toxic to the nervous system) can be fatal to humans or animals. Most cases of botulism poisoning have been caused by low-acid foods improperly canned at home.

To prevent bacteria, yeasts, or molds from spoiling your home-canned foods, carefully follow the canning directions given in this bulletin. Process acid foods in a water bath canner and low-acid foods in a pressure canner. There is no danger of botulism if low-acid foods are canned properly in a pressure canner.

### Start with Fresh Produce

Select ripe, firm fruits and young, tender vegetables for canning. Make sure that they are free of decay. Can them as soon as possible after harvesting. If you must hold them, keep them in a cool, airy place. If you buy fruits or vegetables to can, get them fresh from local farm markets, roadside stands, or pick-your-own farms.

While it is impossible to give hard and fast equivalents, the following amounts of fresh produce (picked or purchased) will generally make 1 quart of canned food:

FOOD	POUNDS
Apples .....	2½ - 3
Blueberries .....	2¼ - 3
Cherries .....	2 - 2½
Grapes, Concord (juice) ...	2⅔
Peaches .....	2 - 3
Pears .....	2 - 2½
Tomatoes .....	2½ - 3½
Asparagus .....	2½ - 4
Beans, snap .....	1½ - 2½
Corn, sweet (in husks) .....	3 - 6
Squash, summer .....	3
Squash, winter (or pumpkin) .....	2½ - 3

### Use Recommended Canning Equipment

● **Canning jars**—For best results, use only standard canning jars (also called Mason jars) with the manufacturer's name on the side. These jars are tempered to withstand temperature extremes, and the sealing edge is smooth and flat so lids will seal properly.

Canning jars must be in perfect condition. Check all jars, new or used, for hairline cracks or chips or nicks on the sealing edge. Such defects can result in breakage or sealing failure.

Packers' jars, such as mayonnaise, pickle, or coffee jars, are not recommended for home canning. As they are not very resistant to temperature extremes, they break easily. Also, lids may not seal because the sealing edge of packers' jars may be rounded rather than flat. Finally, the neck of the jar may be so short that the screw band will not hold the lid firmly in place during processing.

● **Canning lids**—The best way to close canning jars is with two-piece canning lids. The set consists of a flat metal lid and a screw band. The lid has a sealing compound around the edge and is enameled on the underside to prevent food from reacting with the metal. The screw band holds the lid in place during processing. A vacuum seal forms during cooling, after the jar is removed from the canner. You may reuse screw bands that are in good condition, **but always use new lids**. Do not use screw bands that are bent out of shape or badly rusted.

● **Water bath canner**—Use a water bath canner for processing acid foods—fruits, tomatoes, and pickled products. A water bath canner is a large, deep kettle that has a cover and a rack to hold jars. You can purchase a water bath canner in most department stores. However, you can also use any big, covered pot that is deep enough to allow water to extend 1 to 2 inches **over the tops of the jars** with room to boil briskly. A rack for holding jars may be purchased wherever canning supplies are sold.

● **Pressure canner**—Low-acid foods—vegetables, stewed tomatoes, meats, poultry, and fish—must be processed in a pressure canner. A pressure canner is a deep, heavy kettle that has a rack in the bottom for jars to stand on, a tight-fitting lid with a gasket, and a pressure gauge.

The gasket keeps steam from leaking out around the cover. If the gasket is worn, stretched, or hardened, it should be replaced.

There are two types of pressure gauges, the dial gauge and the weighted gauge. A **dial gauge** has a needle that registers the pressure inside the canner. Because dial gauges do get out of adjustment, they should be tested for accuracy before each canning season. Ask your county Extension Home Economist where the testing can be done locally. If it cannot be done locally, send the gauge to the manufacturer for testing. Package it carefully to avoid damage during shipping. Allow several weeks for testing.

A **weighted gauge** (sometimes called a pressure control or pressure regulator) fits over the vent. It permits pressure in the canner to rise to the desired point (10 pounds) and then releases excess steam—by “jiggling” or “rocking”—to keep the pressure from going higher. Weighted gauges do not get out of adjustment and do not need testing for accuracy, but they do need to be kept clean.

● **Pressure cooker**—A small 4- or 6-quart pressure cooker (sometimes called a pressure saucepan) equipped with a rack may be used for canning food in pint jars. Because of its small size, a pressure cooker heats up and cools down more rapidly than a large pressure canner. To compensate for the faster heating and cooling, it is necessary to use longer processing times when canning low-acid foods in a pressure cooker. The timetable on page 14 includes times for processing pints in a pressure cooker.

