

Food Preservation

Canning Vegetables

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Vegetables (except tomatoes), along with protein foods (meat, poultry, fish), mushrooms, soups and mixed vegetable recipes containing tomatoes, are included in the low acid food group. All foods in this group have very low levels of natural acidity. The low acid levels make the bacterial spores that cause spoilage more difficult to destroy. To process these low acid foods safely in a reasonable length of time takes a temperature higher than that of boiling water. Water boils at 212 F at sea level. Bacteria spores can be destroyed in a time period measured in minutes at 240 F (10 PSI at sea level) whereas they can survive for many hours in unpressurized boiling water (212 F at sea level). This is why all foods in the low acid group are processed in a steam pressure canner. The time required for jars of food inside the pressure canner to reach 240 F will vary with the type of food and style of pack. Detailed directions for canning each vegetable are available from county Agricultural Extension offices. The directions should be carefully followed to assure the canned vegetables will be safe, wholesome and nutritious.

Selecting Vegetables for Canning

Remember, canning will not improve the quality of food. For best canned quality results, select young, tender, freshly harvested vegetables for canning. Can them while they are still fresh — within two to three hours after harvest where possible. If they must be stored for a short period, store them in a cool, well ventilated place.

Quantity of Fresh Vegetables Needed

The number of quarts of canned food obtained from a given amount of fresh vegetables depends on the quality, condition, maturity and variety of the fresh vegetable. The number of jars obtained will also be

influenced by the size and shape of vegetable pieces and whether they are cold or hot packed. Generally the following amounts of fresh vegetables (purchased or picked) will yield one quart of canned food.

Fresh pounds to make Vegetables	one quart canned
Beans, Lima (in pods)	3-5
Beans, Snap	1½-2½
Beets (without tops)	2-3½
Carrots (without tops)	2-3
Corn, Sweet (in husk)	3-6
Peas, Green (in pods)	3-6
Greens	2-6
Sweet Potatoes	2-3
Tomatoes	2½-3½
Tomatoes (for juice)	2-3½

Preparation for Canning

Sort vegetables for size, color and maturity. Wash and drain all vegetables before removing hulls (caps), cores, pits, seeds or skins. Wash small lots at a time through several changes of water, but do not soak vegetables. Do not prepare vegetables the evening before canning. They will lose freshness and quality, even if stored overnight in the refrigerator.

Methods of Packing Jars

Most vegetables may be packed raw into glass jars or they may be preheated and packed hot.

Raw Pack Method: Pack cold, raw vegetables into glass jars and cover with boiling water. Pack corn, lima beans and peas loosely because they absorb water and expand during processing. Pack other raw vegetables tightly into the jars because they shrink during processing.



Hot Pack Method — Heat freshly prepared vegetables to the boiling point, and hold for 2-5 minutes. Promptly fill the jars loosely with the boiled food. Use the boiling cooking liquid to fill jars after packing to conserve nutrients. Add boiling water if there is not enough cooking liquid.

Some head space should be allowed between the packed food and the top of the jar. The amount of space to leave is given in the detailed directions for canning each food. If the jar is too full, liquid will be forced out during processing and may prevent the jar from sealing. If too much space is left, the process time will not be long enough to exhaust all the air from the jars, and the jars will not seal.

Hot packing is the best way to remove air and is the preferred pack style for foods processed in a boiling-water canner.

Closing Glass Jars

There is only one recommended type of closure for glass jars today and that is the **metal screwband and flat metal lid with sealing compound**. To use this type, wipe jar rim clean after produce is packed. Heat flat metal lid with sealing compound according to manufacturer's directions. Put lid on, with sealing compound next to glass. Screw metal band down tight by hand. When band is tight, the lid has enough give

to let air escape during processing. Do not tighten screwband further after removing jar from canner.

Processing Vegetables

Process all vegetables except tomatoes and pickled vegetables in a steam pressure canner. Follow detailed directions for canning each vegetable.

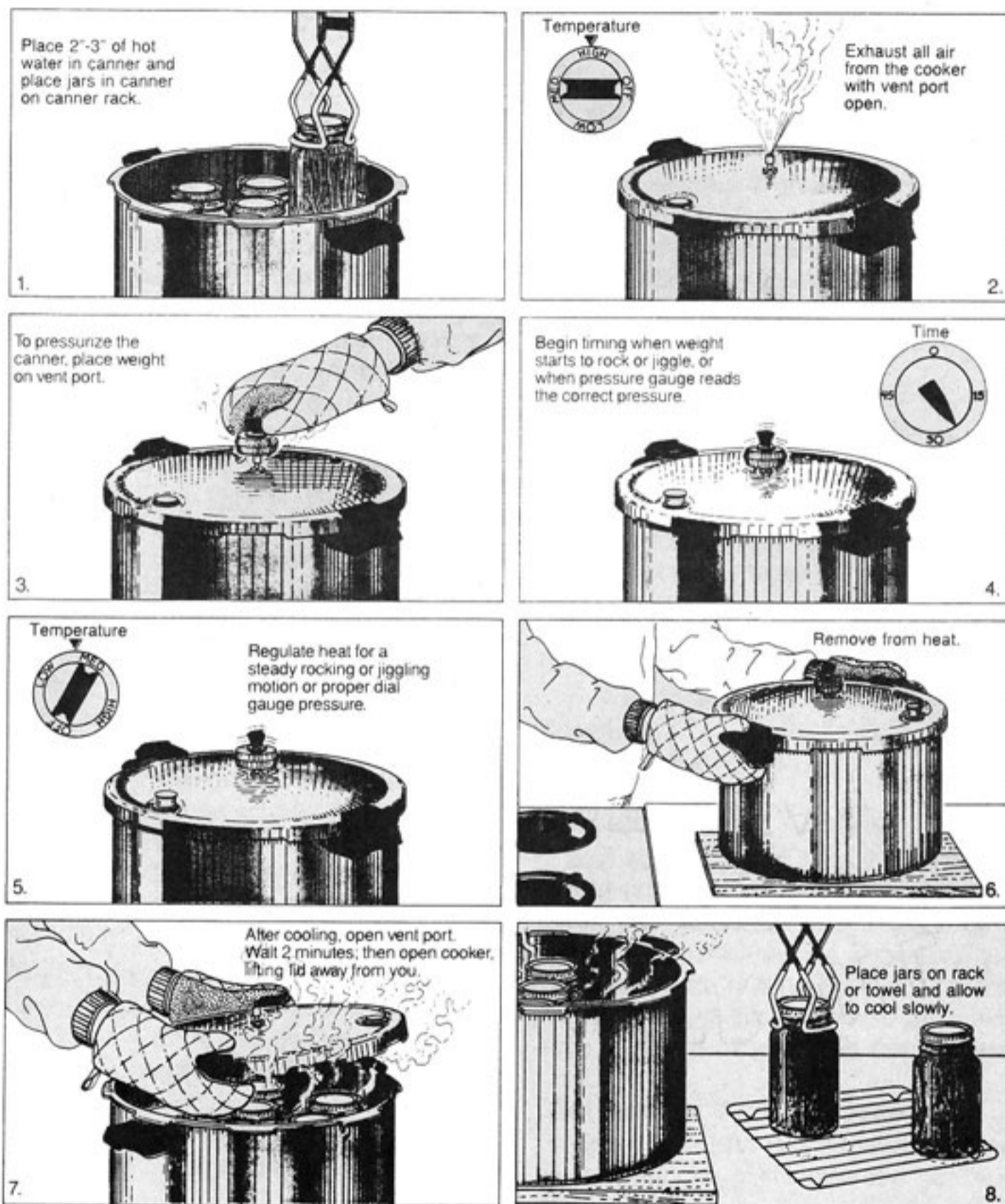
Cooling Glass Jars

Remove jars from canner immediately after pressure returns to zero. Set jars top side up on a rack or folded cloth to cool. Leave space between jars for air to circulate. Do not loosen or tighten screwbands of the two-piece closures. Keep jars away from drafts, but do not cover them.

Storing Canned Vegetables

Store canned foods in a cool, dry place. For best nutritive value and eating quality, use within one year. Canned foods stored in a warm place or in direct sunlight will lose eating quality quickly. Dampness may corrode lids and cause leakage which, in turn, will cause the food to spoil. Freezing will not cause the food to spoil unless the seal or jar is damaged. However, canned foods that have been frozen will not be as tasty as foods that have been properly stored.

Eight Steps for Successful Pressure Canning



1. Place 2"-3" of hot water in canner and place jars in canner on canner rack.
2. Exhaust all air from the cooker with vent port open (exhaust steam for 10 minutes).
3. To pressurize the canner, place weight on vent port.
4. Begin timing when weight starts to rock or jiggle, or when pressure gauge reads the correct pressure.
5. Regulate heat for a steady rocking or jigging motion or proper dial gauge pressure.
6. Remove from heat when timed process is complete.
7. After cooling, open vent port. Wait 2 minutes, then open cooker, lifting lid away from you.
8. Place jars on rack or towel and allow to cool slowly.

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Agricultural Extension Service
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