



## More About Canning

### Canning Equipment

**Water Bath Canner** – This large covered cooking pot has a rack. Any large metal container may be used as long as it is deep enough to allow 1 inch of briskly boiling water to cover the jars. The diameter of the canner should be no more than 4 inches wider than the diameter of your stove's burner to ensure proper treatment of all jars. The hot water bath canner is designed to be used only for canning high-acid foods.

**Pressure Canner** – This specially made heavy pot has a lid that can be closed tightly to prevent steam from escaping. The lid is fitted with a vent or petcock, a dial or weighted pressure gauge, and a safety fuse. The pressure canner also has a rack.

Because each type of canner is different, be sure to read the directions for operating your canner. The pressure canner may be used to can any type of food, but it **MUST** be used to can low-acid foods.



Photo credit: [www.flickr.com/people/bug\\_girl/](http://www.flickr.com/people/bug_girl/)

### For more information:

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or see:

[www.ext.wvu.edu/food\\_health/canning](http://www.ext.wvu.edu/food_health/canning)

National Center for Home Food Preservation  
<http://nchfp.uga.edu/index.html>



## Food Preservation

There is nothing like the taste of fresh-from-the-garden vegetables and fruits.

Preserve your garden's abundance to enjoy throughout the year.

*Information for this brochure was adapted from the National Center for Home Food Preservation.*

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FH12-56



# Preserving Food

## Preserving Food

Shiny, red tomatoes, sweet juicy peaches, abundant fresh produce. You have seen them all if you have stopped by one the local farmers markets. Why not save some of the summer's bounty to enjoy throughout the year? Why not share those special homemade gifts with friends?

Canning, freezing and drying are the three main methods of preserving food. The method you chose will depend on two factors:

- whether safe guidelines for that method are available for the food you have
- which method best suits your needs

Freezing is a safe way to preserve almost any food. Canning, freezing, and drying, if done correctly, can help you store good-quality food for later use.



## Why Preserve Food?

Unless food is preserved in some manner, it begins to spoil soon after it is harvested. This spoilage is caused by microorganisms; by physical damage such as bruising, punctures, or water loss; or by chemical changes.

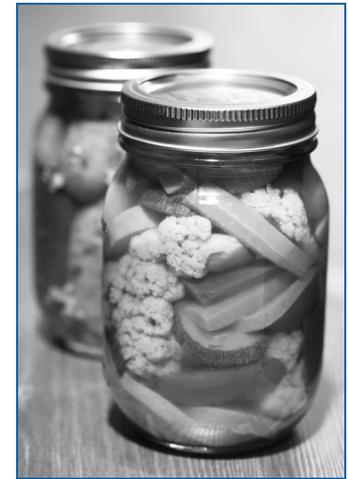
The **microorganisms** that can cause food to spoil include molds, yeasts, and bacteria. These microorganisms are everywhere – in the air and soil, on people and animals, and on the surfaces of items. They grow well in moist conditions and can easily contaminate foods. Most bacteria are destroyed by heat. However, others form spores that can be destroyed only by temperatures higher than boiling. Because these bacteria, especially *Clostridium botulinum*, can cause illness or death, some canned foods must be processed in a pressure canner in which water the temperature reaches at least 240 degrees F.

**Physical changes** also cause food to spoil. Bruising and punctures not only physically damage the food, but they also provide places in fruits and vegetables where microorganisms can start to grow. Water loss and wilting are other physical ways in which food spoils.

Enzymes are the **chemical** substances in foods that help them to grow and mature. Unless the enzymes in fruits and vegetables are inactivated, they continue to work after being harvested, causing flavor and texture changes. Enzymes can be inactivated by blanching food before freezing it.

## How Food Preservation Methods Work

**Canning** – In this process, foods are placed in jars or cans and heated to a temperature that destroys microorganisms and inactivates enzymes. This heating and later cooling cause the container to form a vacuum seal. The vacuum seal prevents microorganisms from recontaminating the food.



High-acid foods such as fruits and tomatoes can be processed or “canned” in boiling water. Low-acid vegetables and meats **must** be processed in a pressure canner where the water reaches at least 240 degrees F (10 pounds of pressure at sea level).

**Freezing** – Low temperatures reduce the activity of microorganisms in food but many survive. Enzyme activity is slowed down but not stopped during freezing.

**Drying** – When most of the moisture is removed from foods, microorganisms cannot grow and enzyme action is slowed down. Dried foods should be stored in airtight containers to prevent moisture from rehydrating the products and allowing microbial growth.