



TIPS ON SAFE HOME CANNING

Many homesteaders and farmers choose to preserve surplus product during the summer months to enjoy during the winter. Canning, a process involving placing foods in jars and heating them to a temperature that destroys the microorganisms that cause foods to spoil, is an excellent, shelf-stable, low energy method to preserve food. However, there are certain guidelines for preparation, packing and processing to achieve a wholesome, safe, canned food product.

The major cause of food spoilage is microbial growth, thus canning is a food preservation method that uses heat to destroy these microorganisms. The types of microorganisms that cause spoilage in foods are bacteria, yeasts and molds. They can contaminate the food through air, soil, and water or via the person handling the food. Temperature, amount of water, amount of acid in the food, and the presence of oxygen affect the growth of these microorganisms.

While the canning process destroys most potentially harmful microorganisms, *Clostridium botulinum*, which causes the often-fatal disease botulism, is able to grow without oxygen, and thrives where there is low acid available. For this reason, foods are divided into 2 groups for canning based on the amount of acid they contain. In food preservation, a food with a pH of 4.6 or lower is considered to be high acid, while one with a pH higher than 4.6 is a low-acid food.

Directions for proper canning have been developed on the basis of low-and-high-acid foods. Because microorganisms are easily destroyed by heat when acid is present, high-acid foods may be processed in a boiling water bath at a temperature of 212 degrees. High acid foods include fruits and fruit juices, jams, jellies and preserves, pickles and pickled products.

Temperatures higher than 212 degrees are required to destroy the spores of *Clostridium botulinum* in low-acid foods, which include tomato sauces, vegetables, meats, fish, poultry and game. To reach a temperature higher than 212 degrees, it is necessary to use a pressure canner and have the product reach a temperature of at least 240 degrees.

The only safe way to can food at home is to match the food product with the safe canning procedure, use a tested recipe (USDA), and follow recommended procedures. More information about these procedures can be obtained from your local cooperative extension service.

Here are some guidelines:

1. Do not hot fill jars and seal without further heat processing.
2. Do not use the oven to can. Use appropriate kettles.
3. Do not use the dishwasher or microwave to can. Temperatures will be uneven and not hot enough.
4. Steam canners are not recommended
5. Do not use chemicals or preserving powders as a substitute for heat treatments.
6. Do not take shortcuts. Use only tested, currently approved methods.
7. Do not use jars, cans or lids not manufactured for canning. They will not withstand the heat treatment.
8. Do not use overripe foods or foods with signs of spoilage.
9. Do not over pack foods. Be sure to leave the recommended headspace when jars are filled. This will ensure that the proper vacuum is created.

Jams, jellies, pickles and relishes that are high acid foods and can be safely processed in a boiling water bath may be produced for resale in a kitchen that is licensed by the Department of Agriculture with a home-food-processor license. MOFGA offers workshops on kitchen licensing; the next one is December 5, 2012.

Questions concerning processing value-added products may be directed to Cheryl Wixson at Cheryl@mofga.org, or 207-947-0892.

