City Farms Tipsheet

Preservation: Canning & Pickling

Equipment

- ❑ Enamel Canner/Large Pot with tight fitting lid.
- ❑ Metal rack – keep jars off bottom of pot and from hitting into one another.
- ❑ Jars, Lids, Caps – jars can be cleaned and reused. Lids must be new each time.
- ❑ Rubber or other non-metallic spatula.
- ❑ Jar Lifter: large metal tongs that allow you to grab hot jars.
- ❑ Dry Towels
- ❑ Knife and Cutting Board
- ❑ Water
- ❑ Vinegar, Sugar/Honey & other ingredients (based on recipes)
- ❑ Quality Fruits and Vegetables
- ❑ Heat source - stove, etc.

Pressure Cooker vs. Hot Water Bath

- ❑ Pressure Cooker
  - Most store-bought canned vegetables are processed using a pressure canner, which can cost around $150.
  - Preservation of low-acid vegetables, such as beans and peppers, is usually done in a pressure cooker. **However, low-acid vegetables can be successful preserved by pickling, using a hot water bath.**
  - This Tip-sheet will not cover preservation with a pressure cooker.

- ❑ Hot-water Bath:
  - There are Enamel Canners made specifically for canning/pickling however any large vessel/pot will do.
  - The pot should be deep enough to have at least 1 – 2 inches of water covering the tops of the jars.
  - The pot should be large enough to fit several jars (5 jars), making it worth your while.
  - The jars should not be touching, the water needs to circulate between the jars.
  - A metal rack can be used to lift the jars off the bottom of the pot.
  - The pot should have a tight fitting lid.

Acidity of Foods

Food for Canning is divided into two groups, low-acid foods and high-acid foods.

- ❑ Low-acid Foods:
  - Low-acid foods have a pH above 4.6; this includes most vegetables, such as: pumpkins, carrots, beets, squash, beans, spinach, cabbage, turnips, peppers, sweet potatoes, asparagus, potatoes, mushrooms, peas, corn.
  - Low-acid foods must be heated, in a pressure cooker, to 240 degrees in order to eliminate Clostridium botulium (a bacterium that is present in soil and therefore also in most fruits and vegetables) or pickled (vinegar solution added to vegetables, in order to raise acidity) in a hot-water bath.

- ❑ High-acid Foods
  - High-acid foods have a pH below 4.6, this includes most fruits, such as: citrus fruits, plums, apples, strawberries, rhubarb, berries, cherries, peaches, apricots, pears, pineapple, tomatoes.

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- High-acid foods can be processed in a hot-water bath. Any large vessel/pot will do for a water-bath canner (see above).
- ***Special Note for Tomatoes***: although tomatoes are listed under high-acid foods, some varieties have lower acidity. As a precaution add two tablespoons of bottled lemon juice per quart of tomatoes (this will raise acidity).

Procedure

- Water Bath
  - Fill canner/pot with enough water to cover closed jars. There should be 1-2 inches of water over the top of the jars and the final water level should be 2 inches below the top of canner/pot.
  - Begin heating water.
  - While water is heating …..

- Jars and Lids
  - Jars
    - Jars can be reused from year to year. Rinse jars in hot water if new. Wash with soap and water if reusing.
    - Wide-mouth jars are easiest to use when packing and removing fruits and vegetables.
    - Do not use jars with even the tiniest chips or cracks on them.

  - Lids
    - Lids must be **new** every year. The seal needed for preservation is only good once. Packets of lids can be purchased separately from jars.
    - The lids should be soaked in hot water before starting.

- Syrup and Solutions
  - Syrups:
    - When preserving fruits you should use a sugar or honey solution.
    - Sugar/Honey will help to keep the fruit's color and firmness.
    - Sugar Solution/Honey Solution: Thin (1 part sugar/3 parts water), Medium (2-3 parts sugar – 2-1 parts water), Heavy (equal parts sugar and water).

  - Solutions:
    - When canning/pickling low-acid foods in a water bath, a vinegar and water solution must be used.
    - White Vinegar is recommended but other vinegars are fine to use. Consider flavor when choosing vinegars.
    - Vinegar & Water Solution: the solution can be 50-50 water to vinegar or to be safe, 60% vinegar to 40% water.

- Packing Vegetables
  - Wash all fruits and vegetables
  - Cut up vegetables/fruits
  - Pack produce tightly into jars
  - Add syrup or solution - use enough liquid to fill around and cover the food. Many recipes are available, be creative - yummy!
  - Use a non-metallic spatula to remove any trapped air bubbles. Insert the spatula into the middle of the jar and move up and down to allow air bubbles to escape.

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Run the spatula around the inside of the jar for the same purpose. Add more liquid as necessary.

- Wipe the jar rim with a clean damp paper towel to remove any food particles and excess water.
- Place lid and twist cap tightly.

- Boiling Water-bath and Beyond
  - Place tightly closed jars upright into boiling water-bath.
  - Put lid on canner/pot and bring water to boil.
  - Start timing when bath comes to a boil. 5-10 minutes for most vegetables, 10-30 minutes for fruits – depending on ripeness, & 30 minutes for tomatoes.
  - When time is up use jar lifter to remove jars from water-bath.
  - Place jars on a dry towel.
  - Let the jars cool, allow air to circulate around jars.
  - After half hour – the last bit of air is exhausted as the food cools, creating a vacuum.
  - You can tell that your jars have been successfully sealed by pressing down on the center of lid – there should be no pop.
  - If you do not have a good seal eat within a few days.
  - Jars that are sealed correctly can last for years. Label with contents and date. Store in a clean, cool, dry, dark place. Preserve it!!!

Resources: Canning & Preserving Without Sugar. Norma MacRae. Globe Pequot Press, 1993. The Busy Person's Guide to Preserving Food. Janet Chadwick. Garden Way Publishing, 1995. Preserving Summer's Bounty. Susan McClure. Rodale, 1998. From Asparagus to Zucchini: A Guide to Farm Fresh, Seasonal Produce. The Complete Guide to Home Canning. Home and Garden Bulletin, U.S. Department of Agriculture, 1994. www.backwoodshome.com/articles/clay53.html, Cornell Cooperative Extension – NYC. Kathleen McTigue, Just Food 2002.