“How do you know which preservation method to use?” “For which vegetable?” asked a young woman in a food preservation class. She is interested in learning how to preserve the vegetables in her garden, but is uncertain if she should can, freeze, pickle, or dry!

The class participants shared: “I freeze everything, it's easier.” “My family prefers canned green beans.” “We like frozen sweet corn.” “I just started drying tomatoes and really like the flavor in the winter.” “Grandma always made pickled beets.”

There are many ways to preserve vegetables and fruits and numerous factors that play a role in preservation choices.

- A key factor is the taste, texture, and quality of the preserved food.
- Our knowledge, expertise, and comfort level with a preservation method and its required equipment is essential to safe preservation.
- Consider your energy level and time.
- Space availability, whether freezer or fruit cellar, will influence our choices.
- The cost of different home preservation methods needs to be weighed in the family budget.
- Family traditions and preferences, such as the pickling of beets, play a role in our choices.

How do you, or did you, select the preservation method for the vegetables and fruits that you “put-up”?

Whatever factors influence the home food preservation method you choose, be sure to always put safety first. Food preservation, via any method, is a science that requires our attention, knowledge and respect. Our ability to maintain a high level of cleanliness and safety during each preservation process is critical.
Searching for Reliable Information

When searching the internet, how do you know if the food preservation information is reliable?

Always use food preservation information based on current research. The United States Department of Agriculture takes the lead to share results of scientifically tested recipes and methods. This testing is usually done at University laboratories where special equipment and monitoring devices are used to determine recommended methods and processing times.

On page 1 of this newsletter, we provide a list of reliable resources including the National Center for Home Food Preservation. In addition, the recent editions of the Ball publications are research-based and reliable.

When searching the web for food preservation information, look for these red flags:

- Be suspicious of short cuts.
- Directions for canning non-pickled vegetables and meats in a water-bath or steam canner.
- The recipe was “made-up” or changed by the person providing the information.
- The writer says it is okay to process jars in the oven, dishwasher, or appliance other than pressure or boiling water bath canner.
- Directions tell you to pour hot food into jars and put on lids with no processing.

Stay safe by using up-to-date research-based methods and recipes!

Pressure Canner Fears

For some people, using a pressure canner brings a fear of the canner blowing up with food everywhere. Although there is always a chance for a blow-up, chances are slim . . . if you stay alert and respect the canner. Follow these tips:

- If you have never used a pressure canner or if it has been a few months, review the canner's instruction manual. Every canner is unique and it is important to know how YOUR canner works. Pay attention to the amount of water, sounds the canner will make, how to open or close the petcock or vent, how to lock and open the canner lid, etc.
- Ask an experienced canner to show you how to use the canner and ask her/him to watch you use the canner until you are comfortable.
- While jars are processing in the canner, stay in the room and be alert. Watch and listen to the canner. Do not choose this time to call or text someone, watch a movie, play games on the computer, etc.
Plan Ahead: Preserve Soup Now

Freeze or can soup and you will end up with a healthy food because you control the amount of added salt.

Freezing: When preparing soup, use less liquid. Do not add potatoes because they become mushy after freezing - add them when you reheat soup before serving. Cool soup quickly by placing soup-pot inside larger container filled with ice and stir often. After cooling, package soup in containers leaving 1-inch headspace. Or, freeze in ice cube tray and store cubes in plastic bags.

Canning: Canned soup must be processed in a pressure canner. Choose vegetables and prepare as you would for hot-pack canning. If desired, add cooked meat or poultry. Cover ingredients with hot water, broth or tomatoes and juice and boil 5 minutes. Rehydrate dried beans or peas before using them. DO NOT ADD THICKENERS, FLOUR, MILK, CREAM, NOODLES, PASTA, or RICE - add these ingredients when soup is heated for serving. Add salt and other spices to taste. Fill canning jars halfway with solid mixture. Continue filling jars with hot liquid, leaving 1-inch headspace. Process pints for 60 minutes; quarts for 75 minutes. Use 11 pounds pressure for dial gauge canner or 15 pounds pressure for weighted gauge canner.

Freezing Leafy Greens

Spinach, kale, Swiss chard, beet greens, along with mustard and turnip greens freeze well for year-round enjoyment. Small leaves can be frozen whole, and large leaves can be cut or torn as desired.

Greens are a rich source of vitamins A and C, phytochemicals, and contribute iron, calcium, and add fiber to our diets.

Begin by selecting young, tender greens with good color and no blemishes. Removing soil and grit by rinsing several times in cold water, lifting the leaves from the water, is an important step when preserving greens.

Blanch greens, in small quantities about 4 cups packed per gallon of boiling water: Collard greens 3 minutes, other greens 2 minutes, and very tender spinach leaves 1½ minutes. Start counting blanching time when water returns to a boil. If greens are not blanched properly, they will lose their fresh flavor quickly in frozen storage.

Steam blanching of greens is not recommended as the leaves mat together and do not blanch properly.

After blanching, cool greens in ice water, drain and package. Louisiana Cooperative Extension Service suggests when packing greens – “Barely cover with ice water, leave ½” head space, remove air and seal. This gives an excellent product, which will maintain high quality for a much longer time in frozen storage.”

Pick 5% for Pickling

Vinegar, that is. When pickling vegetables - cucumbers, beets, asparagus, peppers - be sure to use white or cider vinegar with 5% acidity. There are vinegars on the market shelves that are 4% or even 3% acetic acid. Be sure to read the vinegar bottle label and purchase 5% vinegar for safe, quality pickled products.
Tomatoes plus Acid

For years, tomatoes were considered an acid food. Because tomatoes are fruits, the amount of acid varies during the growing season (i.e. they are more acidic when unripe). Tomato acidity is affected by the variety and amount of heat, moisture, and soil makeup during the growing season.

In the past 20 years, research studies indicate inconsistency of pH levels (acid level) in tomatoes with many at 4.6 or above 4.6 which supports the growth of Clostridium botulinum. Research done at North Dakota State University compared tomato varieties, in salsa with and without lemon juice [http://www.ag.ndsu.edu/pubs/yf/foods/fn1396.pdf].

Current canning recommendations require that acid be added to all canned (water bath and pressure canned) tomato products. Acid can be added directly to jars before filling jars with tomato product. Choose one:

- **Citric Acid** ½ tsp/qt or ¼ tsp/pt
- **Bottled Lemon Juice** 2 T/qt or 1 T/pt
- **Vinegar (5% acidity)** 4 T/qt or 2 T/pt

Avoid canning tomatoes that are bruised or damaged by insects, affected by frost or with blossom end rot because these conditions reduce acidity.

*If you or family members have a sulfite sensitivity or allergy, be aware bottled lemon and lime juice contain sulfites. Consider using citric acid or vinegar. Or, substitute frozen lemon juice (not lemonade) that you find in the grocery store frozen section - use same amounts as bottled lemon juice.

Frequently Asked Questions

**How can I thicken tomato salsa and spaghetti sauces before canning?**

Thickening sauce-type products by adding flour, cornstarch or modified starches slows the heat penetration and reduces safe processing. Never add a thickening agent to tomato products before canning. Try using less-liquid tomatoes or add a small amount of tomato paste – OR thicken with cornstarch or drain away some of the excess juice before serving.

**What should I do if the lids seal before I get the jars into the canner for processing?**

If lids seal (pop or ping) before jars go into the canner, the jars must still undergo the normal processing required for the product. A “seal” that forms before processing is very weak and the exhausting of air and a complete vacuum has not occurred. To help eliminate the problem of a seal forming before processing, work as fast as possible to get filled jars into the canner. Try to fill and cap one jar at a time.

**How long will canned food keep?**

Properly canned food stored in a cool, dry place will retain optimum eating quality for at least 1 year. Canned food stored in a warm place near a range or a furnace may lose quality in a few weeks or months.

Photos from The National Center for Home Food Preservation [www.uga.edu/nchfp/]

If you would like to stop receiving the Home Food Preservation newsletter, please email schmi374@umn.edu.

For more food safety information visit our website: [extension.umn.edu/foodsafety/].

Source: Dr. Barbara Ingham, Professor and Food Science Extension Specialist, University of Wisconsin Extension, July, 2011.