



Canning & Freezing:
Preserving the Summer Harvest

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Before we get started...

- This workshop will provide a basic overview to canning & freezing.
- If you would like to learn to safely preserve food at home, please see the resources at the end of this presentation.



Why preserve food at home?

- Capture the flavor of the season.
- Eat locally.
- Know what is in your food.
- Reduce waste.
- Make what you can't find in the grocery.
- Share your bounty.
- Preserve tradition.
- Save money!!



Canning: What you will need:

- Water-bath canner.
- Canning jars with two-part lids.
- Canning funnel.
- Long-handled spoon/ladle & slotted spoon.
- Jar-lifting tongs.
- Pots, bowls, & measuring cups.
- Plastic/wooden tool.






Choosing Your Canning Method

- The canning method that is approved for a food depends on the type of food.
- Foods are divided into two main categories:
 - those that contain acid (called "acid foods").
 - those that have very little or no acid (called "low acid" foods).

Acid Foods

- pH of 4.6 or lower (measure of acidity)
- Generally all fruits.
- Tomatoes and figs are borderline – (specific amounts of citric acid or lemon juice must be added before canning to acidify).
- Sauerkraut.
- Foods to which large amounts of acid are added (pickles).

Low Acid Foods

- pH greater than 4.6
- Generally all vegetables
- Meats
- Poultry
- Seafood
- Soups
- Mixtures of acid and low acid foods (spaghetti sauce – meat, vegetables and tomatoes)

Why Pressure Can Low-Acid Foods?

Clostridium botulinum!

- *C. botulinum* forms protective, heat-resistant spores.
- Spores require higher temperatures for destruction in a reasonable period of time (usually 240°F or above at sea level).

What can happen?

No oxygen + moisture + warmth =

Botulism



Important Things to Keep in Mind...

- Follow all directions from a reputable source (USDA, University of Minnesota Extension, National Center for Home Preservation, Ball Blue Book, *So Easy to Preserve*).
- Follow processing times exactly (adjust for altitude when necessary).
- Up-to-date methods and information should be used.



Methods of Pack

- Raw Pack
 - For foods that lose shape when cooked.
 - Place raw food directly in jars. Boiling hot liquid is then poured over the food.
 - Pack firmly, don't crush.
 - Add jars carefully to canner.



Methods of Pack

- Hot Pack
 - Preferred method for most foods.
 - Food is cooked in liquid before packing. Cooking liquid poured over food in jar.
 - Fewer jars needed.
 - Less floating.
 - Better color and flavor.
 - Easier to pack, foods pliable.



Headspace

- Space in the jar between the inside of the lid and the top of the food or its liquid. Check directions for the correct headspace.
- Usually:
 - ¼" jellied fruit products.
 - ½" fruits, tomatoes and pickles.
 - 1" to 1-¼" low acid foods.



Step 1: Sterilize

- Wash all equipment and dry on clean surface.
- Use only canning jars with no nicks, cracks, or scratches.
- Boil the jars for at least 10 minutes.
- Heat the lids in simmering water.



Step 2: Prep

- Prepare your fruits/vegetables according to the recipe.
- Food quality does not improve as it is processed, so start with the best quality possible.



Step 3: Pack

- Fill jars according to the recipe.
- Be sure to leave the proper headspace!



Step 4: Seal

- Remove air bubbles by stirring content with plastic/wooden tool.
- Wipe the jar rim clean.
- Set lid on jar rim and twist on the metal band until finger tight. Don't overtighten.



Step 5: Boil

- Fill the canner with at least 6 inches of water and bring to a boil.
- Place the jars in the rack and lower into the boiling water.
- Jars should be covered with at least 1 - 2 inches of water.
- Begin timing as instructed in the recipe once the water returns to a boil.



Step 6: Cool

- Remove jars from the rack and set on a clean towel, leaving a little space between.
- Listen for the "ping."
- Lids should sink inward.
- Jars that have not "popped" did not seal properly. Attempt to reseal or refrigerate.



Step 7: Label

- Wipe all jars.
- Clearly label and date.
- Note: Some suggest removing the rings.



Step 8: Eat! Share!

- Delight in the tastes of Summer in the bleak Midwinter.



Freezing Fruits & Vegetables: Crops that Freeze Well

- | | |
|-------------|----------|
| Asparagus | Herbs |
| Berries | Kale |
| Broccoli | Kohlrabi |
| Carrots | Okra |
| Cauliflower | Peas |
| Chard | Peppers |
| Collards | Rhubarb |
| Corn | Spinach |
| Eggplant | Squash |
| Green beans | Tomatoes |



Advantages of Freezing

- Many food can be frozen.
- You can retain color, flavor, & nutritional value.
- Texture is often better than other preservation methods.
- Food can be preserved more quickly than canning and drying.



Advantages of Freezing

- Simple.
- Convenient food preparation later (think of making homemade tomato sauce after work)
- A lot cooler than canning!



Some Disadvantages...

- Texture is not the same as fresh
- Investment in a freezer may not be an option.
- Storage is limited by the space in your freezer.
 - General Rule - Allow 6 cubic feet of freezer space per person in family (typically about 35 lbs/square foot).



Advice for Freezing

- Freeze quickly!
 - Set freezer at -10° at least 24 hours in advance of freezing large quantities.
 - Spread packages around the freezer and then stack when frozen.
- Hold temperature at 0° for best quality.



General Freezing Instructions

- Selection of Food
 - Freezing does not improve quality.
 - Choose highest quality available.
 - Freeze promptly.
 - Remember some foods don't freeze well.
- Preparation
 - Work in a clean environment.
 - Follow recommended procedures.



Freezing: What you will need

- Freezer space
- Packaging

Selecting Packaging Materials

- Moisture resistant.
- Durable & leak-proof.
- Does not become brittle and crack at low temperatures.
- Resistant to grease and oil.
- Does not absorb or allow the absorption of flavors/odors.
- Easy to seal and label.



Types of Packaging

- Rigid Containers
 - Plastic freezer containers.
 - Wide-mouth canning/freezing jars.
- Good for liquids or soft, juicy, or liquid-packed foods.
- May be reusable.
- Hold their shape and can be stored upright.



Types of Packaging

- Non-Rigid Containers
 - Bags
 - Wrappings (plastic, foil, freezer paper)
- Good for firm, non-juicy foods.



A Good Investment



Freezing Fruits & Vegetables

- Freeze as soon as possible after harvesting.
- Prepare food by cleaning and cutting/if necessary.
- Vegetables: Generally blanch before freezing (stops or slows enzyme action).
- Fruit: freeze in individual layers on cookie sheet lined with parchment (loose pack).
- Store in air-tight packaging (allow for head space of liquids in rigid packaging).
- Label.



How to Blanch

- Blanch in boiling water.
- Use a strainer, basket that will fit the pot you are using.
- Blanch only a small amount at a time (water should continue to boil after you add the vegetables).
- Immerse in ice water immediately. And cool for the same amount of time as blanched.
- Follow time specifications according to recipe.





Resources

- USDA Complete Guide to Home Canning, 2009.
http://nchfp.uga.edu/publications/publications_usda.html
- National Center for Home Food Preservation:
www.homefoodpreservation.com
- National Center for Home Food Preservation: How Do I Freeze?
<http://nchfp.uga.edu/how/freeze.html>



Resources

- Ball Blue Book. 2004. Alltrista Consumer Products.
- Andress, Elizabeth. 2006. *So Easy To Preserve*. University of Georgia Cooperative Extension Service; 5th edition.
- Ingham, Barbara H. *Freezing Fruits & Vegetables*, Wisconsin Safe Food Preservation Series, University of Wisconsin Extension.
<http://learningstore.uwex.edu/Assets/pdfs/B3278.pdf>



Questions?