Just Because It Seals, Doesn’t Mean It’s Safe!

Food Safety for Fair Exhibits and Home

Karen Blakeslee, M.S.

It is the 21st Century!

• Just because Grandma did it her way, doesn’t mean it’s safe today!!

• It is important to use current food preservation practices

Why Get Up to Date?

• Food preservation is a science and things have changed!
  – pH < 4.6 = high acid foods
  – pH > 4.6 = low acid foods
  – Supports growth of botulism!
  – Water activity
  – Heat penetration through the jar
  – Thickness of the food mixture
  – Size of food pieces
  – Size of jar
  – Raw pack or Hot pack
  – Altitude of residence
  – Time and temperature
  – Headspace

Creative Canning ➔ Foodborne Illness!

• Improperly home canned vegetables are the most common cause of botulism outbreaks in the U.S.
  – Did not pressure can
  – Ignored spoilage signs
  – Improper instructions
  – Unaware of the risks

The Basics

• Use USDA processing methods
• Clear, standard canning jars
• High acid foods MUST be water bath processed
  – Jams, jellies, fruits, pickles
• Low acid foods MUST be pressure canned
  – Vegetables, meats
• Tomatoes, with added acid, may be processed either way

Trusted Recipe Sources

Not recommended to can homemade recipes
Packaged mixes

• For quick and easy canning
• Pickles
• Salsa
• Sauces
• Many more!

Follow instructions exactly!!!!

Unsafe Recipes Sources

Just because a food is canned commercially doesn’t mean it can be canned safely at home!!

• Blogs
• Pinterest
• Old recipe books
• Recipe magazines – May not be adequately tested
• Many others...

Unsafe Processing

Dishwasher
Open or Microwave
Open kettle Canning
Pressure Cooker
Sun Canning
Steam Canning

Canning Equipment

USDA Complete Guide to Home Canning

Pressure Canner – Dial or Weighted Gauge
Water Bath Canner

Pressure Gauge Testing

• Dial pressure gauges need yearly testing
• If more than 1 pound off, replace
• Weighted gauges do not need testing
• 1 pound error in a 20-minute process causes over 10% decrease in sterilizing value
  — 2 pound error a 30% decrease

Boys and Girls Club Work, canning demonstration, 1920. Minnesota Historical Society Photography Collection • SA1.31 r30, 81684

• Recipes older than 1994 may be unsafe
Types of Jars

• Use regular or wide-mouth canning jars
  – 4 oz – ½ gallon sizes
  – ¾ gallons for fruit juice only
• Clean, not damaged
• NO Mayonnaise jars!!
• Clear jars only!
  – No colored jars for the fair

Types of Lids

• Use two‐pieced lid
• Always use new lids
• Pretreat lids per manufacturer’s directions
  – Newer lids don’t need pretreating, but it’s a good idea

Headspace

Space in jar between bottom of lid and top of food/liquid
Varies by type of food
Proper headspace creates vacuum seal
Usually:
  – 1/4” jellied fruit products
  – 1/2” fruits, tomatoes and pickles
  – 1” to 1-1/4” low acid foods

Adjusting for Altitude

This is the number one reason for disqualification!!

How to Adjust
Boiling Water Bath
Pressure Canning
Pressure

Search Kansas Elevation Data at http://geonames.usgs.gov/pls/gnispublic

Processing Time

• Each food and preparation style has its own processing time
• Time differs with size of jar
• Too Little (Underprocessing)
  – Spoilage
• Too Much (Overprocessing)
  – Overcooked
• After removing canner lid...
  – Let jars sit in canner for minimum of 5 minutes

Sensational Salsa!

Please do not experiment with canning your own recipe that mixes low‐acid vegetables together, even with “some” acid like vinegar or lime juice. If done improperly, you put yourself at risk for botulism, a potentially fatal food poisoning.

http://nchfp.uga.edu/publications/nchfp/factsheets/salsa.html
Tomatoes Need Acid

- All Tomatoes have pH between 4 - 4.6
  - Borderline for safe boiling water canning
  - This includes all colors of tomatoes!

- For Pints
  - 1 Tablespoon bottled lemon juice
  - ¼ teaspoon citric acid

- For Quarts
  - 2 Tablespoons bottled lemon juice
  - ½ teaspoon citric acid

More on Tomatoes

- Vinegar may be used, but....
  - 4 Tablespoons vinegar per quart or 2 Tablespoons per pint
  - Flavor may be objectionable

- Add acids directly to jar before filling
  - If too acidic, add sugar to taste
    - Example: 1 tablespoon per quart

Pie Filling

- Must use Clear Jel® as thickener
  - This will not break down during processing, which would cause a runny filling

- Regular corn starch or flour will get clumpy or separate due to repeated heating.
  - Think clumpy gravy!

Safety of Jerky

- Jerky
  - Must be heated to 160°F
    - Heat in marinade prior to drying
    - Heat in 275°F oven for 10 minutes after drying
  - Strips should be ¼-inch thick or less
  - http://nchfp.uga.edu/how/dry/jerky.html
  - Recipe needs to reflect the heating method

Labels for Jars

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Product: Canning Method: Water Bath or Pressure Process Time: Pressure
Date processed: Month & year
Altitude of residence
Name:
County/District

http://www.kansas4h.org/p.aspx?tabid=46
Scroll down to “Food Preservation”

Judging Standards

- Canned Fruits and Tomatoes
- Canned Meats
- Canned Pickled Products
- Canned Vegetables
- Dried Fruits and Leathers
- Dried Vegetables and Herbs
- Fruit Preserves
- Meat Jerky

http://www.kansas4h.org/p.aspx?tabid=490
READ THE RULES!

What Judges Consider

Disqualification
- Jar unsealed
- No label, missing information
- Wrong processing method
- Underprocessing
- Jerky not heated to 160°F
- Wrong jar size
- Added thickeners, rice, pasta
- Moving bubbles
- Not acidifying tomatoes
- Mashed or pureed pumpkin/winter squash
- Paraffin wax on sweet spreads

Lowering a Ribbon Placing
- Not following fair book rules
- No recipe
- Different color rings/ bands
- Messy jars, rusty rings
- Not enough liquid
- Improper headspace
- Wrong color (artificial color added if not in recipe)
- Uneven sized food pieces
- Using new blue, green or purple jars
- Brands of jar/lids not the same
- Food over mature
- Fancy pack
- Foreign material
- Sediment in jars

Get Educated!

- 4-H Foods Project Curriculum and online resources
- http://nchfp.uga.edu/putitup.html
- http://nchfp.uga.edu/

For the Fair AND Home!

- This is not JUST for the Fair!!
- All foods need to be canned safely for any use!
- Be Smart!
- Be Safe!

Need a judge's training, leader's training?
Food preservation class?
Resources?

How Can I Help?

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