

**Canning Basics & Canning High Acid Foods**

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Presented by Sue Mosbacher  
UC Master Food Preserver Manager  
February 13 & 14, 2025

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**Today's Goals**

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1. Know why high acid foods are canned with boiling water and low acid foods are canned with pressure.
2. Understand why unsafe and outdated canning practices are not recommended.
3. Identify processing steps for boiling water and steam canning.
4. Become familiar with the High Acid Teaching Checklist.

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**Pre-Class Activities**

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- Read Chapters 3 & 4 in the training manual
- Read pages 1-1 through 1-27 in the USDA Guide
- Watched 12 High Acid Canning pre-class mini recordings
- Completed High Acid Quiz

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**Agenda**

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- Opening announcements
- Small breakout rooms
- High Acid Canning Q&A
- Break (*Th 7:35, Fri 3:05*)
- Terminology
- Breakout rooms
- Closing announcements

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**Student Breakout Room Questions**

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- What type of foods are typically high acid?
- What type of canner do you use to preserve high acid foods and why?
- Why do we want food cut into similar sizes when preserving food?

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**Student Breakout Room Answers**

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- What type of foods are typically high acid?
- What type of canner do you use to preserve high acid foods and why?
- Why do we want food cut into similar sizes when preserving food?

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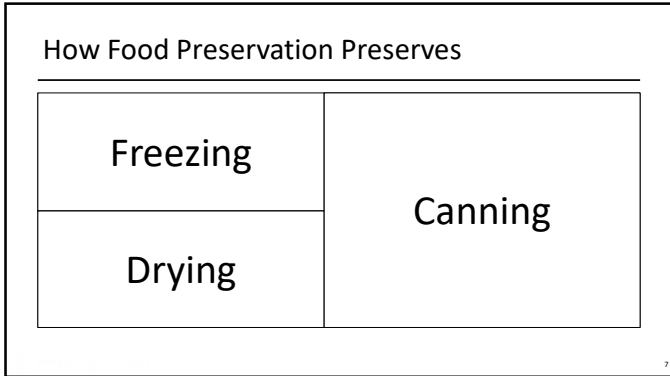
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High Acid Canning Q&A by Programs

- You teach me!
  - Take turns by programs - students
- Your program's turn?
  - Video on
  - Video off for next team's turn
  - Now: All off
- Know the answer?
  - Raise hand and wait to be called on
  - Can use books, but be quick

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All MFPs

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**Why 2 Canning Methods?** AC & Tu

- Concern over what bacteria?
- *Grows:*
  - Environment?
  - What does it do when it grows?
- *Doesn't grow:*
  - Environment?
- Canner type? Why?
- How to prevent it from growing in a jar when using a boiling water canner or steam canner?

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**Methods Not Recommended** SO

Open Kettle Canning	Oven Canning	Paraffin Wax
		

*Describe the method.  
Explain why not recommended.*

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**Canning Basics** S/Y

1. Pre-sterilizing/pre-heating jars: when & how?
2. Headspace: what is it?
3. Lids & rings: types and reusability
4. Altitude adjustments: what and when?
5. Liquid loss in jars: impacts on sealing & safety?
6. Storage: where, how, how long?

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Sac

### Canning Tomatoes

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- *Acidify?*
  - *Always?*
  - *When?*
  - *Why?*
- *How much?*
  - *Quarts:*
  - *Pints:*

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SB/R


### Canning Salsa!

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*Ingredient adjustments*

- *Tomatoes*
- *Peppers*
- *Onions*
- *Acids: vinegar or **commercial** lemon/lime juice*
- *Spices*



- No pressure canning
- 2016 Book: fresh vs bottled lemon 

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### Hot Pack vs Raw Pack

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<i>Hot Pack</i>	<i>Raw Pack</i>
• <i>What is it?</i>	• <i>What is it?</i>
• <i>Pros</i>	• <i>Pros</i>
• <i>Cons</i>	• <i>Cons</i>

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OD (A-K)

### Process: Boiling Water Canning

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<ul style="list-style-type: none"> <li>• <i>Type of pot</i></li> <li>• <i>Rack</i> <ul style="list-style-type: none"> <li>– <i>Why</i></li> </ul> </li> <li>• <i>Water</i> <ul style="list-style-type: none"> <li>– <i>Amount</i></li> <li>– <i>Starting temps</i></li> </ul> </li> <li>• <i>Sterilize jars?</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Processing</i> <ul style="list-style-type: none"> <li>– <i>When to start timing?</i></li> <li>– <i>Type of boil?</i></li> <li>– <i>How long</i></li> <li>– <i>Oops – boil stops</i></li> </ul> </li> <li>• <i>Timer done – next steps?</i></li> </ul>
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OD (L-Z)

### Process: Steam Water Canning

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- *Type of pot*
- *Canner bottom*
- *Rack*
- *Vent hole(s)*
- *Temp sensor*
- *Sterilize jars*
- *Multi-use canner?*
- *Recipes*

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FMM

### Process: Steam Water Canning

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<ul style="list-style-type: none"> <li>• <i>Type of pot</i></li> <li>• <i>Canner bottom</i></li> <li>• <i>Rack</i></li> <li>• <i>Vent hole(s)</i></li> <li>• <i>Temp sensor</i></li> <li>• <i>Sterilize jars</i></li> <li>• <i>Multi-use canner?</i></li> <li>• <i>Recipes</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Water</i> <ul style="list-style-type: none"> <li>– <i>Amount</i></li> <li>– <i>Starting temps</i></li> </ul> </li> <li>• <i>Processing</i> <ul style="list-style-type: none"> <li>– <i>Start timing?</i></li> <li>– <i>Boil</i></li> <li>– <i>How long</i></li> <li>– <i>Oops</i></li> </ul> </li> <li>• <i>Timer done – next steps</i></li> </ul>
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**Common Causes of Seal Failures** SM/SF

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4.
5.
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**High Acid Teaching Checklist**

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- Use Notes!
- Process Steps
  - Boiling Water
  - Steam Canning
- High Acid Teaching Checklist
  - Personalize it with stories
- Lab Skill Checklist

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**Agenda**

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Opening announcements  
 Small breakout rooms  
 High Acid Canning Q&A  
 Break (*Th 7:35, Fr 3:05*)  
 Terminology  
 Breakout rooms  
 Closing announcements

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**Break**

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- 5 minutes
  - Grab a canning jar if you have one – empty or full
  - Get your
    - Laminated canning steps sheet
    - High Acid Teaching Checklist

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**MFP Terminology**

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- Boiling Water Canning vs Water Bath Canning
  - NCHFP uses phrase boiling water canning
  - We use boiling water canning in printed materials
  - Old habits are hard to break ....

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**MFP Terminology**

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- Boiling Water Canning vs Water Bath Canning
- Reputable/Credible Recipe vs Internal Recipe
  - Reputable: for the public, follows NCHFP & USDA processing recommendations
  - Internal: for MFPs internally; our resource list for canning recipes for **public** events
    - Previously/Commonly referred to by MFPs as Approved Recipes
  - Old habits are hard to break ....

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**MFP Terminology** 

- Boiling Water Canning vs Water Bath Canning
- Reputable/Credible Recipe vs Approved Recipe
- Explaining vs Enforcing
  - Our job: to teach and explain why; not to force people to do what we say
  - We give recommendations: “the NCHFP recommends XXXXX **because** ....”

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**MFP Terminology** 

- Boiling Water Canning vs Water Bath Canning
- Reputable/Credible Recipe vs Approved Recipe
- Botulism

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**Botulism Terminology**

<p>The bacteria (<i>Clostridium botulinum</i>)</p> 	<p>generates a toxin (<i>botulinum</i>)</p> 	<p>When eaten creates a disease (<i>botulism</i>)</p> 
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**Breakout Rooms**

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MFP facilitator/timer: keep things moving; all students speak

1. Quick introductions if new faces
2. Rotate through boiling water canning process, 1 step at a time
3. 1 minute to explain, then move to the next person
4. Either continue that step's explanation or move to the next.
5. Use your own words to describe the step and explain the **why**.
6. At end of list? Ask for clarifications from MFP on terminology.
7. Continue with steam canning process, 1 minute per person.

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**Today's Goals: Success?** 

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1. Know why high acid foods are canned with boiling water and low acid foods are canned with pressure.  
*Destroy microorganisms; need pressure to reach temp to kill Clostridium botulinum.*
2. Understand why unsafe and outdated canning practices are not recommended.  
*They don't destroy any remaining pathogens in jar.*
3. Identify processing steps for boiling water and steam canning.  
*Continue to review the laminated canning steps.*
4. Become familiar with the High Acid Teaching Checklist.  
*You got it, now practice with your mentor and friends.*

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**Next Class: Pickling & Fermenting**

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- Read Chapter 6 in training manual
  - Read pages 123-127 in *So Easy to Preserve*
- Watch Pickling & Fermentation pre-class recordings
- Complete Pickling & Fermentation Quiz
- Explore handouts in Resources section

- Case Study #1: due February 28
- Case Study #2: due March 21

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