

Pickling & Fermentation

Presented by Sue Mosbacher
UC Master Food Preserver
Program Manager
February 27 & 28, 2025

1

1

Today's Goals

- Understand which ingredients are used in pickled products and why.
- Know the basic process for making refrigerator, quick/fresh pack, and fermented pickles.
- Practice researching a sample helpline question.

2

2

Pre-Class Activities

- You read chapter 6 & completed the quiz
- You watched the pickling & fermentation pre-class videos

1. *Basics*
2. *Pickling Salt*
3. *Sugar & Spices*
4. *Refrigerator Pickles*
5. *Quick Pickles*
6. *Fermentation Process*
7. *MFP Fermentation Project Overview*
8. *Making Sauerkraut*
9. *Making Kombucha*
10. *Making Kimchi*

3

3

Agenda

Opening info

Small breakout rooms

Pickling & Fermentation Q&A

Break (*around 7:30/3:00*)

Breakout rooms

Wrap up

4

4

Student Experience

Pickling

- *Poll (Students only)*

Fermentation

- *Poll (Students only)*

5

5

Student Breakout Room Questions (5 min)

- Why do we add vinegar when making pickled vegetables?
- Why don't we add vinegar when making fermented vegetables?
- What's the difference between canning salt and table salt?

•6

6

What happens when we pickle & ferment?

Pickle

- Convert a low-acid product to high acid product by **adding acid**
- Acetic acid

Ferment

- Convert a low-acid product to high acid product by **creating acid**
- Lactic acid

- Storage
 - Refrigerate
 - Can for shelf stability

7

7

Pickling Ingredients: Vinegar

- Poll – all attendees participate



8

8

Pickling Ingredients: Salt

- Poll – all attendees participate



9

9

Pickling Ingredients: Spices

- Poll – all attendees participate



10

10

Pickling Ingredients: Sugar

- Poll – all attendees participate



11

11

Cucumbers

- Poll – all attendees participate



12

12

Refrigerator Pickles

- Poll – all attendees participate



13

13

Quick/Fresh-Pack Pickles

- Poll – all attendees participate



14

14

Lactic Acid Fermenting Basics

- Poll – all attendees participate



15

15

Recipes we use

- MFP Internal Recipe list
 - https://mfp.ucanr.edu/Resources_/Volunteers/Internal_Resources_-_Recipes/
- Yes, fermentation has been around for centuries
- Yes, people ferment successfully all the time
- Concern: product is left at room temperature for long time
 - If done wrong, food safety issues
 - Limited number of fermentations recipes with independent research to verify safe
 - Conservative approach, remember?

16

16

Agenda

Opening info

Small breakout rooms

Pickling & Fermentation Q&A

Break (*around 7:30/3:00*)

Breakout rooms

Wrap up

17

17

Mission Statement

To keep Californians safe and well
as they use culturally appropriate,
**research-based practices to
safely preserve food in the home,**
reducing food waste,
increasing food security, and
providing engaging ways for Californians to explore healthy food.

18

Researching Helpline Questions Online

Search topic site:.edu

19

19

Small Program Breakout Room: 30 minutes

Small groups discuss & research sample helpline question:

1. One person shares their screen & opens an internet browser
2. Another logs the information found and after the breakout room, will paste the recommendation in the Zoom whiteboard
3. As a group, discuss what to enter as the search topic; try several phrases to see what pops up (topic site:.edu)

20

20

Small Program Breakout Room: 30 minutes

4. Log the sites you found and the date of the information
5. Identify the most current resource
6. Summarize the information you find & discuss any differences
7. Document your recommendation this way: Based on <resource site>, the research-based recommendation is because
8. Identify any interesting information you learned in your research.
9. Back in the main room, paste your response in whiteboard

21

21

Whiteboard Results!

22

22

Case Studies

Status check:

- Effective study tool?
- Comfort level increasing as they practice explaining their recommendations?
- # 3 - Pickling & Fermentation
 - 2 pickling recipes
 - 5 Q&A

23

23

Today's Goals



- Understand which salts and vinegars are used in pickled products and why.
- Know the basic process for making refrigerator, quick/fresh pack, and fermented pickles.
- Practice researching a sample helpline question.

24

24

Next Class: Fruit Spreads

- Read Chapter 7 in training manual (*Fruit Spreads*)
- Watch Fruit Spreads pre-class recordings
- Complete Fruit Spreads Quiz
- Review handouts in Fruit Spreads Resources section

- Case Study #1: due now (Food Safety)
- Case Study #2: due March 21 (High Acid)
- Case Study #3: due April 4 (Pickling & Fermenting)