



Food Preservation Update 2007

April 5, 2007

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Objectives

Extension Educators will:

1. Increase knowledge and understanding of ingredients in the marketplace used in home food preservation.
2. Increase knowledge of home practices in food preservation in the U.S.
3. Increase knowledge and understanding of appropriate resources for home food preservation recommendations.

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So Easy to Preserve



**5th Edition
Book is Out!**

Ordering info:
www.soeasytopreserve.com

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5th edition SETP

► 39 new procedures:

- Canning Fruits – 3
- Canning Tomato Products – 3
- Canning Salsas – NEW SECTION
 - Vegetable Salsas – 7
 - Fruit Salsas – 4
- Canning Seafood – 2
- Vegetable Pickled Products – 10
- Fruit Pickles – 1
- Relishes – 4
- No-Sugar Pickled Products – 3
- Jelly – 1
- Drying – 1



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5th edition SETP

► New step in BWC:

- Wait 5 minutes after removing lid, before removing jars.

► New step in PC:

- Wait 10 minutes before removing lid, after removing weight.

Reasons: To insure success in sealing of jars and preventing leakage when jars are removed from the canner to cool.

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5th edition SETP

► Directions for de-toxifying unsealed, improperly canned low acid food have been updated.

- Most changes have to do with cleaning up the work area.
- See pages 33-34.

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5th edition SETP

▶ A CAUTION statement has been added to directions for Fruit Puree:

- These recommendations should not be used with figs, tomatoes, cantaloupe and other melons, papaya, ripe mango or coconut.
- Reason: Fruits not acid enough to be used with this procedure.

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5th edition SETP

Canned Foods

- ▶ *Barbecue Sauce* has increased amount of vinegar. (p. 60)
- ▶ *Spaghetti Sauce with Meat* now expands the list of ground meat to include beef, sausage, venison or turkey. (p. 63)
- ▶ Preparation for *Chicken Stock (Broth)* (p. 97) has been revised to emphasize this is a process for broth with only little bits of meat.
 - The pack for pieces of chicken with broth to cover is to be processed as Poultry.

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5th edition SETP

Canned Fish/Seafood

- Pay special attention to different canner management instructions for all three of these:
- ▶ *Fish in Pint Jars* has been updated and renamed. (p. 93)
- ▶ *Fish in Quart Jars* has been added.
- ▶ Directions for *Smoked Fish* have been re-worded.
- ▶ New *Crab* warning: that the procedure results in crab meat with a distinctly acidic flavor and freezing is the preferred preservation method at this time.

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5th edition SETP

Freezing

- ▶ Vacuum packaging acknowledged as good option; other wording changes in packaging options.
- ▶ Blanching times revised, to be consistent with USDA information.

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5th edition SETP

Drying

- ▶ *Drying Herbs* procedures revised.
- ▶ *Packaging and Storing Dried Foods* discussion revised.

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USDA *Complete Guide to Home Canning*

- ▶ Submitted to USDA last June.
- ▶ Hope to release very soon.

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www.homefoodpreservation.com

NCHFP Website Changes



NCHFP Burning Issues

- ▶ Smooth top ranges
- ▶ Pressure canners vs. pressure cookers
<http://www.uga.edu/nchfp/publications/nchfp/factsheets.html>
- ▶ In the works:
 - Canning soups
 - Steam canners (not)
 - Canning chocolate sauces (not)



New NCHFP Seasonal Tips

- ▶ Preserving a Harvest of Tomatillos
 - Seasonal Tip, Summer.
http://www.uga.edu/nchfp/tips/summer/preserving_tomatillos.html
- ▶ Sorting Out Tomato Canning Directions
 - Seasonal Tip, Summer.
http://www.uga.edu/nchfp/tips/summer/canned_tomato_types.html



National Center Website

Plans for the coming year:

- ▶ Add more modules to our on-line self-study.
- ▶ How-to tutorials/slides, hopefully some video eventually.
- ▶ More FAQs.
- ▶ Reports from our latest survey, literature reviews and lab studies.

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Problems Needing Attention

- ▶ Getting people to use Pressure Canners for low acid foods.
 - Avoiding oven canning or other creative methods.
- ▶ Helping people understand we cannot adjust our low-acid canning processes based on 10 pounds pressure for smaller pressure cookers.
- ▶ Avoiding “open kettle” or just hot-filling of jars to replace canning processes.

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Botulism does Occur

- ▶ Botulism still occurs in the U.S. from home processed foods, although some may think it rare.
- ▶ *Foodborne Botulism in the United States, 1990–2000.*
 - Jeremy Sobel, Nicole Tucker, Alana Sulka, Joseph McLaughlin, and Susan Maslanka.
 - *Emerging Infectious Diseases* • www.cdc.gov/eid • Vol. 10, No. 9, September 2004. p. 1606-1611.

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Foodborne Botulism Incidence

Summary of US, 1990-2000

- ▶ 263 cases from 160 events.
- ▶ Avg cases per event = 1, range = 1 to 17.
- ▶ 103 (39%) of cases 58 events were in Alaska.
- ▶ Toxin Type A caused 51% of the cases;
- ▶ Type E caused 90% of the Alaska cases.
- ▶ A particular food was implicated in 126 (79%) of the events.



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Foodborne Botulism Incidence

Summary of US, 1990-2000

- ▶ All Alaska cases were attributable to traditional Alaska Native foods.
 - A lot of foods fermented at room temperature and eaten without cooking.
 - 28 cases were from fermented fish
 - 21 cases fermented sea mammals
 - 20 cases seal oil
 - 18 cases fish eggs



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Foodborne Botulism Incidence

Summary of US, 1990-2000

- ▶ In the lower 49 states (not Alaska),
 - A noncommercial food item was the cause in 91% of the events, most commonly home canned vegetables (44%).
 - 14 cases home canned asparagus.
 - 4 home canned tuna.
 - 4 home canned peppers.
 - 6 home canned beets.
 - Mushrooms, olives, garlic in oil.
- ▶ Two restaurant outbreaks affected 25 people.



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Foodborne Botulism

Home Processed Food Examples

- ▶ Home fermented tofu, California, Dec. 2006.
 - Tofu (low-acid food) was boiled (removed oxygen), dried, cut into cubes, put in a bowl, covered with plastic wrap & left at room temperature for 10-15 days (lack of refrigeration).
 - It was then transferred to glass jars with spices, wine, oil & broth, and marinated at room temperature for 2-3 more days; then stored and eaten at room temperature.

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Foodborne Botulism

Home Processed Food Examples

- ▶ Home canned bamboo shoots, Thailand, March 2006.
 - Home-canned bamboo shoots with possible lack of adequate canning temperatures, lack of proper acidification and inadequate cooking.
 - *Interesting editorial note:* In 1998, a smaller outbreak of botulism assoc. with home-canned bamboo reported in the same Thai province.
 - Recommendations for home-canned food production were disseminated widely to all provinces.
 - However, this recurrence 8 years later indicates the importance of long-term follow up and continuous inspection and assurance of the quality of food canning.

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Foodborne Botulism

Home Processed Food Examples

- ▶ Home pickled eggs, Illinois, 1997.
 - Whole hard-boiled eggs were peeled, pierced with toothpicks, combined with beets, hot peppers & vinegar, in a glass jar with a metal screw-type lid. This was stored at room temperature & occasionally exposed to sunlight.
 - Type B toxin was detected; 1000 times greater in the egg yolks than in the pickling liquid.
 - Although the pH of the pickling liquid was 3.5, the pH of the egg yolks was not determined (egg yolk pH is usually 6.8).
 - Pricking cooked eggs may have introduced spores, yolk may have remained anaerobic, and inadequately acidified may have allowed spore growth. Keeping the jar in sunlight & lack of refrigeration may have provided temperatures suitable for cell growth & toxin production.

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Foodborne Botulism

Lessons from Commercial Foods

Olives, 2007 – No illnesses reported, but recalls issued.

- ▶ Charlie Brown di Rutigliano & Figli S.r.l, in Italy.
 - March 2007.
 - Cerignola, Nocellara and Castelvetro Olives.
 - pH above 4.6 and concern over possible contamination with *C. botulinum*.
- ▶ Flora Foods of Pompano Beach, Florida.
 - March 2007.
 - Cerignola Olives.
 - Product was underprocessed.

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Commercial Recalls

- ▶ On those for botulism from FDA, warning is given:

Consumers are warned not to use the product even if it does not look or smell spoiled.

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Foodborne Botulism

Olives, continued –

- ▶ Marcella's Garden brand Olives, imported from Italy, distributed in Canada.
 - March 2007.
 - Cerignola, Baresana, Calabrese, Jumbo Stuffed, Kalamata, Nocellara olives.
 - pH above 4.6 and concern over possible contamination with *C. botulinum*.
- ▶ DAL RACCOLTO brand Olives, sold by Cibo Specialty Foods, a division of Colavita USA, L.L.C. of Linden, N.J.
 - March 2007.
 - Cerignola, Baresana, Calabrese, Italian Colossal, Nocellara olives.
 - pH and water activity levels that did not provide botulism control.

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Foodborne Botulism

Lessons from Commercial Foods

- ▶ Carrot juice, Bolthouse Farms, California.
 - September 2006.
 - 3 cases in GA, followed by 1 in Florida.
 - Juice was flash pasteurized -- not adequate to kill botulinum spores, and toxin may be produced if the product is not adequately refrigerated.
 - Inadequate refrigeration by the consumers originally suspected.
 - Were not large numbers to be a distribution problem.
 - Other cases in Canada reported by CBS indicated four types of organic carrot juices, and that the consumers had kept the product refrigerated.



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Foodborne Botulism

Lessons from Commercial Foods

- ▶ Carrot Juice, cont.
- ▶ Last word we have in U.S. reports:
- ▶ In the U.S., FDA looking into the labeling issues surrounding adequate display of "keep refrigerated" warnings.
- ▶ FDA Recall Notice: Consumers should look for the words "Keep Refrigerated" or "Refrigerate After Opening" on juice labels to know whether the product should be refrigerated.
- ▶ Bolthouse Farms saying it was failure of consumers to refrigerate in the U.S. cases.



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Foodborne Botulism

Lessons from Commercial Foods

- ▶ Baby food, Earth's Best Organic 2 Apple Peach Barley Wholesome Breakfast.
 - February 2007.
 - Possible contamination with *C. botulinum*.
 - pH too high to control for botulism given the way it was processed.



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hfp

► Back to Home Food Preservation Updates

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hfp

Marketplace Updates

► New "Ball" consumer website from Jarden Home Brands, Inc.:
<http://www.freshpreserving.com/>



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Ball® Simple



Newer Jars

► Ball® Collection Elite™ Platinum Jar

- Last year -Wide mouth 8 oz (half-pint) – “flattened”.
- Platinum color lids; available separately.
- Use same half-pint process times.



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Newer Jars

- Ball® Collection Elite™ Platinum Jar now available in Pint Size
- Wide mouth 16 oz.



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Newer Jars

► Ball® Freezer “Jars”

- Plastic.
- 5 (8-oz) jars or 4 (16 oz)
- Twist-on lids
- Stack in freezer



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New Packaging for Lids



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Other Jars

- ▶ Ball® Creative Containers™
- ▶ STORAGE ONLY
 - Wire bales, rubber rings
 - 1, 2 and 4 gallon sizes



- 1 gallon with spigot



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New Ingredients

- ▶ Seasoning mixes
 - Salsas (2), tomato sauce
 - Pickle mixes (2)



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Newer Ingredients

- ▶ **Ball® Simple Creations® Pickle Crisp® powder.**
- ▶ **New appearance and directions this year.**
 - Calcium chloride.
 - Now suggest adding it to jars between solids and liquids when filling jars.
 - OR using as a presoak.
 - Overnight, no rinsing.



See insert:

<http://www.freshpreserving.com/filebin/41672PickleCrispInsert.pdf>

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New Ingredients

- ▶ **Pectins**
 - **Freezer jam “pouch”**
 - Any fruit, Splenda or sugar
 - **Powdered and liquid “regular”**
 - **Powdered “no sugar needed”**



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New features

- ▶ **Under “How To”, there are some method videos.**



http://www.freshpreserving.com/pages/preserve_fresh_preserving_home_canning_/33.php

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New features

► Flash tutorials

- Step by step high acid canning
- Step by step low acid canning
- Step by step freezing
- Look under "How To"

► Problem Solving

- Soft Spreads Problem Solver
- Pickle Problems
- Etc.
- http://www.freshpreserving.com/pages/problem_solving/39.php

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Preserving Guides

- http://www.freshpreserving.com/pages/preserving_guides/5.php
- Produce Purchase Guide
- Weights and Measures Conversions
- Harvest Guide

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Recipes

- http://www.freshpreserving.com/pages/all_recipes/26.php



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New Book

► Ball Complete Book of Home Preserving

- Came out in 2006
- 400 recipes
- \$19.95 list price



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Other Industry Websites

- www.surejell.com – great for jam and jelly recipes
 - Kraft Foods
- www.mrs wages.com – quite a few recipes
 - Mrs. Wages
- www.canningusa.com ?????? – Not sure yet
 - ??????
 - Supply store
 - Videos
 - Technical guide
 - Lots of photos
 - Podcasts
 - Jars and lids in videos not always what we recommend
 - Sell equipment not all recommended for home canning.

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Touch the Soil Magazine

- Magazine about farm/food sustainability.
- Idaho-based; bi-monthly.
- Editor is very pro-home canning and preservation.
 - I've written two columns for him so far.
 - He added a message about supporting Cooperative Extension.
- www.touchthesoil.com



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Additional Handouts

- ▶ Insert for Ball® Simple Creations® Pickle Crisp®.
- ▶ Foodborne Botulism in the United States, 1990-2000.
- ▶ Select Botulism Reports.
