

# Well-Preserved

The Well Preserved news column is prepared by Lancaster County Cooperative Extension. It includes food preservation information and questions.

## Processing Times

Have you ever wondered why it takes so much longer to process tomatoes than to process peaches?

The amount and method of heat processing used in canning mainly depends on the pH of the food. (pH is a measure of acidity with lower numbers indicating higher acidity). Cranberries, lemons, jams, jellies, preserves, apple and grape juice, and some pickled products are very high in acid and have pH values around 3.0.

When these foods are fairly disease-free, handled in a sanitary manner, and put in the jars boiling hot; they can be processed as little as five minutes in a boiling water canner. This is adequate to kill air-borne microorganisms that are in the headspace of the jar. When the processing time is less than 10 minutes, it is necessary to sterilize the jars for 10 minutes in boiling water before adding the hot food.

Most berries, apples, apricots, grapes, nectarines, peaches, pears, pineapples, rhubarb, and some pickled foods have pH values of 3.4 to 4.0. They require more heat to destroy their spoilage microorganisms and must be processed from 10 to 35 minutes.

Tomatoes and figs are borderline acidic with pH values of 4.0 to 4.6 after being acidified with lemon juice or citric acid. The lower acidity of tomatoes and figs

allows the growth of some mildly heat-resistant, spore forming bacteria which requires a minimum internal food temperature of 200F during processing of the filled jars. This will take from 45 to 85 minutes of processing time in boiling water.

Vegetables, meats, and seafood are low-acid foods with pH values above 4.6. This acidity level is too low to prevent the growth of very heat-resistant spore-forming bacteria commonly found on these foods. Under more favorable conditions the spores can grow and produce harmful toxins. Therefore, these foods must be processed in a pressure canner at temperatures in excess of 240F to be safe. Processing these foods at lower temperatures requires much longer times to destroy spores therefore making it unsafe to process in a boiling water bath.

Another factor influencing processing time is the style and density of the food being canned. Thin juice heats more quickly than thick juice. Juice heats more quickly than fruit pieces or sauces. Whole or halved tomatoes heat more quickly when packed in water than in thick juice or without liquid. Cubes of pumpkin in water heat more rapidly than does a strained product. In fact, pumpkin sauce is so dense that it is not safe to can it even in a pressure canner because the internal temperature does not reach a safe level for killing bacterial spores. Cream-style corn requires more processing time than whole-kernel corn that is packed in water. Many soups are combinations of food pieces and



broth. Heating is slower when food pieces are larger or there are more pieces in the jar. Adding starch to the broth also slows the heating. Never add flour, cornstarch, or other starch-based thickeners to products to be canned unless it is a USDA tested recipe. Soups and stews can be thickened before they are served.

Other factors also increase processing time. Raw packed food requires more time than hot packed food. Quarts take longer than pints. Steam under pressure raises the temperature above the boiling point of water. Thus, a pressure canner takes less time to destroy bacteria. Food processed at higher altitudes requires additional time because water boils at a lower temperature at higher altitudes. Because there are so many variables affecting processing time, it is important for canning safety that tested recipes be used.

Besides killing spoilage organisms, proper processing is necessary for a good vacuum seal. Air inside the headspace expands during processing; as the air cools a vacuum seal is formed preventing spoilage organisms from entering the jar during storage.

If you have food preservation questions, a Home Economist is available to answer questions on Wednesdays 10 a.m. to 1 p.m. Call (717) 394-6851 or write Penn State Cooperative Extension, Lancaster County, 1383 Arcadia Rd., Rm.1, Lancaster, PA, 17601.

# Taste Of Honey

September is National Honey Month and before you take a bite from your crisp apple or tangy pear you need to take a moment and thank the little honey bee for all his hard work in pollinating all the fruit trees and the bulk of our nation's agricultural crops.

The tiny little insects keep us in constant supply of sweet-tasting honey for consumption, thus providing us with nature's original sweetener.

Did you know that Americans consume nearly 1.5 pounds of honey annually — mixing it into sweet and savory recipes. Probably not.

If you are looking for something different to try without all the sugar please consider these good honey and dairy recipes.

## HONEY AND FRUIT SPREAD

½ cup butter  
¼ cup dried fruit (apricots, raisins, dates, etc.)

¼ cup honey  
2 tablespoons chopped pecans  
½ teaspoon grated orange peel

Combine all ingredients. Mix well. Spread on English muffins, waffles, toast or hot biscuits. This is a new and exciting taste to add to your breakfast. Makes about ¼ cup.

Ashley Bird  
Centre Co. Dairy Princess

## GRANOLA BARS

24 ounces marshmallows  
¼ cup margarine  
Melt marshmallows and margarine, then add:  
¼ cup vegetable oil  
½ cup honey  
¼ cup peanut butter  
In a large bowl mix together:

1½ cup crispy rice cereal  
5 cups toasted oatmeal  
1½ cup raisins  
1 cup M&M's or chocolate chips  
1 cup crushed graham crackers  
1 cup crushed peanuts  
1 cup coconut

Add marshmallow mixture and press into two 9x13-inch pans.

Vera Newswanger  
Morgantown

## HONEY HAM LOAF

2 pounds ground ham  
1 pound freshly ground pork  
3 slices bread  
½ cup milk  
2 eggs  
½ teaspoon cloves  
¼ cup brown sugar  
¼ cup honey  
2 teaspoons vinegar

Combine and mix ground meats in a bowl. Soak bread in milk and add to meat with remaining 2 ingredients. Mix thoroughly. Mold into loaf and place in shallow roasting pan. Before baking, pour mixture of ¼ cup of brown sugar, ¼ cup of honey, and 2 teaspoons of vinegar over top of loaf. Bake at 350 degrees for 2 hours.

Kristen Miller  
Pa. Honey Queen

## HONEY PEANUT BUTTER TREATS

1 cup honey  
1 cup brown sugar  
6 cups crispy rice cereal  
1 cup of chunky peanut butter  
Use a large heavy saucepan. Stirring constantly, bring the honey and the brown sugar to a boil. Remove from heat and add cereal and peanut butter. Press into 13x9x2-inch pan, cool. Cut into 2-inch squares. Makes 32 squares.

Kristen Miller  
Pa. Honey Queen

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## Do You Suffer From Fibromyalgia?



When I was introduced to New Image I was 50 pounds over weight and suffered from fibromyalgia. I was so depressed and in pain the majority of the time. I was taking steroids and four other medications one of which made me so groggy I could hardly get out of bed and another gave me ulcers. I began taking New Image secretly because I thought my family would make fun of me. After a month I discovered I had lost eight pounds and seven inches. Wow! Then it dawned on me, I was feeling better the depression and pain were gone. In two months I was off all medications. 'I feel SUPERIFIC!' Now two years later I have lost 43 pounds and 30 inches. Thank you New Image for giving me a new life again.  
Judy Swift -Mt Washington KY

NII does not make any health claims. This is strictly personal testimonies of product users.

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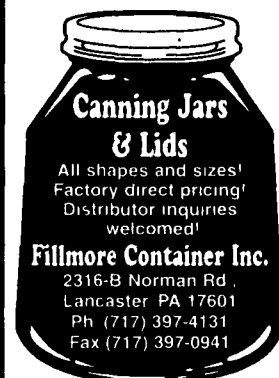
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## CALLING ALL CREATIVE COOKS!

Enter your favorite recipes in The Ephrata Review's Holiday Recipe Contest. You could win cash or prizes...and enjoy a cook-off party to sample finalists' creations together!

Enter in the following categories:

ENTREES • APPETIZERS • BREADS  
DESSERTS • SALADS • SOUPS • VEGETABLES

Entry Deadline is Friday, Oct. 17 • Early Entries Are Encouraged!

Four (4) Finalists will be selected in each of the 7 categories. These finalists will be asked to prepare their entries and bring them to the Ephrata Public Library. The final judging will be an actual tasting by Home Economists.

## THE GRAND COOKOFF

Saturday, Nov. 1st at the EPHRATA PUBLIC LIBRARY

Winners will be announced in the HOLIDAY RECIPE CONTEST SECTION in The Ephrata Review on NOV. 12, 2003.

### FOLLOW THESE INSTRUCTIONS TO ENTER!

- All entries must be received by Fri., October 17 by 5 p.m. Mail to The Ephrata Review Holiday Recipe Contest, 1 E. Main St., Ephrata, PA 17522 - or drop your entry off at our office before 5 p.m.
- All entries must be submitted either typed or neatly handwritten on an 8.5" x 11" inch sheet of paper.
- Participant can only enter in TWO categories.
- All entries must include the following: CATEGORY ENTERED, NAME, ADDRESS and PHONE.
- All entries become property of The Ephrata Review and may be published in the "Holiday Recipe Contest" Tabloid.



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