



# Let's Preserve Newsletter

Lancaster County

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**July 2006**

Dear Home Food Preserver,

Gardens are producing lots of beans, corn is starting to appear at roadside stands, berries and cherries are available for making jams and jellies. Empty jars are disappearing from shelves, and freezers are beginning to fill up. Young, tender, fresh herbs are peaking in flavor for harvesting. What a busy time!

A large number of you had a "Berry Good Time" at a recent workshop by that name. Included in this letter are several recipes from that workshop so the rest of you can enjoy some of the same items.

Talking to you at workshops and your phone calls help us identify issues to include in newsletters. A common question is "Why did something spoil?" Look for clues in the articles about flat-sour spoilage, liquid loss, and unsealed jars.

Only one more workshop remains. "Food Preservation—Now and Then" looks at those methods we once thought were the correct ones and now know that they involved some risky procedures. Whether you are an experienced preserver or a beginner, you will learn lots from this workshop.

Finally, don't forget to have your pressure canner dial gauge tested yearly.

Enjoy this busy season,

*Nancy R. Wiker*

Nancy R. Wiker  
 Extension Educator – FCS  
 Penn State Cooperative Extension

*Martha Zepp*

Martha Zepp  
 Food Preservation Consultant  
 Penn State Cooperative Extension

**What's Inside...**

**Food of the Month: Berries**

- Frozen Blueberry Pie Filling
- Berry Flavored Vinegar
- Raspberries
  - Red Raspberry Honey Vinegar
  - Raspberry Mustard
  - Raspberry Mustard Salad Dressing



**Herbs**

- Chives -- Dried or Frozen
- Storing Dried Herbs

**Drying Updates -- Pretreating**

**Problem Solving -- Canning**

- Does Color Matter?
- Flat-Sour Spoilage
- Liquid Loss -- Siphoning
- When Jars Become Unsealed

**Resealable Plastic Bags**

**Web Resources**

**Workshop**

**Food of the Month – Berries**

**Frozen Blueberry Pie Filling**

*This is a wonderful pie filling similar in texture to the commercially canned version except it has lots more berries. Use it as a topping for cheesecake or to accompany a slice of angel food cake. Of course, it can be put into a pie shell for that favorite blueberry pie.*

- 12 cups blueberries
- 3 cups sugar
- ½ cup plus 2 tablespoons  
 ThermFlo® modified food starch\*



1 tablespoon grated lemon peel  
¼ cup lemon juice

Wash and drain blueberries. Combine sugar and ThermFlo®. Stir in blueberries; let stand until juice begins to flow, about 30 minutes. Add lemon peel and lemon juice. Cook over medium heat until mixture boils and thickens. (Mixture will be very thick and should be at least 185°F.) Ladle pie filling into freezer jars or plastic freezer boxes, leaving ½-inch headspace. Cool at room temperature, not to exceed 2 hours. Seal, label and freeze.

Yield: about 5 pints.

\*ThermFlo® is available in many bulk food departments.

\*¾ cup cornstarch may be substituted for the ThermFlo® but the consistency after thawing will not be as smooth.

(Recipe adapted from the Ball Blue Book).

## Berry Flavored Vinegars

Beautifully colored berry flavored vinegars provide zest to leafy salads and fruit salads. Have a safe product by using sterilized glass containers, caps, and lids. Wash high quality berries gently and blot dry on paper towels. Leave small fruits whole or crush gently. One to two cups of berries will infuse a pint of vinegar.

Choose a clear-colored vinegar labeled as 5% acidity for the base. Distilled white vinegar tastes more acidic; white wine vinegar is more delicately flavored. Use only commercially produced vinegars.

Frozen, unsweetened berries may be substituted for fresh berries. Thaw the berries and include any juice that accumulates during thawing.

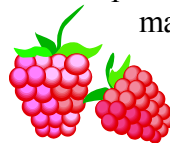
Gently stir the ingredients each day to mix flavors. Store in a cool place while infusing—the refrigerator is a good choice. The length of time it takes to reach the desired flavor depends upon the particular fruit and your individual taste preference. Berry infusions generally take two to four weeks. Taste to determine doneness.

Strain the vinegar through several layers of damp cheesecloth or a damp coffee filter. If the

vinegar is cloudy, strain it again. If the flavors seem too strong after the standing time and straining, dilute the flavored vinegar with more of the base vinegar.

Unless you have used a research tested recipe that requires water bath processing of the flavored vinegar, it should be stored in the refrigerator for best retention of flavor and freshness.

## Raspberries



Raspberries combine with basic ingredients to make special condiments. Try this vinegar and mustard, and then combine them for a special salad dressing.

*The following recipe overcomes the tartness of regular vinegar with the addition of sugar and honey. This research tested recipe can be processed. If you halve the recipe and just make a small amount for short term use, you could skip the processing and store it in the refrigerator.*

*Notice the recipe cautions to simmer and not boil the vinegar before putting it in the jars. Use an instant read thermometer to determine that the mixture has reached 180°F before pouring it into jars. Boiling the fruited mixture will cause the mixture to foam and separate.*

## Red Raspberry Honey Vinegar

4 cups red raspberries

4 cups white wine vinegar, divided

¼ cup sugar

¼ cup honey

Combine red raspberries and 1 cup white wine vinegar in a glass bowl. Lightly crush raspberries. Stir remaining white wine vinegar, sugar, and honey into mixture. Cover bowl with waxed paper or plastic wrap and secure. Let vinegar steep in cool, dark place for 4 weeks, stirring every 2 to 3 days.

When vinegar has reached desired strength, wash jars and prepare lids according to

manufacturer's directions. Strain vinegar through several layers of damp cheesecloth. Heat vinegar to a simmer, do not boil. Carefully ladle hot vinegar into hot jars, leaving ¼ inch headspace. Wipe jar rims and adjust lids. Process 10 minutes in a boiling water canner. Yield: about 3 pints.

Note: ¼ cup washed, fresh raspberries may be added to each jar before filling with flavored vinegar.

Source: [www.homecanning.com](http://www.homecanning.com)

*To prepare the raspberry puree in the following recipe, crush about 1 1/3 cups fresh or thawed frozen berries and rub the crushed berries through a fine sieve to remove the seeds. It will be very juicy at first. With continued rubbing the puree will form on the outside of the sieve. It is helpful to rub the puree off the sieve with a spoon or rubber scraper.*



### Raspberry Mustard

¾ cup dry mustard  
2 tablespoons mustard seed  
2/3 cup water  
3 tablespoons sugar  
2 teaspoons salt  
1/3 cup raspberry puree  
Whirl the dry mustard, mustard seed, and water in a food processor. Add sugar and salt. Transfer to a covered container and refrigerate overnight. The next day add the raspberry puree and process again. Store tightly covered in the refrigerator up to 1 month.  
*Use as an all-purpose mustard or use in the salad dressing recipe below.*

### Raspberry Mustard Salad Dressing

2 tablespoons minced onion  
2 tablespoons honey  
1 teaspoon salt  
½ teaspoon pepper  
1 teaspoon Raspberry Mustard (recipe above)  
1 teaspoon poppy seeds  
1 teaspoon celery seed  
½ cup vegetable oil  
2 tablespoons Raspberry Vinegar

Combine all ingredients in a blender.  
*Delicious over a layered salad of spinach, tomatoes, mushrooms, and hard cooked eggs.*  
Source: Unknown

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## Herbs

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### Chives—Dried or Frozen

I grow chives for their pretty flowers, but each year I pick some of the round, hollow leaves to dry for their delicate oniony flavor. When fresh chives aren't available, the dried are a good substitute in cheese and egg dishes, gravies and soups, and with sour cream on baked potatoes. Simply pick tender stems, rinse, pat dry with paper towels, dice into even 1/8 inch lengths, spread in a single layer on a paper towel lined tray, and set in a warm well ventilated place. I set the tray on top of the stove after using the oven—where there is a little heat coming from the vent but not too much that it cooks the herb. In a few hours the tiny pieces of chives will be dry and ready for storage in a tightly sealed jar. I use the small sample size jelly jars for storing herbs. Make sure herbs are room temperature when placed in the jar to prevent the formation of condensation.

Another method of preserving chives is to freeze the clean, chopped, chives in ice cube trays. As soon of the chive ice cubes are frozen, remove them from the trays and put them in a vapor proof container. To use, simply take out a cube and drop it into the soup or gravy you are making. Store the chive cubes in a glass jar or in a plastic bag or box wrapped in foil to avoid the transfer of odors to other foods in the freezer. The ice cube method of freezing herbs also works well with chopped parsley.



### Storing Dried Herbs

Air, light, moisture, and heat speed flavor and color loss of herbs. Whether you dry your own herbs or purchase commercially dried herbs, follow these guidelines to get maximum use from them.

- Store in a tightly covered container away from sources of heat or moisture—that means keep them away from the stove, dishwasher, microwave, refrigerator, sink or heating vent.
- Store in a cupboard or drawer—a place that is dark and away from sunlight.
- Prevent moisture from entering the container during use:
  - Remove herbs from container with a dry spoon.
  - Avoid sprinkling directly from container into a steaming pot to prevent steam from the boiling food from entering the container.

Be aware that dried herbs that are stored in the refrigerator or freezer can get wet if condensation forms when a cold container from the refrigerator or freezer is left open in a humid kitchen.

Generally, dried herbs will maintain good quality for one year. Check freshness by crushing some of the herb in your hand. If it smells strong with a good aroma, it will probably have good flavor. Label containers with the date you put the dried herb in it.

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### Drying Updates—Pretreating

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The low moisture content of dried foods prevents the growth of most spoilage organisms—at least that was the thinking until research at Colorado State University found that some bacteria did survive the drying process. Research studies showed that pretreating fruits with an acidic solution or sodium metabisulfite dip and blanching vegetables in boiling water or citric acid solution increases the destruction of potentially harmful bacteria. These procedures also improve the quality of the dried product by slowing enzyme activity and reducing drying time.

#### Fruits--Ascorbic Acid Pretreatment

Stir 3 ¾ teaspoons of pure ascorbic acid crystals into one pint of cold water. (Crushed vitamin C tablets can be used—six 500mg tablets equal 1

teaspoon ascorbic acid.) One pint is enough solution to treat about 5 quarts of fruit. Cut peeled fruit directly into ascorbic acid solution. Soak for 10 minutes, remove with slotted spoon, drain well and dehydrate.

#### Lemon Juice or Citric Acid Pretreatment:

Stir ½ teaspoon citric acid into one pint of cold water or mix equal parts of lemon juice and cold water. Follow directions above.

#### Sodium Metabisulfite Pretreatment:

Sulfites may cause asthmatic reactions in some people. If you choose to use a sulfiting agent, stir 1 tablespoon sodium metabisulfite into 1 quart of cold water. Proceed as above.

#### Vegetables. Blanching

Water blanching is recommended over steam blanching because heat penetration is more even. Adding ¼ teaspoon citric acid per quart of water prevents darkening and acts as an anti-microbial agent. Chill in cold water after blanching; drain and pat dry on paper towel before dehydrating. Reference: P. Kendall, Colorado State University.

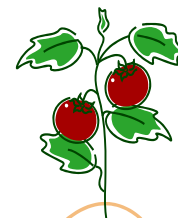
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## Problem Solving--Canning

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### Does Color Matter?

Not for tomatoes. Yellow, pink, or orange tomatoes are canned the same way as red tomatoes. Be sure to acidify all tomatoes by adding 2 tablespoons bottled lemon juice or ½ teaspoon citric acid to each quart of tomatoes being canned.



### Flat-Sour Spoilage

Flat-sour spoilage is caused by a microorganism named *Bacillus coagulans*. It is heat resistant and can survive processing treatments. Flat-sour spoilage is not a health hazard, but the product is not edible. The lid may be sealed and the product may look normal, but the food will smell sour because of lactic acid produced by the growth of *Bacillus coagulans*. Never use canned goods with off-odors.

To reduce the chance of spoilage, do not let jars remain in the boiling water bath or pressure canner after processing any longer than the five or ten minute adjustment period. Don't let jars cool down in a canner overnight. Place jars two inches apart on the counter so that air can circulate between the jars to cool them more quickly. Don't cover jars with a towel to prevent drafts—it will only hold in the heat encouraging bacterial growth.

Most of the incidents of flat-sour spoilage reported to this office have involved tomatoes or green beans. As always, start with quality produce that has been washed well. Avoid decayed or diseased produce that can carry bacteria. Process the recommended time to ensure that these heat resistant bacteria are killed. Check that jars are securely sealed. Store canned foods in a cool dark location.

### Liquid Loss--Siphoning

Siphoning is the loss of liquid from jars during processing and immediately after removal from the canner prior to sealing. Causes of siphoning include:

- Jars packed too solidly with food or overfilled
- Not enough headspace
- Lids not adjusted properly
- Failure to precook food before packing in jars—hot pack method
- Uneven pressure from rapid temperature changes or drafts blowing on the canner
- Failure to allow the temperature of the jars to equalize before removing them from the canner
  - Pressure Canner: After removing the pressure regulator, allow canner to remain closed for 10 minutes after pressure has completely dropped.
  - Boiling Water Canner: After processing time is complete, remove lid and allow jars to sit in water 5 minutes before removing jars.

The Presto® company identifies additional causes of liquid loss for pressure canners:

- Insufficient exhaust period
- Pressure regulator on the weighted gauge canner rocked vigorously during processing—always maintain a slow steady rocking motion.
- A fluctuation of pressure during processing from an unsteady heat source or steam leakage
- Removing or bumping the pressure regulator before pressure has completely dropped

Loss of liquid does not mean that the food is not safe to eat. However, food above the liquid may discolor during storage. Use those jars first.

### When Jars Become Unsealed

Occasionally a jar loses its seal during storage. The following are some reasons for jars to lose their seal. Jars were processed by the wrong method or for an insufficient amount of time or pressure, and a strong vacuum seal was

Any jar that loses its seal during storage should be considered spoiled and discarded.

not formed. Too much headspace resulted in a weak seal. Jars processed in a boiling water canner were

covered with less than one inch of boiling water. Spoilage organisms remaining in the jar (from insufficient processing) produced gasses releasing the seal. Tightening the screw band after processing dislodged the seal. Loss of liquid during processing caused food particles to lodge on the rim of the jar. The canning lid had a thin or uneven layer of sealant. Moving, excessive bumping, or rough handling of jars during storage loosened the lid. Jars stored with screw bands may rust causing lids to loosen.

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### Dial Gauge Testing Comes to You— SKH July 28, 10:00 AM to 12:00 Noon

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Again this year, we will offer dial gauge testing at the Lititz location of Stauffer's of Kissel Hill on Friday, July 28, 2006, from 10:00 a.m. until 12:00 noon. Of course, we continue to

offer dial gauge testing at the Extension Office on Wednesdays between 10:00 a.m. and 2:00 p.m. (It's a good idea to call ahead just in case I might be out of the office.) Dial gauge testing takes about 10 minutes. Bring the lid only.

Pressure canners with a weighted gauge do not have to be tested for accuracy because they cannot go out of calibration.

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## Resealable Plastic Bags

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Resealable freezer bags have gained popularity for their convenience. Those labeled as freezer bags are suitable for that. Problems arise when people try to cook in the freezer bags. There are concerns about different types of plastics leaching certain kinds of chemicals into foods at various temperatures. There can also be problems with the plastic holding up under the stress of the heat. Plastics that tear or melt increase the chance of burns.

To be safe, do not boil food in plastic bags. Only use plastic bags to reheat foods in the microwave oven if the manufacturer gives directions for doing so. Look at the fine print on the box. If the manufacturer has approved his product for microwaving, don't microwave the item on high and always open the bag at least one inch to allow heated air to escape during microwaving. Likewise, follow the manufacturer's directions for using vacuum sealed plastic pouches.

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## Web Resources

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National Center for Home Food Preservation:  
[www.uga.edu/nchfp/](http://www.uga.edu/nchfp/)

Penn State Food Preservation data base:  
<http://foodsafety.cas.psu/preserve.html>

Altrista (Ball Canning Company):  
[www.homecanning.com](http://www.homecanning.com)

SureJell and Certo: [www.surejell.com](http://www.surejell.com) or  
[www.kraftfoods.com](http://www.kraftfoods.com)

Mrs. Wages: [www.mrswages.com](http://www.mrswages.com)

Pomona Universal Pectin:  
[www.pomonapectin.com](http://www.pomonapectin.com)

Splenda (sugar free recipes):  
[www.splenda.com](http://www.splenda.com)

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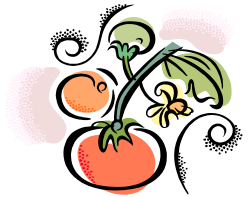
## Workshop

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### Food Preservation: Then and Now

What changes have occurred in food preservation over the years? While taking a historic overview of preservation methods and practices, we will examine the reasons for newer recommendations for canning, freezing, and drying foods. You are sure to come away with new pointers for safe preservation. A demonstration of canning tomatoes will be included.



Date: Thursday, August 10, 2006

Times: 10:00 A.M. to 12:00 noon,  
or 7:00—9:00 P.M.

Place: Farm and Home Center  
1383 Arcadia Rd., Lancaster

Cost: \$7.50

Call 717-394-6851 to register.

Penn State encourages persons with disabilities to participate in its programs and activities. If you anticipate needing any type of accommodation or have questions about the physical access provided, please contact Nancy Wiker at 717-394-6851 in advance of your participation or visit.

Where trade names appear, no discrimination is intended, and no endorsement by Penn State Cooperative Extension is implied.

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