

## How Much Sugar?!!

Most novice home food preservationists react with surprise to the amount of sugar in a jam or jelly recipe. (*The strawberry jam recipe demonstrated at the July 13 class in Placerville called for 5 cups of crushed strawberries and 7 cups of sugar!*)

Sugar helps fruit keep its color, shape and texture, and preserves fruit spreads. It's the sugar that prevents the growth of microorganisms. In jellied products, the microorganisms of concern are yeasts and molds that can cause the product to spoil. Jams and jellies made with normal pectin contain 60-65% sugar. If there's less, the gel will be runny and susceptible to mold.

Because sugar is the preservative, never arbitrarily reduce the amount of sugar called for in a recipe to make a "low-sugar" product. Instead, use a recipe designed for low/no sugar and avoid the risk a spoiled product. Always use recipes from reputable sources, such as the USDA, pectin manufacturers, land-grant universities, and Ball. Most pectin packages include recipes for full and low sugar products. There are also pectins specifically designed for low/no sugar products.

While granulated white sugar is the norm for jams and jellies, some recipes use corn syrup or honey. For best results, use tested recipes that specify honey or syrup; don't make up your own proportions.



Don't try brown sugar, sorghum, or molasses because their flavor overpowers the fruit flavor and their sweetness varies. Stick with white sugar.

Even though you can use a sugar substitute for coffee or tea, do not replace sugar in a preserving recipe with a sugar substitute. It will not gel. Find a recipe calling for the sugar substitute you want to use and follow it precisely for best results. Note that many sugar substitutes (such as agave and stevia) have not been thermal tested and may not be shelf stable.

### Inside this issue:

<a href="#"><i>How Much Sugar?</i></a>	<a href="#">1</a>
<a href="#"><i>The Curious Canner</i></a>	<a href="#">2</a>
<a href="#"><i>Christmas in July</i></a>	<a href="#">3</a>
<a href="#"><i>Canning Salt vs. Table Salt vs. Kosher Salt</i></a>	<a href="#">3</a>
<a href="#"><i>Candied Citrus Peel</i></a>	<a href="#">4</a>
<a href="#"><i>Canning Using the Right Equipment and Process</i></a>	<a href="#">5</a>
<a href="#"><i>Tips &amp; Tricks</i></a>	<a href="#">6</a>
<a href="#"><i>MFP Classes</i></a>	<a href="#">7</a>
<a href="#"><i>Oregon Botulism Anniversary</i></a>	<a href="#">8</a>
<a href="#"><i>Pressure Canner Gauge Testing</i></a>	<a href="#">8</a>
<a href="#"><i>MFP Info</i></a>	<a href="#">8</a>

### Got a Food Preservation Question?

**Amador/Calaveras County**  
209-223-6857  
acmfp@ucdavis.edu

**El Dorado County**  
530-621-5506  
edmfp@ucdavis.edu

**Sacramento County**  
916-875-6913

**UCCE Central Sierra MFP Website:**

<http://ucanr.org/mfpcs>

## The Curious Canner

**Question:** What is a full rolling boil?

**Answer:** It is a bubbling, steamy boil that no amount of stirring can stop. Use a deep pot to prevent boiling over.



**Question:** Why don't my double batches of jelly gel?

**Answer:** The cooking time changes in relation to the proportion of ingredients when you increase the recipe. The longer you cook the product to bring it to a boil, the more you impact the gel. The bigger the batch, the worse the problem. Small batches are easier to handle and are more apt to turn out successfully. Work with no more than 4-6 cups of jelly at a time.

**Question:** Why is my jelly bubbly?

**Answer:** If the bubbles are active it's a sign of spoilage—throw it out! Stationary bubbles indicate that the jelly has too much trapped air in it. Did you use a food processor to chop the fruit? (It's best to chop the fruit by hand.) Did you pour it into the jar slowly, trapping air bubbles? (Try debubbling it next time and pouring the jelly in quickly.)

**Question:** I over-cooked my jelly and it's runny. Can I fix it?

**Answer:** The easiest thing to do is to call it syrup! To make it thinner, dilute it with water. Otherwise you can recook it. Work with no more than 4-6 cups at a time. Process remade jelly 5 minutes (0-1000'), 10 minutes (1,001-6,000') or 15 minutes (above 6,000').



*To remake jelly with powdered pectin:* For each quart of jelly, mix 1/4 cup sugar, 1/2 cup water, 2 tablespoons bottled lemon juice, and 4 teaspoons powdered pectin. Bring to a boil while stirring. Add jelly and bring to a rolling boil over high heat, stirring constantly. Boil hard 1/2 minute. Remove from heat, quickly skim foam off jelly, and fill sterile jars, leaving 1/4 inch headspace. Adjust new lids and process.

*To remake jelly with liquid pectin:* For each quart of jelly, measure 3/4 cup sugar, 2 tablespoons bottled lemon juice, and 2 tablespoons liquid pectin. Set aside. Bring jelly only to boil over high heat, while stirring. Remove from heat and quickly add the sugar, lemon juice, and pectin mixture. Bring to a full rolling boil, stirring constantly. Boil hard for 1 minute. Quickly skim off foam and fill sterile jars, leaving 1/4 inch headspace. Adjust new lids and process.

*To remake jelly without added pectin:* For each quart of jelly, add 2 tablespoons bottled lemon juice. Heat to boiling and boil for 3 to 4 minutes. Use temperature or spoon test to determine jelly doneness. Remove from heat, quickly skim foam off jelly, and fill sterile jars, leaving 1/4 inch headspace. Adjust new lids and process.

## Christmas In July: Gifts from the Kitchen

Giving gifts of homemade treats is a wonderful way to share your love for food with friends and family. Join the El Dorado County Master Food Preservers for their annual "Christmas in July" class where they will share their favorite recipes for gifts from the kitchen.

The event highlights ideas for gifts you can make in your own kitchen. Come and let your senses be tantalized with samples of Spirited Blueberries, Pineapple Pepper Jam, Orange Chili Marmalade, Pumpkin Leather, Dijon Mustard, and much, much more. The Master Food Preservers will present the finished product for over 20 different recipes!

Master Food Preservers will present each sample in a decorative package to give you gift wrapping ideas. Get in the mood with twinkling Christmas trees plus seasonal table decorations.

**Date:** July 23, 2013

**Time:** 10:00 am to Noon

**Location:** Marshall Building, El Dorado County Fairgrounds  
100 Placerville Drive, Placerville CA

*Enter through the Blue Gate on Armory Drive by the Veterans Building. Follow the signs to the MFP class!*



## Canning Salt vs. Table Salt vs. Kosher Salt

When pickling, we recommend using canning or pickling salt. Table salt contains anti-caking ingredients which can cloud the brine.

Not all Kosher salts are free of anti-caking agents. For example, according to the Morton Course Kosher Salt box, the ingredients are Salt and Yellow Prussiate of Soda (Anti-Caking Agent). Read the label before using Kosher salt to can pickled products.

Since flake salts vary in density, they are not recommended for making pickled and fermented foods. If you must substitute Kosher salt, it is lighter than canning salt so you need to use the same amount of salt by weight, not volume. In a Master Food Preserver class in Calaveras County, we measured both salts by weight and found that 1/2 cup pickling salt = 1 cup plus 2 Tablespoons Kosher salt.



## Candied Citrus Peel – Scrap Candy!

Did you know that every time you peel an orange, juice a lemon, or have a grapefruit for breakfast, you have the ingredient for a delicious candy? Don't throw away or compost the citrus peel, make a candy out of it!

Candied citrus peels are refreshing, addictive, and absolutely satisfying at the end of a meal. Candied citrus peel keeps so well that it's a good idea to double the recipe. The Master Food Preservers will feature candied citrus peel at the July 23<sup>rd</sup> *Christmas in July* class. See for yourself what a treat it is!

### Candied Citrus Peel

2 grapefruit or 3 oranges or 6 lemons  
2 cups sugar  
3 Tbsp light corn syrup  
Water

1. Peel the fruit in large strips, using only the zest and white peel. If the white is very thick, trim it down a little.
2. Put the peel in a pan, cover with cold water and simmer for 30 minutes.
3. Drain, cover with cold water, and simmer until tender.
4. Drain and cut the peel into small strips, about 3/8 inch wide and 2 inches long.
5. Mix one cup of the sugar with the corn syrup and 3/4 cup water in a heavy saucepan; add fruit peel and stir over low heat until most of the syrup has been absorbed.
6. Cover and let stand overnight on the kitchen counter.
7. Reheat and bring to a simmer again, then cool a little and drain.
8. Spread several thicknesses of paper towels with the remaining cup of sugar and roll the peel in it, turning so that all the pieces are coated.
9. Let them stand until they are dry enough to handle.
10. Stored airtight, they will stay fresh for several months. If they become too dry, put a lemon in the container for a day or two and the peel will soften.

Yield: Approximately 2 cups

Source: *Sunset Magazine*



## Canning Using the Right Equipment and Process

New to canning? It's not your grandmother's canning world! Canning supplies and processes have changed over the years; make sure you use current techniques recommended by the USDA.

### Jars

For best results, use standard Mason canning jars designed for home canning. According to the [National Center for Home Food preservation](#), most commercial pint- and quart-size mayonnaise or salad dressing jars may be used with new two-piece lids for canning acid foods. **However**, you should expect more seal failures and jar breakage than when using canning jars. Commercial jars have a narrower sealing surface and are tempered less than Mason jars, and may be weakened by repeated contact with metal spoons or knives used in dispensing mayonnaise or salad dressing. Seemingly insignificant scratches in glass may cause cracking and breakage while processing jars in a canner. Mayonnaise-type jars are not recommended for use with foods to be processed in a pressure canner because of excessive jar breakage. Stick with regular canning jars.

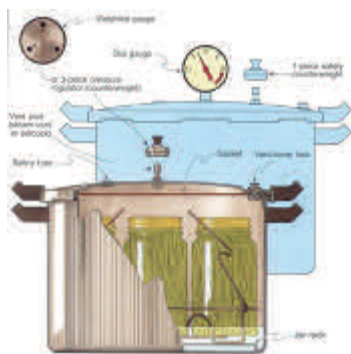


Mason canning jars

To seal jars, use two piece metal lids and rings. Paraffin wax is not recommended as a sealing agent because mold spoilage happens too easily as the wax contracts and expands with temperature fluctuations.

### Canners

Water bath canners: Make sure they're deep enough to hold a bottom rack and 1-2" boiling water above jars.



Pressure canners: Need a flat rack in bottom, dial or weighted gauge, vent pipe, overpressure plugs. (Contact the MFP office to schedule a pressure canner test.)  
*Note: A pressure cooker is **NOT** a pressure canner.*

### Use the Appropriate Canning Process

- The USDA does **not** recommend the open kettle method of canning where hot food is placed in a hot jar and sealed without processing in boiling water.
- Use a water bath canner for high acid foods: fruits, pickled and fermented products, jams and jellies.
- Use a pressure canner for low acid foods: meats, vegetables, and mixtures of high and low acid foods.

Pressure canner

Why two different processes? Because you need to ensure you've removed the risk of botulism. Growth of the bacterium *Clostridium botulinum* in canned food may cause botulism—a deadly form of food poisoning. These bacteria exist either as spores or as vegetative cells. The spores, which are comparable to plant seeds, can survive harmlessly in soil and water for many years. When ideal conditions exist for growth, the spores produce vegetative cells which multiply rapidly and may produce a deadly toxin within 3 to 4 days in an environment consisting of moist, low-acid food at a temperature between 40° and 120°F, and less than 2 percent oxygen. This moist, oxygen deprived environment is what exists in canned foods.

(Continued on page 6)

## Tips and Tricks

### **Need to mail some jam?**

Here's tried and true advice on how to package jam for shipping from Master Food Preservers who've learned the hard way.



Since baggies leak, vacuum seal each individual jar. Use pulse mode to avoid breaking the jar's seal. Pad the jars with bubble wrap or old towels in a box.

Write FRAGILE and UP (with an arrow) on all sides of the box.

### **Got a great deal on ground meat?**

Instead of freezing the entire amount in a large container or multiple packages of small portions, put it in a large re-sealable freezer bag. Then divide it into small portions from the outside using a chopstick.

When you need to cook it, open the bag, break off as many portions as you need, reseal the bag, and put it back in the freezer.



## **Canning Using the Right Equipment and Process** *(Continued from page 5)*

Botulinum spores are on most fresh food surfaces. Because they grow only in the absence of air, they are harmless on fresh foods.

The level of acidity in high acid foods prevents the growth of botulism. Vegetables, meats and seafood do not have enough acidity to destroy the botulism spores, so to safely can low acid foods you must process the food at temperatures between 240° to 250°F to kill the spores. Obviously, you can't reach this temperature with boiling water, so you must use a pressure canner.

### **Use a Current, Reputable Recipe**

Canning recommendations, processing times and ingredient ratios have changed over the years as new research has led to safer methods. The length of time to process a product depends on how long it takes the heat to penetrate the coldest part of the jar for the amount of time needed to ensure any foodborne pathogens are destroyed. Use—and follow—a current recipe from a reputable source. If the directions say to peel and chop, then peel and chop. If they say to leave whole, then leave whole. If it says process 30 minutes for pint jars, then put it in pint jars and process not 20, not 25, but how long? 30 minutes. This is especially critical for pickled and pressure canned products.

Following current USDA recommended procedures will give you peace of mind while canning. It's an exciting adventure, and the Master Food Preservers are eager to guide you. Contact the nearest program for classes and canning information.



*Beautiful, but out-of-date cookbook with canning recipes*



## Upcoming Master Food Preserver Classes & Events

*In the Central Sierra, Sacramento, and San Joaquin counties  
Where listed, click on the class link to schedule an email reminder for the class.*



### Amador/Calaveras County

#### Saturday, August 24: [Tomatoes 4 Ways](#)

10:00 am

Location: Calaveras County MG Demo Garden,  
891 Mountain Ranch Road, San Andreas

#### Saturday, September 7: [Tomatoes 4 Ways](#)

10:00 am—Noon

Location: Amador County GSA Building,  
12200-B Airport Road, Jackson

Both classes are free and no reservations are required. Call 209-223-6857 for more information.



### El Dorado County

Location: El Dorado County Fairgrounds (Board Room) from 10 am—Noon

#### [Christmas in July-Gifts from the Kitchen:](#)

Tuesday, July 23

Location: Marshall Building

#### **Pickles, Relishes & Sauerkraut:**

Saturday, [July 27](#) & Tuesday, [July 30](#)

#### **Tomatoes, Basic & Fancy**

Saturday, [Aug 3](#) & Tuesday, [Aug 6](#)

#### **Pressure Canning**

Saturday, [Aug 10](#) & Tuesday, [Aug 13](#)

#### **Dehydrating & Freezing**

Saturday, [Aug 17](#) & Tuesday, [Aug 20](#)

#### **Cheese Making**

Saturday, [Aug 24](#) & Tuesday, [Aug 27](#)

[Download the full class schedule.](#)

### Sacramento County

Location: Sacramento UCCE office at 4145 Branch Center Road, Sacramento

#### Saturday, August 17: [All Dried Up](#)

10 am—Noon, Free

Basic introduction to safe dehydration techniques

#### Wednesday, August 21: [Tomatoes & Late Summer Fruits](#)

6:30—8:30 pm, Cost: \$3

[Click here for more information.](#)



### San Joaquin County

#### Saturday, August 3: [Jams & Jellies](#)

9am—Noon

Location: Boggs Track Farm, 466 S. Ventura Ave, Stockton

For more information, call 209-525-6825.

#### No MFP Class Nearby?

The National Center for Home Food Preservation has a free, self-paced, online home canning and preservation course for those who do not live near a county with the UCCE Master Food Preserver program.

Sign up for this online class at  
<http://nchfp.uga.edu>.



## Oregon Botulism Anniversary

It's been one year since the [Oregon State Public Health Lab confirmed](#) that three Central Oregon residents who were hospitalized contracted botulism at a private barbecue. Deschutes County Health Services conducted an investigation and implicated home-canned food as the source of the Botulism.

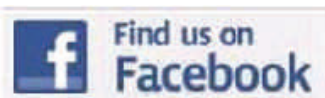
These three people ate some home-canned beets that had not been acidified or processed sufficiently. Putting low acid foods in a jar and sealing them without either acidifying (with vinegar/fermentation) or processing using a pressure canner is a bad idea. It creates the ideal environment for botulism toxin formation. And botulism is pretty devastating, often resulting in paralysis and a long-term recovery period.



Remember, just because a jar is sealed doesn't mean it's been processed properly. Before eating someone else's canned meat or vegetables, find out how they processed it. It's not rude to ask; it could save your life.

### Master Food Preserver Services

- Free public classes
- Food preservation hotline
- Free pressure canner testing
- Speakers for custom training for your organization
- Regular articles in local newspapers



To get information about our program, visit our website at [http://cecentralsierra.ucanr.org/Master Food Preservers/](http://cecentralsierra.ucanr.org/Master_Food_Preservers/).

Preserving Times is published by the Central Sierra Master Food Preservers.  
[edmp@ucdavis.edu](mailto:edmp@ucdavis.edu)

Know someone who would like to receive our newsletters and notifications on classes and events?  
 Sign up at <http://ucanr.org/mfpnews>.

### Free Pressure Canner Gauge Testing

Test your pressure canner gauge for accuracy once a year. Amador, Calaveras, and El Dorado Master Food Preservers all offer this service. Contact the office nearest you to schedule a time to bring in your pressure canner for a FREE test!

UCCE—Amador & Calaveras:  
 209-223-6482

UCCE El Dorado:  
 530-621-5502



The University of California Division of Agriculture & Natural Resources (ANR) prohibits discrimination against or harassment of any person participating in any of ANR's programs or activities on the basis of race, color, national origin, religion, sex, gender identity, pregnancy (which includes pregnancy, childbirth, and medical conditions related to pregnancy or childbirth), physical or mental disability, medical condition (cancer-related or genetic characteristics), genetic information (including family medical history), ancestry, marital status, age, sexual orientation, citizenship, or service in the uniformed services (as defined by the Uniformed Services Employment and Reemployment Rights Act of 1994: *service in the uniformed services* includes membership, application for membership, performance of service, application for service, or obligation for service in the uniformed services) or any person in any of its programs or activities. University policy also prohibits retaliation against any employee or person participating in any of ANR's programs or activities for bringing a complaint of discrimination or harassment pursuant to this policy. This policy is intended to be consistent with the provisions of applicable State and Federal laws. Inquiries regarding the University's equal employment opportunity policies may be directed to Linda Marie Manton, Affirmative Action Contact, University of California, Davis, Agriculture and Natural Resources, One Shields Avenue, Davis, CA 95616, (530) 752-0495.



Should you need assistance or require special accommodations for any of our educational programs, please contact us at 530-621-5502.

The University of California, working in cooperation with County Government and the United States Department of Agriculture.