

## Canning with Half Gallon Jars

Although half-gallon jars look great and it seems as if there would be less work while processing with large jars, the following information from the Penn State Extension explains what can be canned in half-gallon jars and what cannot:

“At least one canning jar manufacturer is selling half-gallon canning jars. That manufacturer has a printed note on the top that says half-gallon jars are only used for some highly acidic foods in a boiling water canner, with instructions to call a toll-free number for the instructions.

When we last called, the only choices are grape juice and apple juice, as we also recommend.”

The only processes that USDA, the National Center for Home Food Preservation and the University of Georgia recommend for half-gallon jars are for two very acidic fruit juices (and only juice):

Apple Juice  
Grape Juice

Do not use the processing time listed for apple and grape juice for tomato juice or any other juice.

There are no other research-tested processes for half-gallon jars. Boiling water processes for other foods for jars larger than those published with recipes (usually pints and/or quarts) cannot be extended by any formula to a larger jar.



We are aware that there are historical recommendations for canning foods in half-gallon jars. However, these are not currently accepted or endorsed by the USDA, Cooperative Extension System or U.S. manufacturers of home canning jars.

*What's the most popular use of large jars in the Master Food Preserver program?*

*Fermenting sauerkraut!*

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### Got a Food Preservation Question?

**Amador/Calaveras County**  
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530-621-5506  
edmfp@ucdavis.edu

**Sacramento County**  
916-875-6913

**UCCE Central Sierra MFP Website:**  
<http://ucanr.org/mfpcs>

## The Curious Canner

**Question:** When I open a jar of food I have canned, why do I sometimes find black spots on the underside of the lid?

**Answer:** There are natural compounds in some foods, especially foods that are acidic, that corrode metal and make a dark deposit on the underside of the lids. The undersides of canning lids are protected by an enamel coating. However, if there are any imperfections in the enamel, such as scratches or pinholes, the natural compounds in some food can react with the metal in the lid to form brown or black spots. Also, sometimes small particles of the canned food might adhere to the lid, dry there and cause a dark spot. If you used proper canning jar lids and the jar of food was properly jarred and processed, the spots on the lid are harmless and the food is safe to eat.



**Question:** I want to purchase a food dehydrator. What features are important for it to have?

**Answer:** To ensure quality results when drying food, there are several important food dehydrator features necessary:

**Heat Source** The heating element should be internal and enclosed for safety.

**Thermostat** The thermostat should be an adjustable control with a range from 85°F to 160°F, as different foods and herbs require a variety of temperatures for proper drying.

**Fan** The fan is needed in order to blow the heated air evenly over all the food to be dried.

**Drying Trays** The drying trays should be made of safe, food-grade material, such as stainless steel, nylon, Teflon coated fiberglass or plastic. Copper, aluminum or plated metals should not come in contact with drying food. Copper reduces the vitamin C in many foods; aluminum discolors some foods; and plated metals can be dissolved by fruit acids and may cause the food to become toxic. Trays should be spaced adequately for air circulation and it's very helpful if they are easy to load/unload and clean.



*Products pictures are representative samples of dehydrators and not endorsements by Master Food Preservers.*

## More Pumpkin Ideas

In [last month's eNewsletter](#) we shared ideas on freezing pumpkins. Here are some more tips on freezing pumpkin.

First, puree the cooked pumpkin. Freeze small amounts of pureed pumpkin in silicon cupcake cups. Pop them out and bag them, similar to how we've recommended freezing lemon juice in ice cube trays. There are freezer safe plastic zip-type bags available in all sizes.



What do you do with frozen pumpkin puree? Here's a great idea from the CDC...Pumpkin Shake. Just blend 1 cup of pumpkin puree with 1 cup of nonfat milk, 1 banana, 1 teaspoon of vanilla extract and 2 teaspoons of honey. Add ice cubes if desired and blend again. Sprinkle with nutmeg.



## Fruit of the Month from the CDC – Cranberries

*Cranberries are native to North America and are so called because the flowers resemble cranes.*



**How to Select:** Choose cranberries that are firm and not shriveled or decayed.

**How to Store:** Refrigerate cranberries for up to 2 months or freeze for future use.

**Nutrition Benefits:** Fat free, cholesterol free, sodium free and a good source of vitamin C and fiber.

### Ways to Enjoy Cranberries

**Cranberry Ice!** Put cranberries in the bottom of a bunt pan, add water and freeze. The result? A decorative floating ice ring to spice up any holiday punch.

**Make Your Own Mix.** Save some money and create your own trail mix. Combine dried fruit, grains, nuts, and maybe even a little dark chocolate ... the possibilities are endless!

**Raw Relish!** Cranberries, apples and oranges make this relish not only a perfect side to any meal but a great topping for sandwiches.

**Cranberry Decor.** Use with cut or silk flowers as a decorative vase accent, or add to holiday popcorn strings.

**The Saucy Standby!** Hooked on the cranberry sauce holiday tradition? Break away! This holiday favorite can accompany more than just turkey! Enjoy all year long.

**After-School Snacks.** Cranberries are just one of many healthy snacks you can give your kids when they come charging through the door. Snacks should be as nutritious as meals and include fruits and vegetables.

**A Hearty Handful.** Toss a little extra flavor and texture atop your oatmeal or cold cereal in the morning, or grab a handful of cranberries for a quick snack!

**Cranberries and Cookies? Absolutely!** Add dried cranberries to your favorite cookie recipe for a quick holiday makeover.

**Cran-Apple Pie.** Surprise your taste buds and toss a handful of fresh or dried cranberries into your favorite apple pie recipe before adding the top crust.

*Here's a hit recipe from the October MFP class on Cranberries, Winter Squash & Turkey.*

### Cranberry Barbecue Sauce

1¼ cups whole cranberry sauce	¼ cup water	¼ cup sugar
¾ cup ketchup	3 Tbsp. honey	1 Tbsp. apple cider vinegar
1 tsp. Worcestershire sauce	½ tsp. onion powder	½ tsp. garlic powder
Pinch ground cayenne pepper	Salt and pepper, to taste	

In a medium saucepan, combine cranberries, water and sugar over medium-high heat and bring to a boil. Cook until cranberries pop, sugar is dissolved and mixture is bubbling. Reduce heat to low. Stir in ketchup, honey, vinegar, Worcestershire sauce, onion powder, garlic powder, cayenne and salt and pepper. Mix well and cook on low for 2-3 minutes to allow flavors to meld. Serve immediately, or refrigerate in an airtight container until ready to use.

*Makes about 1½ cups sauce.*



*Cranberry ice ring—before*



*Cranberry ice ring—after*

## Green Tomato Pie Filling (Mincemeat)

*Just the other day I was speaking to a man who reminisced about the green tomato pie his mother used to make. He went on and on about how good it was and how much he missed it. Then MFP Summer Brasuel posted a recipe for Green Tomato Pie Filling on the MFP Facebook page. What a coincidence! Just in case you do not "do" Facebook, here is the posting from Summer:*

Running out of ideas for all those ripe tomatoes? Then take a different tack and start working on green tomatoes. There are a lot of fun recipes from which to choose. Dilled Green Tomatoes (every bit as good as Dilly Beans!) and other pickles such as Curried Green Tomato Wedges, Green Tomato Hotdog Relish, Piccalilli Relish and Chow-Chow - just to name a few. Then there is Salsa Verde and Green Tomato Chutney. Here is something a little different, but oh so delicious:

### Green Tomato Pie Filling (Mincemeat)

*Yield: 7 quarts, Note: This recipe may be cut in half.*

*Don't let the word mincemeat turn you off. There are no animal products in this recipe. Modern day mincemeat is just heavily (or to taste) spiced fruit or vegetables. It is an old fashioned, homey, recipe that makes your house smell cozy on a cool autumn or a nippy winter day.*



- 4 qts chopped green tomatoes
- 3 qts peeled and chopped tart apples
- 1 lb dark seedless raisins
- 1 lb white raisins
- ¼ cup minced citron, lemon or orange peel
- 2 cups water
- 2 ½ cups brown sugar
- 2 ½ cups white sugar
- ½ cup vinegar (5%)
- 1 cup bottled lemon juice
- 2 Tbsp ground cinnamon
- 1 tsp ground nutmeg
- 1 tsp ground cloves

Combine all ingredients in a large saucepan. Cook slowly, stirring often, until tender and slightly thickened (about 35 to 40 minutes).

Fill hot jars with hot mixture, leaving ½ inch headspace. Remove air bubbles and adjust headspace if needed.

Wipe jar rims clean. Place lids and rings on jars, tightening rings finger tight.

Process 15 minutes in a boiling water bath canner for pints and quarts, adjusting for altitude.

*Source: USDA Complete Guide to Home Canning and Preserving, 2009 Revision*



## Class Question Follow-up: Clostridium Botulinum

Val Renzoni, El Dorado County Master Food Preserver

At the October 16<sup>th</sup> El Dorado County Master Food Preserver class, the class discussion turned to botulism. As promised to the attendees, here's more information from the USDA about what causes the toxic illness and how to prevent it.

### What is *Clostridium botulinum*?

*Clostridium botulinum* is a rod-shaped microorganism. It is an obligate anaerobe, meaning that oxygen is poisonous to the cells. However, *C. botulinum* tolerates traces of oxygen due to the enzyme superoxide dismutase (SOD) which is an important antioxidant defense in nearly all cells exposed to oxygen. *C. botulinum* is only able to produce the neurotoxin during sporulation, which can only happen in an anaerobic environment. Other bacterial species produce spores in an unfavorable growth environment to preserve the organism's viability and permit survival in a dormant state until the spores are exposed to favorable conditions.



The dormant bacterium is able to survive for years. *C. botulinum* is responsible for a disease called botulism.

### What is Botulism?

Botulism is a life-threatening disease caused by the ingestion of a potent neurotoxin produced during growth of the *C. botulinum* bacteria. This neurotoxin is among the most toxic substances known; even microscopic amounts can cause illness or death. In the past, botulism was linked primarily to home-canned foods. In recent decades, however, botulism illnesses have been linked to foods such as unrefrigerated homemade salsa, baked potatoes sealed in aluminum foil, honey (the primary cause of botulism in infants), garlic in oil, and traditionally prepared salted or fermented fish.

### When do Symptoms Occur?

Symptoms of botulism usually appear within 12 to 36 hours after eating food containing the neurotoxin, although there have been documented cases that ranged from 4 hours to 8 days. The earlier the symptoms appear, the more serious the disease. Treatment requires quick medical attention and an antitoxin.

### How Does the Illness Occur?

Once in the body, the toxin binds to nerve endings that join muscles. This prevents the nerves from signaling the muscles to contract. The first symptoms of botulism are nausea, vomiting, weakness, and vertigo (dizziness). These are followed by neurological symptoms: visual impairments (blurred or double vision), loss of normal throat and mouth functions (difficulty speaking and swallowing; dry mouth, throat, and tongue; and sore throat), general fatigue, lack of muscle coordination, and difficulty in breathing. Gastrointestinal symptoms may include abdominal pain, diarrhea, or constipation. Death is usually caused by respiratory failure and airway obstructions. When the diaphragm and chest muscles become fully involved, breathing is affected and results in death from asphyxia.

If botulism is caught in the early stages, the injection of an antitoxin can lessen the severity of the disease by neutralizing any toxin that has not yet bound to nerve endings. However, due to the risk of serious side effects, the antitoxin cannot always be used. A human-derived antitoxin is used to treat cases of infant botulism and is available from the California Department of Public Health.

### How is the Toxin Produced in Food?

*C. botulinum* spores are often found on the surfaces of fruits and vegetables and in seafood. The organism grows best under low-oxygen conditions and produces spores and toxins. The toxin is most commonly formed when food is improperly processed (canned) at home. *C. botulinum* cannot grow below a pH of 4.6, so acidic foods, such as most fruits, tomatoes, and pickles, can be safely processed in a water bath canner. However, foods with a higher pH (most vegetables and meats) must be processed under pressure. Therefore, a pressure cooker should be used. The pressure cooker will reach high enough temperatures to destroy the *C. botulinum* spores.

For example, if a low-acid food, such as green beans, is canned improperly (not canned under pressure or improperly canned using a pressure canner), *C. botulinum* bacteria and other bacteria present will be destroyed by the boiling of

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## ***Clostridium Botulinum*** (Continued from page 5)

water and food, but the *C. botulinum* spores will not be destroyed. The canning process will remove the oxygen from the jar, creating a low-oxygen environment that will allow the spores to grow into active bacteria. When the jars are stored at room temperature, the spores can germinate and produce the toxin. However, the toxin is sensitive to heat and can be destroyed if the food in question is boiled for 10 minutes (longer at high altitudes).

### **What is the Best Way to Prevent Botulism?**

The control of foodborne botulism is based almost entirely on thermal destruction (heating) of the spores or inhibiting spore germination into bacteria and allowing cells to grow and produce toxins in foods. To prevent foodborne botulism:

- Use approved heat processes for commercially and home-canned foods (i.e., pressure-can low-acid foods such as corn or green beans, meat, or poultry).
- Discard all swollen, gassy, or spoiled canned foods. Double bag the cans or jars with plastic bags that are tightly closed. Then, place the bags in a trash receptacle for non-recyclable trash outside the home. Keep it out of the reach of humans and pets.
- **Do not taste or eat foods from containers that are leaking, have bulges or are swollen, look damaged or cracked, or seem abnormal in appearance. Do not use products that spurt liquid or foam when the container is opened.**
- Boil home-processed, low-acid canned foods for 10 minutes prior to serving. For higher altitudes, add 1 minute for each 1,000 feet of elevation.
- Refrigerate all leftovers and cooked foods within 2 hours after cooking (1 hour if the temperature is above 90 °F).
- One of the most common causes of foodborne botulism is improperly home-canned food, especially low-acid foods such as vegetables and meats. Only a pressure cooker/canner allows water to reach 240 to 250°F, a temperature that can kill the spores.



### **More Information**

- [USDA's Complete Guide to Home Canning, 2009 Revision](#)
- National Center for Home Food Preservation at <http://www.uga.edu/nchfp/index.html>
- USDA Website on foodborne illnesses at [http://www.fsis.usda.gov/FACTSheets/Clostridium\\_botulinum/index.asp#9](http://www.fsis.usda.gov/FACTSheets/Clostridium_botulinum/index.asp#9)

## **Easy Homemade Fruit Vinegars**

Vinegars made with fruit are colorful, delicious, and easy to make! Here's a simple recipe that makes a great gift.

- 1 cup of raspberries
- ½ cup vinegar (use 5% rice, white, or wine vinegar)

Place fruit in a hot, clean jar. Heat vinegar to just below boiling (190-195°), pour over fruit, leaving 1/4" headspace. Wipe jar rim, cover and steep for 3-4 weeks at room temperature, out of direct sunlight. Strain through a fine sieve, to extract liquid; discard pulp. Pour into a clean, sterilized jar with a tight fitting lid or cork. Store the vinegar in the refrigerator for best flavor retention.

For more information, go to [http://nchfp.uga.edu/publications/uga/uga\\_flavored\\_vinegars.pdf](http://nchfp.uga.edu/publications/uga/uga_flavored_vinegars.pdf).



*The bright color of the raspberries makes a rich, vibrant final product.*





## November Master Food Preserver Classes

*In the Central Sierra and Sacramento Counties*



### **Amador/Calaveras County:**

#### Condiments, Vinegars & Pickled Peppers

**Date:** Saturday, November 10, 2012

**Time:** 10:00 AM - 12:00 PM

**Location:** Calaveras County Senior Center, 956 Mountain Ranch Road, San Andreas

The holidays are on our doorstep and vinegars, condiments and pickled foods are wonderful on our holiday tables. They also make great gifts! Learn to make flavored vinegars, mustards and pickled peppers as well as many other fun recipes.

### **Sacramento County:**

#### All Dried Up

**Date:** Saturday, November 10, 2012

**Time:** 10:00 AM - 12:00 PM

**Location:** UC Cooperative Extension Auditorium, 4145 Branch Center Road, Sacramento, Ca 95827

A basic introduction to safe dehydration techniques. This is a free demonstration.

#### Festive Fall Favorites

**Date:** Wednesday, November 14, 2012

**Time:** 6:30 PM - 8:30 PM

**Location:** UC Cooperative Extension Auditorium, 4145 Branch Center Road, Sacramento, Ca 95827

Learn to preserve persimmons, pomegranates, pumpkins, and kiwifruit. There is a \$3.00 materials fee for this class.

### **El Dorado County**

Although the free public education classes have come to a close for the year, the El Dorado County Master Food Preservers are still available to answer any questions you may have about home food preserving. In addition to the question/answer phone line, the Master Food Preservers would love to come and talk to your group or organization about safe home food preserving. This is a free service for the community. For questions about safe home food preservation, or to schedule a speaker, call the El Dorado County Master Food Preservers at (530) 621-5506.

## Interested in Becoming a Master Food Preserver?

You may have seen them at the County Fair or attended one of their classes. Master Food Preservers are agents of the University of California and work through the UC Cooperative Extension to educate their community on the safe practices of food preservation, including pickling, making cheeses, sausages, preserves, dried foods and much more. Our volunteers donate their community service hours in their program's home county of Amador, Calaveras, El Dorado, or Sacramento.

Interested in learning more about joining this volunteer organization and being notified about the next training class?

If you live in Amador, Calaveras, or El Dorado county, visit our [Becoming a MFP](#) website to fill out the interest survey. If you live in Sacramento County, call 916-875-6913 to speak with Joan.

### **Do you live outside of Amador, Calaveras, El Dorado, or Sacramento County?**

You can still contact one of the counties nearest to you, but first priority for accepting trainees is for local residents. Our volunteer hours are primarily completed in our home county.

But all is not lost! 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 offering the UCCE Master Food Preserver program. To sign up for this online class, go to <http://nchfp.uga.edu>.

## Master Food Preservers are on Facebook!

Check out the [El Dorado County Master Food Preservers Facebook](#) page! Just search for "El Dorado County Master Food Preservers facebook" to find our site. Be sure to "Like" it so you can see our posts on a regular basis. Please share the page with your friends even if they don't live in our community. Food preserving information has no geographical boundaries. Enjoy!



## Free Pressure Canner Testing

With all the vegetables ripening, the pressure canner is sure to be needed soon.

Test your pressure canner for accuracy once a year. Call the El Dorado County UCCE Office at (530) 621-5506 to schedule a time to bring in your pressure canner for a FREE test!



## 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/).

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*Know someone who would like to receive our newsletters and notifications on classes and events?*

Sign up at <http://ucanr.org/mfpenews>.

## Master Gardener Classes



Join our fellow educators at Master Gardener classes and events. [Click here](#) for full class descriptions and directions.

### Amador County

Nov 13: [Fruit Tree Pruning Clinic](#)

Dec 1: [Selection & Planting of Bareroot Fruit Trees](#)

### El Dorado County

*(All Nov/Dec classes are at Government Center Hearing Room, Building C, Placerville)*

Nov 3: [Shade Gardening](#)

Nov 10: [Raised Beds](#)

Nov 17: [Rose Selection & Planting](#)

Dec 1: [Selection & Planting of Deciduous Fruit Trees](#)



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