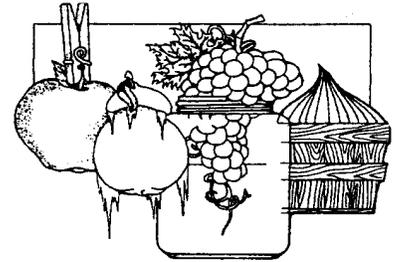


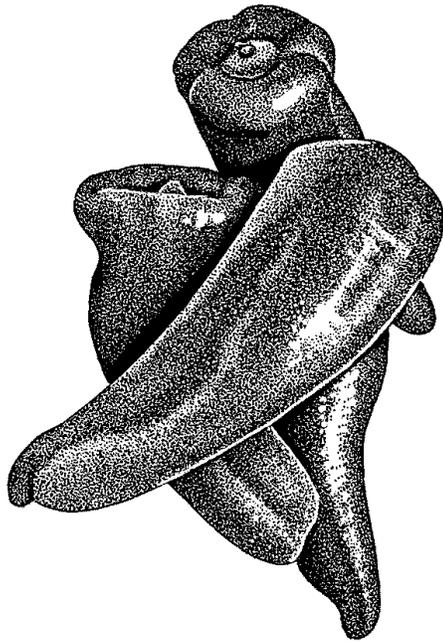
# Quality for Keeps



Information for those who produce and preserve food

## Heat up summer with peppers

*Summer is here and so are hot temperatures. With summer vegetables ripening on the vine, one vegetable, the hot pepper, is ready to heat up summer recipes.*



**For safety's sake.** Capsaicin is the chemical substance that makes some peppers hot. Each variety of pepper has its own distinctive flavor and level of hotness. When working with hot peppers, use proper precautions. Oil from hot peppers, known as capsaicin oil, is an irritant to skin and eyes. Wear rubber gloves when handling hot peppers and wash hands thoroughly before touching the face or eyes. To remove oil that

has come in contact with skin, cover affected skin with olive or vegetable oil and wipe clean with a paper towel. Wash skin with soap and water to a full lather and follow with a complete rinse. Dry with a clean paper towel.

All pepper varieties should be pressure canned, except for pickled peppers. Contrary to folklore, hotter peppers do not have more acidity. The hotness depends on the amount of capsaicin it contains. All peppers are considered low-acid foods (pH between 4.8-6.0) and should be pressure canned unless properly acidified, such as pickling.

Take proper precautions, preserve safely, and enjoy hot peppers all year round.

**Preserving peppers.** Common hot pepper varieties include Hungarian, Banana, Chile and Jalapeno. Excess peppers can easily be preserved using the following options:

**Freezing.** The simplest method of preserving peppers is freezing. Simply wash peppers and remove stems. Package in rigid container or a flexible freezer bag or wrapping designed for use in the freezer, leaving no headspace. For more information on appropriate containers for freezing, see Stamp

Out Freezer Burn with Proper Packaging (<http://extension.missouri.edu/franklin/documents/QFK/14AprilQFK.pdf>) or <http://nchfp.uga.edu/how/freeze/containers/html>. Seal container and freeze.

**Drying.** Peppers can be sun-dried (although difficult to do in Missouri), air-dried or dehydrated using an oven or dehydrator. Dried peppers can be stored in moisture- and vapor-proof packaging in a cool, dry, dark location for several months. Soak dried peppers in water to rehydrate.

*Sun drying*—sun drying requires high temperatures (above 85) and low humidity. This can be difficult to achieve during Missouri summers. High humidity can cause peppers to spoil before they dry. If proper conditions are met, remove seeds, stems and membranes and slice or cut into cubes. Small peppers can be left whole but should be slit with a knife to speed drying.

(Cont'd on page 2)

### Inside this issue:

Safe salsa recipes .....	2
Safety during power outages .....	3
Marinated peppers .....	4

## Hot peppers *(Cont'd from cover page)*

**Air drying**—slit peppers with a knife and use a large needle to run a heavy thread through the stems of the peppers. Hang the strings in a room where air circulates freely. Beware of high humidity, as it can cause peppers to spoil. This method can take as long as 2-4 weeks.

**Dehydrating**—when using a home oven or dehydrator, temperatures should not exceed 140 degrees. Remove seeds, stems and membranes of large peppers. They will dry better if cut in half. Small peppers can be left whole. Drying times often range from 8-12 hours. Peppers are done when texture is leathery to brittle.

**Canning. Quantity**—An average of 9 pounds is needed per pressure canner load of 9 pints. A bushel weighs 25 pounds and yields 20-

30 pints—an average of 1 pound per pint.

**Quality**—Select firm yellow, green or red peppers. Do not use soft or diseased peppers.

**Procedure**—Wash peppers, remove cores and seeds. Small peppers may be left whole and large may be quartered. Make two to four slits in each pepper and either blanch in boiling water or blister by placing peppers in a hot oven (400 degrees) or broiler for 6-8 minutes. Place peppers in a pan, cover with a damp cloth, and allow peppers to cool. Once cool, peel each pepper and flatten whole peppers. Add 1/2 teaspoon of salt to each pint jar, if desired. Fill jars loosely with peppers and add fresh boiling water, leaving 1-inch headspace. Remove any air bubbles, wipe rims with a clean damp cloth, and adjust lids and process.

**Processing**—Process half-pints or pints in a dial-gauge pressure canner for 35 minutes at 11 pounds of pressure if located at an altitude between 0-2000 feet. If located at an altitude between 2001-4000 feet, process at 12 pounds of pressure. If located at an altitude between 4001-6000 feet, process at 13 pounds of pressure. If located at an altitude between 6001-8000 feet, process at 14 pounds of pressure. If using a weighted-gauge canner, process 35 minutes at 10 pounds of pressure if below an altitude of 1000 feet or 15 pounds of pressure if above 1000 feet.

*Source: Adapted from the "Complete Guide to Home Canning," Agriculture Information Bulletin No. 539, USDA, revised 2009. [http://nchfp.uga.edu/how/can\\_04/peppers.html](http://nchfp.uga.edu/how/can_04/peppers.html). Source: Publication 8004. Peppers. Safe Methods to Store, Preserve, and Enjoy. University of California Division of Agriculture and National Resources. [http://nchfp.uga.edu/publications/uc\\_davis/](http://nchfp.uga.edu/publications/uc_davis/)*

## Seek a safe salsa recipe

**S**alsas are a mix of acid and low-acid ingredients. If not adequately acidified to a pH at or below 4.6, a boiling water canner will not provide sufficient heat to prevent botulism. Without detailed knowledge of ingredients, proportions and procedure used, there is no way to tell if the product is safe.

Fortunately, USDA and Cooperative Extension have a variety of tested recipes for canning salsa at home. Ten different salsa recipes can be found in the University of Georgia publication *Sensational Salsas*

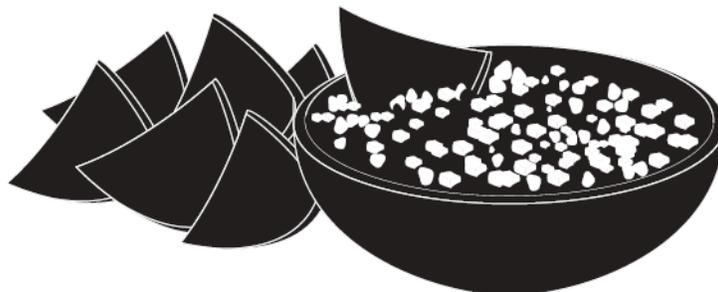
[http://nchfp.uga.edu/publications/uga/sensational\\_salsa.pdf](http://nchfp.uga.edu/publications/uga/sensational_salsa.pdf).

Additionally, there is a Choice Salsa recipe available through the National Center for Home Food Preservation, located at [http://nchfp.uga.edu/how/can\\_salsa/choice\\_salsa.html](http://nchfp.uga.edu/how/can_salsa/choice_salsa.html). This salsa allows you to choose the

proportion and variety of onions and peppers used in the recipe.

If you find that these recipes still don't meet your needs, try freezing your favorite salsa.

*Source: Your Favorite Salsa Recipe...Is it Safe to Can? Preserving Food at Home blog, brought to you by the National Center for Home Food Preservation, hosted by the University of Georgia.*



## Keeping food safe during power outages

**S**trong storms, flooding or heatwaves often cause power outages during summer months.

**Freezer.** If the power might be off for an extended period of time, set the freezer to between -10 and -20 degrees. The colder the freezer, the longer foods will stay frozen.

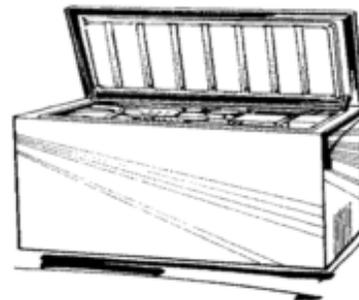
If the power does fail, do not open freezer. With a closed door, food will usually stay frozen in a fully loaded freezer for about 2 days. Cover freezer with blankets to help hold in cold, but be sure to pin the blanket away from the air vent openings to prevent overheating of the motor once the electricity comes back on.

If the power will not be back on for several days, dry ice can be used to keep temperature below freezing and prevent food spoilage. Fifty pounds of dry ice

should keep the temperature of a full 20-cubic-foot freezer below freezing for 3-4 days and in a half-full freezer for 2-3 days.

Foods can be safely re-frozen only if they still contain ice crystals or if they have been at refrigerator temperature (40 degrees) for no longer than 2 days.

- Discard foods if they have warmed above room temperature and have completely thawed.
- Refreeze vegetables only if they contain plenty of ice crystals.
- Although not dangerous, fruit will ferment when they spoil, causing off taste and smell. Refreeze only if taste and smell are acceptable.
- Refreeze meat only if it contains ice crystals. Flavor and texture may be affected.



- Do not refreeze seafood. If containing many ice crystals, cook immediately.

**Refrigerator.** Food stored under refrigeration is only safe to eat as long as the power has been restored within 4 hours. Keep door closed as much as possible and discard any perishable food that has reached over 40 degrees for over 2 hours.

And always remember, “*When in doubt, throw it out!*”

*Source: GH1506, Quality for Keeps: Freezer Problem Solver, University of Missouri Extension.*

*Source: Refrigerated Food and Power Outages: When to Save and When to Throw Out. [http://www.foodsafety.gov/keep/charts/refridg\\_food.html](http://www.foodsafety.gov/keep/charts/refridg_food.html).*

### Why packages say “Do not refreeze”

Frozen food packers want their products to have a good image with shoppers. Because quality can deteriorate if interior product temperatures range up to 40 degrees, many manufacturers do not recommend refreezing such thawed food because they cannot guarantee quality under such conditions.

### Freezer management

A freezer (a chest or upright unit that maintains a temperature of 0 degrees or below) offers convenience and flexibility, but it can rarely be justified only on the merits of saving

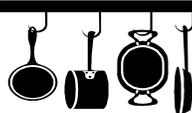
money. To get the greatest use out of your freezer, keep it fully stocked. A rapid rate of turnover—once every six months—is recommended to greatly reduce the operating cost per pound of food.

### Freezing home-prepared foods

- ⇒ All flavoring should be added when a dish is prepared for heating before serving because:
  - Black pepper, cloves, onion and garlic (in casseroles, for example) become stronger during freezer storage
  - Other seasonings tend to weaken in freezing

- ⇒ Stews keep better than fried or broiled meats.
- ⇒ Some foods do not freeze well, or have a very limited storage life, such as:
  - Mayonnaise, which does not keep as well as salad dressing
  - White of hard cooked eggs, which get tough and rubbery
- ⇒ Food to be frozen should not be cooked to a well-done stage.
- ⇒ Cream-style sweet corn retains its flavor better than whole kernel corn and far better than corn on the cob.

## THE RECIPE BOX



### Marinated Peppers

- 4 lbs firm peppers\*
- 1 cup bottled lemon juice
- 2 cups white vinegar (5 percent)
- 1 tbsp oregano leaves
- 1 cup olive oil
- 1/2 cup chopped onions
- 2 tbsp. prepared horseradish (optional)
- 2 cloves garlic, cut in quarters (optional)

\* Bell, Hungarian, Banana or Jalapeno peppers are best suited for marinating.

For hot style - Use 4 lbs jalapeno peppers.

For medium style - Use 2 lbs jalapeno peppers and 2 lbs sweet and mild peppers.

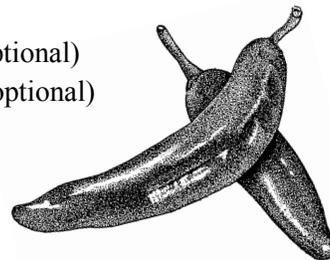
For mild style - Use 1 lb jalapeno peppers and 3 lbs sweet and mild peppers.

Yield: About 9 half-pints

**Procedure:** Select peppers and wash. Peppers may be left whole or quartered. Make two to four slits in each pepper and either blanch in boiling water or blister in order to remove the peel of tough-skinned peppers. To blister, place peppers in a hot oven (400 degrees) or broiler for 6-8 minutes or until skins blister. Allow peppers to cool, place in a pan, and cover with a damp cloth. After several minutes of cooling, peel each pepper and flatten. Mix all remaining ingredients in a saucepan and heat to boiling. Place 1/4 garlic clove (optional) and 1/4 teaspoon of salt in each half pint jar or 1/2 teaspoon per pint jar. Fill jars with peppers, add hot, well-mixed oil-pickling solution over the peppers, leaving 1/2 inch headspace. Wipe the rims of jars with a clean, damp cloth, adjust lids and process..

Process half-pint jars in boiling-water canner for 15 minutes at 0-1,000 feet altitude, for 20 minutes at 1,001-6,000 feet altitude, or 25 minutes if above 6,000 feet.

Source: National Center for Home Food Preservation, [http://nchfp.uga.edu/how/can\\_06/marinated\\_peppers.html](http://nchfp.uga.edu/how/can_06/marinated_peppers.html). Adapted from the "Complete Guide to Home Canning," Agriculture Information Bulletin No. 539, USDA, revised 2009.



*Quality for Keeps*, published monthly, April through October, is made available to residents of East Central, Southeast and Urban regions in Missouri by their Extension Council. Contact your county Extension office to subscribe, or visit our website: <http://missouri.extension.edu/franklin>. Questions may be directed to:

*Mary Schroepfer*

**Mary Schroepfer**

Nutrition & Health Specialist, Franklin County  
116 W. Main  
Union, MO 63084  
Phone: 636-583-5141  
Fax: 636-583-5145  
Email: SchroepferM@missouri.edu

*Bethany Bachmann*

**Bethany Bachmann**

Nutrition and Health Specialist, Perry County  
321 N. Main, Suite 1  
Perryville, MO 63775  
Phone: 573-547-4505  
Fax: 573-547-4535  
Email: schindlerb@missouri.edu

*Linda S. Rellergert*

**Linda Rellergert**

Nutrition and Health Education, St. Charles County  
260 Brown Rd.  
St. Peters, MO 63376  
Phone: (636) 970-3000  
Fax: (636) 279-3310  
Email: RellergertL@missouri.edu

**EAST CENTRAL MISSOURI OFFICES:**

Callaway	573-642-0755
Cole	573-634-2824
Crawford	573-775-2135
Dent	573-729-3196
Franklin	636-583-5141
Gasconade	573-437-2165
Lincoln	636-528-4613
Maries	573-422-3359
Miller	573-369-2394
Montgomery	573-564-3733
Osage	573-897-3648
Phelps	573-458-6260
Pulaski	573-774-6177
St. Francois	573-756-4539
Ste. Genevieve	573-883-3548
Warren	636-456-3444
Washington	573-438-2671

**SOUTHEAST MISSOURI OFFICES:**

Bollinger	573-238-2420
Butler	573-686-8064
Cape Girardeau	573-243-3581
Carter	573-323-4418
Dunklin	573-888-4722
Iron	573-546-7515
Madison	573-783-3303
Mississippi	573-683-6129
New Madrid	573-748-5531
Oregon	417-778-7490
Pemiscot	573-333-0258
Perry	573-547-4504
Reynolds	573-648-1035
Ripley	573-996-2921
Scott	573-545-3516
Shannon	573-226-5544
Stoddard	573-568-3344
Wayne	573-224-3035

**URBAN AREA OFFICES:**

St. Charles	636-970-3000
St. Louis	314-615-2911
St. Louis City	314-367-2585
Jefferson	636-797-5391