



Let's Preserve Newsletter

Lancaster County

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Dear Home Food Preserver,

By now the effort put into food preservation begins to slow down. Perhaps your shelves are lined with the fruits and vegetables of summer and freezers are likewise full. It certainly gives one a sense of satisfaction to realize how much has been “put away.”

Butternut and blue hubbard squash were plentiful in Martha’s brother’s garden—so she wants to freeze some pureed squash for pies, breads, soups, and sauces. Nancy has an abundance of carrots and peppers. She likes to stuff peppers and freeze them. We look forward to the apple harvest festivals in October because we prefer the later apples for flavor and texture. This month we will both be drying apples, freezing apple pies, and canning apple pie filling—all items that make great gift ideas. Whatever your end of the year canning tasks, we hope that your efforts are rewarded with great results that are appreciated by your family and friends.

This is the final issue of *Let's Preserve* for this season.

Sincerely,

Nancy Wiker
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 Penn State Cooperative Extension

Martha Zepp
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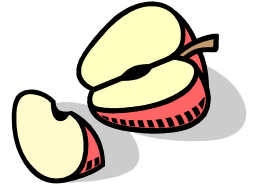
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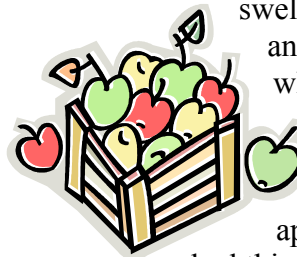
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Featuring Apples

Applesauce

Have you ever made applesauce and had it swell up in the jar, boil over the top and down the sides of the jar when removed from the canner, and then cling to the top of the lids when the jars are cooled? After canning both applesauce and sliced apples, I had this problem and began using the problem solving model.



Were the canning procedures correct?

- ✓ Apples were boiling hot when put in the jar.
- ✓ ½ inch headspace was allowed.
- ✓ Lids were prepared correctly.
- ✓ Standard mason jars were used.
- ✓ Water in the boiling water bath was about 180°F when jars were added to the canner.
- ✓ Water boiled evenly during processing—temperature wasn't turned up and down several times.
- ✓ Air bubbles were removed before applying lids.
- ✓ Jar rims were wiped clean before lid was applied.

Did work procedures affect results?

- ✓ Worked quickly so that hot product did not cool while jarring.
- ✓ Filled one jar, removed air bubbles, and capped before going to the next jar so that contents did not cool before adding lids.
- ✓ Kept food boiling while filling jars.

Was there something about the product itself that influenced the consistency?

- ✓ Some varieties of apples are more suitable for cooking than others.
- ✓ A riper apple is more juicy than a slightly under-ripe apple.
- ✓ Was there enough liquid in the product? I had better results when I added more water to the apples that I was preparing for sauce.

Cooking with Apples

Substitute applesauce for oil in cakes, muffins, and brownies to cut fat and calories.

Home prepared applesauce should be about the same consistency as commercial applesauce when it is used as a fat substitute.



Top slightly sweetened apple slices with this oatmeal topping and bake until golden brown for a *quick apple crisp*.

1 cup quick or old fashioned oatmeal (uncooked)

1/3 cup sifted all-purpose flour

½ cup firmly packed brown sugar

½ teaspoon salt

1 teaspoon cinnamon

1/3 cup melted butter, margarine, or vegetable oil

Combine dry ingredients, add liquid shortening, and mix until crumbly. Sprinkle over apples and bake in preheated 375°F oven for 25 minutes or until topping is golden brown and apples are hot. To use this topping on prepared apple pie filling, reduce the sugar to 1/3 cup.

Apple Trivia

- A bushel of apples yields 20 to 24 quarts of applesauce.
- A peck of apples weighs 10.5 pounds.
- Apple varieties range in size from a little larger than a cherry to as large as a grapefruit.
- 2500 varieties of apples are grown in the United States. 100 varieties of apples are grown here commercially.
- Pennsylvania is one of the major apple producing states.
- The “Smokehouse” variety was found behind a smokehouse here in Lancaster County.
- Twenty-five percent of an apple’s volume is air which explains why they float. (Also why they must be blanched for hot packing and for canning pie filling)
- Most of the apple’s fragrance cells are concentrated in the skin. As they ripen, the skin cells develop more aroma and flavor.
- When you pick an apple from the tree, you should be able to roll or twist the apple so that its stem separates from the tree leaving the stem attached to the apple.
- Apples ripen 6 to 10 times faster at room temperature than in the refrigerator.



- Some apples turn brown quickly when cut surfaces are exposed to air. This is due to oxidation which can be prevented by dipping the cut apple in an ascorbic acid solution or by using a commercial mixture such as Fruit Fresh®.
- A medium apple contains about 80 calories, both soluble and insoluble fiber, small amounts of calcium, phosphorus, iron, potassium, folate, vitamins A and C, flavonoids and polyphenols. The last two are phytochemicals that provide anti-oxidant and health benefits.
- Apples do not contain fat, sodium, or cholesterol.

Fight Bacteria

We have received a number of phone calls in the last month where canned food has spoiled. As we discuss possible causes, some practices come up that are related to good food handling practices. Cleanliness and temperature control are essential for food safety.



Cleanliness

Keep hands, counters, equipment and food clean. Wash your hands often before and during the process of canning—each time you touch a potential bacteria carrier which includes raw foods, pets, and used utensils. If you have any cuts on your hands, wear plastic gloves.

Wash cutting boards, dishes, utensils, jars, and counter tops with hot soapy water before and after preparing each food item. Plastic and other non-porous cutting boards are recommended because they can be washed in the dishwasher or hot soapy water after use. Wipe counters with a bleach solution—1 tablespoon liquid bleach to 1 gallon water.

Don't cross-contaminate. That's a scientific word for how bacteria can be spread from one food product to another. Use a clean cutting board and utensils to slice or cut foods. Avoid using the same cutting board or knife to slice

vegetables as you used to cut meat. Clean knives after each use. Use clean spoons to stir product. Don't use the spoon that you stirred the raw tomatoes with to stir the almost finished tomato juice. Use paper towels to clean up kitchen surfaces and to wipe the edges of jars before applying lids—those fabric dishcloths and sponges hold bacteria that can be transferred from one place to another. Use a clean bowl or pot to hold peeled food. Never place clean food or cooked food on or in a container that previously held unwashed or raw food.

Temperature Control

While home canners may be careful to control the temperature during the boiling water bath or pressure canner processing, sometimes they allow food to set at dangerous temperatures during the preparation process.

Bacteria grow best between 40°F and 140°F. This is called the temperature danger zone. Bacteria can multiply quickly enough at room temperature in two hours to cause spoilage and/or illness. Keep perishable produce refrigerated until you are ready to can. Once you start the canning process, continue until finished. Work with one canner load at a time so that peeled food is not in the danger zone for more than two hours. A large volume of food cools slowly, meaning that it is in the danger zone long enough to spoil. Allowing tomato juice or vegetable soup to set in a five gallon container at room temperature overnight is inviting disaster. Even a one gallon container that is refrigerated can spoil quickly. It is not recommended that food be partially prepared to be canned or frozen later.

Follow research tested recipes for safe processing times and temperatures. Food that is processed long enough and at high enough temperatures will kill bacteria, molds and yeasts. Inadequate processing will allow some bacteria to survive that can produce spores. Botulism spores produce deadly toxins in an oxygen free environment like the one found inside a sealed jar.

Cooling Foods for Freezing

When making soups and stews for freezing, it is necessary to cool a large volume quickly. Chill the food in an ice water bath stirring until the temperature drops below 70°F and then divide it into smaller containers not over three inches deep. Refrigerate or freeze these smaller containers below 40°F until ready to use. The less thick and the lower the volume, the quicker the food will chill. Never put a large volume container into the refrigerator to chill and never cluster large jars or other containers in a refrigerator, not even in a walk-in refrigerator. Allow air space between the containers for the food to cool.

Handling Winter Vegetables

Pumpkin and Winter Squash

Pumpkin, winter squash, and products made from them are not suitable for canning unless special precautions are taken. Never can mashed or pureed pumpkin or squash—the density of the product is too great for heat to penetrate adequately to destroy harmful bacteria. The only safe way to can pumpkin or squash is to hot pack 1-inch cubes and process pints for 55 minutes and quarts for 90 minutes at 11 pounds pressure in a dial gauge pressure canner (10 pounds in a weighted gauge pressure canner).

When pumpkin is used in recipes such as salsas, chutneys, relishes, butters, jams, jellies, or conserves; these products must be treated as fresh foods and refrigerated (or frozen if appropriate). They cannot be safely canned by either the boiling water or pressure canning methods. There are no USDA research tested recipes for canning pumpkin preserves.

Freezing Pumpkin and Squash

Freezing is the easiest method of preserving pumpkin and winter squash. Cook it in boiling water, steam, or bake it in an oven until tender. Baking works especially well for larger pumpkins or squash—cut in half and bake face side down. Then remove the skin and mash.



Cool by placing the pan in cold water and stirring occasionally. If you have a large amount, use two pans. Allow ½ inch headspace in rigid freezer containers. A space saver is to fill zip-type freezer bags, remove excess air, and freeze on a flat tray. These flat bags not only save freezer space, but they thaw more quickly when you are ready to use them.

More About Squash

Winter squash are mature when the stems connecting the fruit to the vine begin to shrivel.

Proper curing and storage prolongs the storage life of winter squash. After harvesting, cure the winter squash (except for the acorn types*) at a temperature of 80 to 85°F and a relative humidity of 80 to 85%. Curing helps to harden winter squash skins and heal any cuts and scratches. *The high temperature and relative humidity during the curing process actually reduce the quality and storage life of acorn squash.

Store fully cured winter squash at 50 to 55°F and 50 to 70% relative humidity for the greatest storage life—3 to 5 months.

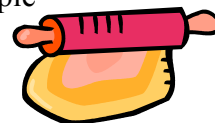
Winter squash is thought to be native to America.

The six basic types of winter squash are acorn, buttercup, butternut, spaghetti, delicata, and hubbard. Each variety has its own delicate flavor.

Jack-o'-lantern pumpkins are not the best for cooking—they tend to be stringy and too moist.

The deep yellow and deep orange colors of pumpkin and squash contain carotene, which your body turns into vitamin A. Winter squash provides slightly more vitamin A per serving than pumpkin. The Thanksgiving pumpkin pie has more vitamin A than an apple pie.

Mashed winter squash can be used to make that holiday “pumpkin” pie.



Pumpkin Seeds

Dried and roasted pumpkin seeds make a crunchy snack. Sprinkling a few over a salad adds texture. Drying seeds and roasting seeds are two different processes. Carefully wash the

seeds to remove the clinging fibrous pumpkin tissue. To dry the seeds, place in a dehydrator at 115° to 120°F for 1 to 2 hours or in an oven on warm for 3 to 4 hours. Stir them frequently to avoid scorching. They are dry when they are crisp. The dried pumpkin seeds can be roasted by tossing them with oil and or salt and roasting in a preheated oven at 250°F for 10 to 15 minutes.

Dark Sweet Potatoes

If you have a problem with sweet potatoes turning dark, it may have something to do with temperature. If the potatoes get too cold, they will turn dark. According to Tim Elkner, horticulture extension educator, sweet potatoes that are harvested after frost will turn dark. Sweet potatoes should be stored in a cool place, but not refrigerated before cooking.

Freezing Sweet Potatoes

Peel cooked potatoes and cut in halves, slice, or mash. To prevent darkening, dip halves or slices for 5 seconds in a solution of ½ cup lemon juice to 1 quart water. Mix 2 tablespoons orange or lemon juice with each quart of mashed sweet potatoes. Allow ½ inch headspace in freezer containers. Sweet potatoes can be baked until slightly soft, cooled, peeled, and wrapped individually in aluminum foil before being placed in plastic bags and frozen. Complete the baking in a 350°F oven immediately before serving, leaving the potatoes wrapped in foil.

Mangoes

Mangoes are a tropical fruit that is becoming more plentiful in supermarkets. Ripe mangoes have a sweetly fragrant aroma and yield slightly to the touch. Black spots on the skin of the mango indicate that the fruit is very ripe. Mangoes that are picked too early will have shriveled skin and the flesh will be very acid and unpleasant tasting.

If you have difficulty getting the flesh off the mango seed, try this method. Cut the washed mango in half lengthwise by slicing off each fleshy cheek of the mango vertically along the flat side of the center seed. Hold one mango

half, peel side down, and score the fruit down to the peel (but not through the peel) in a tick-tac-toe pattern. Hold the scored portion with both hands and bend the peel backward so that the diamond cut cubes are exposed. Cut the cubes off the peel; then remove any remaining fruit clinging to the seed. If desired, slice instead of cubing the fruit. Besides eaten fresh, mangoes can be frozen in syrup, unsweetened in a tray pack, or pureed.

Freezing Unsweetened Mango Slices

Select firm, ripe mangoes that yield to gentle pressure. Wash, peel, and slice. Arrange slices on a flat pan and freeze. When frozen, remove and store in sealed containers.

Mango and Melon Salad with Strawberry Sauce

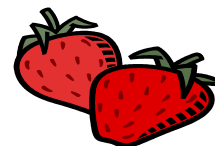
Here's a recipe that uses your frozen mango and frozen strawberries. In fact, the strawberry sauce would make a nice dressing for many combinations of fruits.

Salad ingredients:

1 fresh mango, peeled and sliced into bite sized pieces, or 1 partially thawed frozen sliced mango
½ cantaloupe, peeled and sliced into bite sized pieces
½ honeydew, peeled and sliced into bite sized pieces

Strawberry Sauce:

1 ½ cups fresh or partially thawed frozen strawberries
1 tablespoon lemon juice
¼ cup confectioners' sugar



Place mango and melon pieces in a large serving bowl. In a blender, blend strawberries with lemon juice and sugar until smooth. Drizzle sauce over fruit salad and serve. Serves 4 people with two servings of fruit each. Source: 5 A Day recipes, National Cancer Institute

Did you know?

Mangoes should be peeled before eating. Their skin may be irritating to the mouth.

Green mangoes may irritate the skin for some people in the same way as poison ivy. They belong to the same plant family. Avoid this reaction by wearing plastic gloves while working with raw green mangoes.

Mango juice leaves indelible stains on clothing.

Freezing Convenience Foods

Here are some benefits of freezing home prepared convenience foods.

- You prepare food when you have time.
- You use your oven more efficiently by baking more than one dish at a time.
- You avoid waste by freezing leftovers to use as “planned-overs.”
- You can prepare special diet foods and baby foods in quantity and freeze them as single portions.
- You save time by doubling or tripling recipes and freezing the extra food.
- If you normally cook for just one or two, you can freeze individual portions of an ordinary recipe for later use.
- You often save money by making convenience foods yourself.

Thawing Convenience Foods

Nonperishable foods such as breads, most cakes, and cookies can be thawed at room temperature. Just leave them in their packaging.

Thaw perishable foods such as main dishes, cooked meat, side dishes, and eggs in the refrigerator to prevent bacterial growth.

Microwave thawing works well for most frozen convenience foods. Use a low-power level—usually 30 to 40%. Refer to your manual for defrost directions. Cook food immediately following microwave defrosting. Cooking is done at a higher power level—usually 70 to 80% to heat the food without totally cooking it again. Frozen vegetables can be cooked successfully without thawing. Breads and other porous foods thaw very quickly on the defrost setting. Foods with uneven moisture content require careful

attention so that outer surfaces do not overcook while the center of the food is thawing.

Source: C. Raab and N. Oehler, Freezing Convenience Foods, A Pacific Northwest Extension Publication, PNW 296

Lancaster County Penn State Cooperative Extension will continue to have a resource person available to answer food preservation questions on Wednesday's from 10:00 a.m. to 2:00 p.m. Call 394-6851. This is also a good time to bring your dial gauge pressure canner lid in for testing.

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

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