



FOOD PRESERVATION SERIES

Strawberries

Michigan-grown strawberries are available between June and July

RECOMMENDED VARIETIES

Guardian, Surecrop, Midway, Red Chief, Sparkle, Gilbert and Ozark Beauty are excellent for freezing, while Red Chief and Guardian are recommended varieties for preserves. Raritan, Delite, Holiday, Earliglow and Scarlet varieties are additional varieties that grow well in Michigan.

TRIM LOSS

Good quality – approximately 6 percent from stemming and capping.
 Fair quality – 14 percent from sorting, stemming and capping.

YIELD

1 quart (1 ½ lbs)	4 cups
8-quart crate (12 lbs.)	12 pints frozen
24-quart crate (36 lbs)	18-24 quarts canned
	36 pints frozen
2/3 quart fresh	1 pint frozen

FOOD SAFETY TIPS

- Purchase fruits that are not bruised or damaged.
- Bag fresh fruits separate from meat, poultry and seafood products.
- Wash hands before and after handling fresh produce.
- Wash fruits thoroughly under running water. Do not use soap or detergent.

Use a separate cutting board for fruits, and keep away from raw meat, poultry and seafood.

Follow standardized procedures recommended by the United States Department of Agriculture for home canning.

HOW TO STORE

When you bring strawberries home check the fruit. Use soft, overripe berries right away. Throw away any smashed or moldy berries.

Keep strawberries in a box with holes and cover with plastic wrap, or put in a plastic bag with holes.

Store in the refrigerator at 40 F, in the crisper drawer to help retain moisture.

Use berries within 1-2 days, washing and hulling them as you use them.

Store processed canned strawberries in a cool, dry area.

QUICK AND EASY SERVING TIPS

- Serve as a snack.
- Serve with breakfast cereals, oatmeal or pancakes.
- Include in vegetable and fruit salads.
- Topping for ice cream, yogurt and pastries

RECIPE

STRAWBERRY YOGURT BREAKFAST SPLIT

1 banana
4 oz. (1 cup) fresh strawberries
4 oz. (1/2 cup) vanilla yogurt
1 Tbsp. chopped, toasted almonds

Peel and split 1 banana. Place banana halves in a serving bowl. Top with strawberries, yogurt, and almonds. Makes 1 serving.

This is an official 5 A Day recipe. Nutrient analysis per serving: Calories, 312; fat, 7 g; cholesterol, 5 mg; fiber, 5 g; sodium 75 mg; percent calories from fat, 19%.

HOW TO PRESERVE

FREEZING STRAWBERRIES

Choose firm, ripe, red berries, preferably with a slightly tart flavor. Large berries are better sliced or crushed. Sort the berries, wash them in cold water but do not soak. Cap and drain well. Sugar and syrup packs make better quality frozen strawberries than berries packed without sweetening.

Syrup pack : Pack berries into containers and cover with cold 50 percent syrup (1 part water to 1 part sugar), leaving 1/2 inch headspace. Seal label and freeze.

Sugar pack : Add 1 part sugar to 6 parts strawberries and mix thoroughly. Put into containers, leaving 1/2 inch headspace. Seal, label and freeze.

Unsweetened pack: Pack into containers, leaving 1/2 inch headspace. For better color, cover with water containing 1 teaspoon ascorbic acid to each quart of water. Seal, label and freeze.

Pectin pack : This alternative uses pectin and less sugar than syrup pack and retains the fresh berry flavor, color and texture. Follow manufacturer's directions on the box. Pack into freezer bags or containers, leaving 1/2 inch headspace. Seal, label and freeze.

Freeze no more than 1 quart of food per cubic foot of freezer capacity per day. One cubic foot will hold 30 quarts.

Strawberry Freezer Jam (about 5-6 half-pints)

2 cups crushed strawberries (about 1 quart berries)
4 cups sugar
1 package (1 3/4 ounces) powdered pectin (purchase fresh pectin each year. Old Pectin may result to poor gels)
1 cup water

Sort and wash fully ripe berries. Drain. Remove caps and stems. Crush berries and place in a mixing bowl. Add sugar, mix well, and let stand for 10 minutes, stirring occasionally. Prepare pectin following directions on the box. Add to the strawberry and sugar mixture. Stir for 2 seconds. Pour jam into freezer containers, leaving 1/2 inch headspace. Cover and let stand at room temperature for 24 hours or until jam has set. Label and freeze.

CANNING STRAWBERRIES

Strawberry Syrup (9 half- pints)

This procedure may also be used with fresh juices from fresh or frozen strawberries, and with fresh or frozen blueberries, cherries, grapes or raspberries.

Select 6 1/2 cups of fresh or frozen fruit. Wash, cap and stem fresh fruit and crush in a saucepan. Heat to boiling and simmer until soft (5 to 10 minutes). Strain hot through a colander and drain until cool enough to handle. Strain the collected juice through a double layer of cheesecloth or a jelly bag. Discard the dry pulp. The yield of the pressed juice should be about 4 1/2 to 5 cups. Combine the juice with 6 1/2 cups of sugar in a large saucepan. Bring to a boil, and simmer 1 minute. To make syrup with whole fruit pieces, save 1 or 2 cups of the fresh or frozen fruit, combine these with the sugar, and simmer as in making regular syrup. Remove from heat, skim off foam, and fill clean, hot, half-pint or pint jars, leaving 1/2 inch headspace. Adjust lids and process.

Table 1. Recommended Process Times for Strawberry Syrup in a Boiling-Water Canner

		Process Time at Altitudes of		
Style of Pack	Jar Size	0 - 1,000 ft	1,001 - 6,000 ft	Above 6,000 ft
Hot	Half-Pints/Pints	10 min	15	20

STRAWBERRY JAM and JELLY

Even though jellies and jams are high acid and sugar products, molds can grow on the surface of these products. Mycotoxins, known to cause cancer in animals (their effects on humans are still being researched) have been found in some jars of jelly having surface mold growth.

Paraffin or wax seals are no longer recommended for jellies, jams and other high sugar products to avoid possible mold contamination. Use of sterile jars is preferred, especially when fruits are low in pectin, since the added 5-minute process time may cause weak gels. If unsterile jars are used, the filled jars should be processed for 10 minutes.

Jelly mixtures should be boiled rapidly since long, slow boiling destroys the pectin in the fruit juice. Some old jam or jelly recipes called for the use of Epsom Salt to help the product gel, but this is not a recommended practice.

Strawberry Jelly with Added Pectin

(5 2/3 cups)

2 ½ quarts strawberries
(or 3 ½ cups of strawberry juice)
5 cups sugar
1 box (1 ¾ ounces) powdered pectin
(purchase pectin fresh every year)

Thoroughly crush, one layer at a time, 2 ½ quarts of strawberries. Place crushed fruit in a jelly bag or double layer of cheesecloth and let drip. When dripping has almost ceased, press gently. Measure 3 ½ cups of juice into a large saucepan. Measure sugar and set aside. Stir pectin into juice and bring to a full boil, then add sugar all at once. Stir and bring mixture to a full rolling boil, and boil hard for 1 minute, stirring constantly. Remove from heat

and skim off foam. Ladle into hot, sterilized jars, leaving ¼ inch headspace. Adjust lids and process.

Strawberry-Rhubarb Jelly

(7 half-pints)

1 ½ pounds red stalks of rhubarb
1 ½ quarts ripe strawberries
½ teaspoon butter or margarine to reduce foaming
(optional)

6 cups sugar
2 pouches (6.35 ounces) liquid pectin
(Purchase fresh pectin every year).

Wash and cut rhubarb into 1-inch pieces and blend in a blender or food processor. Wash, stem and crush strawberries one layer at a time in a saucepan. Place both fruits in a jelly bag or double layer of cheesecloth and gently squeeze out juice. Measure 3 ½ cups of juice into a huge saucepan. Add butter and sugar, thoroughly mixing into juice. Bring to a boil over high heat, stirring constantly. Immediately stir in pectin. Bring to a full rolling boil and boil hard 1 minute, stirring constantly. Remove from heat, quickly skim off foam, and fill hot, sterilized jars, leaving ¼ inch headspace. Adjust lids and process.

Table 2. Recommended Process Times (minutes) in a Boiling-Water Canner

		Process Times (mins) At Altitudes (ft) of			
Product	Style of Pack	Jar Size	0 - 1,000 ft	1,001 - 6,000	6,000-8000
Strawberry Jelly with added pectin	Hot	Half-pints	5 min	10	15
Strawberry – Rhubarb Jelly	Hot	Half-pints	5 min	10	15

FURTHER INFORMATION

Food Domain Website
www.Fooddomain.msu.edu

National Center for Home Preservation
<http://www.uga.edu/nchfp/index.html>

“So Easy to Preserve” 5th ed. 2006. Cooperative Extension Service, The University of Georgia, Athens.
<http://www.uga.edu/setp/>

Safe Handling of Raw Produce and Fresh-Squeezed Fruit and Vegetable Juices
<http://www.cfsan.fda.gov/~dms/prodsafe.html>

Handbook of Fruits and Fruit Processing. 2006. Hui, Y., Barta, J., Cano, M., Gusek, T., Sidhu, J. and Sinha, N. (ed). Blackwell Publishing.

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