

Freezing Fruits



You can freeze most fruits, but the quality of the frozen product depends on the kind of fruit, stage of maturity, and type of pack.

- ▶ Select firm, evenly ripe fruit of the right variety for freezing. Freeze fruit that has a good flavor and color and is at peak ripeness for eating. Freezing won't improve the quality of the fruit. Immature fruit becomes pale and tasteless in the freezer; overripe fruit turns dark.
- ▶ Most fruits are best when frozen soon after they are harvested. Peaches and pears may be held a short time to ripen.
- ▶ Wash fruit in cold water before hulling or paring. Wash a small amount at one time to prevent bruising. Don't let fruit soak in water. Prepare as for serving. Use a stainless steel knife for paring or cutting. Work quickly. Slice fruit directly into the carton containing syrup, or immediately add sugar to the fruit.
- ▶ Fruits packed with dry sugar or sugar syrup usually retain their color, flavor, and texture better than those packed without sugar. The amount of sugar or syrup used depends on the sweetness desired. Juicy fruits will make their own syrup when combined with dry sugar. You may want to use sugar syrup for less juicy fruits.

- ▶ Some fruits darken during freezing if you don't treat them to prevent browning. Speed is important in preparing fruit for freezing. Ascorbic acid (vitamin C) is effective in preserving the color and flavor of fruit and adds nutritive value. It also adds to the expense of freezing fruits. A crystalline or powdered form of ascorbic acid is easier and better to use than tablets. Dissolve ascorbic acid in a little cold water and add it to the fruit or syrup. Make solutions as needed. If you use one of the ascorbic acid mixtures on the market, follow the manufacturer's directions. Steaming a few minutes before packing is enough to control the darkening of some fruits, such as apples. You can use citric acid or lemon juice on some fruits, but it is less effective than ascorbic acid and changes the flavor of the fruit.
- ▶ Use a package that protects the quality of the fruit while in storage. Select the size container according to your planned use of the fruit.
- ▶ Leave head space in the container as directed for each fruit.
- ▶ Seal the container and label it with the name of the fruit, the date, the purpose for which the fruit is intended (such as pie, jam, or dessert), and the amount of sugar used in the pack.
- ▶ Freeze immediately. Place packages against freezing plates or coils. Leave space between packages so air can circulate freely.

Ways to Pack Fruit

How you plan to use the fruit will help determine the way you pack it. A syrup pack is best for dessert use; dry sugar or unsweetened packs are best for most cooking purposes.

Syrup Pack

A 40 percent syrup is recommended for most fruits. Mild-flavored fruits are best when packed in a lighter syrup. Heavier syrup is best for sour fruits. You need about half a cup or two-thirds of a cup of syrup for each pint package of fruit.

Dissolve the sugar in hot or cold water. If you use hot water, cool the syrup to 70 degrees before using it. You may make syrup ahead of time and keep it in the refrigerator.

Cover the fruit with syrup. You can place a piece of crumpled parchment paper or other moisture-vapor-resistant paper on top of the fruit before closing and sealing the container to help hold fruit below the syrup level. The top pieces of fruit will change flavor or color if not covered with syrup.

Sugar Pack

For most fruits, adding one part sugar by weight to four parts fruit by weight makes the fruit sweet enough and preserves its quality. The amount of sugar varies with the sweetness of the fruit and the family's taste. (See directions for each fruit.) One part sugar by weight to three parts fruit by weight would be the highest desirable concentration of sugar.

Mix sugar and fruit gently with a large spoon until the juice is drawn out and the sugar is dissolved. Pack the fruit and juice in a container and place a piece of crumpled moisture-vapor-resistant paper on top to hold the fruit in the juice. Close and seal the container.

Unsweetened Pack

Pack prepared fruit into a container without liquid or sweetening, or cover it with water containing ascorbic acid. Some fruits, such as peaches and strawberries, however, may be mushier when packed without sugar. It is best to cover light-colored fruit with water containing ascorbic acid. The fruit may be crushed or sliced in its own juice without sweetening added.

Press the fruit into the juice or water with a small piece of crumpled parchment paper, as described in the syrup and sugar pack methods. Close and seal the container.

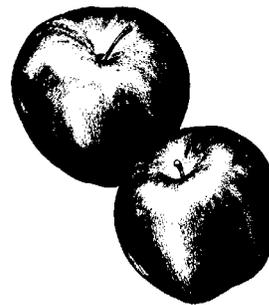
Table 1. Syrups for freezing fruits.

| Type of Syrup | Percent Syrup* | Sugar** (cups) | Water (cups) | Yield of Syrup (cups) |
|---------------|----------------|----------------|--------------|-----------------------|
| Very Light | 10 | ½ | 4 | 4½ |
| Light | 20 | 1 | 4 | 4¾ |
| Medium | 30 | 1¾ | 4 | 5 |
| Heavy | 40 | 2¾ | 4 | 5⅓ |
| Very heavy | 50 | 4 | 4 | 6 |

* Approximate.

** In general, up to one-fourth of the sugar may be replaced by corn syrup or mild-flavored honey. A larger proportion of corn syrup may be used if you use a bland, light-colored type.

Information provided by Cooperative Extension, The University of Georgia, "So Easy To Preserve," 5th edition, 2006.



Apples

A syrup pack is best for apples if you plan to use them for fruit cocktails or uncooked desserts. Apples packed in sugar or frozen unsweetened are good for pies. For better quality, treat apple slices to prevent darkening.

Select crisp, firm, non-mealy, full-flavored apples. Wash, peel, and core. Slice medium apples into twelfths, large ones into sixteenths.

To firm soft apples that are to be used in cooking or baking after freezing, hold the sliced apples for 5 to 20 minutes in a solution made from 1 teaspoon calcium chloride (U.S.P. grade) or 2 tablespoons calcium lactate (U.S.P. grade) to each quart of water. The softer the apples, the longer the time they should be held in the solution. Apples differ with variety, stage of ripeness, and the region in which they are grown. Experiment with a few packages. After freezing, boil the apple slices a few minutes to test their firmness.

Syrup pack

Use 40-percent syrup. For better quality, add ½ teaspoon crystalline ascorbic acid to each quart of syrup. Slice apples directly into cold syrup in a container, starting with ½ cup of syrup to a pint container. Press the fruit down in the containers and add enough syrup to cover them. Leave head space. Seal and freeze.

Sugar pack

To keep apples from darkening during preparation, slice them into a solution of 2 tablespoons salt to 1 gallon of water. Hold the apples in this solution no more than 15 to 20 minutes. Drain. To prevent darkening, place slices in a single layer in a steamer; steam 1½ to 2 minutes, depending on the thickness of the slices. Cool in cold water; drain. Over each quart (1¼ pounds) of apple slices, sprinkle evenly ½ cup of sugar and stir. Pack into containers and press the fruit down, leaving head space. Seal and freeze.

Unsweetened pack

Follow directions for a sugar pack, omitting sugar.

Applesauce

Select full-flavored apples. Wash, peel (if desired), core, and slice. To each quart of apple slices, add $\frac{1}{3}$ cup water; cook until tender. Cool and strain, if necessary. Sweeten to taste with $\frac{1}{4}$ to $\frac{3}{4}$ cup sugar for each quart (2 pounds) of sauce. Pack, leaving head space. Seal and freeze.

Blackberries, Boysenberries, and Dewberries (whole)

Use a syrup pack for berries to be served uncooked. A sugar pack or an unsweetened pack is satisfactory for berries to be used for cooked products such as pies or jams.

Select firm, plump, fully ripened berries with glossy skins. Green berries may cause off-flavor. Sort and remove any leaves and stems. Wash and drain.

Syrup pack

Pack berries into containers and cover with cold 40 or 50 percent syrup, depending on the sweetness of the fruit. Leave head space. Seal and freeze.

Sugar pack

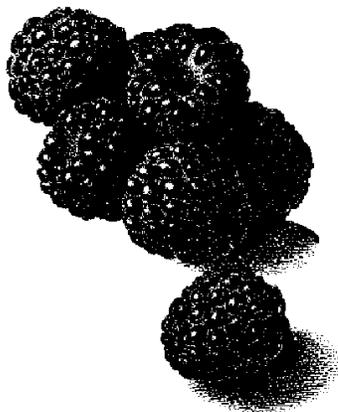
To 1 quart ($1\frac{1}{3}$ pounds) of berries, add $\frac{3}{4}$ cup sugar. Turn berries over and over until most of the sugar is dissolved. Fill containers, leaving head space. Seal and freeze.

Unsweetened pack

Pack berries into containers, leaving head space. Seal and freeze.

Crushed or pureed

Prepare for packing in the same way as for whole berries. Then crush or press through a sieve for a puree. To each quart (2 pounds) of crushed berries or puree, add 1 cup sugar. Stir until the sugar is dissolved. Pack into containers, leaving head space. Seal and freeze.



Blueberries and Huckleberries (whole)

The syrup pack is preferred for berries to be served uncooked. Berries frozen unsweetened are satisfactory for cooking.

Select full-flavored, ripe berries all about the same size, preferably with tender skins. Sort, wash, and drain. If desired, steam for 1 minute and cool immediately. Preheating in steam tenderizes the skin and makes a better-flavored product.

Syrup pack

Pack berries into containers and cover with cold 40 percent syrup. Leave head space. Seal and freeze.

Unsweetened pack

Pack berries into containers, leaving head space. Seal and freeze.

Crushed or pureed

Select fully ripened berries. Sort, wash, and drain. Crush or press berries through a fine sieve for a puree. To 1 quart (2 pounds) of crushed berries or puree, add 1 to $1\frac{1}{8}$ cups sugar, depending on the tartness of the fruit. Stir until the sugar is dissolved. Pack into containers, leaving head space. Seal and freeze.

Coconut, fresh

Shred the coconut meat or put it through a food chopper. Pack into containers and cover with the coconut milk. Leave head space. Seal and freeze.

Figs (whole or sliced)

Select tree-ripened, soft-ripe fruit. Make sure figs have not become sour in the center. Sort, wash, and cut off the stems. Peel, if desired. Slice or leave whole.

Syrup pack

Use 35 percent syrup. For a better product, add $\frac{3}{4}$ teaspoon crystalline ascorbic acid or $\frac{1}{2}$ cup lemon juice to each quart of syrup. Pack figs into containers and cover with cold syrup, leaving head space. Seal and freeze.

Unsweetened pack

Pack into containers, leaving head space. Cover with water, if desired. If you use water, you may add crystalline ascorbic acid to slow the darkening of light-colored figs— $\frac{3}{4}$ teaspoon to each quart of water. Leave head space. Seal and freeze.

Crushed

Prepare figs as directed for freezing whole or sliced. Crush them coarsely. With 1 quart (1½ pounds) fruit, mix ⅔ cup sugar. For a product of better quality, add ¼ teaspoon crystalline ascorbic acid to each quart of fruit. Pack figs into containers, leaving head space. Seal and freeze.

Grapes (whole or halves)

Grapes are best frozen with syrup, but grapes to be used for juice or jelly can be frozen without sweetening.

Select firm-ripe grapes with tender skins and full color and flavor. Wash and remove the stems. Leave seedless grapes whole; cut table grapes with seeds in half and remove the seeds.

Syrup pack

Pack into containers; cover with cold 40 percent syrup. Leave head space. Seal and freeze.

Puree

Grapes may be frozen as a puree with sugar added. The puree may develop a gritty texture because of tartrate crystals. The crystals disappear when the puree is heated. Wash, remove the stems, and crush the grapes. Heat to boiling. Drain off the extra juice and freeze or can it separately. Cool the crushed grapes and press them through a sieve. To 1 quart (2 pounds) puree, add ½ cup sugar. Pack into containers, leaving head space. Seal and freeze.

Juice

For beverages, select as for whole grapes. For jelly making, select as recommended in the specific jelly recipe. Wash, remove the stems, and crush the grapes. Strain them through a jelly bag. Let the juice stand overnight in the refrigerator or a cool place while the sediment sinks to the bottom. Pour off the clear juice for freezing. Pour the juice into containers, leaving head space. Seal and freeze. If tartrate crystals form in the frozen juice, they may be removed by straining the juice after it thaws.



Melons (slices, cubes, or balls)

(cantaloupe, creshaw, honeydew, Persian, and watermelon)

Select firm-fleshed, well-colored, ripe melons. Cut in half, remove the seeds, and peel. Cut melons into slices, cubes, or balls. Pack into containers and cover with cold 30 percent syrup. Leave head space. Seal and freeze.

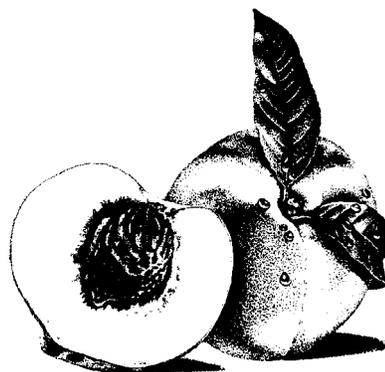
Crushed

Prepare melons, except watermelon, as for freezing in slices, cubes, or balls, then crush. If a food chopper is used for crushing, use the coarse blade. Add 1 tablespoon sugar to each quart of crushed fruit, if desired. Stir until the sugar is dissolved. Pack the melon into containers, leaving head space. Seal and freeze.

Peaches (halves and slices)

Peaches in halves and slices have a better quality when packed in syrup or with sugar, but a water pack will serve if sweetening is not desired.

Select firm, ripe peaches with no green color in the skins. Sort, wash, pit, and peel. For a better product, peel peaches without a boiling-water dip. Slice, if desired.



Syrup pack

Use 40 percent syrup. For a better quality product, add ½ teaspoon crystalline ascorbic acid for each quart of syrup. Put peaches directly into cold syrup in a container—starting with ½ cup syrup to a pint container. Press the fruit down and add syrup to cover, leaving head space. Seal and freeze.

Sugar pack

To each quart (1½ pounds) of prepared fruit, add ⅔ cup sugar and mix well. To slow darkening, sprinkle ascorbic acid dissolved in water over the peaches before adding sugar. Use ¼ teaspoon crystalline ascorbic acid in ¼ cup cold water to each quart of fruit. Pack into containers, leaving head space. Seal and freeze.

Water pack

Pack peaches into containers and cover with cold water containing 1 teaspoon crystalline ascorbic acid to each quart of water. Leave head space. Seal and freeze.

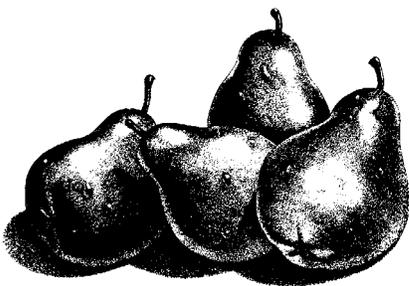
Crushed or pureed

To loosen skins, dip peaches in boiling water $\frac{1}{2}$ to 1 minute. The riper the fruit, the less scalding is needed. Cool in cold water, remove skins, and pit. Crush peaches coarsely. Or, for puree, press through a sieve or heat pitted peaches 4 minutes in just enough water to prevent scorching and then press through a sieve. With each quart (2 pounds) of crushed or pureed peaches, mix 1 cup sugar. For better quality, add $\frac{1}{8}$ teaspoon crystalline ascorbic acid to each quart of fruit. Pack into containers, leaving head space. Seal and freeze.

Pears (halves or quarters)

Select pears that are well-ripened and firm but not hard. Wash the fruit in cold water. Peel, cut in halves or quarters, and remove cores. Heat pears in boiling 40 percent syrup for 1 to 2 minutes, depending on the size of the pieces. Drain and cool.

Pack pears into containers and cover with cold 40 percent syrup. For a better product, add $\frac{3}{4}$ teaspoon crystalline ascorbic acid to a quart of cold syrup. Leave head space. Seal and freeze.

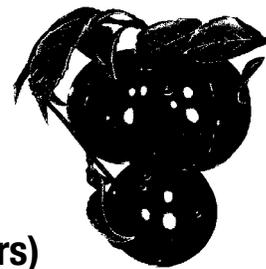


Puree

Select well-ripened pears that are firm but not hard or gritty. Peel or not, as desired, but do not dip in boiling water to remove skins. Prepare and pack as for peach puree.

Pecans

Shell, sort, and dry thoroughly. Pack, seal, and freeze immediately.



Plums and Prunes (whole, halves, or quarters)

Frozen plums and prunes are good for use in pies and jams or in salads and desserts. The unsweetened pack is preferred for plums to be used for jams.

Choose firm tree-ripened fruit of deep color. Sort and wash. Leave whole or cut in halves or quarters.

Unsweetened pack

Pack whole fruit into containers, leaving head space. Seal and freeze. To serve uncooked, dip frozen fruit in cold water for 5 to 10 seconds, remove skins, and cover with 40 percent syrup to thaw.

Syrup pack

Pack cut fruit into containers. Cover fruit with cold 40 or 50 percent syrup, depending on the tartness of the fruit. For improved quality, add $\frac{1}{2}$ teaspoon crystalline ascorbic acid to a quart of syrup. Leave head space. Seal and freeze.

Puree

Select fully ripened fruit. Wash, cut into halves, and remove pits. A puree may be prepared from unheated or heated fruit, depending on the softness of the fruit. To prepare a puree from unheated fruit, press the raw fruit through a sieve. For better quality, add either $\frac{1}{4}$ teaspoon crystalline ascorbic acid or $\frac{1}{2}$ tablespoon crystalline citric acid to each quart (2 pounds) of puree. To prepare a puree from heated fruit, add 1 cup water for each 4 quarts (4 pounds) of fruit. Bring to a boil, cook 2 minutes, cool, and press through a sieve. With each quart (2 pounds) of puree, mix $\frac{1}{2}$ to 1 cup sugar, depending on the tartness of the fruit. Pack into containers, leaving head space. Seal and freeze.

Juice

For juice to be served in beverages, select plums as for puree. For juice to be used for jelly making, select as recommended in the specific jelly recipe. Wash plums, then simmer until soft, in enough water barely to cover them. Strain through a jelly bag. Cool. If desired, sweeten with 1 to 2 cups sugar for each quart of juice, depending on the tartness of the fruit. Pour into containers, leaving head space. Seal and freeze.

Raspberries (whole)

You may freeze raspberries unsweetened or in sugar or syrup. Seedy berries are best for use in making purees or juices.

Select fully ripe, juicy berries. Sort, wash carefully in cold water, and drain thoroughly.

Sugar pack

To 1 quart (1½ pounds) berries, add ¾ cup sugar and mix carefully to avoid crushing. Put into containers, leaving head space. Seal and freeze.

Syrup pack

Put berries into containers and cover with cold 40 percent syrup, leaving head space. Seal and freeze.

Unsweetened pack

Put berries into containers, leaving head space. Seal and freeze.

Crushed or pureed

Prepare as for whole raspberries; then crush or press through a sieve for a puree. To 1 quart (2 pounds) crushed berries or puree, add ¾ to 1 cup sugar, depending on the sweetness of the fruit. Mix until the sugar is dissolved. Put into containers, leaving head space. Seal and freeze.

Juice

For beverage use, select as for whole raspberries. For jelly making, select as recommended in the specific jelly recipe. Crush and heat berries slightly to start the flow of juice. Strain in a jelly bag to extract juice. Sweeten with ½ to 1 cup sugar for each quart of juice, if desired. Pour into containers, leaving head space. Seal and freeze.

Rhubarb (stalks or pieces)

Choose firm, tender, well-colored stalks with good flavor and few fibers. Wash, trim, and cut into 1- or 2-inch pieces or in lengths to fit the package. Heat rhubarb in boiling water for 1 minute and cool promptly in cold water to help retain the color and flavor.

Unsweetened pack

Pack either raw or preheated rhubarb tightly into containers without sugar. Leave head space. Seal and freeze.

Syrup pack

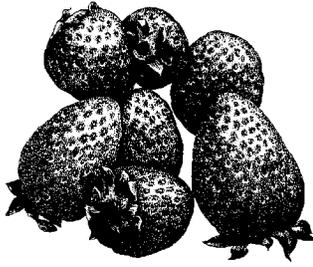
Pack either raw or preheated rhubarb tightly into containers; cover with cold 40 percent syrup. Leave head space. Seal and freeze.

Puree

Prepare rhubarb as for rhubarb stalks or pieces. Add 1 cup water to 1½ quarts (2 pounds) rhubarb and boil 2 minutes. Cool and press through a sieve. With 1 quart (2 pounds) puree, mix ¾ cup sugar. Pack into containers, leaving head space. Seal and freeze.

Juice

Select as for rhubarb stalks or pieces. Wash, trim, and cut into pieces 4 to 6 inches long. Add 1 quart water to 4 quarts (5 pounds) rhubarb and bring just to a boil. Press hot fruit in a jelly bag to extract juice. Cool. Sweeten, if desired, using ½ cup sugar to a quart of juice. Pour into containers, leaving head space. Seal and freeze.



Strawberries (whole)

Choose firm, ripe, red berries, preferably with a slightly tart flavor. Large berries are better sliced or crushed. Sort berries, wash them in cold water, drain well, and remove hulls.

Sugar and syrup packs make better quality frozen strawberries than berries packed without sweetening.

Syrup pack

Put berries into containers and cover with cold 50 percent syrup, leaving head space. Seal and freeze.

Sugar pack

Add $\frac{3}{4}$ cup sugar to 1 quart (1½ pounds) strawberries and mix thoroughly. Put into containers, leaving head space. Seal and freeze.

Unsweetened pack

Pack into containers, leaving head space. For better color, cover with water containing 1 teaspoon crystalline ascorbic acid to each quart of water. Seal and freeze.

Sliced or crushed

Prepare for packing as for whole strawberries, then slice or crush partially or completely. To 1 quart (1½ pounds) berries, add $\frac{3}{4}$ cup sugar; mix thoroughly. Pack into containers, leaving head space. Seal and freeze.

Puree

Prepare strawberries as for freezing whole. Then press the berries through a sieve. To 1 quart (2 pounds) puree, add $\frac{3}{8}$ cup sugar and mix well. Put into containers, leaving head space. Seal and freeze.

Juice

Choose fully ripened berries. Sort and wash them in cold water. Drain well and remove hulls. Crush the berries and strain the juice through a jelly bag. Sweeten with $\frac{2}{3}$ to 1 cup sugar to each quart of juice or leave unsweetened. Pour into containers, leaving head space. Seal and freeze.

Storage Times for Best Quality Fruit

Generally, fruits can be stored frozen for 8 to 12 months.

Unsweetened fruits lose quality faster than those packed in sugar or syrup. Note that citrus fruits and citrus juices can be stored for only 4 to 6 months. Pecans can be stored for up to 3 years.

Table 2. Head space between packed food and closure.

| Type of Pack | Container with wide top opening* | | Container with narrow top opening** | |
|---|----------------------------------|--------------------|-------------------------------------|--------------------|
| | Pint | Quart | Pint | Quart |
| Liquid pack (Fruit packed in juice, sugar, syrup, or water; crushed or pureed; juice) | $\frac{1}{2}$ inch | 1 inch | $\frac{3}{4}$ inch*** | 1½ inch |
| Dry pack (Fruit packed without added sugar or liquid) | $\frac{1}{2}$ inch | $\frac{1}{2}$ inch | $\frac{1}{2}$ inch | $\frac{1}{2}$ inch |

* Head space for tall containers, either straight or slightly flared.

** Glass canning jars may be used for freezing most fruits, except those packed in water.

*** Head space for juice should be 1½ inch.

Table 3. Mississippi-grown varieties of fruits suitable for freezing.

| Fruit | Variety |
|--|---|
| Apples | Early Harvest, Red Delicious, Stayman Winesap |
| Crab Apples | Transcendent, Dolgo, Yellow Siberian |
| Strawberries (north, central, and south Mississippi) | Dixieland, Pocahantas |
| Strawberries (north Mississippi) | Sunrise, Tenn. Beauty |
| Strawberries (south Mississippi) | Dabreak, Klommore, Headliner |
| Pears | Orient, Garber, Waite, Kieffer, Baldwin |
| Plums | Bruce, Burbank, Methley, Munson, American, Santa Rosa |
| Peaches* (central and north Mississippi) | Dixiegem, Ranger, Keystone, Redhaven, Triogem, Ambergem, Halehaven, Sullivans Early Elberta, Elberta, Rio Oso Gem |
| Peaches* (south Mississippi) | Southland, July Elberta, Redskin |
| Pecans | Stuart, Desirable, Elliot, Owens, Curtis, Schley |
| Blackberries | Williams (semierect), Flint (semierect), Brazos (semierect) |
| Blueberries | Calloway, Homebelle, Tifblue, Woodard, Garden Blue, Menditoo |
| Figs | Celeste, Brown Turkey |
| Raspberries (purple) | Sodus, Marion |
| Raspberries (red) | Latham, Sunrise, Cuthbert, St. Regis, Mandarin |
| Raspberries (yellow) | Golden Queen |
| Muscadines (black) | Magoon, Hunt, Southland, Thomas, Bountiful, Chief, Creek |
| Muscadines (bronze) | Dearing, Topsail, Scuppernong, Higgins |
| Grapes, bunch (blue) | Concord, Champanel |
| Grapes, bunch (red) | Delaware, Catawba |
| Grapes, bunch (white) | Niagara |
| Cantaloupe | Edisto 47, Hale's Best No. 36 |
| Watermelon | Charleston Gray, Crimson Sweet, Jubilee, Petite Sweet |

*In order of ripening

Publication 663 (POD-05-22)

Reviewed by **Courtney Crist**, PhD, Associate Extension Professor, Food Science, Nutrition, and Health Promotion.



Copyright 2022 by Mississippi State University. All rights reserved. This publication may be copied and distributed without alteration for nonprofit educational purposes provided that credit is given to the Mississippi State University Extension Service.

Produced by Agricultural Communications.

Mississippi State University is an equal opportunity institution. Discrimination in university employment, programs, or activities based on race, color, ethnicity, sex, pregnancy, religion, national origin, disability, age, sexual orientation, gender identity, genetic information, status as a U.S. veteran, or any other status protected by applicable law is prohibited.

Extension Service of Mississippi State University, cooperating with U.S. Department of Agriculture. Published in furtherance of Acts of Congress, May 8 and June 30, 1914. STEVE MARTIN, Interim Director