FILL YOUR PANTRY
Preserving Apples

Preserve apples by freezing, canning, juicing or making applesauce to enjoy their fresh, delicious flavor all year long. For best taste and quality, select a variety known to work well for the desired preservation method.

KITCHEN SAFETY

Begin with a clean kitchen and equipment. Always wash hands, pull long hair back, and avoid canning or preserving when sick. Clean equipment, utensils, and kitchen workspace, and sanitize when necessary.

- *Cleaning* removes visible dirt or debris.
- *Sanitizing* reduces microorganisms to a safe level.
- *Sterilizing* kills all microorganisms.

CHOOSE A TESTED RECIPE

Use a tested recipe from the National Center for Home Food Preservation, University of Georgia Cooperative Extension's *So Easy to Preserve* cookbook or website, the United States Department of Agriculture (USDA) Complete Guide to Home Canning, or other University Extension Services.

SELECTING APPLES

Preserving food does not improve its quality. Select good quality fruits that are free of disease and mold and are not overripe or insect damaged.

For best quality, select varieties best suited for the chosen preservation method. Process produce just after harvesting or shortly after purchase. If unable to process fruits and vegetables within 6 to 12 hours of harvest, store them in a cool, dry location to minimize deterioration.

PREPARING APPLES

Wash apples with plenty of clean water and a brush if needed. Remove the stem and leaves. No soap is needed. The Food and Drug Administration advises against using fruit and vegetable washes. Once rinsed, cut away any bruised or damaged areas of the apples.

APPLE VARIETIES

Canning

Braeburn, Golden Delicious, Granny Smith, Jonathan, and McIntosh.

Dehydrating

Cortland, Empire, Fuji, Gala, Honeycrisp, and Granny Smith.

Freezing

Ambrosia, Cameo, Empire, Fuji, Gala, Golden Delicious, Granny Smith, Gravenstein, Honeycrisp, Jazz, Jonathan, McIntosh, Pink Lady, Rome Beauty, and Stayman.

Juice and Cider

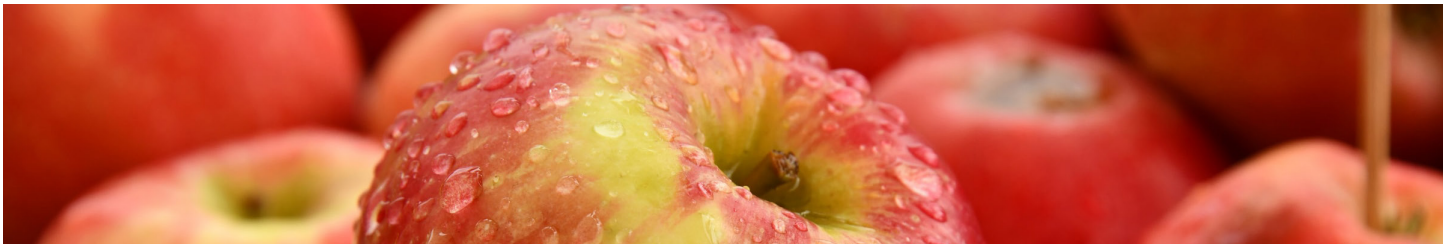
Ambrosia, Cameo, Fuji, Gala, Golden Delicious, GoldRush, Granny Smith, Honeycrisp, Jazz, Jonagold, and Pink Lady.

Pies and Baking

Ambrosia, Braeburn, Cameo, Cortland, Empire, Golden Delicious, Granny Smith, Gravenstein, Honeycrisp, Jazz, Jonagold, Jonathan, and Pink Lady.

Sauce and Butter

Ambrosia, Braeburn, Cameo, Empire, Fuji, Gala, Jazz, Granny Smith, Gravenstein, Honeycrisp, Golden Delicious, Jonagold, McIntosh, Pink Lady, Rome Beauty, Stayman, Jonathan, and Winesap.



PEELING APPLES

Make sure equipment is clean and sanitized. Some equipment is easier than others for processing large quantities of apples.

The stem area and blossom end of apples are the most difficult to clean. When processing, the peeling equipment will cut around those areas to avoid possible contamination.

Produce peelers and paring knives are easy to use, portable, and dishwasher safe. Apple peelers/corers cut the fruit quickly, but be careful of sharp metal spikes, and get ready to use some muscle turning the handle. Follow equipment directions carefully.

HOW TO PREVENT BROWNING

Cut apples darken quickly when exposed to air. Although browned apples are harmless, they lose their crisp texture. Pretreatment options below can help to prevent cut apples from browning:

Ascorbic acid (vitamin C)

Available in powder or tablet form and typically found with other food preservation supplies in the grocery store or a drug store. One teaspoon of powdered Ascorbic acid is 3,000 milligrams, or six 500 milligrams tablets. White specks in the tablets are harmless.

How to use: Mix 1 teaspoon powder (6 crushed tablets) in 2 cups water. Place fruit in solution for 3 to 5 minutes. Remove and drain. Add more acid if the solution has been used to pretreat more than two batches of fruit.

Ascorbic acid mixture (vitamin C)

Contains Ascorbic acid and sugar and is used for canning and freezing fresh fruit.

How to Use: Follow the manufacturer's instructions.

Honey dip

Fruit can be preserved using a honey dip solution. This method adds extra calories to the fruit and is another way to prevent browning.

How to use: Mix ½ cup sugar with 1 ½ cup boiling water. Add ½ cup of honey. Soak fruit in the solution for 3 to 5 minutes. Remove and drain.

Fruit juice dip

Fruit juices high in vitamin C, such as orange, grape, cranberry, pineapple, lime, or lemon juice can also slow browning. Different juices will add different colors and flavors to apples. This method will also add extra calories. *Tip: mix 3 tablespoons lemon juice with 1 quart of water.*

How to use: Add enough juice to cover apples. Soak 3 to 5 minutes. Remove and drain.

Sodium Bisulfate:

Add ¾ teaspoons per quart of water. Soak apples for 5 minutes in the solution. ***Do not use this option if you have asthma.***

CANNING METHODS

For a safe finished product, always use a scientifically proven food preservation method. Safe canning methods include using a boiling-water canner or a pressure canner.

Boiling-water canner

- Uses a pot of boiling water (212°F).
- Best for acid foods: fruits, jams, jellies, tomatoes or figs with acid added, and pickled or fermented products.

Pressure canner

- Uses a pressure canner (at least 240°F) with a dial or weighted gauge.
- Best for low-acid foods: meats, vegetables, broth, dried beans, and mixed products.

Unsafe canning methods

- It is not safe to use unproven methods when canning.
- Do not use a pressure cooker, electric pressure cooker, microwave, oven, slow cooker, dishwasher, or the sun.

PREPARING APPLES FOR CANNING

Select a mixture of sweet and tart apple varieties suitable for the chosen method of preservation. Some recipes, such as those for apple butter or smooth applesauce, require cooking or pressing through a food-mill.

Apples can be added to salsa, such as peach apple salsa, to spice up a meal or a snack. Always use a tested recipe.

Enjoy pickling through preserving apple relish and chutneys. **For a safe final product, never alter amounts of vinegar, food, or water in a tested recipe.**

APPLE JELLY

Apple jelly can be made without pectin, a natural gelling ingredient. When making apple jelly, sort, wash, and remove apple stem and blossom ends. Do not peel or core the apples though, as naturally occurring pectin resides in the peel and cores.

Apple jelly requires sterilized jars because it is processed in a water bath canner for less than 10 minutes. Always check for headspace when canning.

APPLESAUCE

Pretreat apples and boil with ½ cup water. Run cooked apples through a food-mill for a smoother sauce; chunky sauce does not require this step. Applesauce can be packed without sugar.

Troubleshooting

Browning, siphonage, and mold are common problems when canning applesauce. Browning is caused by cut apples being exposed to air and can occur in various stages of the canning process.

- **Surface browning** may occur when applesauce has not been heated adequately during processing and there is enough oxygen present in the headspace.
- **Air bubbles** in the sauce may also create browning. Use a bubble freer tool or plastic knife to remove air bubbles from product before sealing.
- Some recipes may call for **lemon juice or Ascorbic acid** to preserve color and add acidity.
- **Headspace** is important to allow room for food to expand without disturbing the jar's seal, which could lead to mold. Consider using a ruler or headspace tool to ensure ½ inch of headspace in each jar.

FREEZING METHODS

Freezing is one of the least expensive ways to prevent loss of quality fruit. Select full-flavored apples that are crisp and firm, not mealy in texture.

Peel, core, and slice apples. If using large apples, slice into twelve or sixteen slices. Treat for browning by using Ascorbic acid, fruit juice dip, or other practices discussed.

Syrup pack

Sugar syrups can be made by dissolving sugar in water completely and pouring it around and over fruit in the packed container. This method will also add extra calories.

- Slice apples directly into syrup in container, starting with ½ cup syrup to a pint container.
- To prevent browning, add ½ teaspoon (1500 mg) Ascorbic acid to each quart of syrup, Ascorbic acid mixture, or lemon juice.

For Containers: Press fruit down in containers and add enough syrup to cover leaving 1 inch of headspace. Place a small piece of crumpled, water-resistant paper on top to hold fruit down. Seal and freeze.

Sugar pack

Simply sprinkle sugar over fruit and mix gently until the juice is drawn out and the sugar has dissolved.

Dry pack

Treated apple slices can also be frozen first on a tray and then packed into containers as soon as they are frozen; allow ½ inch of headspace. Pack apples into freezer bags, and press air out; then label, seal, and freeze.

FREEZING APPLESAUCE

Improve the color of applesauce by adding Ascorbic acid, lemon juice, or commercial mixes.

Cool sauce completely before freezing. After cooking the sauce, cool the sauce fast by placing pot in a sink of cold ice water, stirring, and changing the water quickly.

Wipe down the lid to keep the sauce tightly sealed. If anything is left on the edge, that could loosen the seal.

Headspace: ½ inch for pint containers and 1 inch for quart containers

FREEZING PIE FILLING

Tapioca or modified food starch offer more stability in freezing compared to flour and cornstarch.

Freeze filling in a foil-lined pie pan. After the filling freezes, fold excess foil edges over the filling and remove it from the pan. Place the foil-wrapped, frozen filling in a plastic freezer bag, and return it to the freezer. The pie pan is then free for other uses.

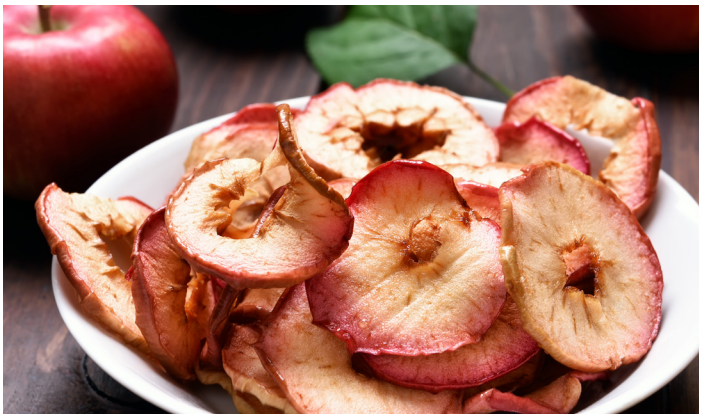
To use frozen filling, remove foil and place the panshaped frozen filling into a pastry-lined pan. Bake as usual. Allow an additional 20 to 25 minutes of baking time for the fruit to heat through.

This method also works for freezing pie filling in a casserole dish for use as a crisp or cobbler.

DRYING APPLES

Adequately drying apples in the oven can take up to 25 hours. Fruit does not dry evenly in a microwave and can easily scorch and burn. Apples are a good candidate for sun drying in the correct environment but require a minimum temperature of 85°F and humidity less than 60%. In Illinois, sun drying is not recommended.

Select mature, firm apple varieties such as gala, honey crisp, granny smith, or fuji apples.



Prepare apples for drying

Unpeeled apples dry faster. Wash well, pare, if desired, and core. Apples can be dehydrated in rings, ¼ to ½-inch thick slices, in quarters, or in eighths.

Pretreat apples in Ascorbic acid or an antidarkening/ antimicrobial solution for 10 minutes. Remove from the solution and drain well. Sodium bisulfite or sulfite dips are the most effective against browning for long term storage of dried apples but cannot be used for people with asthma.

Blanching apples or using Ascorbic acid dips are useful for short-term storage.

You can choose not to pretreat, but apples will continue to brown during and after drying and may affect flavor and vitamins in the fruit.

Conditioning

Apples should have a water content of around 20% when dried. Since not all pieces will have the same amount of moisture, condition the fruit by placing cool, dried fruit in a jar, seal the container, and shake daily for 7 to 10 days. If condensation develops, return the fruit to the dehydrator for further drying.

Storing dehydrated apples

Keep dehydrated apples in a cool, dry place for up to one year for best quality. For longer storage, place dried apples in a freezer-safe bag or container and use within 2 years for best quality.

Applesauce may be dried by itself or in combination with other fruit purees to make fruit leather.

Dehydrated fruits are great snacks and can be chopped and used in breads and salads. You may reconstitute dried apples by boiling and soaking.

APPLE CIDER

One bushel of apples makes 3 gallons of cider, and lower quality apples are great for this purpose. Apples for cider may have flaws but must be free from spoilage, which can cause cider to ferment.

Signs of spoilage can be a grainy, soft interior and wrinkled skin, along with discoloration and bruising, or mold on the bottom.

Apples can be contaminated by bacteria from soil, water, and animal sources, or from lack of sanitation during preparation or processing from human sources during or after harvest, right up to the point of eating.

Always wash apples before peeling, cutting, or eating. Use a tested recipe which calls for heating cider to at least 160 degrees to kill bacteria. Unpasteurized, or fresh, cider may contain bacteria that cause illness, such as *E. coli* or *Salmonella*.

Store heat-treated cider in the refrigerator and use within 5 days. Cider can be frozen.

APPLE CIDER VINEGAR

Cider is best made in fall and winter months when apples naturally have more sugar. Do not use homemade apple cider vinegar for home canning. It does not have the same, controlled acidity level as store bought apple cider vinegar and can result in an unsafe finished product.

Making apple cider

Crush apples to create apple pulp. Use a press or cheesecloth to strain off juice. Adding yeast activates and speeds the fermentation process but is not essential. Special cultivated yeasts are available for this purpose at wine-making shops and biological labs. Bread yeasts are not recommended.

Making a starter

Crumble one yeast cake into one quart of cider, which is enough starter to yield 5 finished gallons of cider. To increase the recipe, maintain an equal ratio of yeast cake to cider.

Making alcohol and acetic acid

Pour cider into one or more containers to about three-fourths full; do not close the lids on the containers.

- Stir the mixture daily.
- Keep containers away from direct sunlight, and maintain a temperature between 60 to 80°F.
- Full fermentation takes 3 to 4 weeks.

Near the end of this period, you should notice a vinegar-like smell. Taste samples daily until reaching desired strength. Fermenting vinegar forms a jelly-like layer called the "mother of vinegar".

Store the mother in a small amount of the newly made apple cider vinegar in a food-safe, closed container at room temperature.

Filter

Filtering removes the mother of vinegar, preventing further fermentation or product spoilage. After vinegar is fermented to a desired strength, filter it through several layers of fine cheesecloth, filter paper, or coffee filters.

Storing vinegar

Store vinegar in separate, capped containers out of direct sunlight. Stored vinegar will stay in excellent condition indefinitely if it is pasteurized.

Pasteurizing vinegar

Heat vinegar to at least 140°F to pasteurize and do not exceed 160°F. Use a food thermometer to ensure the correct temperature is met. Sterilize the empty bottles in which vinegar will be stored and let cool completely before adding the vinegar.

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