

**Ask an Expert // Which
preservation method should I
use?**



5 WAYS TO PRESERVE FOOD

*freeze | pressure can | dry
water bath can | freeze dry*

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Interested in food preservation, but not sure where to start? Here's a great overview of the different methods for preserving food. Which one is right for you?

There are many ways to preserve food beyond the traditional bottling most people consider “canning.” All of the methods help you take advantage of seasonal abundance or food market sales. Here are the Big Four, soon to become the Big Five, with pros and cons attached to help you make your decision

1. Freezing

Advantages: Freezing yields the freshest taste, and has the highest nutrition retention.

Disadvantages: In most cases, product must be thawed or cooked before use. Fruit can be limp when thawed. This can be overcome by serving fruits when still half-frozen.

Level of Preparation Difficulty: Easy— vegetables typically need to be blanched before freezing for highest quality. In most cases you simply put the product in a bag, label it, and put it in the freezer.

Cost: A freezer is a major expense, but they last a long time. Otherwise, cost is minimal: freezer bags or containers and electricity.

Storage time: For best quality, use frozen foods within three to six months. Frozen food is safe to eat as long as it is frozen.

Important food safety note: Freezing does *not* kill any bacteria, the cold temperature only keeps the bacteria from growing. When frozen product thaws, bacteria starts growing again.

2. Dehydrating (Drying)

Advantages: Dehydrated foods are lightweight, and don't take up much storage space, making great packable snacks or meals. Home dehydrated foods are healthier than many packaged snacks because they don't have commercial additives. Dehydrating yourself is cheaper than buying commercially dried fruits and vegetables.

Disadvantages: Lowest nutrition retention of food preservation methods—but still healthier than a store-bought snack. Product shrinks down, which makes for easy storage, but also appears to have a small yield because of that. Rehydrating a dried product does not mean the produce rehydrates to the level of fresh. It will be chewier than a fresh product.

Level of preparation difficulty: Easy— children love to dehydrate. Produce needs to be sliced around 1/4 to 1/2-inch thick. Most vegetables (excluding peppers and onions) need to be blanched prior to dehydrating for best results.

Cost: Usually under \$100 for a small electric dehydrator—at garage sales, even less. Make sure to wash and sanitize a used dehydrator.

Storage time: Product is best when used within 6 months to a year, and is safe for longer if it is kept dry. Dehydrated products will mold if not kept dry.

Food Safety Note: Dehydrating is like freezing, it does **not** kill bacteria. It merely puts the bacteria in a state too dry to reproduce.

3. Boiling Water Bath Canning

Advantages: Foods preserved in a boiling water bath canner do not need refrigeration, and can be used directly out of the jar. This method yields good nutrition retention, fresh taste,

and is easy to use in cooking and food preparation. This is what most people think of when considering “canning.” Useful for fruits, pickled products, salsas, jams and jellies.

Disadvantages: This food preservation method can only be used for high acid fruits, jams and jellies, or pickles. It requires both the preparation time and processing time in the water bath canner.

Level of preparation difficulty: Moderate. Follow a research-based USDA or Extension recipe for safety and best results. See <http://nchfp.uga.edu/> for online instructions and recipes.

Cost: You will need a 3- 5 gallon stock pot with a lid that allows for a trivet to keep the jars from direct contact with the bottom of the pan, and is deep enough to cover the jars with 2 inches of water above the jars. Commercial canners are around \$30 – \$40. Electric water bath canners are available for around \$130. Canning jars are between \$8 to \$10 per dozen, although garage sales often have canning jars for cheaper. Only real canning jars (Ball, Kerr, Golden Harvest, Mason are typical brands) can be used: Salad dressing or mayonnaise jars are not strong enough. Canning lids need to be bought annually, but the bands and jars can be reused for years. One-piece Tattler lids are not USDA recommended at this time.

Storage time: Foods preserved with this method should be used within 1 to 2 years.

Food safety note: The boiling water bath method kills most yeasts and molds in high acid foods. If you open a jar and smell fermentation or see mold, throw the jar away.

4. Pressure canning

Advantages: This is a great way to can low acid foods for home use. Properly done, it is as safe as commercial products, but

there is more personal control over the content.

Disadvantages: Pressure canning *must* be done according to research-based methods in order to be safe! Canned low acid vegetables and meats are prime targets for the growth of the deadly botulism toxin. See <http://nchfp.uga.edu/> for online instructions and recipes.

Level of preparation difficulty: Difficult, mainly because of the time involved. Once the food is prepared for the jars, the pressure canner must be closely watched to make sure the pressure consistently stays at the 13 to 15 pounds of pressure needed to be safe at Utah altitudes for the correct amount of time.

Cost: The cost of a pressure canner ranges from \$150 to \$300. A pressure cooker is too small to be a pressure canner. Electric pressure cookers that claim to also pressure can are not recommended because they cannot hold 15 pounds of pressure for as long as it needs to be held at our altitude for safe canning. The cost of jars and lids is the same as for water bath canning.

Storage time: Foods preserved with this method should be used within 1 to 2 years.

Food safety note: If properly canned using a USDA or Extension tested recipe, the temperatures reached in a pressure canner should kill botulism spores, which create the botulism toxin. It is recommended to boil any low acid canned product for 15 minutes before eating as an additional safeguard, but anything that seems suspicious of spoilage should be thrown away rather than eaten.

5. Home freeze-dryer

Advantages: This method yields fresh taste, great nutrition retention, and preparation is easy (same as freezing or

dehydrating).

Disadvantages: Freeze drying machines are expensive, noisy, and take up space—they are quite large: the mid-size model is the size of a dishwasher, the small is the size of a student refrigerator. When the vacuum pump goes on, it is noisier than a dishwasher.

Level of preparation difficulty: Easy—the same preparation as for freezing or dehydrating. The time for processing is typically 24 hours or more, but it doesn't need to be watched to do the processing.

Cost: Freeze drying machines cost \$2500 and up, and require special vacuum pump oil.

Storage time: Home freeze-dryers are new, so definitive time studies have not been done. It is estimated the product is safe for around 10 years.

Food safety note: Freeze-drying does **not** kill bacteria. The same food safety recommendations as for either freezing or drying hold true here: once the product is rehydrated, the bacteria begin to grow again.

Home food preservation is an important skill to have. It saves money, gives control over content, and focuses your mind on healthy eating. Choose a process and enjoy the bounty!

This article was written by Cathy Merrill, USU Extension Assistant Professor, Utah County