



Snacks Your Family Will Love From Home-dried Fruits, Vegetables and Meat

Drying foods at home can be a fun activity enjoyed by the whole family. Drying food is simple, safe and easy to learn. With modern food dehydrators, you can safely dry fruit leathers, vegetables, seeds, herbs and jerky all year round. Drying food offers one of the most economical and energy efficient ways of preserving a variety of foods. It is estimated that drying costs less than canning and one-quarter the cost of freezing. And drying not only preserves foods but also offers new and different nutritious snacks such as dried fruits, fruit rolls and meat jerky.

Drying preserves food by lowering the amount of water or moisture in food to a point where the growth of microorganisms such as bacteria, yeast and mold, and chemical reactions such as changes in color, texture and flavor—no longer take place. This stabilizes the food so that it can be stored, unrefrigerated, for an extended period of time. And because drying removes moisture, the food shrinks, becoming lighter in weight and easier to store.

Drying food successfully requires a source of heat, generally at a low temperature—120 to 150° F. At higher temperatures, the food cooks rather than dries. Low humidity aids the drying process, especially if the food naturally contains a lot of water. To dry food, water must move from the food to the surrounding air. If the surrounding air is humid, drying will be slowed. And air currents speed drying by moving the surrounding moist air away from the food surface and drawing fresh dry air into contact with the food.

Foods can be dried by two general procedures: indoor or outdoor drying. Through indoor drying, food can be dried in an oven, food dehydrator or by the air. Through outdoor drying, food is dried directly in the sun, by a solar drier or on the vine. Outdoor drying is *not* recommended in Wisconsin because complete drying cannot be assured and the quality of the dried food is often unacceptable. Regardless, all drying methods require the same essential guidelines of warm temperatures, low humidity and an available air current.

Drying food at home will be most successful if you use a food dehydrator, a small electrical appliance for drying foods indoors. An oven can serve as an occasional 'dehydrator' for meat jerky, fruit leathers, and small quantities of fruit and vegetables. But because the oven may be needed for everyday cooking, it may not be satisfactory for preserving abundant quantities of food. And because an oven does not have a built-in fan, it requires twice as long to dry foods and uses more energy. Air drying is acceptable only for foods such as herbs and hot peppers. Because air drying is a slow process, the resulting product is often inferior.

Drying fruits. Dried fruits are tasty, nutritious and easy to prepare. Begin by washing any fruit to be dried, and then peel, core, and slice, if necessary. Thin, uniform pieces of fruit will dry most successfully. Whole pieces of fruit dried with the skin intact, such as blueberries, must have the skin "checked" or cracked before drying so that moisture can leave the fruit. Many light-colored fruits benefit from a treatment before drying to prevent darkening.

Dry prepared fruit at 150° F for two hours, then reduce heat to 125°F and continue drying until fruit is pliable, but not sticky. After drying, cool fruit for 30 to 60 minutes. Package in an airtight container and store in a cool, dry location.

Drying vegetables. Vegetables are dried until they are brittle, but the longer the drying time the less flavorful and poorer the product. Drying times can be hastened by drying small, uniformly cut pieces. Some vegetables should be blanched before drying. Dry vegetables at 145°F for 6-8 hours, or until brittle. Cool, and package in an airtight container. Store in a cool, dry place.

Vegetables such as lettuce and cucumbers that have a very high water content do not dry successfully. And other vegetables such as onions, peppers and mushrooms do not need to be blanched before drying.

Research-tested recipes for preparing dried fruits and vegetables can be found online through the National Center for Home Food Preservation. For jerky, see the UW-Extension publication, Wisconsin's Wild Game: Enjoying the Harvest (B3573). This and other food preservation publications are available at the Outagamie County UW-Extension office or from Cooperative Extension Publications (877-947-7827) and online at <http://learningstore.uwex.edu>. There is a fee for the publications, some are printable online free of charge.

Recipes for Drying Foods

Seasoned Jerky Strips

2 lbs lean venison or beef strips 1/4 tsp garlic powder Yield: 1/2 to 7/8 pound
1/4 cup soy sauce 1/4 tsp black pepper
1 tbsp Worcestershire sauce 1 tsp Liquid Smoke
1/2 tsp onion powder

Stir until seasonings are dissolved. Mix meat strips with brine until all surfaces are coated. Cover, and refrigerate overnight. Remove meat strips from brine, pat dry with paper towels.

-- Dry strips indoors using an oven or dehydrator. Stretch strips across clean oven or dehydrator racks. If strips are too short, fasten several together with wooden toothpicks. Allow strips to touch but not overlap. Leave enough open space for air to circulate.

-- For oven drying, set the temperature at 150 degrees F. Place filled racks in the oven, but not within 4 inches of the heat source. It may be convenient to place foil on a lower rack to catch drips. Dry for 6-10 hours until almost crisp. Keep oven door open about 1 inch during first few hours to let moisture escape.

-- In a dehydrator, dry at 145 degrees F. Follow the manufacturer's instructions. Strips are dry when chewy and leathery. Warm jerky will be pliable, even though enough moisture is removed. Cool a strip to test. When dry, remove from oven/dehydrator to cool on absorbent paper. Pat off fat beads. (*Note: jerky dried in a dehydrator will be superior to that dried in an oven.) Store in an airtight plastic bag or jar with a tight-fitting lid. You can store jerky at room temperature in a cool, dry, dark place for 1-2 months, or in the refrigerator or freezer for up to a year.

Strawberries and cream roll-ups

2 to 3 quarts of very ripe strawberries
4 ounces cream cheese, softened

Lightly spray a drying tray with nonstick cooking spray. Gently wash, sort, and remove any stems from berries. Drain. Puree berries in a blender until smooth. Sieve through a fine strainer to remove seeds (if desired). Measure out 2-1/2 cups of puree onto prepared drying tray, spreading to within 1 inch of the sides (this allows for spreading during drying). Or, prepare 4- to 6-inch fruit leather pancakes. Dry at 150°F for 2 hours, then reduce temperature to 125°F, and continue drying. Leather is dried when it is pliable and slightly tacky, but not sticky in the center. This will take 4 to 8 hours. Remove the leather from the tray while it is still warm and roll up jelly-roll fashion to cool. Once cool, unroll and spread with softened cream cheese, leaving a 1-inch margin. Roll up and cut into bite-size pieces, if desired. Store tightly wrapped in the refrigerator. Or, omit the cream cheese and take the fruit roll-ups on your next hiking trip.

Backpacker's vegetable noodle soup

Soup ingredients Blanch Drying Time

Soup ingredients	Blanch	Drying Time
2 cups carrots, diced	3 minutes	6-8 hours
2 cups green peas	2 minutes	8-10 hours
2 cups corn	2 minutes	6-8 hours
1 cup sliced mushrooms	None	6-10 hours
1 cup celery, diced	2 minutes	6-12 hours
1 cup onion, diced	None	3-6 hours

Wash and prepare vegetables for drying. Dry for 3-12 hours, or until brittle. Package soup mix in an air tight container.

Pour 4 cups boiling water over vegetables in a large pot, or enough boiling water to cover. Allow to stand for 30 minutes to 2 hours, or until partially hydrated. Add 4 bouillon cubes and 2-4 cups additional water. Bring to a boil and boil until vegetables are almost soft, adding additional water as necessary to cover vegetables with a generous amount of broth. Add noodles and additional water, if necessary, and cook until pasta is done. Adjust seasoning and serve.

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