

“Dry It, You’ll Like It...Dehydrating Made Easy”

Compiled by Debbie Kent peaceofpreparedness.com



“So why dehydrate? There are many reasons:

- It’s a quick and easy way to preserve food;
- It saves money to buy on sale and dry;
- Dried food takes up much less space than fresh or canned food;
- It is a great way to add variety to your family’s long term food storage
- When you dehydrate foods you are able to maximize the shelf life,
- It is a great way to use the zucchini that is taking over your backyard and all the other yummy fruits and vegetables during the winter months.
- It saves so much time when you cook with dehydrated foods.

Another Great Reason? The Prophets have asked us to.

President Ezra Taft Benson has urged each of us to be productive and to store what we produce: “Can or bottle fruit and vegetables from your gardens and orchards. Learn how to *preserve food through drying and* possibly freezing. Make your storage a part of your budget...We urge you to do this prayerfully and *do it now.*” Prepare for the Days of Tribulation, Ensign, November 1980.

Dehydrating Food



People have been drying food for thousands of years. In the beginning the sun and air were used to dry out their grain and fruits for the long winter months when no fresh fruits and vegetables were available. Dehydrating removes moisture from food so bacteria, yeasts & molds can’t grow and spoil food. It also slows down action of enzymes but doesn’t inactivate them. Optimum temperature for drying food is 140°F. If higher temps are used food cooks instead of drying.

Today, there are still methods of dehydrating that use the air and sun to dry food. But now you can also use your oven (if you can set it at 140°), or else the fastest and best method to dry food which is an electric food dehydrator. You can buy dehydrators: at department stores, mail-order, thrift stores, garage sales and the internet.



Sun Drying

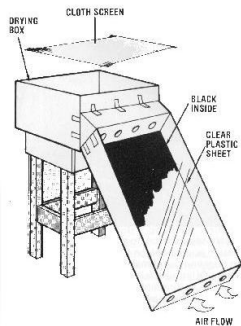


FoodPantry.com



The high sugar and acid content of fruits make them safe to dry out-of-doors when conditions are favorable for drying. *Vegetables* (with the exception of vine dried beans) *and meats are not recommended for out-of-doors drying.* Vegetables are low in sugar and acid. This increases the risks for food spoilage. Meats are high in protein, making them ideal for microbial growth when heat and humidity cannot be controlled. It is best to dry meats and vegetables indoors using controlled conditions of an oven or food dehydrator.

To dry fruits out-of-doors hot, dry, breezy days are best. A minimum temperature of 85°F is needed with higher temperatures being better. It takes several days to dry foods out-of-doors. Because the weather is uncontrollable, drying fruits out-of-doors can be risky. High humidity in the South is a problem for drying fruits out-of-doors. Humidity below 60 percent is best. Often these ideal conditions are not available when the fruit ripens and other alternatives to dry the food are needed. Fruits dried out-of-doors must be covered or brought under shelter at night. The cool night air condenses and could add moisture back to the food, thus slowing down the drying process. Racks or screens placed on blocks allow for better air movement around the food. Screens need to be safe for contact with food. The best screens are stainless steel, Teflon-coated fiberglass and plastic. Because the ground may be moist, it is best to place the racks or screens on a concrete driveway or if possible over a sheet of aluminum or tin. The reflection of the sun on the metal increases the drying temperature. It can take up to a week for foods to dry in the sun.



Solar Drying

Solar drying is another way of sun drying in which the sun's rays are collected inside a specially made box. This raises the temperature 20-30° higher than in open sunlight, which results in a shorter drying time. While solar drying has many advantages over sun drying, lack of control over the weather is the main problem with both methods. If the weather does not stay dry enough your food can mold and spoil. For plans to build your own solar dehydrator search Google: homemade solar dehydrators.

Vine Drying

One method of drying out-of-doors is vine drying. To dry beans (navy, kidney, etc.) leave bean pods on the vine in the garden until the beans inside rattle. When the vines and pods are dry and shriveled, pick the beans and shell them. pretreatment is necessary. Raisins can also be dried this way. This can also be finished in a dehydrator.



No

Oven Drying



Oven drying would seem the most practical way to experiment with dehydration. It requires little initial investment, protects foods from insects and dust, and does not depend on the weather. Continual use of an oven for drying is not recommended because ovens are less energy efficient than dehydrators, and energy costs tend to be high in addition, it takes about twice as long to dry foods this way compared to an electric dehydrator. Drawbacks: Temperature must be below 140°, it is difficult to maintain this low drying temperature in the oven, and foods are more susceptible to scorching at the end of the drying period. Oven-dried foods usually are darker, more brittle and less flavorful than foods dried by a dehydrator. Oven drying

- Temperature needs to go down to 140°F, use oven thermometer to monitor this.
- Leave oven door propped open 2-6 inches
- Best if you place a fan outside oven door
- Trays should be 3-4" shorter front to back and side to side of oven with 2-3" between racks.
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Electric Dehydrators

By Ronco



By Excalibur

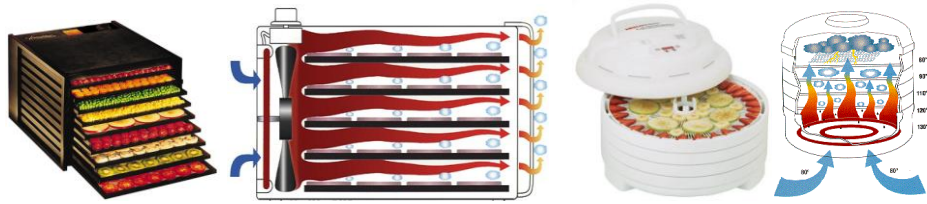


This is a small electrical appliance for drying foods indoors. A food dehydrator has an electric element for heat and a fan and vents for air circulation. Dehydrators are efficiently designed to dry foods fast. Food dehydrators are available from discount department stores, mail-order catalogs, the small appliance section of a department store, natural food stores and seed or garden supply catalogs. Costs vary depending on features. Some models are expandable and additional trays can be purchased later, including ones for fruit leather. Twelve square feet of drying space dries about a half bushel of produce.

Features to Look For

- Is it safe? Look for the UL seal of approval and a one-year guarantee.
- How big is it? Will it fit on your counter?
- How many trays does it have? Are they sturdy, made of open mesh and easy to clean?
- An enclosed thermostat from 85°F to 160°F.
- Does it have a side or bottom mounted fan or blower? Side fans are more efficient.
- An easy to read dial for regulating temperature.
- A timer. Often the completed drying time may occur during the night and a timer could turn the dehydrator off and prevent scorching.
- Double wall construction of metal or high grade plastic. An unlined wood dehydrator is not recommended, because it is a fire hazard and is difficult to clean.
- How noisy is it?

Types of Electric Dehydrators Horizontal vs. Vertical



There are two basic designs for electric dehydrators. One has horizontal air flow and the other has vertical air flow. In the units with horizontal air flow, the heating element and fan are located on the side of the unit. The major advantages of horizontal flow are: it reduces flavor mixture so several different foods can be dried at one time; all trays receive equal heat penetration; and juices or liquids do not drip down into the heating element. Vertical air flow dehydrators have the heating element and fan located at the base. If different foods are dried, flavors can mix and liquids can drip into the heating element.

Dehydrating Made Easy



The following section contains rules, tips and instructions for dehydrating in general:

- Dry food as soon as possible after picking to maximize nutrients.
- Thin, uniform, slices dry fastest and most evenly.
- Place food in single layer, not touching any other pieces.
- Follow directions and drying times given in recipes.
- Turn over half-way through drying process.
- Check food, it dries much faster at the end of drying period.
- Dehydrate foods that process for the same amount of time and temperature together.

Clean Environment



Keeping your area and hands clean produces safer dried products. Wearing gloves cuts down on the spread of bacteria, especially when handling meat. There are natural oils and moistures in your hands which will contaminate your foods by reintroducing moisture. The whole idea to dehydrating foods is to maintain a good quality food with a long shelf life. Wearing protective gloves helps you obtain these goals.

Tools to Have



Just like when canning there are several tools or supplies you should have on hand to dry foods. These include: a good, easy to follow dehydrating cookbook that you can refer to for times and temperatures and recipes; a dehydrator of some kind; a food or meat slicer or Sharp Knife (a slicer will quickly and easily cut very uniform pieces of product); cutting board; large bowl & Ziploc bags to coat and store meat with marinade for jerky; lemon juice, ascorbic acid, etc. for fruits; Pot for blanching or steaming vegetables and bowl filled with ice water to cool them down.

Which foods to dry?

The best quality dried foods begin with the best quality foods available. Fruits and vegetables to be dried should be picked or bought at their peak of flavor and freshness.

Frozen Food: You can also dehydrate all your frozen fruits and vegetables from your grocery store, saving room in your freezer. All your frozen foods have already been prepped, just open the bag and throw them on the tray frozen. This includes thick French fries and hash browns.

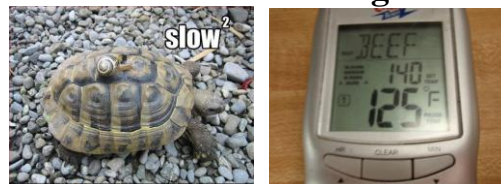
Drying Time



It is very difficult to give exact times when it comes to dehydrating foods. This is because there are so many variables: Is it humid or dry? How thick is the food sliced? How full are the trays? Is the food touching? What kind of dehydrator do you have? Does it have a fan on the side or the bottom? That being said here are some average drying times:

8-15 hrs	Fresh Vegetables	15+ hrs	Fruit rollups
8-10 hrs	Frozen Vegetables	15-20 hrs.	Grapes
12-15 hrs	Fruits, 1/4" thick	12-15 hrs	Peach, plum, pear, apple, nectarine
8-10 hrs	Mushrooms/Onions	18-20 hrs.	Blueberries
12-15 hrs	Potatoes	6-12 hrs	Jerky

Case Hardening



If you increase the temperature of the dehydrator so that it dries faster, you can cause the outer layer of the food to cook too fast thereby forming a case around the food. This makes it more difficult for the inside to dry completely which can lead to the food turning "sour" or moldy and it will have to be tossed. Best Bet...Long time and Low temperature.

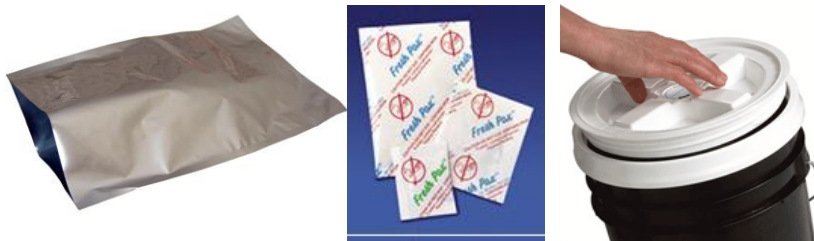
Packaging Dried Foods



Dried foods are susceptible to insect contamination and moisture re-absorption and must be properly packaged and stored immediately. First, cool completely. Warm food causes sweating which could provide enough moisture for mold to grow. Pack foods into clean, dry insect-proof containers as tightly as possible without crushing. If you are going to use your dried foods within a month or two, you can just put them into Ziplocs or Tupperware type containers. IF you are packaging for Long Term Storage then see Storing Dried Food Section.

- Store dried foods in clean, dry home canning jars (using Food Saver Canning Jar attachment); plastic freezer containers with tight-fitting lids; or in plastic freezer bags.
- Vacuum packaging using Food Saver or Seal-a-Meal is also a good option.
- Pack foods in amounts that can be used all at once. Each time a package is re-opened, the food is exposed to air and moisture that can lower the quality of the food and result in spoilage.

Storing Dried Foods



The taste and quality of all stored food is affected by HALT: humidity; air; light and temperature. The drier; less oxygen; darker and cooler it is the longer the food will look and taste good. Food quality is affected by most by heat. For instance: if the food is stored at a constant temperature 60° = it will store for 20 years; if stored at 95° it will last 2.5 years. Cooler is much better. If you are going to store things in the Mylar or food saver bags you will need to put them in buckets with gamma lids to keep the rodents and light out. ***SEE BELOW for more information on storage times.***

Oxygen packs are small oxygen absorbing packages that can be placed into your vacuum sealed bags, buckets, or cans of dehydrated foods. The purpose of an oxygen pack is to absorb any residual oxygen that might be present in your bag or can, allowing your food to store much longer.

What O2 packets size to use?

100 cc per one gallon vacuum bag or glass jar. (available at HoneyvilleGrain.com)

Drying Fruit



Dried fruits are the oldest, the most familiar, and the most popular of dried foods. They also are the simplest to dry and the simplest to use. Raisins, apples, banana chips, apricots and plums are favorites. For dried fruit mixtures, they are best if they are prepared, dried and packaged separately, the combined just before eating. (Making & Using Dried Foods)

- Preparing the Fruits – wash fruit and core, if needed
- Fruits can be halved or sliced and some left whole
- Apples can be cored and sliced - wedges, rings
- Bananas can be sliced
- If fruit dried whole, “check” or crack the skin to speed drying – cranberries – place in boiling then cold water to “check”
- Oranges, Lemons and Limes can be sliced and placed right on the trays.

Pre-treating the Fruit

(Excalibur Dehydration Guide)

Pre-treating prevents fruits from turning brown. There are several different ways to pre-treat... Some fruits benefit from blanching. Blotting off any excess moisture with paper towels before placing the food in the dehydrator is the final important step. Excess moisture on foods will prolong the drying cycle.



Ascorbic Acid: Is simply a form of Vitamin C and is found in all citrus fruits. You can buy it under the name Ascorbic Acid in drug or health food stores in crystal, powder or table form. Soak the prepared fruit in a solution of 2 T. of power to 1 quart of water for 2 minutes.

Fruit Juice Dip: Citrus Juices, such as: pineapple, lemon or lime may be used as a natural anti-oxidant. Bottled lemon juice or pineapple juice can be sprayed directly on the items instead of soaking them in a bowl. Soaking food takes away important vitamins and minerals. To soak: stir 1 cup of juice into 1 quart of lukewarm water and soak fruit for 10 minutes. (Note: fruit juice is only 1/6th as effective as pure ascorbic acid and may add taste to your food.)



Honey Dip: Honey dips are used quite frequently on fruits to be dried. The honey will make fruit considerable sweeter and will add calories as well. Dissolve 1 c of sugar in 3 cups of hot water. Allow mixture to cool until lukewarm, and then add 1 cup honey. Dip fruits in small batches, remove with a slotted spoon and drain thoroughly before dehydrating.

Pectin: Pectin (Fruit Fresh) is another way to preserve the fresh fruit flavor, color and texture of your fruit. It does not add taste or color. Combine 3 T. with 8 cups of water, dip fruits and drain. For fruit leather add 1 t. to 2 cups pureed fruit.



Blanching Fruit



Some fruits have a better texture when dehydrated if blanched first. These include: apricots, blueberries, cranberries, gooseberries, currants, grapes (raisins), peaches and plums (prunes). Most just have to be dipped in boiling water for 30 seconds then cooled in ice water and drained.

Drying Fruits

Fruits can be dried in sun or in dehydrator at 115° (most). See chart for times.

How to Tell if Fruit is Done

- Let food cool 5-10 minutes before testing.
- Cut several cooled pieces in half...should be no visible moisture and should not be able to squeeze any moisture from fruit
- Not be sticky or tacky, should spring back when squeezed together.
- If piece folded in half, shouldn't stick to itself.
- Peaches, pears, apples and plums should remain pliable but others such as berries and rhubarb should be crisp. Banana chips can be either.

After Fruit is Done

Cool fruit 30-60 minutes before packaging...don't pack too soon or moisture buildup could occur...don't wait too long or could pick up moisture

Conditioning Fruits



The moisture content of home dried fruit should be about 20 percent. When the fruit is taken from the dehydrator, the remaining moisture may not be distributed equally among the pieces because of their size or their location in the dehydrator. Conditioning is the process used to equalize the moisture. It reduces the risk of mold growth.

To condition the fruit, take the dried fruit that has cooled and pack it loosely in plastic or glass jars. Seal the containers and let them stand for 7 to 10 days. The excess moisture in some pieces will be absorbed by the drier pieces. Shake the jars daily to separate the pieces and check the moisture condensation. If condensation develops in the jar, return the fruit to the dehydrator for more drying.

- Pack cooled food loosely in plastic or glass jars, seal and let stand for 7-10 days
- Shake jars daily to separate pieces and check for moisture condensation
- If condensation, return to dehydrator for more drying...unless has started to mold, then dispose of.
- After conditioning, package and store the fruit as described above.

Drying Vegetables



To retain the best flavor and nutrition in dried vegetables, pick or buy the crispest, freshest and most flavorful vegetables you can. More care must be taken in pre-treating and drying vegetables because they are low-acid and therefore more susceptible to spoilage than most fruits. Strong smelling foods should not be dehydrated in the same batch as other foods. Try putting your dehydrator outside on a hot dry day when doing your garlic and onions to avoid the spreading of strong unwanted scents through your home.

Preparing Vegetables



To preparing the vegetables you will need to: Wash, core, trim and peel according to directions and then slice or chop if needed into uniform sizes. Remember that the food will shrink dramatically when drying, if cut too small it can fall through the racks. Most vegetables need to be pre-treated in one of the following ways to stop the enzyme process from turn the vegetables and unappetizing black color.

Pre-Treating Vegetables

Pre-treating is necessary for most vegetables (not: peppers, Collard Greens, Spinach, Mushrooms, onions or garlic) to keep them from turning dark, brown, black or rotting during storage. This process includes water or steam blanching.



Water blanching: Fill a large pan over half-full with water. Bring the water to a boil and stir the food directly into the boiling water. Start counting time as soon as water returns to boil. If takes more than 1 minute to return to boil, are putting in too many vegetables at a time. Blanch for about 3 minutes. Remove food into ice water for a few minutes to cool, drain and blot with a towel to remove excess water before drying.

Steam blanching: Using an old fashioned, pan-type steam, fill the bottom with 2 inches of water and bring to a boil. Add vegetables no more than 2 inches deep above boiling water. Cover and steam according to directions given for each vegetable. Remove to bowl of ice water for few minutes, then drain and blot dry, before putting in dehydrator.

Drying Vegetables

- Dehydrator temperatures should not go above 120°. See chart for more details.
- Dry vegetables until brittle or “crisp” (Root vegetables, squash and pumpkin will be tough and leathery but still pliable.
- Check dried vegetables for moisture once or twice a week for the couple of weeks.

Fruit and Vegetable Leathers



Fruit leathers are homemade fruit rolls made from ripe or slightly over ripe: apples, apricots, bananas, berries, cherries, grapes, oranges, pears, pineapples, plums, strawberries, tangerines, and tomatoes. They are a tasty chewy, dried fruit product. They can be made from fresh, slightly damaged or frozen fruit. Fruit leathers are made by pouring puréed fruit onto a flat surface for drying. When dried, the fruit is pulled from the surface and rolled. It gets the name "leather" from the fact that when puréed fruit is dried, it is shiny and has the texture of leather. The advantages of making your own fruit leathers are to save money uses less sugar and you can mix fruit flavors. Leftover fruit pulp from making jelly can be blended and made into fruit rolls. For the diabetic, fruit leathers made without sugar are a healthy choice for snacks or desserts.

Fruit Roll Up Hints

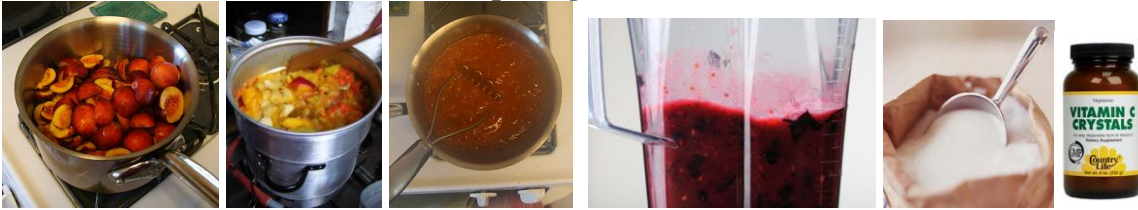
- Never use sugar in fruit rollups for long term storage, the sugar will crystallize over time. Instead use honey or corn syrup. Sugar fine for short term roll-ups.
- Cooking the fruit in a sauce pan before dehydrating makes a translucent roll-up whereas uncooked makes a more firm and solid color roll-up.
- When using zip bags to dry your fruit rollups make sure any print on the bag is facing away from the rollup. Otherwise, it will pull the print up when the rollup when removed.
- Use duct tape when taping down the zip bag because it does not fall off in the dehydrator and it is easy to remove from the trays.
- Shrink wrap or the wax bags in cereal boxes makes a great packaging for the rollups when sealed using your sealer.

Preparing the Trays



- For drying in the oven a 13" X 15" cookie pan with edges works well. Line pan with plastic wrap. Do not use waxed paper or aluminum foil.
- To dry in a dehydrator, specially designed plastic sheets can be purchased or plastic trays can be lined with plastic wrap or gallon Ziploc bags held down with pieces of duct tape.

Preparing the Fruit



Pit fruit if necessary and cut into slices or chunks, cutting out any rotten parts. *Four cups of fruit, makes one cookie sheet size fruit leather.* Then either:

- Put directly into pot with half cup of water for every 4 cups of chopped fruit. Bring to a simmer, cover and let cook on a low heat for 10-15 minutes, then add sugar and continue to cook or until the fruit is cooked through and sugar is dissolved. OR
- Put in top of steamer and steam for 10-15 minutes until fruit is soft. OR
- Put raw chunks of fruit directly into blender or food processor

Then puree your fruit until smooth, with masher, in blender or food processor. Taste your fruit, if it isn't sweet enough for you, add sugar or honey to taste. Add cinnamon, nutmeg or other spices if desired. You can also add chopped nuts or coconut to create different textures. *Also*, to prevent food discoloration and flavor loss, add 1/2 t. of ascorbic acid crystals or 2 T of lemon juice for every 2 cups of fruit.

Hint: Applesauce can be dried alone or added to any fresh fruit puree. Applesauce will add sweetness and make the fruit leather smoother and more pliable.

Pouring the Leather



Fruit leathers can be poured into a single large sheet (13" X 15") pour purée evenly in a serpentine pattern, about 1/8-1/4" thick, onto drying tray. Avoid pouring purée too close to the edge of the cookie sheet. The larger fruit leathers take longer to dry.

Drying the Leather

Approximate drying times are 6 to 8 hours in a dehydrator at 140°, up to 18 hours in an oven and 1 to 2 days in the heat. It will still be slightly sticky, but will pull away from the paper. If packaging for long term storage, dry until no sticky.

Fruit Leather dries from the outside edge toward the center. Test for dryness by touching center of leather; no indentation should be evident. Leather should be slightly tacky but pull up easily from the paper. While warm, peel from plastic and roll; allow to cool and rewrap the roll in plastic. Roll, and wrap in plastic.

Chances are the fruit leather will not last long enough for storage. If it does, it will keep up to 1 month at room temperature. For storage up to 1 year, place tightly wrapped rolls in the freezer.



Storing the Leather

Remove leather from trays. If made on plastic wrap you can cut in strips and roll. Or cut in strips, put on plastic wrap and roll up. Store in Ziplocs for use in a month or store in air tight container for longer term storage.

Jerky



Jerky is a lightweight, dried meat product that is a handy food for backpackers, campers and delicious. It requires no refrigeration. Jerky can be made from almost any lean meat, including **beef** (rump roast, bottom round, London broil, even hamburger -on sale under \$2.00 per pound) venison or smoked turkey breast. (Raw poultry is generally not recommended for use in making jerky because of the texture and flavor of the finished product.)

Safe handling of Meat and Poultry



- Always wash hands thoroughly with soap and running water for at least 20 seconds before and after handling raw meats.
- Use clean equipment and utensils.
- Keep meat and poultry refrigerated at 40°F or below.
- Thaw frozen meat in the refrigerator, not on the kitchen counter.
- Marinate meat in the refrigerator. Do not save and re-use marinade.

Treating the Meat for Bacteria and E.Coli



Harmful bacteria can easily multiply on moist, high protein foods like meat and poultry and can cause illness if the products are not handled correctly. If pork or wild game is used to make jerky, the meat should be treated to kill the *Trichinella* parasite before it is sliced and marinated. To treat the meat, freeze a portion that is 6 inches or less thick at 0°F or below for at least 30 days. Freezing will not eliminate bacteria from the meat.

The risk of food borne illness from home-dried jerky can be decreased by allowing the internal temperature of the meat to reach 160°F. Two methods can be used: Heating meat strips in marinade before drying or heating the dried jerky strips in an oven after the drying process is completed.

- Heating meat strips in marinade before drying – drying times will be reduced. Check temp of several strips with metal stem-type thermometer to determine 160°F is reached. When the strips are heated in a marinade before drying, drying times will be reduced. Color and texture will differ from traditional jerky.
- Heating dried jerky strips in oven after drying process is completed. Heat strips 10 minutes in oven preheated to 275°F. Thicker strips may take longer heating, check temp (160°F) with thermometer.

Preparing the Meat



- Partially freeze meat to make slicing easier.
- Trim and discard all the fat from the meat. Fat on jerky causes it to go rancid.
- Slice meat no thicker than $\frac{1}{4}$ inch. If a chewy jerky is desired, slice with the grain. Slice across the grain if a more tender, brittle jerky is preferred.
- Marinate the jerky for flavor and tenderness. Marinade recipes may include oil, salt, spices and acid ingredients such as vinegar, lemon juice, teriyaki, or soy sauce or wine.
- Cover and marinate in the refrigerator for 12-24 hours.

Drying the Jerky



- Remove meat strips from the marinade, tear off any remaining fat and drain.
- Arrange strips on dehydrator trays or cake racks placed on baking sheets for oven drying. Place the slices close together, but not touching or overlapping.
- Place the racks in a dehydrator or oven preheated to 140°-150°F.
- Turn jerky over and test after 3 hours. Jerky heated in marinade will dry faster.
- When done, jerky should be fibrous and crack slightly when bent, 6-20 hours.
- For long term storage jerky should be so fibrous it is very hard to chew.
- Once drying is completed, pat off any beads of oil with clean, absorbent towels and cool.
- Package in glass jars or heavy plastic food storage bags. Vacuum packaging is also a good option.

Storing the Jerky



- ✓ Jerky that will be consumed within 2 weeks you can store in Ziploc bags.
- ✓ For longer term; seal jerky in Food Saver/Seal-a-meal bags and then in bucket or in jar.
- ✓ To increase shelf life and maintain best flavor and quality, refrigerate or freeze jerky.

Other Uses for Dehydrators



Drying Pasta: Place strips of *freshly made pasta* in single layers onto your drying trays. Dry for 2 to 4 hours at 135°F. Store in airtight packages. Or *dry cooked pasta* (smaller varieties work best) and break into bite size pieces, if applicable. Store in air tight containers. It rehydrates in 2-3 minutes in boiling water. Add some cooked pasta to heat-and-eat microwave meals



Raising Bread: Remove the trays from the dehydrator, set the thermostat at 115°F and allow the unit to preheat. Place a shallow pan of water on the bottom of the dehydrator. Insert a tray directly above the water and place the bowl or pans of dough on the tray. Cover the dough with a cloth to keep it from drying out. Allow the dough one-half to one hour of time to rise. When it has risen, continue with preparation according to your recipe.



Re-crisping: There is no need to throw away crackers, chips, cookies or cereal that have become stale. Re-crisp those items by placing them in a single layer on the drying trays and drying them for 1 hour at 145°F.



Kitchen Dryer: Use your dehydrator to dry a variety of items. Toss your damp dish towel in for a quick drying when you finish the dishes. Did you know that a damp dish towel, hung inside the cabinet under your sink, dries slowly due to lack of air circulation? This provides extra time for bacteria, molds, and fungi to grow. Or you can place small, hand-washed, clothing items in your dehydrator to dry them. Or, you can dry wet gloves and mittens when they come in from playing in the snow.



Craft Projects: Speed up drying of many types of crafts projects by using your dehydrator. If your children are making paper Mache projects, dry them in your dehydrator. Simply remove as many shelves as you need to make space for the project. Select drying times and temperatures according to the needs of the individual craft projects.



Dried Flowers: The fragrance of flower blossoms can be captured outdoors in the summer, stored away in sealed containers and enjoyed indoors in the winter. You can dry any fragrant blossoms you want. Some of the best are: roses, apple blossoms, geraniums, lavender, marigolds, nasturtiums and honeysuckle. Dry at 110°, until brittle, 6-8 hours.

Drying Herbs



Drying is the easiest method of preserving herbs. Simply expose the leaves, flowers or seeds to warm, dry air. Leave the herbs in a well ventilated area until the moisture evaporates. Sun drying is not recommended because the herbs can lose flavor and color. Dried herbs are usually 3 to 4 times stronger than the fresh herbs. To substitute dried herbs in a recipe that calls for fresh herbs, use 1/4 to 1/3 of the amount listed in the recipe.

The best time to harvest most herbs for drying is just before the flowers first open when they are in the bursting bud stage. Gather the herbs in the early morning after the dew has evaporated to minimize wilting. Avoid bruising the leaves. They should not lie in the sun or unattended after harvesting. Rinse herbs in cool water and gently shake to remove excess moisture. Discard all bruised, soiled or imperfect leaves and stems.

Dehydrator drying is a fast and easy way to dry high quality herbs because temperature and air circulation can be controlled. Pre-heat dehydrator with the thermostat set to 95°F to 115°F. In areas with higher humidity, temperatures as high as 125°F may be needed. After rinsing under cool, running water and shaking to remove excess moisture, place the herbs in a single layer on dehydrator trays. Drying times may vary from 1 to 4 hours. Check periodically. Herbs are dry when they crumble, and stems break when bent. Check your dehydrator instruction booklet for specific details.

Less Tender Herbs — The more sturdy herbs such as rosemary, sage, thyme, summer savory and parsley are the easiest to dry without a dehydrator. Tie them into small bundles and hang them to air dry. Air drying outdoors is often possible; however, better color and flavor retention usually results from drying indoors.

Tender-Leaf Herbs — Basil, oregano, tarragon, lemon balm and the mints have a high moisture content and will mold if not dried quickly. Try hanging the tender-leaf herbs or those with seeds inside paper bags to dry. Tear or punch holes in the sides of the bag. Suspend a small bunch (large amounts will mold) of herbs in a bag and close the top with a rubber band. Place where air currents will circulate through the bag. Any leaves and seeds that fall off will be caught in the bottom of the bag.

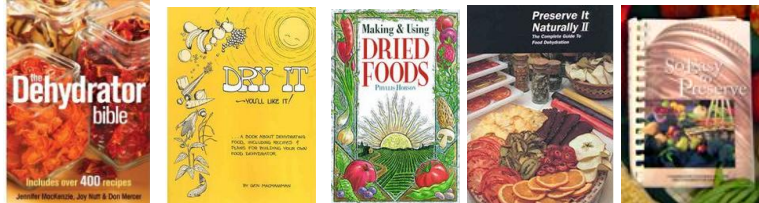


RESOURCES

Books

There are many great dehydrating resources out there; some of the best are even FREE. I would highly recommend a dehydrating book. The first 3 of these are just about drying foods the 4th, "So Easy to Preserve" has both canning and dehydrating in it.

You can find these and many others online or at your local bookstore.



“Dehydrator Bible” By Jennifer MacKenzie, Jay Nutt and Don Mercer

“Dry It You’ll Like It” By Gen MacManiman

“Making and Using Dried Foods” by Phyllis Hobson

“Preserve It Naturally II or 3rd Edition” By Excalibur Dehydrators

“So Easy to Preserve”, 5th ed. 2006. Bulletin 989, Cooperative Extension Service, The University of Georgia, Athens. Revised by Elizabeth L. Address. Ph.D. and Judy A. Harrison, Ph.D., Extension Foods Specialists

On the Web



If go online to [youtube.com](https://www.youtube.com) and put dehydrating or drying foods in the search box you will have many free, short videos on how to dry many kinds of things from fruit and jerky to flowers. They are free to watch and there are some great ones to choose from.



One of my favorites is Tammy at dehydrate2store.com. She has a series of videos, all on how to **“How to Dehydrate and Store Food”**.

Start with Part 1 and go through the whole series. The website has lots of videos and step-by-step instructions on how to build these cool shelves.

Also on YouTube.com: **foodsaver jars by jam5192** (using the Food Saver to “can”)

AND

Wendy Dewitt -- **Food Storage Seminar, Part 8 of 9. "Food Saver"**

(If you haven't watched her whole series DO-it's excellent!)



In Conclusion

This year our Theme is “The Peace of Preparedness” and we have and will continue to cover many aspects of preparedness for both cooking with our Food Storage and being prepared in other areas in our quest to be “Be Prepared in All Things”. Some of you are just starting on this path while others are getting close to the top of the trail. No matter where you are you must watch for the signs along the way. Some of these signs tell you which way to go, some are reminders to stay on the path, dangers ahead and some when the terrain is difficult. Such path of earth life. We have to show us the way to go. busy with the distraction in life are going the wrong way, come they give us warnings both in dangers that lie ahead and how Always, they encourage us and IT and that we are not alone. I these things too. For that is my you are going, what you need to all along the way. As the storms continue to brew around us, we can be at peace knowing we have done all we can both spiritually and temporally to be prepared. I love the Lord, I am so grateful to be here on earth at this time as we prepare for the Second Coming of our Savior. I hope that through these classes I can in some small way help you to be better prepared for the days of want that lie ahead.



some them warn you of encourage you to keep going is real life. We are all on this parents, leaders and Prophets Sometimes when we get they have to say, “Hey, you back to the path!” Sometimes word and in scripture of we can prepared for them. remind us that we CAN DO hope that these classes do all goal: to remind you where get there and encourage you



Brigham Young said, “A great many have taken this counsel, and they are prepared...

Who is deserving of praise? The persons who take care of themselves, or the ones who always trust in the great mercies of the Lord to take care of them?

It is just as consistent to expect that the Lord will supply us with fruit when we do not plant the trees; or that, when we do not plow and sow and are saved the labor of harvesting, we should cry to the Lord to save us from want, as to ask Him to save us from the consequences of our own folly, disobedience and waste..." ***The Lord has said, 'Gather and save the produce I put within your reach, and prepare against a day of want.'*** - (Journal of Discourses, vol. 12, p. 244

I hope that this class and the canning class have gotten you excited about different and easy ways to “Put Up the Harvest” and by doing so: add nutrition and variety to your family’s food storage and gain the blessings of gathering and saving the produce He puts within your reach.

RECIPES

Fruit Leathers

Leathers from Fresh Fruit

Select ripe or slightly overripe fruit. Wash fresh fruit or berries in cool water. Remove peel, seeds and stem. Cut fruit into chunks. Use 2 cups of fruit for each 13" x 15" inch fruit leather. Purée fruit until smooth. Add 2 t. of lemon juice, 1/8 t. ascorbic acid or 1 t. fruit fresh for each 2 cups light colored fruit to prevent darkening.

Optional: To sweeten, add corn syrup, honey or sugar. Corn syrup or honey is best for longer storage because it prevents crystals. Sugar is fine for immediate use or short storage. Use ¼ to ½ cup sugar, corn syrup or honey for each 2 cups of fruit. Saccharin-based sweeteners could also be used to reduce tartness without adding calories. Aspartame sweeteners may lose sweetness during drying.

Leathers from Canned or Frozen Fruit

Home reserved or store-bought canned or frozen fruit can be used.

- Drain fruit, save liquid.
- Use 1 pint of fruit for each 13" X 15" leather.
- Purée fruit until smooth. If thick, add liquid.
- Add 2 teaspoons of lemon juice or 1/8 teaspoon ascorbic acid (375 mg) for each 2 cups of light colored fruit to prevent darkening.
- Applesauce can be dried alone or added to any fresh fruit purée as an extender. It decreases tartness and makes the leather smoother and more pliable.

Fruit Leather: Spices, Flavors and Garnishes

To add interest to your fruit leathers, spices, flavorings or garnishes can be added.

Spices to Try — Allspice, cinnamon, cloves, coriander, ginger, mace, mint, nutmeg or pumpkin pie spice. Use sparingly, start with 1/8 teaspoon for each 2 cups of purée.

Flavorings to Try — Almond extract, lemon juice, lemon peel, lime juice, lime peel, orange extract, orange juice, orange peel or vanilla extract. Use sparingly, try 1/8 to 1/4 teaspoon for each 2 cups of purée.

Delicious Additions to Try — Shredded coconut, chopped dates, other dried chopped fruits, granola, miniature marshmallows, chopped nuts, chopped raisins, poppy seeds, sesame seeds or sunflower seeds.

Fillings to Try — Melted chocolate, softened cream cheese, cheese spreads, jam, preserves, marmalade, marshmallow cream or peanut butter. Spread one or more of these on the leather after it is dried and then roll. Store in refrigerator.

Vegetable Leathers

Vegetable leathers are made similar to fruit leathers. Common vegetable leathers are pumpkin, mixed vegetable and tomato. Purée cooked vegetables and strain. Spices can be added for flavoring.

Mixed Vegetable Leather

2 cups cored, cut-up tomatoes

1 small onion, chopped

1/4 cup chopped celery

salt to taste

Cook over low heat in a covered saucepan 15 to 20 minutes. Purée or force through a sieve or colander. Cook until thickened. Spread on a cookie sheet or tray lined with plastic wrap. Dry at 140°F.

Pumpkin Leather

2 c. canned pumpkin or 2 c. fresh pumpkin, cooked and puréed

1/2 c. honey

1/4 t. cinnamon

1/8 t. nutmeg

1/8 t. powdered cloves

Blend ingredients well. Spread on tray or cookie sheet lined with plastic wrap. Dry at 140°F.

Tomato Leather

Core ripe tomatoes and cut into quarters. Cook over low heat in a covered saucepan, 15 to 20 minutes. Purée or force through a sieve or colander and pour into electric fry pan or shallow pan. Add salt to taste and cook over low heat until thickened. Spread on a cookie sheet or tray lined with plastic wrap. Dry at 140°F.

Hamburger and JERKY

If you choose to heat the meat prior to drying to decrease the risk of food borne illness, do so at the end of the marinating time. To heat, bring strips and marinade to a boil and boil for 5 minutes before draining and drying. If strips are more than 1/4 inch thick, the length of time may need to be increased.

Hamburger

I have 5 trays and it took about 7 pounds, you cook it up till it is done, then you rise it off about 5 times to get off as much grease as you can then you put it on the trays and dry it till there is no more moisture in it then you put it in a gallon zip lock bag then you put it in a #10 can and seal it, and it is good for a very long time, 1 cup of dried hamburger when added with hot water will give you 1 pound of meat.

Jerky

Jerky Marinade

1 1/2-2 lb. of lean meat

1/4 c. soy sauce

1 t. Worcestershire sauce

1/4 t. black pepper

1/4 t. garlic powder

1/2 t. onion powder

1 t. hickory smoke-flavored salt

Combine all ingredients. Place strips of meat in a shallow pan and cover with marinade. Cover and refrigerate 1-2 hours or overnight.

Sweet Jerky

by Steven Tomeno

4 T. soy sauce

1 c. brown sugar

1-8oz tomato sauce

3/4 t. pepper

3/4 t. salt

2 - 16 oz cans Pepsi (not Coke)

2 cloves garlic....

4 lbs beef strips

Marinate 4-6 hours. Cook in dehydrator at 145° 6-10 hours or 4 hours in oven @ 160°. Don't forget to flip the jerky after a couple hours.

Colonel Stivers' Beef, Deer, Elk or Moose Jerky

2 lbs. of flank steak

2/3 c. of soy sauce

2/3 c. Worcestershire sauce

1 t. garlic powder

1 t. onion powder

2 t. of seasoning salt

Slice flank steak diagonally with the grain of the meat into very thin slices. Mix ingredients and marinate meat overnight or 12 hours. Dry at 140-160° for 7-12 hours, or until meat is dry throughout. Store finished jerky in an airtight container. It keeps for several months, but it is likely that it will be consumed by the master hunter, kids, or the cook within a few days.

Pepper Jerky

16 oz. soy sauce[La Choy]

1/4c. Worcestershire sauce

1/4c. hot sauce

1/4c. liquid smoke

1 T. black pepper

8-10 lbs Meat

Mix all ingredients in bowl. Add meat piece by piece, Soak overnight in fridge Lay on trays and sprinkle with black pepper Then dry and enjoy.

Blade's Jerky Recipes

All of the following are for 5 lbs of venison, or beef (90% lean or higher).

Mix all of the ingredients together that are listed in the recipes and then marinate for 12-24 hrs.

All the ingredients can be adjusted to taste. I like black pepper, so the amounts listed below might be reduced to 2 -3 tsp., for those that don't have the same palate for it's' flavor.

EZ Style

5 t. salt

5 tsp. black pepper

1/4 c. brown sugar

1 1/2 c. soy sauce

1 c. red wine vinegar

Yankee Style

5 t. salt

1 finely chopped onion

1/3 c. Worcestershire Sauce

5 t. black pepper

Baja Style

5 t. salt

2 T. coriander

1 1/2 t. ground ginger

1 1/2 t. ground cumin

5 t. black pepper

1 1/2 t. chili powder

1 1/2 t. turmeric

Oriental Style

5 t. salt

1 large minced onion

1 c. brown sugar

1 1/4 c. red wine

5 t. black pepper

5 cloves pressed garlic

1/3 c. soy sauce

1 1/2 c. pineapple juice

Taj Mahal

5 t. salt

5 t. black pepper

1/2 t. cinnamon

1/4 t. ground cloves

1/2 t. cumin

3 t. curry powder

4 cloves pressed garlic

3 t. ground ginger

1 c cream sherry

Colorado Pioneer

6 t. salt

2 c. beef bouillon (2 c. water+4 cubes)

20 t. black pepper

Valley Style

1 1/2 c. soy sauce

5 T Worcestershire sauce

5 t. black pepper

4 cloves pressed garlic

1/4 t. powdered onion (hot or mild)

1 t. nutmeg

1 t. ginger

10 t. liquid smoke

5 t. crushed peppers, dried

Barbecue Jerky (from class)

5 lbs sliced meat	1 c. soy sauce	1 c. hickory-smoke BBQ sauce
1/2c. brown sugar	2 t. liquid smoke	2 t. Tabasco sauce
2 1/2 t black pepper	1 t onion salt	1 t garlic salt

1 t garlic powder

Blend all ingredients. Marinate meat overnight. Place on dehydrator racks. Cook until desired dryness.

Hot DAWG Deer Jerky

1 T. mint sauce	20 shakes Frank's red hot sauce
2 T. Lea & Perrins steak sauce	1 bottle Allegro hot & spicy marinade
2 T. molasses	1/4 c. ground cayenne pepper
1/8 c. garlic salt	1/8 c. onion salt
2 T. seasoned meat tenderizer	1 t. dried mint crushed
20 shakes teriyaki sauce	3 T. McCormick Caribbean jerk seasoning
3 T. brown sugar	1/4 c. white vinegar
20 shakes Worcestershire sauce	

Combine all ingredients in a plastic jug and shake well. Place in fridge overnight and occasionally shake a few more times. Take a deer backstrap and slice into 1/4 inch thick strips going with the grain. A fillet knife works well for this. Place venison in marinade and shake well to coat. Place in fridge overnight. Remove from marinade and place in dehydrator for approximately 5 hours.

Eugene Humpherys' Favorite Recipes

Blend all ingredients. Marinate 1-1/2 lbs. meat overnight. Place on dehydrator racks. Dry until desired dryness (still pliable)

Smoke Garlic

1/2 c. Soy sauce	4 T. Worcestershire	1/2 T. Pepper
1 t. garlic powder	2 T. liquid smoke	1 t. salt

Spicy Garlic

6 t. salt	1 T. Pepper	1 t. Chili powder
2 t. Garlic powder	2T. liquid smoke	1 c. water

Mild Smoke Marinade

4 T. Colgin liquid smoke	3 T. Soy sauce	1/2 c. brown sugar
2 t. Lawry's season salt	2 T. Pepper (or less)	1/2 water

Hot Cajun Marinade

1/2 c. Soy Sauce	1/2 c. Worcestershire	1/2 c. water
1/4 c. brown sugar	2 T. black pepper	1 T. red pepper flakes
2 t. salt	5 drops Hot Cajun pepper sauce	water to cover

Turkey Jerky

1/4 c. Soy Sauce	1 T. fresh lemon juice	1.4 t. garlic powder
1.4 t. pepper	1/8 t. ginger	