



Dehydrating

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Spring planting is around the corner. Careful consideration is given as to what to plant in the garden for later enjoyment. Now is the time to pull out the favorite fall and winter recipes to work out what to plant. We all know the garden often produces more than we can consume fresh. Freezing and Dehydrating are two food preservation methods to extend the garden's bounty.

Dehydrating Food Safety

Dehydrators come in various sizes and have many different features. Some have only heating elements while others have thermostats and fans to circulate the air to more quickly remove the moisture from the product. Be sure to read and follow the manufacturer's instructions. To maintain food safety and quality, several factors must be considered when drying fruits, vegetables and herbs. Keep in mind specific food products often have their own unique recommendations. Drying removes the moisture from food so microorganisms such as bacteria, molds and yeast are less likely to grow; however, dehydrating does not effectively destroy them. There is not a heat treatment to completely destroy the disease-causing organisms, it is critical to use safe food handling practices from the seed tray to the dehydrator tray and storage.

The optimum temperature for drying is about 140°F. The average oven will not heat that low. Anything above will develop a "case hardening" on the outside, trapping moisture in the middle. This in turn leads to mold. Low humidity is also necessary when drying foods. Higher humidity will reduce the effectiveness of the process. Air movement inside the dehydrator will help the drying process.

5/6/2020

Food Selection and Handling

Start with clean kitchen surfaces and dehydrator racks. Use soap and hot water to clean the drying racks. Mix a new solution of ½ teaspoon of household bleach to one quart of water and spray all utensils, containers, trays and kitchen counters. Let the counter air dry. This mixture is generally only effective for about 24 hours. Only mix enough to sanitize the job at hand. Make a fresh batch each time you need to sanitize. If possible, use disposable gloves during the cleaning process.

Harvest fruits and vegetables at the peak of ripeness. Dehydration will not cause under ripe produce to ripen, nor will it improve the quality of over ripe foods. Fruits and vegetables will start to lose their nutritional value as soon as they are picked. Put the produce in clean containers free of additional contamination. Begin the dehydration process as soon after harvesting as possible. The product should be in the dehydrator before the garden knows it's gone. Thoroughly rinse fresh produce to remove traces of dirt, soil amendments, bugs and any other contaminants.

Some fruits dry better than others; apples, apricots, blueberries, cherries, cranberries, figs, grapes, peaches, pears and plums dry very well. Blackberries, cantaloupe and citrus don't dry as well.

Some vegetables dehydrate better than others. Beets, cabbage, carrots, celery, green peas, green peppers, mushrooms, onions, garlic, potatoes, tomatoes and turnips dry well. A word of caution, onions, hot peppers and garlic can produce a strong odor indoors. They may be best suited to process outdoors. Mixing these vegetables with others may also transfer an undesirable flavor.

Pretreatment

Be sure to cut your fruit and vegetables in evenly thin slices or small pieces. Keep the same types of foods on the same tray. This ensures all of the product finishes the drying process at the same time. Pretreatment is a personal choice. Pretreatment can reduce vitamin and flavor loss, browning and deterioration during storage. Common pretreatment methods include Ascorbic Acid (vitamin C) citric acid and citrus juice. Mix one tablespoon of ascorbic acid in a quart of cold water. Dip the fruit in the solution, drain and dehydrate. **Citric Acid** is less effective than Ascorbic Acid. Dissolve one tablespoon in a quart of water. Dip the fruit, let fry and dehydrate. **Citrus Juice** is also less effective than Ascorbic Acid. Dissolve two teaspoons in a quart of water, dip the fruit, dry and dehydrate. Some whole fruits, such as plums, figs, blueberries and grapes have a protective wax coating. It is necessary to use a process called crazing prior to processing. Blanch these whole fruits in boiling water for 3 to 60 seconds, depending on the toughness of the skin.

Test For Dryness

Fruit should be dry and pliable like leather without any pockets of moisture. Vegetables will be hard and brittle. Remove produce as it completes the drying process as some produce dries quicker than others.

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Storage

Condition dried foods before storage. Too much moisture in some pieces can spoil a container with mold. Place the product in a tightly sealed glass jar for a week. Shake or mix the jar once a day to equalize the moisture. If condensation appears on the top of the jar, return to the dehydrator for further processing. Moisture must be kept from dried foods. Freezer containers work well.

Sources

So Easy to Preserve, University of Georgia Cooperative Extension, 2014

The Dehydrator Bible, MacKenzie, Nutt, Mercer, 2009

National Center for Home Food Preservation, <https://nchfp.uga.edu/how/dry.html>

In response to Coronavirus (COVID-19) and recent California Department of Public Health and El Dorado County Health & Human Services guidelines, UCCE Central Sierra will cancel all El Dorado and Amador County Master Food Preserver public events and classes. This cancellation remains in effect through May 31, and will be updated as public health guidelines change.

We realize our public classes are valued by County residents and we especially appreciate your continued support and understanding during this public health challenge. We will attempt to offer our cancelled classes and events at a future time if feasible.

Stay safe and follow recommended health and sanitation practices in the coming weeks.

UCCE Master Food Preservers are available to answer home food preservation questions; leave a message at (530) 621-5506 or email us at edmf@ucanr.edu. For more information about our program and events, visit our website at <http://ucanr.edu/edmf>. Sign up to receive our ENewsletter at <http://ucanr.org/mfpnews/>. Find us on Facebook, too (UCCE Master Food Preservers of El Dorado County)!