Conditioning Dried Foods

Conditioning is a process applied to recently dried food to ensure that any residual moisture left in any pieces is equalized amongst all pieces in the batch.

It is also a safety-check that the food has been properly dried.

The Conditioning Process

After drying, and cooling food, do not immediately store it away long-term and forget about it. You want to verify that it really is properly dried. Food which isn't properly dried could mold in storage.

The conditioning process is where you put the newly dried (and cooled) food stuffs in a transparent container for a few days and observe it frequently to see if any condensation moisture is forming on the sides of the container. If it does, then the food needs to go back into the dehydrator for further drying.

Conditioning also equalizes any residual moisture that might be left in any of the food pieces. This means that if one piece has a bit too much moisture left in it that might leave it susceptible to mold, the other drier pieces will suck some of that moisture out of it, reducing it to a safe level.

"Conditioning is a wise precaution because it equalizes the moisture content between under- and overdried pieces."

Colorado State Extension says:

"Post-Drying Treatment Conditioning. When drying is complete, some pieces will be moister than others due to their size and placement during drying. Conditioning is a process used to evenly distribute the minimal residual moisture throughout all pieces. This reduces the chance of spoilage, especially from mold. To condition, place cooled, dried fruit loosely in large plastic or glass containers, about two-thirds full… Stir or shake containers daily to separate pieces. If beads of moisture form inside, return food to drying trays for further drying, then repeat the conditioning step."

So Easy to Preserve feels that conditioning is particularly important with dried fruits, but that the process may not be necessary with some dried vegetables. It recommends a 7-to-10-day conditioning period:

"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.
After conditioning, package and store the fruit as described above. Vegetables should be dried until they are brittle or "crisp." Some vegetables actually shatter if hit with a hammer. At this stage, they should contain about 10 percent moisture. Because they are so dry, they do not need conditioning like fruits."

The University of Missouri Extension Service recommends a 10-to-14-day conditioning period:
"Conditioning is the process used to equalize, or evenly distribute, moisture left in the food after drying. It is usually done to fruits, herbs and seeds to improve storage, because it decreases the chance of spoilage, especially by molds. To condition a food, follow these steps:

- Cool foods on trays.
- Pour into a large, nonporous container of food-grade material; fill to about two-thirds full.
- Cover container and shake container or stir contents at least once a day for 10–14 days.
- Check for condensation on the lid and any signs of spoilage. If condensation occurs, return food to the dryer to finish the product. Recondition after it is dry.
- Cool thoroughly before packaging."

It can be a good idea to slap some kind of temporary label even on a conditioning container. Life can be a busy place, especially during seasons when produce is pouring in, and days can easily slide into weeks into months, and after a while you may forget whether it is dried sweet or hot green peppers sitting in a jar.

Tightly sealed or loosely sealed conditioning container
Notice above that **So Easy to Preserve, and Missouri**, talk about "sealing" the container and "covering it". Both imply a tightly sealed container, because they describe part of the procedure being watching for condensation that forms and is trapped within the container.
On the other hand, **Colorado and *Putting Food By*** talk about loose covering, or even no covering:
"Lightly cover and store in a warm, dry, well-ventilated place for four to 10 days."

With *Putting Food By*, it's not clear if the containers are covered at all:
"Cool the food on the trays, then pour it all into a large, open, nonporous container that's not aluminum—a big crock, enameled, or graniteware canner, even a washtub lined first with food-grade plastic and then with clean sheeting (washtubs are generally galvanized). Have the containers raised on trestles or tables, and in a warm, dry, airy, well-screened, animal-proof room." [6]
We don't know why there is a difference of opinion on this. But if you live in an area of high humidity, you will probably opt for a actual, fully sealed container to do your conditioning in, otherwise your dehydrated food will run the risk of re-absorbing moisture from the air.

Adding to existing dried
If you are drying the same food item in successive batches, one rapidly following the other, it's okay to add to the conditioning jar or container as you go:

> "Freshly dried fruit can be added to the conditioning batch within the first five days. Conditioning time will need to be lengthened to accommodate the additional food."

***Putting Food** By* concurs:

> "It's OK to add freshly dried food to the conditioning batch, but naturally not if the food in a container is almost ready to store."

But it's recommended not to add this year's newly dried food to a large existing jar of dried food from last year. Even dried foods need to be cycled, so you want to be using up a jar of previous years' dried foods first. So, the new stuff should go into a new jar, and the old jar put in front of it on the shelf so that it goes used first.
"Use your supply of dehydrated food on a first in, first out basis. Put new containers to the rear of your storage shelves and move older ones forward."

When you label your jars, it's a good idea to include both the name of the item, and the date. The Excalibur manual suggests that some people may even want to put on the label what the produce weighed before drying.

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