

# A Solar Dehydrator

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**Date :** July 5, 2017



**Image:** Solar dehydrator built from left over bits and pieces from our house construction.

The summer solstice is past and summer's finally here. The weather has become typically hot and dry, with no rain in sight for weeks. It's time to start harvesting the garden before everything dries up and dies. As part of that process, we decided to build a solar dehydrator.

There are some beautiful designs for solar dehydrator's available on the web, but in the end, we decided to build one that fit our pocket book, e.g., free. That means that we designed our dehydrator to make use of left over materials that we had around the cabin.

Essentially, a solar dehydrator is just a square box filled with drying racks attached to a solar collector. The solar collector needs, at a minimum, a clear panel for sunlight to pass through, and a black surface that can be warmed. The whole dehydrator is vented so that cold air is drawn in through the bottom of the solar collector, warmed in the collector, thus causing it to rise, and then passed through the drying racks and out a vent hole in the top of the box. Pretty simple. The size of the unit can be quite variable, although the longer the solar collector the better. We placed our solar collector at 45°, which is a compromise between our spring and summer solar angles for our latitude. The solar collector can be filled with mesh or black painted pop cans for increased solar absorption – we haven't done this yet, and are still experimenting.



**Image:** Side view of our solar collector.

Our strawberries are bearing faster than we can eat them, and have become a good test for the

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solar dehydrator. I've sliced the strawberries into thin slices, and laid them out on the dehydrator racks.



**Image:** Solar collector showing racks with strawberries.



**Image:** Nearly dried strawberries.

The smell that is coming from the top vent of the dehydrator is absolutely gastronomic. I've put quite a load of strawberries in, and although it has taken a couple of days, it seems that they will dry quite nicely. Solar drying is not as fast as using a dryer with an electrical heater unit, but it doesn't take any power, and isn't draining our batteries (which we are happily using to run a small

cooler to keep our perishables from perishing).