

Can you cook chili in a refrigerator?

By Kevin Groenhagen

Last year I decided I wanted to try to make a solar oven. I had seen one for sale in *Mother Earth News* for over \$200, and thought it would be a fun summer project.

Before I could head to the hardware store to buy materials for the oven, I noticed my neighbors had put their old mini fridge out on the curb. Since it was about the size of the oven I wanted to make, I thought I might be able to convert it into an oven.

I removed the plastic shelving inside, cut a square hole in the door, and replaced the plastic egg compartment unit on the door with plexiglass. I then made a wooden box big enough to hold a Dutch oven, painted it with flat black paint, placed it in the fridge, and surrounded the box with pieces of cardboard for insulation.

The next step was to make a reflector for the oven. I had an old Styrofoam cooler in the garage. I cut a square hole in the bottom, lined the inside with reflective foil, and attached the reflector to the oven with Velcro strips.

Now it was time to test the oven. I filled a Dutch oven with water and placed it in the solar oven with an oven thermometer. Within two hours, the temperature had reached the boiling point. Thus far, the hottest the oven has reached is 280° F. Since a typical slow cooker (crock pot) operates below the boiling point on the high setting, anything that can be cooked in an electric slow cooker can be cooked in my solar oven.

With just a little work, I convert-

ed two items designed to keep food cold—and which were headed to a landfill—into an oven that cooks without the need for electricity.

A Solar Dehydrator

I grew some Thai chile peppers in my garden last year to make Thai curry paste (panang). I read that a solar oven could also dehydrate food, so I threw a handful of chiles into the oven. Sure enough, at the end of the afternoon, I had dried chiles. However, at the higher temperature, I was afraid that the oven had also cooked them, and would cook anything else that I wanted to dehydrate.

I sat down at the computer and came up with a design for a solar dehydrator that would reach a lower temperature and circulate air. I'm not exactly Bob Vila, so I e-mailed the plans to my father in Illinois. He had built his own solar heater for our home during the late 1970s, so I thought he would enjoy working on this project.

He built the dehydrator and sent it to me to test out. After waiting a few days for a sunny day, I put zucchini slices on the trays to see how it would work. I tried a chopped onion a few days later.



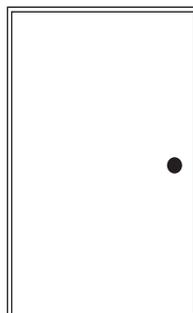
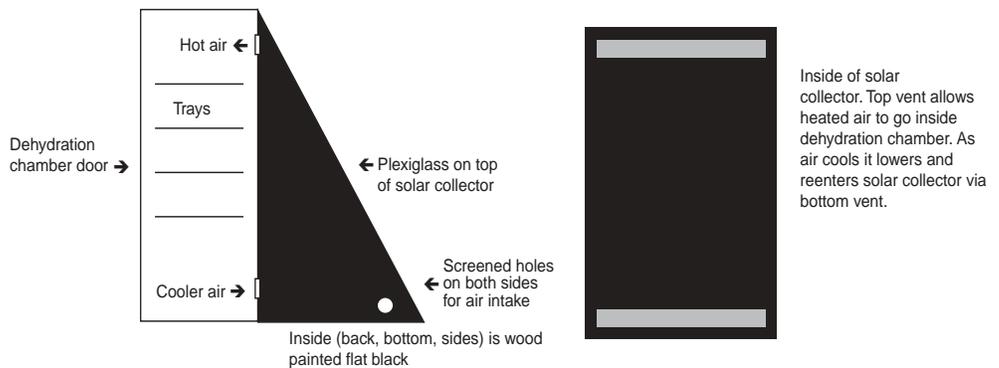
The author's solar oven

Remarkably, the solar dehydrator worked as well as my electric dehydrator. I'm currently trying to decide if I should add a solar fan to speed up the drying process.

I thought a few readers might like to try working on solar ovens and/or solar dehydrators with their grandchildren over the summer. I would

enjoy seeing what you came up with. Also, I would be interested in hearing from anyone who has any ideas on how to make the oven and dehydrator track the sun on their. Right now, I have to manually move them every other hour or so. Photos and suggestions can be e-mailed to kevin@seniormonthly.net.

SOLAR DEHYDRATOR



Dehydration chamber would have a door in order to place trays and fruit in the chamber. Chamber door would have to be sealed to limit the leakage of heat. Chamber probably wouldn't need to be any taller than a foot and a half.



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