

They may be old but they work—a solar food dryer

By Jj

(Photos by Eric Large)

Our rural canyon is home to several aging solar food dehydrators. Whether the original builders had plans, worked from their imaginations, or copied the first design of some original backwoods engineer I don't know.

I do know these rough-and-ready dehydrators, strange as they look, do dry food, without cost from June (and the first greens & berries) through the fall harvest.

It is possible to knock together a perfectly functional dehydrator from a photo of one, but for those less adventurous carpenters here are plans for a model similar to those dotting my landscape.

Wood cut list for dehydrator.

From $\frac{3}{4}$ " stock—12-23" strips for tray supports
 2-2x4's x 70" for back legs
 2-2x4's x 68" for front legs
 1-2x4 x 26 $\frac{1}{2}$ " door support

From $\frac{3}{4}$ " (good one side) plywood

Per illustration #1:

32" x 30" dehydrator top
 24" x 30" dehydrator bottom
 2-24" x 30"/32" dehydrator sides

Per illustration #2:

30" x 32" dehydrator door
 30" x 30" dehydrator front

Wood cut list for collector.

1-1 x 6 x 30" ripped to
 1 x 3 collector top end
 (save "scrap" 1 x 2 $\frac{3}{4}$ x 30)
 1-1 x 8 x 30" collector bottom end

Per illustration #2:

2-6" x 67" collector sides
 6" x 31 $\frac{1}{2}$ " collector top from
 particle board or thinner plywood



Author with dehydrator that came with her house.

58 $\frac{1}{2}$ " x 31 $\frac{1}{2}$ " collector bottom,
 painted flat black on top side
 Glass: 60" x 31 $\frac{1}{2}$ " (preferably
 double strength)

Wood cut list for trays

Using $\frac{3}{4}$ " stock: 12-23" lengths,
 and 12-23 $\frac{1}{2}$ " lengths

Hardware

nails or screws
 24 corner brackets
 wood glue
 30" x 12" screening
 2 hooks/eyes
 2 hinges
 staples
 2 $\frac{1}{2}$ yards of nylon net

Dehydrator assembly

1. Nail & glue tray supports to inside (rough side) of dehydrator sides on indicated marks (illustration #1).

2. Nail or screw and glue legs to outside (good side) of dehydrator sides with 70" (back) legs on the 32" edge

and 68" (front) legs on the 30" edge. Do not allow legs to extend above the top of the plywood.

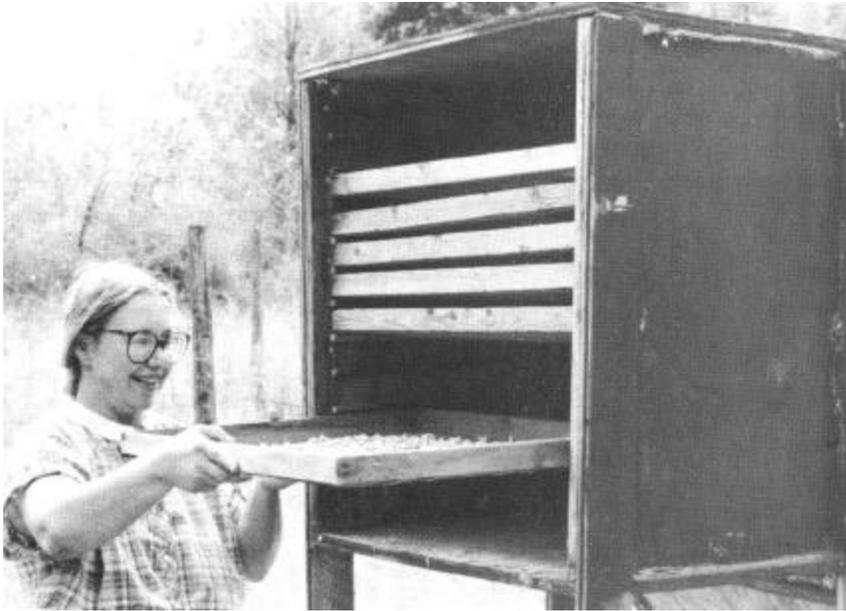
3. Attach bottom, fitting around legs. Glue and screw or nail through bottom up into sides. Position door support between back legs, with support extending $\frac{3}{4}$ " to the back of the dehydrator). Nail or screw through legs into door support.

4. Attach front. Glue and, screw or nail, positioning top of front flush with top of front legs.

5. Attach top. Nail or screw and glue, carefully, into top of sides & front, making sure top is centered and overlap is to the front.

6. Staple screen to inside front over holes.

7. Attach hinges to door, then to door support. Make sure screws are not too long for the door. You may need to get shorter screws for the door side of hinge and may want to use longer screws into the door support. Attach hooks to back legs and eyes to side of door.



Author removing dryer tray.

8. Place dehydrator in a permanent location in full sun if possible.

Collector assembly

1. Attach bottom and top ends between sides, **with bottom extending above** the sides and top flush with the sides. Attach collector top over top end. There will be a gap at the bottom of the top end; staple screen over holes in sides.

2. Attach bottom of collector top over top end. There will be a gap at the bottom of the top end.

3. Screw collector to dehydrator body, aligning gap at the top with screened holes. Make sure the collector fits snugly to the dehydrator.

4. Run a bead of silicone seal or other caulk along top of collector sides. Place glass in position; nail "scrap" to collector top extending down over glass. Silicone seal above & below "scrap"; at bottom where glass meets bottom stop and where collector and dehydrator meet.

Tray assembly

1. Glue and tack sides to front and back. Use a carpenter's square or carefully measure diagonals to ensure the trays are square! Screw in corner brackets, checking frequently to make sure trays remain square.

2. Staple on netting. Δ

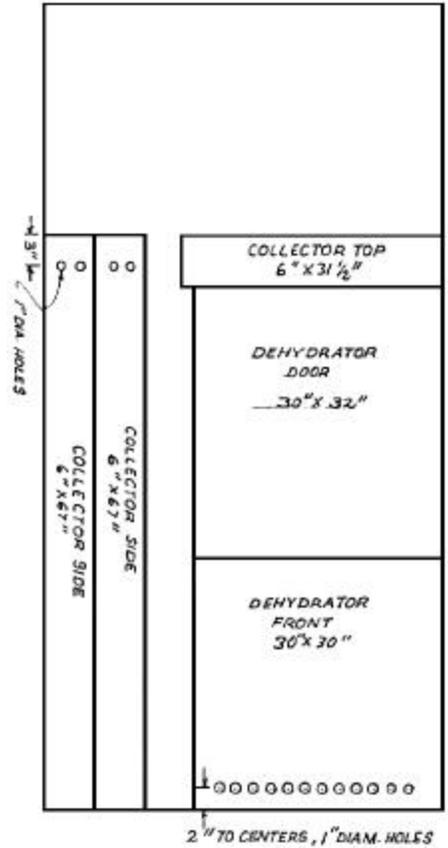


Illustration #2

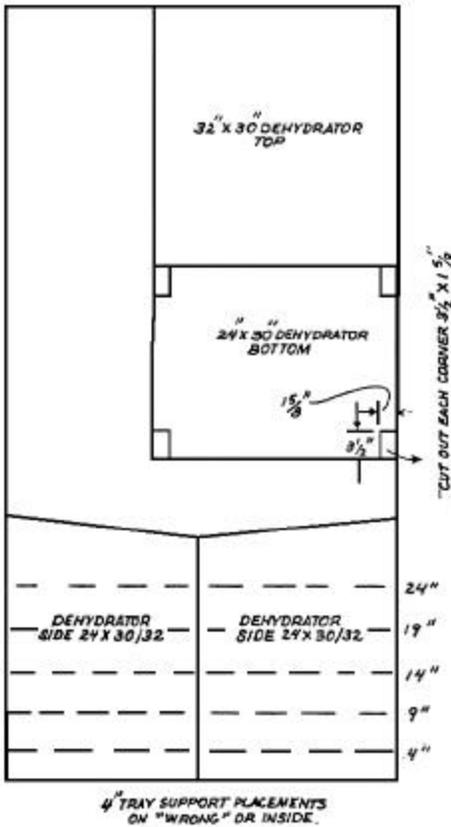


Illustration #1

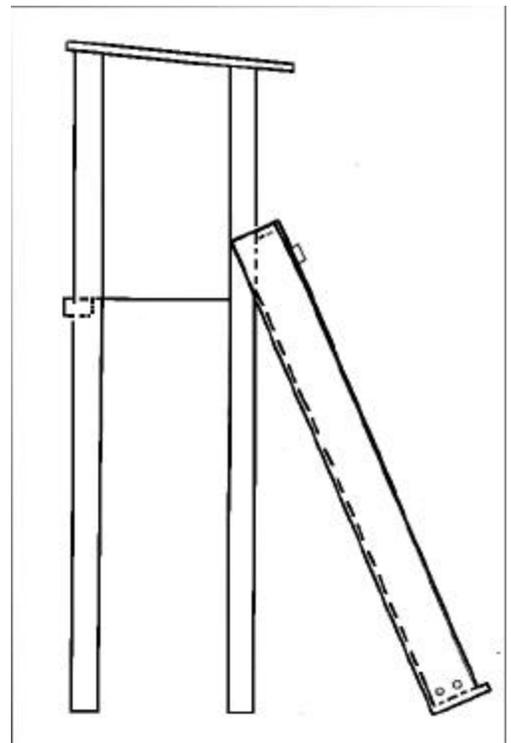


Illustration #3. Side view.