

Build a Solar Wood Dryer

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Dry firewood provides more heat from less wood. It starts easier and burns cleaner, depositing less creosote in chimneys and releasing less smoke into the air.

Firewood normally takes from six to eight months to dry. You can cut drying time in half by building a solar wood dryer for about \$30 in materials. With a solar dryer, firewood you cut and split during the summer will be thoroughly dry for the heating season.

Building the Solar Wood Dryer

These plans are for a low-cost solar wood dryer that holds one cord of wood. (A cord is a stack measuring 4 feet by 4 feet by 8 feet.) After the wood is dry, you can move it to a permanent storage area or use the dryer as a storage area.

Materials

- 2x4 lumber:
 - six 8-foot lengths
 - two 6-foot lengths
 - four 4-foot 6-inch lengths
 - two 4-foot 9-inch lengths
- 1/2 pound tenpenny nails
- 1 box heavy duty staples
- 155 square feet of 4-mil clear plastic.

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Consider using UV-inhibited polyethylene, which lasts longer. Another option is corrugated plastic roofing material that is treated to withstand the sun's ultraviolet rays. It's more expensive, but lasts longer.

Tools

- hammer
- tape measure
- knife
- saw
- staple gun

Construction

Use the illustrations as a guide to build the solar wood dryer. Keep the following in mind:

- The south side is shorter and the north side is taller.

- Nail the lower set of horizontal 2x4s at least 6 inches above ground to allow air to flow through the dryer.

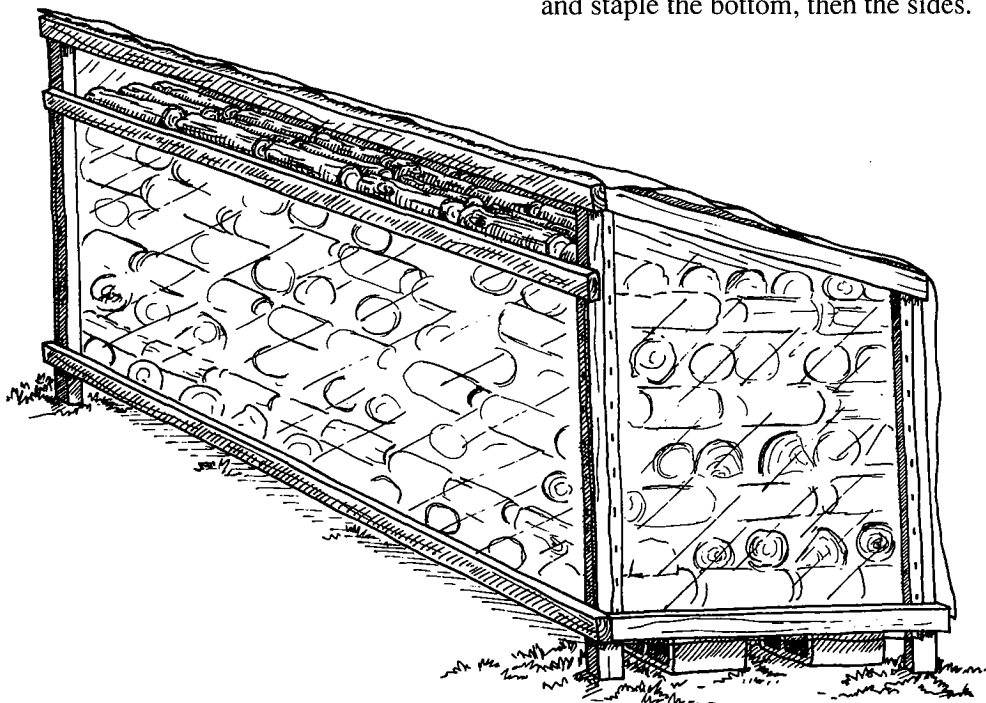
- Leave an air vent at the top of the north face.

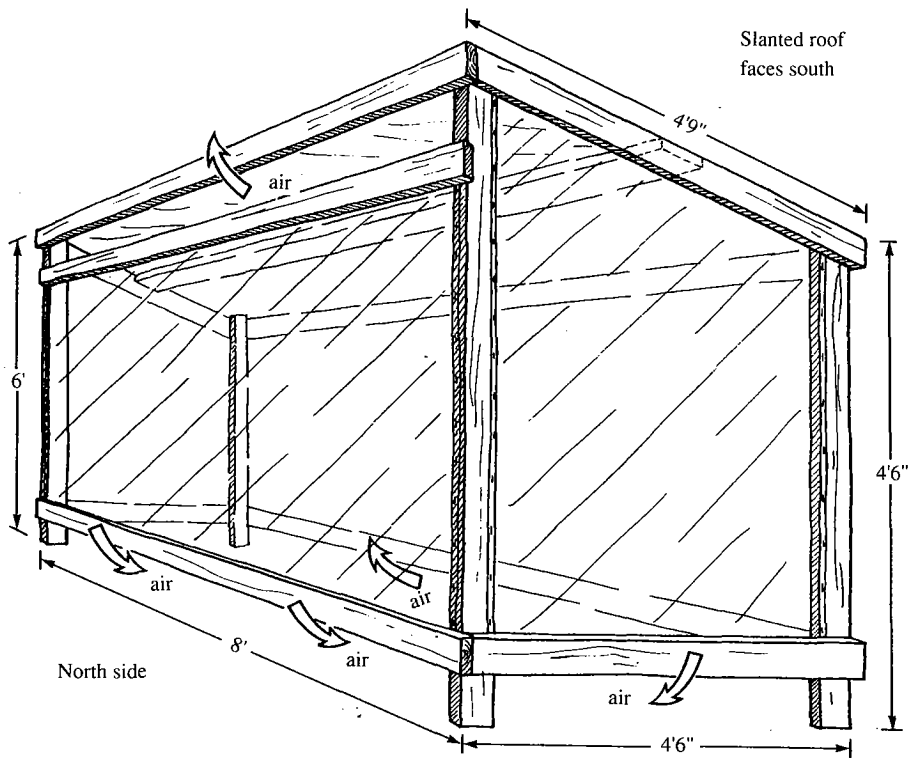
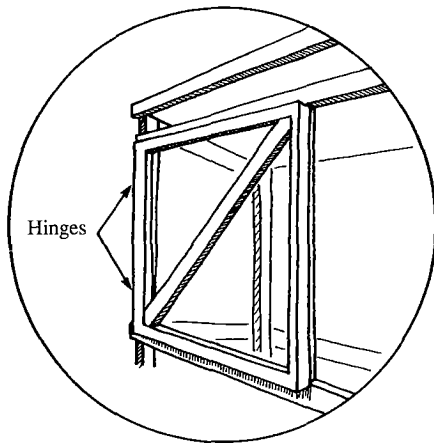
- Place one 8-foot 2x4 in the middle of the slanted roof. It will discourage rainwater from collecting in puddles.

- Cut the plastic slanted roof and south face as one piece.

- Cut all plastic faces 2 inches taller and wider than to size. Use the slack to double the plastic at the edges where you staple the plastic to the 2x4s.

- Staple the plastic every 3 to 6 inches. Start with the top of each face. Next, gently stretch the plastic and staple the bottom, then the sides.





You have two options for attaching plastic on the north side depending on whether you want an opening or not:

- If you're going to use the solar wood dryer only to dry wood that you will store elsewhere, you can staple the plastic around all sides. Be sure you don't cover the air vent at the top.
- If you're going to use the dryer to store the firewood after it's dry, easy access is important.

You can make a 4 foot by 4 foot door frame from 1x2 lumber and hinge it to either of the 6-foot vertical posts. Use a diagonal cross-brace to strengthen the door frame. Attach the bottom of the cross-brace to the hinged side of the door frame. Staple separate pieces of plastic to the door frame and to the remainder of the dryer's north face.

For even easier access, you could let the plastic hang loose from the long sides of the frame. Weight it down by

stapling it to 2x2s. Consider using two 4-foot-wide sheets of plastic because they are easier to handle than one 8-foot-wide sheet.

Using the Solar Wood Dryer

- Orient the slanted roof toward the sun and the prevailing winds. Due south is best but up to 30° east or west of south works, too.
- Split the wood before you put it in the dryer.
- Keep the wood off the ground to increase air flow, accelerate drying, and discourage insects. You can do this by stacking it on pallets, cinder blocks, 2x2s, or 2x4s.
- Avoid unnecessary wear on the plastic and prevent condensation from rewetting the wood by making sure

the wood doesn't touch the plastic sides and roof.

- Replace the plastic periodically because it deteriorates when exposed to sunlight. Inspect it before the rainy season.

As wood dries, obvious cracks or checks develop at the ends. Cracks that extend to the center indicate that the wood has been thoroughly dried. When you knock pieces together, dry wood makes a sharp, cracking sound.

Your solar dryer should last for many seasons and provide a quick drying location for unseasoned wood. Dry wood from your solar dryer will produce more heat from less wood.



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