Building a Soil Sifter

This easy building project--a soil sifter--is a great way to build confidence using power tools.

By Rick Gush

Photos by Rhoda Peacher

Materials List:

QuantityItem2 8-foot 2x4s
1 piece 3/4-inch wire mesh (18x24)
30 U-shaped nails about 3/4-inch long8 2 1/2-inch screws (Phillips head)

ToolsCircular sawJig sawElectric drill with 1/8-inch or smaller drill bit, screwdriving headHammerNippersWood chiselClampsCarpenter's square Pencil and tape measureSafety goggles and ear plugs/muffsOptional: sand-paper, masking tape, paint

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TopThis project is a great way to try out a few basic power tools and practice building your confidence along with building a soil sifter.

The soil sifter is a useful, multipurpose tool; from sifting compost to sifting rocks from soil to drying fruits and vegetables, you'll find many uses for it around the farm.

This project is relatively simple, and a good one for beginning carpenters wanting to build their skills and confidence.

(Discover some various uses for a soil sifter>>)

Step One
Assemble all the tools and materials you'll need.

This phase may include cutting the wire mesh to size if you can't buy it in the exact dimensions on the materials list.

This step also includes determining the exact design you want.

If you want to change the measurements of the project from 36 to 24 inches, now is the time to do so, before you buy materials.

Step Two
You want to end up with two side pieces that measure 2 x 4 x 36 and two cross pieces measuring 2 x 4 x 18.

With a pencil, mark the wood for the straight cuts.

When joining pieces of wood to each other, square, flat surfaces allow the most powerful bond. If one or both of the surfaces to be joined is not flat, the resulting wobble will last forever.

Sloppy markings will result in sloppy cuts and the connection joints will not be as solid as they could be. "Measure twice, cut once" is the rule. Measuring three times is even better!

Step Three

Make the straight cuts with the circular saw. There are two types of straight cuts in the project: The first cuts are short cuts to trim the cross pieces to the correct length.
The second cuts are those short and shallow cuts that will be used to create a notch in the main pieces where the cross pieces can nestle.

The second type of cut is a bit more complicated and requires setting the blade to a precise depth that matches the depth of the notch desired.

First cuts should be made at the edges of the notch; several more passes with the saw can remove more material, leaving only a few sections that will need to be removed with a chisel.

A project of this nature doesn't really require the notches. If using the circular saw and chisel to make the notches isn't something you want to do, go ahead and connect both cross pieces with simple butt connections. Note: Cut the cross pieces to 16 1/2 inches if you're not using the notches.

When using the circular saw, use clamps to hold down the piece of wood to be cut and use two hands on the saw as it makes the cut.

Keeping both hands on the saw serves two purposes:better guidance control andthe safety aspect of keeping both hands firmly attached to the saw.

Having a good mental image of the cut to be performed is essential. It's always a good idea to take one more look at the saw itself to make sure the saw blade is the one you had intended to use, and that the saw angle and depth of cut are correct.

Step Four
Make the curve cuts.

To make the handles, mark one cut, use the jig saw to cut the curve and then use the leftover piece to mark the cut for the other three handles.

Pay attention here because it would be easy to cut a board with two handles that face opposite directions. Sand the handle area to smooth sharp edges.

Step Five
Assemble the wood frame. The four wood pieces are held together by eight screws. Using the electric drill, pre-drill the holes in the long pieces. Pilot holes not only make setting a screw much easier, but they also act to ensure that the screws go nicely into the center of the pieces. The screws here should be set as tightly as possible.

Step Six
Attach the wire mesh with the U-shaped nails. It's a good idea to nail one corner, then another, and then a third before nailing all the sides. Too much quick nailing can result in a piece of mesh that sits crooked on the frame. Not every inch on the mesh needs to be nailed, but the screen should be nailed at least every four inches or so.

Step Seven
Optional: a paint job.

There's something about a nicely painted tool that makes it more fun to use.

Tape the edges of the screen with wide masking tape and cover the remaining large areas, front and back with newspaper. Once everything is masked, the sifter can be painted with one coat of spray paint, perfectly in line with the casual nature of the project.

Using the Soil Sifter

Soil sifters have a variety of uses:Sifting soil to remove rocks. In stony soil, removing rocks can be quite troublesome. A good soil sifter makes this job much easier.

Adding amendments. Mixing soil amendments such as peat moss and mature can be difficult with just a shovel, and the result is often amarbled-fudge effect of improperly mixed soil. A soil sifter does a great job of mixing soil and amendments.

Making potting soil. Make a nice potting soil rich in organic material and free from stones.

Storing fruit and vegetables. This structure can also be used as a well-aerated shelf for proper storing of fruits and vegetables.

Drying fruit and vegetables. A screen in a frame is an excellent device for sun drying fruits and vegetables. Place parboiled fruits or vegetables on the screen, then leave the screen in the sun when weather is hot and dry.

Making gravel. Sometimes a gardener needs a bit of gravel. Instead of buying a dump-truck load, use a soil sifter to produce a small bit of gravel quickly.

About the Author: Rick Gush is a small farmer and writer living in Italy.

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