



# DO IT YOURSELF



## Building a Hole Puncher for the Garden or Field

Tools make your life easier, especially the right tools for the job. Mechanics, electricians, builders and fabricators around the world have long known this little piece of knowledge. The same holds true in agriculture. Gardeners could use a spade instead of a hoe when weeding the garden. Both tools are quite similar in shape, yet the hoe is purpose-built for this type of work. The purpose-built aspect of the tool often results in work being completed more efficiently, saving you time and money.

Gardeners and farmers understand proper plant spacing is necessary to achieve the greatest yields while also decreasing the chances of having insect and disease occurrence. In smaller gardens, using a measuring tape works fine, but in large gardens and in commercial scale fields, a quicker method is needed to space holes for

seeds and transplants. A tool that you might find helpful is a hole puncher. This tool can be used in bare ground as well as in gardens and fields where plastic mulch has been applied. There are, of course, already several businesses and companies in existence that manufacture ready-made hole punchers, however, why purchase when you can easily build one yourself with materials lying about at home or purchased inexpensively from your local hardware store.

The proposed hole puncher is approximately 6 feet wide and about 6.5 feet tall. Despite its large size, this design is relatively light and easy to assemble, as well as repair or replace should it eventually wear out. The following instructions utilize wood as a building material, however other materials such as metal may also be used for a sturdier, albeit heavier tool.

### Building Instructions:

1. The following materials and equipment are needed:

- Two 1"x2"x6' wooden boards
- One 1"x2"x4' wooden board
- One 1"x4"x6' wooden board
- One box of screws
- One electric drill or screwdriver including the correct bit
- One electric or handsaw

Notes:

- We selected white wood boards to reduce the overall weight of the tool.
- We selected exterior flathead wood screws in the size #8x1 $\frac{3}{4}$ " with star drive. Phillips drive is an alternative option.
- We selected a star bit. A Phillips bit is an alternative option. Tip: We recommend pre-drilling the holes to prevent the wood from splitting.
- We took advantage of the free cutting services offered by the local hardware stores.



- One of the 1"x2"x6' wooden boards will become the handle (A) while the other will need to be cut in half to create support braces (B) connecting the handle to the spike bar (C). The cut should be made at a 45-degree angle to ensure the pieces fit seamlessly together. (See Figure 1.)
- The 1"x2"x4' wooden board must be cut into five equal pieces to create the spikes (D). One end of these pieces should be cut in such a way as to create a spike or arrow-like end. (See Figure 1.)

Figure 1

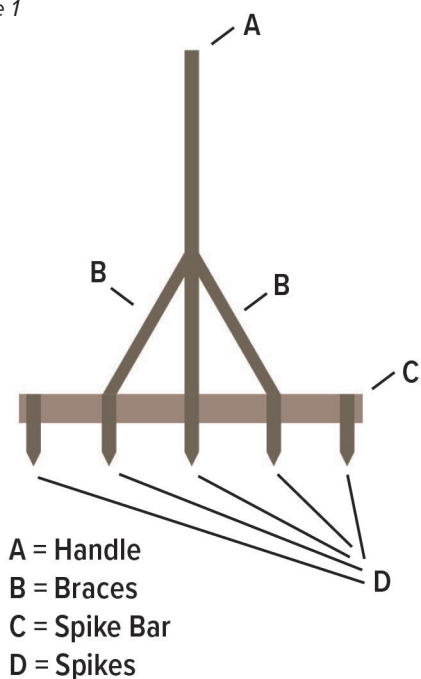
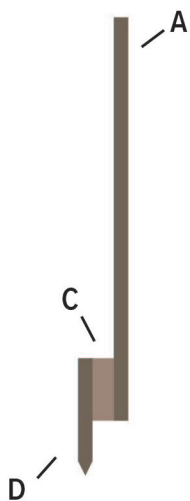


Figure 2

#### SIDE VIEW

A = Handle  
C = Spike Bar  
D = Spikes



- The uncut 1"x2"x6' wooden board (A) serving as the handle will be mounted onto the vertical center line of the 1"x4"x6' wooden board (C) which will be the spike bar. Mount the handle to the spike bar by drilling three screws through one end of the handle into the center of the spike bar. (See Figure 2.)

#### BRACE — HANDLE CONNECTION

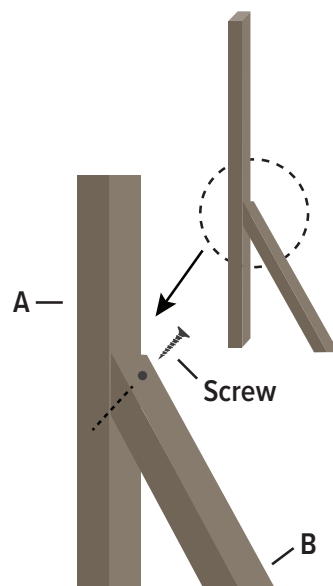


Figure 3

- The support braces (B) from Step 2 can now be attached to the handle (A) and the spike bar (C). The 45-degree ends should fit seamlessly onto the handle. The other ends should be mounted onto the spike bar by using the horizontal centerline of the spike bar. Mount the braces by drilling one screw through the brace into the handle while drilling three screws through the other end of the handle into the spike bar. (See Figures 2 and 3.)



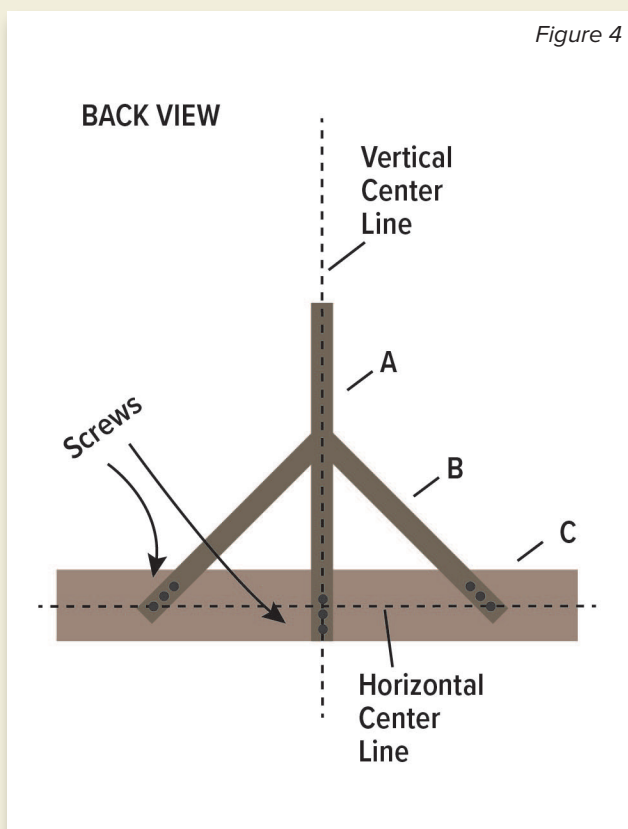


6. The spikes (D) from Step 3 can now be affixed to the spike bar (C). Space the spikes at the desired hole distance. Mount the spikes to the to the spike bar by drilling three screws through each spike into the spike bar. (See Figure 4.)
7. The hole puncher shown in the photo above uses a spacing of approximately 14 inches and five spikes. The table below describes how many spikes are needed to achieve various hole spacings:

Hole Spacing (inches):	Number of Spikes Needed on the Spike Bar:
> 72	1
36 or 72	2
24	3
18	4
14.4	5

To achieve even smaller hole spacing, either make additional spikes or consider mounting the existing spikes even closer together, however, losing equal distribution along the spike board.

Figure 4



### **Authors:**

Alessandro Holzapfel, School of Plant, Environmental and Soil Sciences, Research Associate  
Kathryn Fontenot, School of Plant, Environmental and Soil Sciences, Associate Professor



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Matt Lee, Interim LSU Vice President for Agriculture  
Louisiana State University Agricultural Center  
Louisiana Agricultural Experiment Station  
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