

# Construction Plan for a Home-built Rodent Resistant Single Bin Compost Box

Materials are available at most building supplies stores and will cost about \$115. The box will take about 8 hours to build. The exact dimensions are used wherever possible, but the term “approximately” is used because actual width and thickness dimensions of cedar fencing and rough cedar vary from store to store and board to board.

Ensure that everything is square and nail posts with 2 1/4" galv. ardox nails.

## MATERIALS

### Cedar (rough or fencing)

- 2x4's - 4 @ 42", 1 @ 36", 2 @ 34"
- 2x2's - 2 @ 36", 2 @ approx. 27 1/2"
- 1x6's - 21 @ 36", 4 @ approx. 30"
- 1x4's - 4 @ 36", 2 @ approx. 30", 4 @ approx. 16 7/8", 2 @ approx. 32, 2 @ 27"
- 1x2's - 2 @ approx. 31", 4 @ approx. 16 7/8", 1 @ approx. 30"
- 4' of 2x2 for lid support

### Hardware

- 3 boxes of bell wire insulated staples (5/8"-100/box) or 5/8" poultry staples (where available)
- 1 lb of 2 1/4" galv. spiral nails
- 1/2 lb of 3 1/4" galv. spiral nails
- 40 - 1 1/4" galv. brass or stainless steel screws
- 3" strap hinges

### Wire Mesh

- 19' of 1/4" galv. Wire mesh (hardware cloth 36" wide)

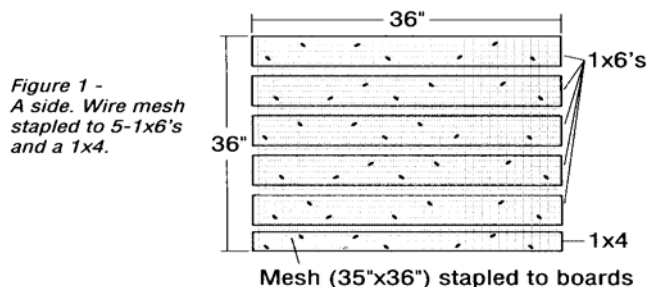
### Tools

- Measuring tape, drill, bit for screws, hammer, tin snips, hand or circular saw, carpenter's square

## CONSTRUCTION

### 1. The Sides and Back

- Cut 15 1x6's 36" long. Cut 3 1x4's 36" long. Cut 3 pieces of wire mesh 35" long. Cut 4-2x4 posts 42" long.
- The two sides and back are identical. Lay 5 1x6's and 1 1x4 on level surface with approximately 1" between each board. Lay piece of wire mesh on top. Ensure that everything is square and staple mesh to boards (approx. 6 staples/board). See Figure 1 below. Repeat for other side and back.



To build the sides lay 2 2x4 posts on level surface 36" apart. Lay mesh and board panels on top with mesh between boards and posts.

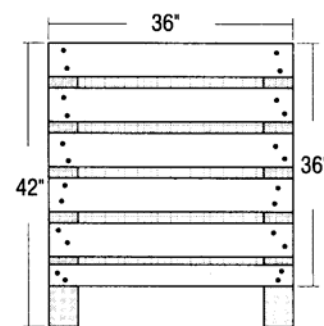


Figure 2 - A side panel nailed to 2 posts with the mesh between boards and posts.

For the back - Stand the 2 sides on a level surface facing each other with the 6" of post up as shown in Figure 3. Ensure that everything is square before nailing the back panel with 3 1/4" galv. ardox nails.

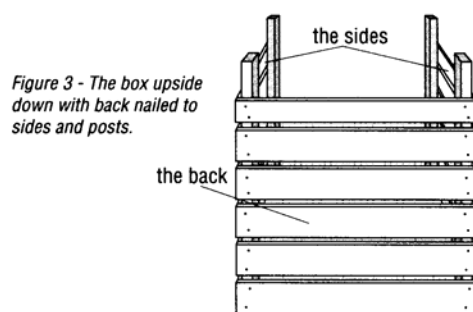


Figure 3 - The box upside down with back nailed to sides and posts.

### 2. Supporting Rails and Bottom

Set 3-sided box on posts. See Figure 4 below.

- **Front cross-piece** - Cut 2x4 36" long, ensure that box is square in all planes, and nail to front posts.
- **2x2 Base Rails** - Cut 2x2's 36" long and nail to inside of posts at base of box. Measure for other 2 2x2's (approx. 27 1/2") and nail to front posts.
- **Top Rails** - Cut 2 2x4's 34" long and nail from back of box to front posts. Note that they will end two inches from the front edge of front posts to allow for sliding front.
- **Vertical Slider Guides** - Measure vertical distance from top of 2x2 base to bottom of 2x4 rail (approx. 31"), cut and nail 1x2 to post 2" back from front of post to guide removable front sections.

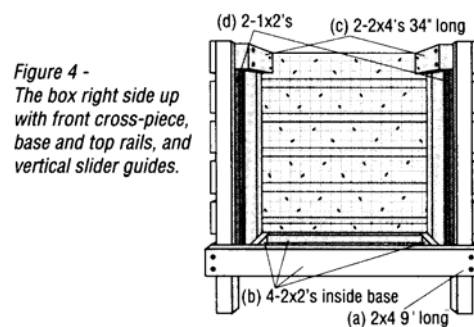
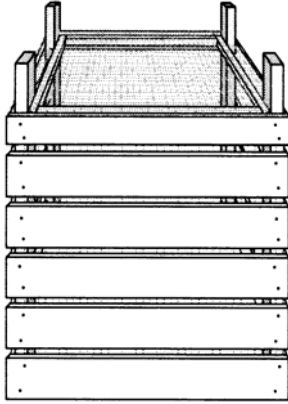


Figure 4 - The box right side up with front cross-piece, base and top rails, and vertical slider guides.

**Bottom** –Turn box upside down. Cut mesh 39” long. Lay mesh with 39” length running from front to back. Cut 2x4” holes in mesh for the posts and staple mesh to base.

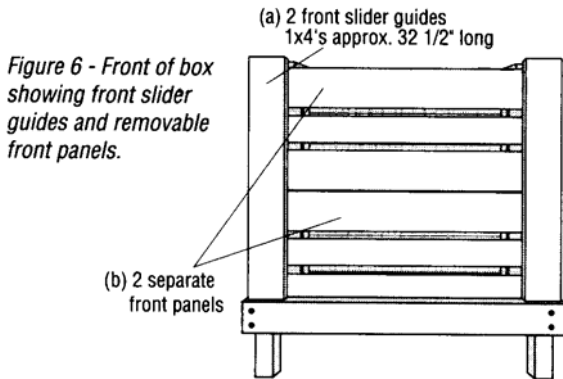
Figure 5 - The bottom of the box with mesh stapled around posts.



### 3. Front

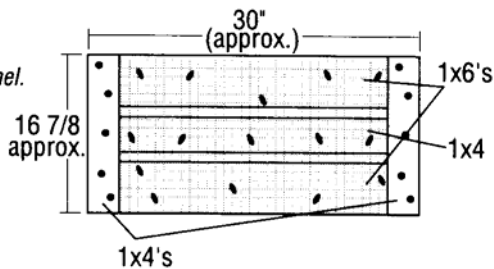
The front is made with two front guides nailed to the front posts and two removable front panels. Each removable panel should be approximately 30” wide and 16 7/8” high and is built to slide in and out of the top of the box.

- (a) **Front Slider Guides** – measure distance between top of base and top of post (approx. 34”) and cut 2 1x4’s to fit. Nail to front posts with 2 1/4” galv. nails.



- (b) **Front Sections** – Measure distance between the inside of the 2 front posts of box (approx. 30 1/4” or 1/4” less than the distance between the posts). Cut 4 1x6’s and 2 1x4’s to fit. Cut mesh to fit each section (2 @ approx. 29”x16”) and staple to 2 1x6’s and 1 1x4. Repeat for other front section. Cut 1x4 bracing to fit (approx. 4 @ 16 7/8”). Screw 1x4 bracing to front sections.

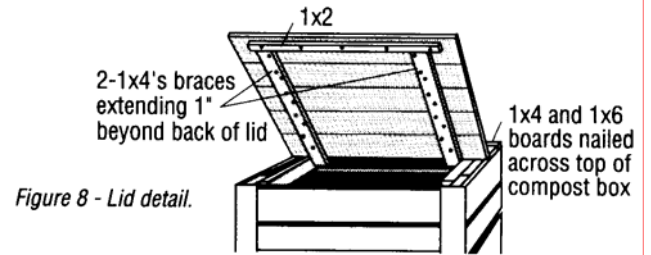
Figure 7 - Detail for one front panel.



### 4. Supporting Rails and Bottom

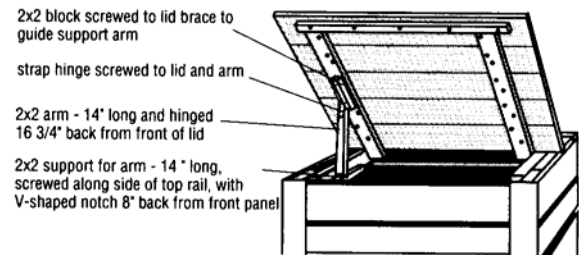
- The top is formed from two sections – 2 boards fixed at the back and a removable lid.

- For the fixed section cut a 1x4 and a 1x6 36” long and nail to the box across the back.
- For the removable section cut 5 1x6’s 36” long and lay them edge to edge across the top of box. They should end up flush with the front of box. If they don’t because of varying widths, add a piece of 1x2 or trim to fit. Lay these 5 boards edge to edge on a flat surface and staple mesh cut to approx. 36”x27”. Cut 2 1x4 braces 27” long and attach to the mesh side with screws. These braces should fit inside the 2x4 rails at top of box and extend approximately 1” out the back of the removable lid to control the lid pivot. Cut a 1x2 approx. 30” long and attach with screws as shown so that it fits directly over top of front panel and inside of front posts.



- Make the lid support with 3 2x2’s (an arm, a support for arm, and a block guide) and a 3” strap hinge. The arm is 14” long and screwed to a strap hinge 16 3/4” from front of lid. When the lid is lifted the arm drops into V-notch on the 2x2 support for arm.

Figure 9 - Lid support detail.



- Attach safety gate hook to lid and front section. Select a location for the composter and dig four holes 6” deep. Set the composter posts in the holes, fill holes with leftover dirt, and the composter is ready for work.

Figure 10 - The completed compost box planted in position and ready for work.

