Build the Best Tomato Cages Ever!

by Radical Geezer
Every year my wife and I plant a variety of tomatoes - and every year we encounter the same problem: finding or making cages big enough and strong enough to contain and support the monsters we tend to grow. Having been unable to find a satisfactory cage, this year I set out to discover a really good solution to the problem. An internet search produced a webpage entitled “The Ultimate Tomato Cage in 5 Simple Steps” which is the work of Mr. Joe Lamp'l, producer and host of the PBS television series “Growing a Greener World”. Mr. Lamp'l's design is, I think, the best solution I've come across...but in the process of replicating his work I wound up making a few crucial modifications that, in my humble opinion, make the ultimate tomato cage even...ummm...ultimater.

The cages are made from cattle panels that are constructed of heavy gauge galvanized wire. This makes them both very sturdy and rustproof so that they will retain their shape and silver-gray color for many, many seasons to come. They are 18 inches square and stand 56 inches tall - enough to tame even the most "indeterminate" tomato beast. When the growing season is over, each cage can be disassembled, nested and stored flat against the side or in the corner of your shed to await the next growing season.

The single biggest drawback to these cages is the initial cost. Cattle panels run about 20 bucks apiece and Mr. Lamp'l's design produced one cage per panel. But the cost is eventually offset by the fact that you can use the cages over and over again for many years to come. The major modification I made was to find a way to construct the cages of the same material, with the same dimensions and same stability - but to save nearly 1/3 the cost - and for people such as my wife and myself who live on a very limited and fixed income this makes a tremendous difference. Mr. Lamp'l's design produces one cage per panel; mine produces one and a half cages per panel - thus the 1/3 reduction in cost.

MATERIALS YOU WILL NEED

Cattle panels: They come in 4 feet wide by 16 feet long panels. Just ask for them at any farm supply store - they will know what you're talking about. Since each panel will make 1 1/2 tomato cages, you'd need four panels to make six cages.

You'll need a pair of bolt cutters or really heavy duty wire cutters to cut the cattle panels to size. Take them with you when you go to buy the panels because, unless you have a nice, long trailer, you'll have to cut the panels to size at the store where you buy them in order to fit them into a truck or van to get them home. (If you don't have bolt cutters they just might have a pair you can use at the yard - call and ask ahead of time).

One eight foot long 2" x 8" pressure treated board for each cage to make the raised bed.

Eight 3" zinc plated screws per cage

Four 1 1/2" screw eyes per cage

Six 6" zip ties and four 8" zip ties per cage

A large hammer or (better) a 2 pound sledge

A drill

A level

Work gloves
Step 1: Make the Raised Beds

NOTE: This step is not absolutely necessary as you can install these cages without raised beds, but raised beds will produce healthier plants and make your garden easier to maintain. More notes on this later.

A. Cut each 2 x 8 board into four 23 1/2 inch pieces.

NOTE: MY tomato garden is a small, fairly square area so I elected to make an individual raised bed for each tomato plant. If you have a longer garden area you could save some lumber by making longer raised beds and placing multiple cages in each row. If you elect to do this, you’ll only need two 23 1/2” boards for each row, but you’ll also need two boards as long as the row you want to make. See Figure 1.

B. Drill pilot holes and assemble each raised bed with two 3” long screws at each corner as shown in Figure 2.

C. Place a screw eye in each corner - about one inch down from the top and one inch in from the corner as shown in Figure 3.

D. Level the area for your raised bed, put the frame in place and fill with dirt.
Figure 1 - For Square Raised Beds
Cut 4 - 2 x 8s
23 1/2"

For Long Raised Beds
Cut 2 - 23 1/2"
Cut 2 - [Length of your row]

Figure 2 - Assemble raised beds
Two 3" zinc coated screws at each butted end

Figure 3 - Position of screw eyes
About 1" down and 1" in from each inside corner
Step 2: Cut the Cattle Panels

As I mentioned earlier, unless you have a flatbed trailer you'll need to take your bolt cutters to your farm supply store and cut your panels on site in order to get them home. This design assumes a standard cattle panel as sold in the U.S. These panels are 16 feet long and 4 feet wide. The wire forms rectangles that are each 6" wide by 8" tall. The last row of rectangles has an additional wire which cuts the last row into two rows of 3" by 8" rectangles as you can see in Figure 4.

If you need to cut the panels where you buy them, PLEASE print out Figures 5, 6 and 7 and take them with you to the farm supply store. Cutting in the wrong place would be a very expensive mistake - once you make the first cut, that panel is YOURS. P.S. Wear gloves!

A. Use the bolt cutters to cut the panel so that you have a panel 3 feet wide by 16 feet long as shown in Figure 5. You won't need the smaller piece, but I cut it into two 8 foot long sections so that I could get it home in my van. Never know what use I may find for it.

B. Cut the remaining panel into three equal sections. This will leave you with three 64" sections - one will consist of six full rows and eight full columns of rectangles while the other two will consist of six full rows and seven full columns with seven 8" tines extending from one end as shown in Figure 6.

C. Cut the last wire off the end of the odd panel so that it is the same as the other two, as in Figure 7.

D. Load it all into your truck/van/whatever and schlep it all home.

Figure 4 - Standard cattle panel
16 feet long, 4 feet wide

Figure 5 - Cut bottom 12" from cattle panel
(bottom section will not be used)

Figure 6 - Cut panel into three equal pieces

Figure 7 - Cut last wire from the different panel so that all three panels are identical
Step 3: Bend the Panels

Each panel will form one half of a tomato cage, so each has to be bent to 90 degrees down the middle of the 36 inch width.

A. Wear gloves. On a flat surface such as a driveway or sidewalk lay a panel flat. Use a fairly heavy board (I had a 4 x 4 laying around) laid at the edge of the center wire. You’re bending to form two sides of the tomato cage - each 18 inches wide and 64 inches tall. Put your weight on the board and bend the wire toward you by hand, working back and forth to get the side most of the way toward the 90 degree angle you need. See Figure 8.

B. Using a two pound sledge (preferable), a heavy hammer or the flat end of a hatchet or axe, pound each wire near the base to a final 90 degrees as in Figure 9. Do this on one side, turn the panel so that the side you just pounded is on the ground rather than in the air and pound the other side until you wind up with a nice, straight angle. See Figure 10. Keep going until you have every panel bent to 90 degrees. Straighten out by hand any bows in the panel or any bent tines.

Figure 8 - Make the initial bend by hand

Figure 9 - Working back and forth near the base with a sledge or heavy hammer, shape to 90 degrees

Figure 10 - A panel shaped to 90 degrees
Step 4: Plant Your Tomatoes and Assemble the Cages

OPTIONAL: I drove a section of rebar into the center of each of my raised beds to tie the main stalks of my tomatoes to as they grow.

A. Plant your tomatoes in the center of each raised bed.

B. Push two bent panels into each bed to form a square around each tomato plant. Push them in far enough so that the first horizontal wire above the tines is even with the dirt in the bed.

C. Secure the corners of the two panels to each other with the smaller zip ties at the top, near the middle and near the bottom (Figure 11). You'll use six of the smaller zip ties for each cage.

D. At each bottom corner, run a larger zip tie through the screw eye and around the bottom of each of the corner wires just above the bottom horizontal wire as in Figure 12.

NOTE: If you didn't make raised beds you should drive a stake near each corner of each bed and secure the bottom corners to the stakes with zip ties or hog rings. This will give you the same stability you would have with the raised bed design.

That's it! At the end of the growing season, cut all the zip ties and pull the panels out of the ground. They can easily be stored in your shed or garage by stacking them along the edge of a wall or standing them in a corner, taking minimal space. Next spring, all you'll need will be a bunch of new zip ties to reassemble your cages and start all over again.

Thanks for taking the time to look my Instructable over - I hope it will be helpful to you and will help you grow fantastic tomatoes for many years to come!

Peace,

Radical Geezer

Figure 11 - Join corners top, middle and near bottom with zip ties

Figure 12 - Join each corner to screw eye as shown