

How to Build a Moveable Tarp Hoop Hut



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1-2. This is the finished product, from the front and from the side, and shown before staking it down. More on that later. There are several “how-to’s” on the web for these hoop huts or tarp huts or Quonset huts as they are sometimes called, but this is the version we have developed! It differs from others in the width—we only make ours 7’ wide x 12’ long, in order to make the sides steep. Goats about 6-18 months old love to climb on the huts, and if several of them do, they crush it! The steep sides tend to thwart most of their climbing! Also, consider the width of any gates through which you will be dragging these huts BEFORE you decide on the size of the frame! (Voice of experience here.....)

Materials:

- 1 12’x16’ heavy tarp—we buy ours in a 2-pack from Sam’s club. Any color, of course. Lowe’s and TSC have them too, but we found them cheaper at Sam’s. Tarps last 1-2 years outdoors in our East Tennessee weather (wind, snow, & sun!)
- 2 4”x4”x12’ pressure-treated lumber for the runners. (you can use timber, but they rot.)
- 2 “landscape timbers” (to cut the cost) or 4”x4”x8’ lumber for the cross pieces.
- 3 “cattle panels” (the cheapest type, which are 4’x16’ long, from TSC or farm supply)
- 8 3/8” carriage bolts, 6-8” long, depending on how deep you notch your wood, with 1 nut and 2 washers per bolt. (we buy these at TSC by the pound, and that is cheaper than stores like Lowes or Home Depot). 1/4” will work, but may not be strong enough, unless you’re adding a diagonal. We also tried only one bolt per corner, not good!
- Fencing staples, 1 1/2” galvanized if available
- Baling wire (14 gauge) or heavy-duty plastic zip ties. The plastic zip ties will break with age and heat, but are quicker and safer.
- 4 t-posts
- Tools—some optional: sawhorses / garbage cans, hammer, chisel, Skilsaw or hand saw, square, drill, wrench, wire cutters, pliers, t-post pounder, work gloves.

3. Putting the lumber up on 4 sawhorses or overturned garbage cans makes it easier to work on the frame.

4. Line up your lumber and make sure you have it squared off. Mark where the beams will cross on both beams.

(Photos on next page)



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5-6. Use a router, or a saw or Skilsaw and chisel to “kerf” out about an inch notch on both ends of the runners only (You can kerf all 8 ends for a smoother, but somewhat weaker joint.)



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7-8. Drill 2 holes through both timbers at each corner. Place 2 carriage bolts with washers UPWARDS through both crossed timbers.



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9-10. Apply washer and nut to top, and tighten snugly with a wrench. (A short, 12-24" diagonal brace can be added to make the frame more rigid when towing). You can be as neat as you want, or put one in quickly in an emergency as shown!



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11-14. Beginning in the corner on one side, line up the short side of a cattle panel as shown, inside the frame, walk to the OTHER end of the cattle panel, pick up and walk the panel into an upside-down "U" shape, tucking the end inside the frame. BE CAREFUL—THEY CAN SPRING BACK AND HIT YOU. Using fence staples, fasten both ends of the now-bent panel securely to the frame. See photos—nestle one edge of the panel snugly into the corner of the runner and crossbeam; Use a scrap of lumber to maintain even spacing off the ground; the edge of the cattle panel towards the middle of the shelter will be caught by the staple holding the edge of the next panel, so no need to staple it now.



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15. Add a second panel, slightly overlapping and **INSIDE** the first panel. See photo—fasten securely. Repeat for the third panel, placing this one **OUTSIDE** the second panel, in about the same position as the first. You should have 3 panels, bowed upwards. It sometimes helps to play with the spacing on the ground next to the framework before bowing and nailing the panels, as the sizes may vary between manufacturers. Purchase the size on sale if it works out cheaper!

16. Go over your structure, adding a plastic tie or bailing wire as shown to several place where the wires cross and the panels overlap. We find at least 5 places necessary for stability. Turn in all sharp ends for safety, for people, goats, and the tarp—you don't want these ends puncturing the tarp and causing a leak.



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17-18. Open your tarp, spread it over the hoop framework, and figure out your spacing . It needs to be tight when you finished, and it is best to stretch it both ways before beginning to fasten it down. Tarp sizes will vary a few inches, even 2 in the same package! Fasten tarp securely to the corner of the frame. You can also fasten to the hoop if desired, but water runs off better if fastened to the frame. You may also want to break or cut off the extra ends of the carriage bolts for safety at this time.



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19. Continue fastening the tarp down along one edge.

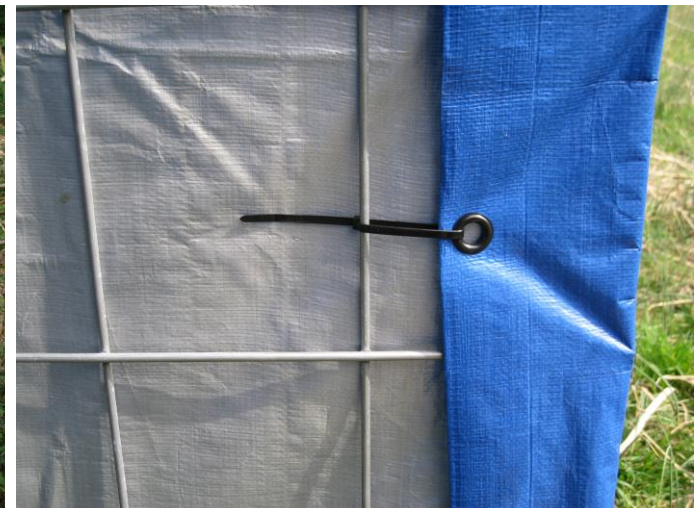


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20-21. Depending on the sizes of your tarp, lumber, and cattle panels, you may have overlap at the other end of the tarp. Here are 2 photos of how we handled that. Once fastened to one long side, adjust and fasten the other long side to the framework **SNUGLY**. Remember, loose tarps flap and tear in the wind! Then fasten tarp snugly to the “open ends” of the hut. You may have to get “creative”, using more than one plastic tie if you are using them, or go diagonal to get a snug fit.



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22. The huts can be easily towed around with a tractor or RTV, with or without a chain. Diagonal bracing on the corners will add more stability. Permanently attaching a tow cable to one or both ends is an option. Be careful not to snag on gates, cut-off stumps or rocks when towing. Instead of cleaning out the floor, you can just move the shelter to a new location. Not shown: We also fasten a scrap piece of hog panel on the inside of the hut for a hayrack---be careful to guard against horns being caught in the panel, and be sure to close the ends (a piece of wire or twine or even plywood works well) to keep the kids from climbing inside the rack and getting trapped.



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23. It is recommended to place 2 diagonal t-posts in the ground at each end, and wire the hut to them, to prevent the wind from “rolling” them! (Voice of experience again.....)

24. You can close off one end partially or completely with plywood in very bad weather, or to make a large kidding jug or sick pen if needed. You can make a gate or even a sub-divider out of a hog panel or an old gate.



We hope you find these instructions, and the huts, useful on your ranch. Each person will find some variation that works better for them, so have fun and “alter as needed”!