

Cedar Garden Trellis

Clean, durable trellis with a ½" table-saw groove that captures black PVC-coated welded wire. Includes an exact 48×60 cut list, a video-matching workflow, and clear math to scale the design to any size.



Watch the Build

Scan to watch the step-by-step on YouTube. The written steps in this plan match the video workflow.

Link: youtu.be/H2hJCFJlouI

At a Glance

- Exact 48" × 60" cut list with centered 1/2" groove
- PVC-coated welded wire visually blends into the garden
- Raised-bed friendly; L- or gusset brackets for install
- Custom-size formulas included for easy adaptation

Materials & Tools

Materials

- (2) 1 x 4 x 8' cedar - stiles (left/right)
- (2) 1 x 4 x 8 cedar — rails (top/bottom) & optional battens
- Black PVC-coated welded wire (14-16 ga, ~2"x4" grid)
- Fasteners: 1" galvanized staples or 1-1/4" exterior screws + 3/4" fender washers
- Exterior wood glue (optional at miters)
- Finish: UV exterior oil or spar urethane
- Sandpaper: 120 → 180 grit
- Optional cedar battens: rip 3/8" x 3/4" to perimeter

Tools

- Miter (chop) saw for crosscuts & 45° miters
- Table saw for centered 1/2" groove (dado or multiple passes)
- Square, tape, pencil; clamps
- Drill/driver; countersink bit
- Stapler (manual/pneumatic) or drill + screws/washers
- Wire cutter/bolt cutters; flush-cut pliers; file
- Random-orbit sander • PPE: gloves, eye/ear protection, push sticks

Cut List – Exact 48" x 60" (1 x 4 cedar)

Part	Qty	Size	Notes
Stiles (left/right)	2	60.0"	Centered groove 1/2" deep
Rails	2	48.0"	Centered groove 1/2" deep
Top Cap (optional)	1	48.0"	1 x 4 cedar; chamfer or roundover
Battens (optional)	4	2 x 60.0", 2 x 48.0"	Rip 3/8" x 3/4" to sandwich mesh
Mesh panel	1	44.25" x 56.25"	PVC-coated welded wire (c = 1/8")

Step-by-Step (video-matching workflow)

1. Wire panel (rough cut): Cut mesh slightly oversize; de-burr sharp ends.
2. Mill & cut lumber: Crosscut stiles and rails to final length; ease edges. Label A (left), B (top), C (right), D (bottom).
3. Cut centered groove: On the back face of each board, cut a 1/2" deep groove. Width = wire diameter + ~1/16". Keep the same face against the fence for all parts.
4. 45° miters: Face up, grooves aligned. Cut miters so the long point equals the finished outside length (stiles = 60", rails = 48").
5. Assemble three sides: Join A-B-C. Pre-drill near ends; glue optional. Check diagonals to make sure they are square.
6. Trim mesh to final size: Cut to 44.25" × 56.25" (or measure groove-to-groove and subtract 1/8" per side). Slide into grooves from the open side, keeping even tension.
7. Add last side (D): Close the frame; pre-drill; glue optional. Verify square again.
8. Reinforce (optional): Staples every 3-4" or screws + 3/4" washers every 6-8" through the back into the mesh line.
9. Sand & finish (optional): 120→180 grit; apply UV exterior oil or spar urethane to the wood. Wipe any drips off mesh.
10. Install: Anchor to raised beds with L-/gusset brackets or use cedar stakes behind stiles. Set plumb & level.

Custom Size Math — Centered Groove Method

Definitions: O_w , O_h = finished outside width/height; B = board width (actual); c = clearance per side ($\approx 1/8''$).

Inside opening:

$$I_w = O_w - 2B$$

$$I_h = O_h - 2B$$

Mesh final cut size:

$$\text{MeshW} = O_w - B - 2c$$

$$\text{MeshH} = O_h - B - 2c$$

Miter long-point lengths:

$$\text{Rails} = O_w$$

$$\text{Stiles} = O_h$$

Build tip: after assembling three sides, measure groove-to-groove and cut the mesh to that number minus $1/8''$ per side—most fool-proof.

Worked Example — Our 48" × 60"

- B (1×4 cedar actual) = 3.5", $c = 1/8''$
 - **Inside opening:** $I_w = 48 - 7 = 41''$ · $I_h = 60 - 7 = 53''$
 - **Mesh final size:** $\text{MeshW} = 48 - 3.5 - 0.25 = 44.25''$ · $\text{MeshH} = 60 - 3.5 - 0.25 = 56.25''$
 - **Miters (long-point):** Rails = 48" · Stiles = 60"
- Alternate back-rabbet method (optional)

Tips

- Black PVC mesh visually disappears and is gentle on ties; $\sim 2'' \times 4''$ grid works well for tomatoes/cucumbers.
- For panels wider than $\sim 48''$, add a center stile or use thicker stock for stiffness.
- Label boards and keep the same face against the fence for grooves and miters—grooves will line up perfectly.

Safety

- Pre-drill near miter tips to prevent splitting; clamp assemblies and check for square.
- Use push sticks/featherboards at the table saw. Wear eye/ear protection.
- Gloves for mesh cutting; file sharp ends; keep fingers clear when stapling.