GA-014 Pea-twine harp panel

Provide many light vertical climbing strings on a removable flat perimeter frame.

Controlling dimensions: US inches and feet. Metric equivalents are references. Original editorial design; no physical build, animal trial or load certification is claimed.

Before marking and cutting

Measure the stated stock sections before cutting. Use the cut-list geometry, not scale measurements from the drawing.

US inch dimensions control; millimeter values are rounded conversions. Ordinary cut target ±1/16 in (1.6 mm); fit commercial accessories before boring attachment holes.

Use limits

Original bounded garden component, not an occupied structure.

No human standing, sitting, climbing, lifting or fall protection use. No stated safe working load.

Geometry and fastener quantities are editorially checked; no prototype build, wind test or crop trial is claimed.

Materials and finished cuts

Part	Qty	Size to cut	Material and detail
P01 Uprights	2	60 × 1 1/2 × 1 1/2 in 1524 × 38.1 × 38.1 mm	2 × 2 in board sound untreated wood
P02 Top and bottom rails	2	36 × 2 1/2 × 3/4 in 914.4 × 63.5 × 19.05 mm	1 × 3 in board sound untreated cedar or other durable untreated wood

Hardware and consumables

8 #10 × 2-1/2 in screws, 2 per rail end

About 55 ft (16.76 m) soft garden twine

2 separately specified anchor posts and 4 removable soft ties

Tools

Tape measure and steel rule; Pencil, square and clamps; Saw suited to the stated stock; eye and hearing protection; Drill/driver, countersink and bits matched to fasteners; Sandpaper and edge file; gloves when handling cut mesh

Primary context and design record

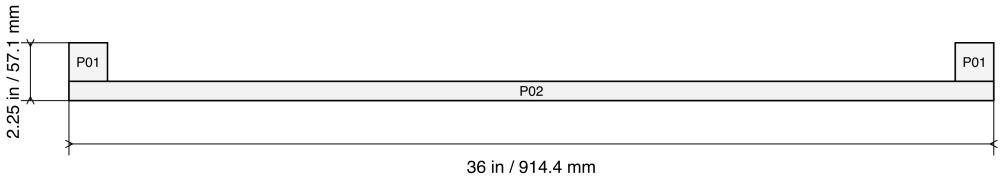
Context references; not design endorsements or certifications.

E04 · Trellises and cages to support garden vegetables · University of Minnesota Extension · https://extension.umn.edu/garden-and-home/yard-and-garden/gardening-in-minnesota/trellises-and-cages

Assembly and first checks

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PLAN — looking down; rear at top; controlling dimensions in inches



Part IDs refer to the finished cut list. Shapes are not load-rated. Read assembly before cutting.
Notches, holes, fittings and operating angles: see numbered steps and geometric annotations.
Original editorial draft • B/W vector • not physically built or tested • no implied Extension endorsement

01 Plan the pea-twine harp panel for this result: Provide many light vertical climbing strings on a removable flat perimeter frame. Confirm the design reference before cutting: Ten climbing lines at 3 in pitch; no sharp hole edges. In the drawings x runs left to right, y runs front to rear and z runs upward.

02 Verify the required stock before laying out these parts: 1 × 3 in board: actual 0.75 × 2.5 in (19.05 × 63.5 mm); 2 × 2 in board: actual 1.5 × 1.5 in (38.1 × 38.1 mm). Reject split or twisted wood and unknown salvage; thinner stock requires recalculating the joints, not simply using the listed lengths.

03 Cut and label the finished parts: 2 Uprights 60 × 1.5 × 1.5 in (1524 × 38.1 × 38.1 mm), mark P01; 2 Top and bottom rails 36 × 2.5 × 0.75 in (914.4 × 63.5 × 19.05 mm), mark P02. Keep saw kerf outside each finished line. Rip only where the finished width is narrower than the actual stock; use a suitable guide and target ±1/16 in (1.6 mm) for ordinary cuts. Dowel triples mean length × diameter × diameter, not square dowel stock.

04 Set uprights at 36 in outside width. Mark the lower rail bottom at z = 6 in and upper rail bottom at z = 57-1/2 in.

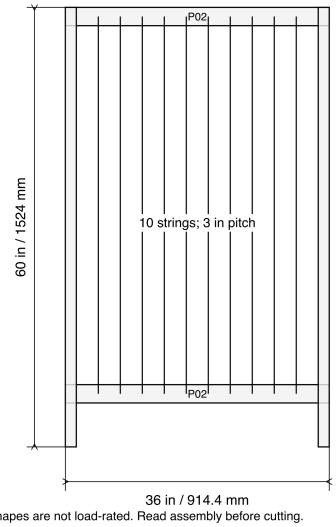
05 Clamp rails to the front of the posts. Use two 2-1/2 in screws per end, at z offsets 3/4 and 1-3/4 in within each rail.

06 Check both frame diagonals and adjust before tightening. Keep post faces parallel so strings lie in one plane.

Complete the assembly

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FRONT — transparent assembly projection from y = 0; controlling dimensions in inches



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07 Mark ten string holes along both rails at x = 4-1/2, 7-1/2, 10-1/2, 13-1/2, 16-1/2, 19-1/2, 22-1/2, 25-1/2, 28-1/2 and 31-1/2 in.

08 Drill 3/16 in holes centered in the 2-1/2 in rail height and sand their mouths. This is a 3 in string pitch, not a crop-spacing instruction.

09 Lace one continuous twine length up and down the panel. Tie off at the first and last hole; keep tension light enough not to bow the rails.

10 Tie the frame to two independent site-appropriate posts at both upper and lower rails. Confirm it cannot rock into a path.

11 Guide young tendrils toward the strings by hand without strangling stems. Cut and remove vines and twine at the end of the crop.

12 Complete the acceptance checks below before putting the assembly into service. Record any changed stock thickness, fastener or equipment fit on the project sheet. The published geometry has not been physically built or load-tested.

Acceptance and intermediate checks

Ten climbing lines at 3 in pitch; no sharp hole edges.

Rails remain straight after stringing and anchors secure the empty frame.

Operation

For light climbing crops; no assumed support for people, fences or heavy squashes.

Cleaning and maintenance

Replace twine each season and check joints after wind.