GA-046 Three-panel seedling windscreen

Create a temporary ventilated sheltered corner during supervised outdoor seedling hardening.

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 Panel uprights	6	24 × 1 1/2 × 3/4 in 609.6 × 38.1 × 19.05 mm	1 × 2 in board sound untreated cedar or other durable untreated wood; no unknown salvage
P02 Panel crossrails	6	21 × 1 1/2 × 3/4 in 533.4 × 38.1 × 19.05 mm	1 × 2 in board sound untreated cedar or other durable untreated wood; no unknown salvage
P03 Mesh faces	3	24 × 24 × 1/25 in 609.6 × 609.6 × 1.02 mm	insect mesh UV-resistant synthetic screening; not a food-contact certification

Hardware and consumables

24 #6 × 2-1/2 in screws for frame butt joints, 2 per corner

12 four-hole light angle braces with 48 compatible #6 × 1/2 in screws, 4 braces per panel

4 six-hole outdoor hinges with 24 compatible #6 × 1/2 in screws, 2 hinges per panel joint

48 broad-crown stainless staples for mesh, 16 per panel

Separate low ground restraints chosen for actual site; no rated wind resistance

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

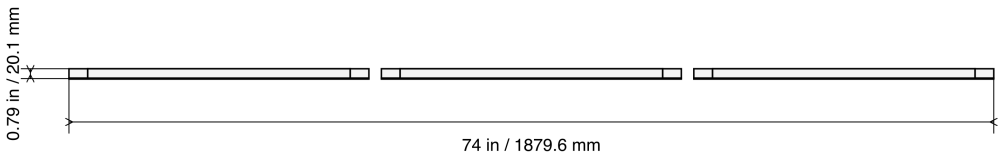
Context references; not design endorsements or certifications.

E02 · Seed and Seedling Biology · Penn State Extension · https://extension.psu.edu/seed-and-seedling-biology

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 three-panel seedling windscreen for this result: Create a temporary ventilated sheltered corner during supervised outdoor seedling hardening. Confirm the design reference before cutting: Three frames square; hinges fold freely and no sharp mesh/staple ends exposed. 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 × 2 in board: actual 0.75 × 1.5 in (19.05 × 38.1 mm); insect mesh: UV-resistant synthetic screening; not a food-contact certification. 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: 6 Panel uprights 24 × 1.5 × 0.75 in (609.6 × 38.1 × 19.05 mm), mark P01; 6 Panel crossrails 21 × 1.5 × 0.75 in (533.4 × 38.1 × 19.05 mm), mark P02; 3 Mesh faces 24 × 24 × 0.04 in (609.6 × 609.6 × 1.02 mm), mark P03. 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 Assemble three individual 24 × 24 in frames from full-length uprights and 21 in crossrails fitted between them.

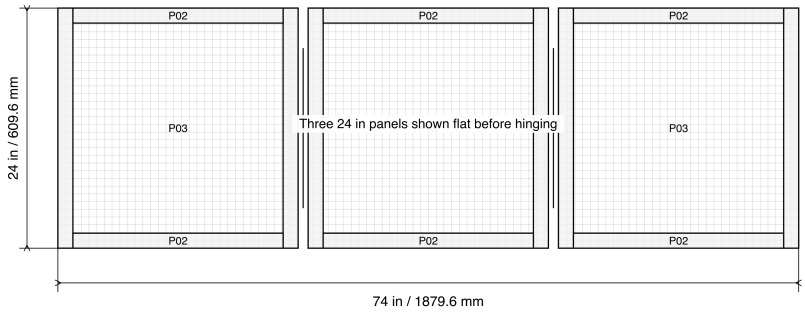
05 Clamp each panel square and use two #6 × 2-1/2 in screws per corner, predrilling through the 1-1/2 in-wide upright into the crossrail end. Center holes in the 3/4 in panel thickness and add the four short-screw angle braces to each panel.

06 Cut three 24 × 24 in synthetic screen panels and staple to the front faces, four staples per side. Fold sharp/snagging screen edges inward beneath a suitable cover tape.

Complete the assembly

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



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07 Lay the panels in line with 1 in fabrication gaps: x = 0–24, 25–49 and 50–74 in. Position two hinges per joint at z = 4 and 20 in.

08 Install hinges using screws that remain within the actual 3/4 in frame thickness. Choose hinge leaves compatible with the 1 in gap and trial-fold before all screws are fitted.

09 Open the end panels to form a sheltered corner and fit independent low restraints so the empty screen cannot fall onto seedlings. Do not rely on the screen area alone to stand upright.

10 Place a small batch of seedlings behind it for supervised gradual outdoor exposure, checking temperature, moisture, light and forecast for the actual crop.

11 Remove or fold the screen before strong wind and bring tender plants back to appropriate shelter as needed. This breathable screen does not guarantee frost protection, a wind-speed reduction or exclusion of all insects.

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

Three frames square; hinges fold freely and no sharp mesh/staple ends exposed.

Separate restraints fitted before plants are placed; screen cannot fall into the tray area.

Operation

Temporary supervised hardening aid, not a storm barrier or closed greenhouse.

Cleaning and maintenance

Inspect mesh, staples and hinges; dry and fold for storage.