GA-010 Ventilated dry-seed sorting box

Separate labeled seed lots during inspection while allowing room-air circulation through screened walls.

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 Base	1	18 × 12 × 1/2 in 457.2 × 304.8 × 12.7 mm	measured 1/2 in plywood exterior-bond plywood for protected non-food-contact fixtures; substitute thickness only by recalculating joints
P02 Long walls	2	18 × 2 1/2 × 3/4 in 457.2 × 63.5 × 19.05 mm	1 × 3 in board sound untreated cedar or other durable untreated wood
P03 End walls	2	10 1/2 × 2 1/2 × 3/4 in 266.7 × 63.5 × 19.05 mm	1 × 3 in board sound untreated cedar or other durable untreated wood
P04 Dividers	2	10 1/2 × 2 × 1/2 in 266.7 × 50.8 × 12.7 mm	measured 1/2 in plywood exterior-bond plywood for protected non-food-contact fixtures; substitute thickness only by recalculating joints

Hardware and consumables

24 #8 × 1-1/4 in screws: 6 each long wall, 4 each end, 2 each divider

2 synthetic insect-mesh patches, 15 × 2 in

12 #6 × 1/2 in washer-head screws for mesh

3 separate paper seed trays, each smaller than 5 × 10 in

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

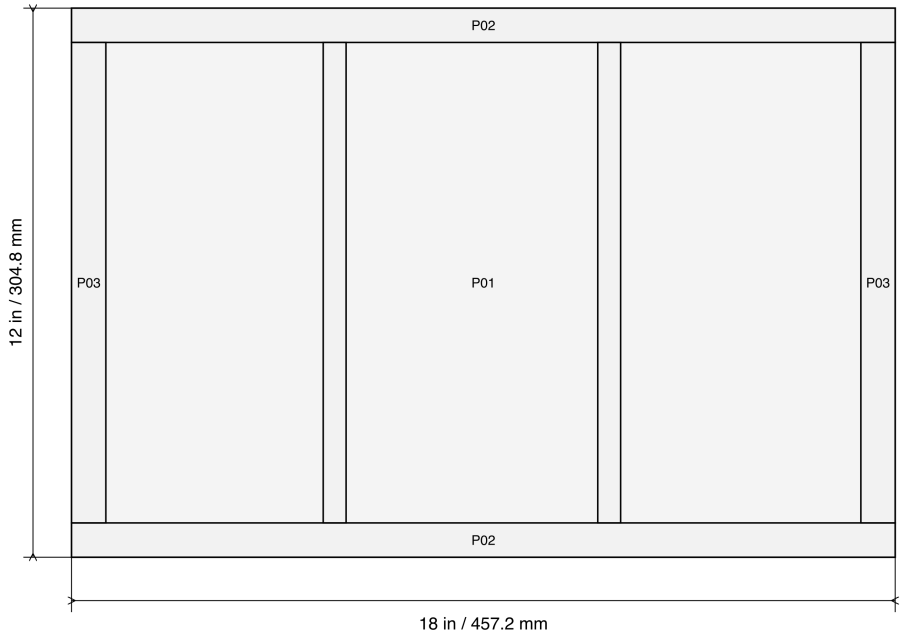
Context references; not design endorsements or certifications.

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 ventilated dry-seed sorting box for this result: Separate labeled seed lots during inspection while allowing room-air circulation through screened walls. Confirm the design reference before cutting: Vents remain unobstructed; no seed contacts splintered plywood or exposed screw points. 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); measured 1/2 in plywood: measured thickness 0.5 in. 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: 1 Base 18 × 12 × 0.5 in (457.2 × 304.8 × 12.7 mm), mark P01; 2 Long walls 18 × 2.5 × 0.75 in (457.2 × 63.5 × 19.05 mm), mark P02; 2 End walls 10.5 × 2.5 × 0.75 in (266.7 × 63.5 × 19.05 mm), mark P03; 2 Dividers 10.5 × 2 × 0.5 in (266.7 × 50.8 × 12.7 mm), mark P04. 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 Before assembly cut a 14 × 1 in vent slot in each long wall, centered in its length and height. Keep at least 3/4 in solid wood around the opening.

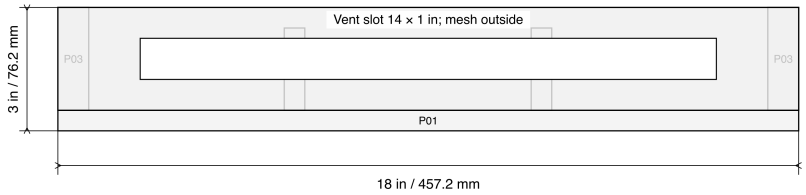
05 Round slot corners with a drill before sawing between holes. Sand the opening until the mesh cannot be cut by its edges.

06 Cover each outside vent with a 15 × 2 in mesh patch, six 1/2 in washer-head screws per patch. Mesh is a ventilation guard, not a guarantee against all insects.

Complete the assembly

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FRONT — transparent assembly projection from y = 0; 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.
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07 Clamp the long walls on top of the base, then fit the 10-1/2 in end walls between them. Confirm outside dimensions 18 × 12 in.

08 Fasten walls through the base with the scheduled screws, avoiding vent slots; place long-wall screws along the lower solid edge.

09 Install divider left faces at x = 5-1/2 and 11-1/2 in. Fasten each from below with two screws and add small glue fillets if desired.

10 Fit one loose paper tray in each bay. Keep seed labels on the trays as well as on the box so lots remain identifiable when removed.

11 Use for dry seed inspection in a dry protected room. Remove seed for crop-specific final drying and sealed storage when appropriate; the mesh does not control moisture.

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

Vents remain unobstructed; no seed contacts splintered plywood or exposed screw points.

All three trays lift out independently without mixing their contents.

Operation

Not for wet fermentation, long-term pest exclusion or guaranteed seed viability.

Cleaning and maintenance

Brush/vacuum between seed lots; discard moldy paper and dry the empty box.