

YOUR FREE READER'S COMPANION

The Backyard Coop Pack

A companion to The Backyard Chicken Coop Building Bible · by Earl Dawson

Thanks for picking up the book. This is the companion you tack to the inside of the feed-room door: the sizing chart that tells you how big to build before you cut a board, the predator checklist that actually keeps birds alive, the truth about ventilation that beginners get backwards every winter, and a one-glance cut-list summary for all six build plans. Print it, fold it, keep it where you'll see it when you're standing in the yard with a tape measure and a head full of chicken math.

My second coop was a tight little thing wrapped in chicken wire with a slide-bolt latch. Three weeks later a raccoon peeled a corner loose, worked the bolt, and killed every bird I had — six hens, at 2:14 in the morning. I've built every coop since as if that raccoon is still out there testing my work every single night. Because something is. — Earl

Coop & Run Sizing — The Numbers That Keep Birds Alive

Size the coop before you sketch it. Get these numbers right and the whole build sizes itself; get them wrong and you're building a second coop eleven months after the first, or worse, burying birds that died of crowding. These are standard-breed laying hens — Rhode Island Reds, Australorps, Orpingtons, sex-links, the common backyard birds.

The two numbers to carry in your head: 4 square feet of coop floor per bird, 8 to 10 square feet of run per bird. Those are floors, not targets. I've never once heard a keeper say their coop was too big. Plenty say theirs was too small, almost always about a year in.

Flock	Coop floor (4 sq ft/bird)	Run (8–10 sq ft/bird)	Nesting boxes (1 per 3–4 hens)	Roost length (8–10 in/bird)	Min. vent (1 sq ft per 10 sq ft floor)
4 birds	16 sq ft (~4x4)	32–40 sq ft	1–2	~3 ft	~2 sq ft
6 birds	24 sq ft (~4x6)	48–60 sq ft	2	~4–5 ft	~2.5 sq ft
8 birds	32 sq ft (~4x8)	64–80 sq ft	2–3	~6–7 ft	~3.5 sq ft
12 birds	48 sq ft (~6x8)	96–120 sq ft	3–4	~8–10 ft	~5 sq ft
20 birds	80 sq ft (~8x10)	160–200 sq ft	5–6	~14–17 ft	~8 sq ft
25 birds	100 sq ft (~8x12)	200–250+ sq ft	6–8	~17–21 ft	~10 sq ft
40+ birds	160+ sq ft	320–400+ sq ft	10–13	27+ ft	16+ sq ft

Plan for chicken math. You'll go to the feed store for four chicks and come home with eight. Everyone does. Pick the number you want today, then build for half again as many — want six, build for nine or ten. Empty coop space is never wasted. Crowded coop space gets birds killed.

Breed adjustments:

- Bantams run a little tighter — about 3 sq ft of coop and 6 of run per bird — but give them height and good roosts; they like to fly up.
- Heavy breeds — Brahmas, Jersey Giants, Cochins — want closer to 5 sq ft of coop each. They're big and slow and don't get out of each other's way.
- Birds confined most of the day (no free-ranging) need the high end of every number above. The less grass time they get, the more indoor and run space matters.

Nesting boxes are 12x12x12 inches for standard hens (14 for the big breeds), set 18 to 24 inches off the floor and always lower than the roost. One box per 3 to 4 hens — and yes, they'll all fight over the same box anyway. Build the right number regardless.

Predator-Proofing Checklist — Build for the Worst Night

You can't out-react a predator. By the time you hear it, the birds are gone. You out-build it, in advance, on a quiet afternoon with a roll of hardware cloth and a box of washered screws. Walk this list before you ever put birds in.

The mesh — the one thing that matters most:

- [] 1/2-inch, 19-gauge welded hardware cloth over EVERY opening — windows, vents, run walls, soffit gaps, ridge. Never chicken wire. Never poultry netting. Chicken wire keeps chickens in; it keeps nothing out. Half-inch is too small for a weasel to pass and too small for a raccoon to reach a hand through.
- [] Fastened every 2 to 3 inches around the full perimeter with exterior screws through fender washers (or heavy fence staples backed by washered screws at corners and midpoints). A raccoon pulls plain staples one at a time — the wide washer is what stops the wire from slipping past.
- [] Pulled tight, no sag. A loose panel gives a claw something to work under. Lap seams at least 1 inch and fasten through both layers. Wear gloves — the cut edges open your hands up.

The ground — stop the diggers (fox, raccoon, dog, rat):

- [] Dig-proof apron. Run 1/2-inch hardware cloth flat on the ground, out from the base of the fence 18 to 24 inches, like the foot of an L. The digger starts right at the base, hits buried mesh, and quits — they almost never back up two feet to start over.
- [] Stake it down, then let grass grow through it or cover with an inch of soil. The mower goes right over it within a season.
- [] Protect the floor. A coop on the ground gets dug into from below — set it on a foundation off the ground, run an apron around it, or lay hardware cloth under the bedding so a digger comes up into mesh.

The latches — a raccoon can't open two motions:

- [] Every door and every nesting-box lid: a two-step latch that takes two separate, different motions to open. A spring latch plus a carabiner through the hasp. A barrel bolt secured with a clip or padlock. Two unrelated actions.
- [] What FAILS: a single slide bolt, single hook-and-eye, gravity latch, turn-button, bungee cord. A raccoon defeats every one. The nesting-box lid is the one people forget — it's a door too.

The gaps people miss:

- [] Under the pop door — run a hardware-cloth skirt around the opening and make sure an automatic door seats flush; cheap openers leave an inch a weasel slips through.
- [] The ridge and eaves — those beautiful high vents are a snake-and-rat door unless they're screened. Cover them.
- [] Corners and seams — predators work edges for leverage. Double the fasteners at every corner.
- [] Hawks and owls from above — the only defense is a covered run: netting or roof overhead, not a

fence beside it.

- [] Heavy-predator country (bear, persistent fox, roaming dogs) — add one or two strands of electric, low (about 6 in, to hit a digging nose) and higher (12–18 in). A supplement to the cloth and apron, not a substitute.

Ventilation Done Right — Cold Is Fine, Damp Is the Enemy

If you read one section twice, read this one. More backyard flocks die from bad air than from every predator combined, and almost every case is the keeper's own doing: built with love, sealed up tight to keep the birds "warm," and slowly poisoned by the air they breathe.

Here's what happens in a sealed coop on a cold night. Eight hens breathing for twelve dark hours pump water vapor into still air. Their droppings — mostly water — evaporate into it. The manure breaks down and releases ammonia. Now that air is warm, humid, and laced with ammonia:

- The moisture condenses on the birds' combs and wattles. Wet skin in freezing air is exactly how you get frostbite. A sealed humid coop frostbites far more birds than an open dry cold one ever will.
- The ammonia burns their airways and opens the door to respiratory disease. If it stings you for a second when you open the door, the birds breathed it for twelve hours.

A healthy hen wears a down coat and comes through nights well below zero in good shape — if the coop is dry and out of the wind. So your winter design target is not warm. It's dry and draft-free.

Ventilation is not a draft. This is the whole trick:

	A draft (harmful)	Ventilation (correct)
Where the air moves	Across the birds, at roost level	Above the birds, near the peak
What it does	Strips warm air out of her feathers, chills her	Lifts moist, foul air up and out; birds sit in calm air below
Vent placement	Low, blowing sideways at the roost	High — ridge, upper gable, top of wall under the overhang

Vents high, birds low, never a steady blast at roost level. Warm wet foul air rises on its own. Put the permanent openings up near the peak and the bad air floats out while the flock sits still in calm, dead air down below.

How much vent: at minimum, 1 square foot of open vent for every 10 square feet of coop floor — and that's a floor, not a ceiling. A 4x8 coop (32 sq ft) needs at least 3 to 4 square feet of permanent high opening, all screened in half-inch hardware cloth. That's a real run of open space, not a dinky 6-inch louver. You almost cannot over-ventilate as long as the openings are high and the birds have a calm dry spot below.

The one-sentence test: open the coop first thing in the morning and breathe. Fresh, even cold, even with frost on the wall? You're fine. Stings, sharp, sour, eyes water? Your birds breathed that all night — add more vent, higher.

And no heat lamps. Ever. They cause coop fires every winter, they keep birds from acclimating so a power outage becomes a death sentence, and they treat a problem the birds don't have. Ventilation, not heat. Every time.

The Six Plans — Cut-List Summary at a Glance

Every plan below carries the whole book baked in: the ventilation, the half-inch hardware cloth over every opening, the dig-proof apron, the two-step latches, the right roost and box dimensions. Costs are 2026 ballpark and swing by region and what lumber's doing that month. These are the sizes I'd build — scale to your flock and your yard.

Plan	Best for	Footprint	Key framing	Roof	Hardware cloth	Cost (2026)
A — 4-Bird A-Frame	First-timers, 4 birds	4x8 (~32 sq ft)	8x 2x4 A-ribs, 8-ft ridge beam, 4x4 raised box	Metal/poly, ridge vent gap	~25 ft, 1/2"	\$200–\$350
B — Walk-In Hen House	Family flock, 8–12, build once	6x8 coop + 8x12 run	2x4 floor/walls @16" OC, shed roof, 20 studs	Metal or asphalt, eave vents	~50 ft, 1/2"	\$600–\$1,100 (+\$150–\$400 run)
C — Mobile Tractor	3–5 birds, rotational grazing	4x8 on wheels	Light 2x4 base, 2x2 ribs, cart wheels + axle	Light metal/poly over box	~30 ft, 1/2"	\$200–\$400
D — Large-Flock Coop	Egg seller, 15–25 birds	8x12 (~96 sq ft)	2x6 floor joists, 32 studs, 2x6 rafters	Metal panels, ridge+eave+gable vents	2–3 rolls, 1/2"	\$1,200–\$2,200 (+\$300–\$700 run)
E — Recycled / Salvage	Budget build, any size	Adapts to salvage	HT-stamped pallets or salvaged 2x4 frame	Salvaged metal/shingle/poly	NEW 1/2", never salvaged	Under \$100
F — Cold-Climate Insulated	North of the snow line, 8–10	6x8, insulated walls/floor/ceiling	2x4 studs + foam/batt + interior liner	Metal (sheds snow), high vents	~50 ft, 1/2"	\$900–\$1,600

Specs every plan shares (don't improvise these):

Component	Spec
Roost bar	2x4 laid flat, wide face up, edges eased — never a dowel or branch; lets her cover her toes in cold
Roost length	8–10 inches per standard hen, set higher than the boxes, 18+ in off floor
Nesting box	12x12x12 in, sloped lid (45°) so they can't roost on top, 18–24 in off floor, 1 per 3–4 hens
Poop board	Removable shelf/tray under the roost — turns a weekly shovel-out into a 30-second daily scrape
Mesh	1/2-inch 19-gauge hardware cloth, washered every 2–3 in, over every opening
Latches	Two-step, raccoon-proof, on every door and box lid

Salvage safety (Plan E only): HT (heat-treated) pallets are safe; MB (methyl bromide) and unstamped pallets are not — methyl bromide is a toxic fumigant. No pre-1978 painted wood (lead) and no pre-2004 green pressure-treated lumber (arsenic) where birds peck. Never salvage the hardware cloth — buy new half-inch on even the tightest budget. It's the cheapest insurance you'll ever buy.

Cold-climate balance (Plan F only): insulate and ventilate — they fight each other, and the balance is the hardest thing in the book. Dry beats warm. Insulate the box, cover the insulation with a liner so birds can't peck it, block drafts at the roost, and leave the high vents open even at nine below. Frost on the inside walls in the morning means under-ventilated — open it up more.

Which plan to start with? If you're new and want four birds, build the A-frame (A) — it's the easiest coop in the book and forgives a first-timer's mistakes. If you know you're in chickens to stay and you've got a family to feed, build the walk-in (B) once and clean it standing up for the next decade — it's the one I recommend to most people. Want fresh grass and a mowed lawn for a few birds, build the tractor (C). Up north, build the insulated coop (F) and respect the ventilation. And whatever you build, steal the parts you like from the others — they're all the same handful of principles: keep predators out, keep the air moving, keep the birds dry, and give every hen room to be a chicken.

When you've got your first flock settled into a coop you built with your own hands, I'd love to hear about it — and in a couple of emails I'll tell you how a quick word from you helps this book reach the next person standing in their yard with a tape measure.

Build it once, build it right,
Earl Dawson