

YOUR FREE READER'S COMPANION

The Board Maker's Bench Pack

A companion to The Cutting Board & Serving Board Woodworking Bible · by Owen Brecht

Thanks for picking up the book. This is the companion you tape next to the lumber rack and keep on the bench through the build: the wood chooser that tells you what's safe to put under food and what to leave on the shelf, the edge-grain versus end-grain call so you build the right board for the job, a food-safe glue and finish cheat sheet with the actual oiling schedule, a full cut list and glue-up plan for one starter edge-grain board you can build in a weekend, and a printable shop-safety and board-care card. Print it, fold it, keep it in the shop.

Boards that come back fail for one of three reasons, not a hundred. It cupped, it cracked at a joint, or the finish gave out and it went gray and sour. Right grain, flat glue-up, food-safe finish. Beat those three and your board outlives you. — Owen

1. The Wood Chooser — What's Safe Under Food

A cutting board wood has to do two jobs at once: be hard and stable enough to survive a kitchen, and be safe to put food on. Plenty of beautiful wood fails one test or the other. Three things decide it. Hardness — you want a wood that resists denting but doesn't chew up knife edges, which puts the sweet spot roughly between 1,000 and 1,500 on the Janka scale (the force in pounds to press a steel ball halfway in). Grain — closed, tight pores wipe clean and don't harbor bacteria; open pores like red oak trap food and water. Food safety — no toxic or oily-rancid species, no stain or dye ever, because a knife lifts right through any colored layer into the food.

Wood	Janka (lbf)	Grain	Verdict	Notes
Hard (sugar) maple	~1,450	Closed, tight	Use — first choice	The classic butcher-block wood, pale and neutral
Black walnut	~1,010	Closed	Use	Rich brown, softer, pair with maple; note nut sensitivities
Cherry	~950	Closed	Use, lighter duty	Ages to amber-red, great for serving boards
Beech	~1,300	Closed, tight	Use	Affordable European-style choice, watch movement
White oak	~1,350	Tighter than red	Usable, not preferred	Tighter than red oak but I still pick maple
Red oak	~1,290	Open, large pores	Avoid	Open pores trap food and water, can taste off
Pine / poplar / basswood	~400–540	Soft, resinous (pine)	Avoid	Too soft, dents and scores, pine is pitchy
Dense oily tropicals	varies, often high	Often oily/resinous	Avoid unless confirmed food-safe	Oils can go rancid, may stop glue bonding
Spalted / punky wood	varies, often soft	Decaying	Avoid for food	Spalting is fungal decay, save it for decor
Treated / reclaimed / unknown	n/a	n/a	Never	Unknown chemicals, off limits

Four habits at the lumberyard

- Pair woods in the same hardness neighborhood. Maple (1,450), walnut (1,010), and cherry (950) wear evenly and move in step. Pair woods too far apart and the soft one wears into a valley while the hard one stands proud, and a few years on the surface goes washboard.
- Buy kiln-dried and let it acclimate a week or two in your shop before you build, so it settles to your shop's humidity.
- Sight down every board for cup, bow, and twist before you pay, and smell the end grain — anything

sharp, chemical, or sour goes back.

- No stain, ever, on a food surface. If a customer wants a darker board, reach for a darker wood, not a can. Walnut is brown because walnut is brown.

The wrong wood doesn't announce itself. It just quietly fails, or quietly makes someone sick. When in doubt, leave it out — a pretty board isn't worth a sick customer.

2. Edge-Grain vs. End-Grain — Pick the Right Build

There is no single "best" board. There are three ways to orient the wood, and a good maker matches the construction to the job. Turn the narrow edge up and you get edge grain — the workhorse. Turn the cut end up and you get end grain — the showpiece. Turn the wide face up and you get face grain — the serving slab. Most chopping boards should be one of the first two.

	Edge grain	End grain	Face grain
Surface up	Narrow edge of strip	Cut fiber ends (checkerboard)	Wide flat face
Knife wear	Hard, slow-wearing	Kindest to edge; "self-heals"	Softest; scores and dents
Movement	Modest, predictable, forgiving	A lot, and fast through open ends	Most across the width
Glue-ups	One	Two	One
Difficulty	Easiest — start here	Hardest, fussiest about moisture	Easy build, careful wood selection
Oiling needs	Normal	Heaviest, especially first season	Light if serving-only
Best for	First boards, daily choppers, wet sinks	Premium butcher block for a serious cook	Bread/cheese serving boards, show pieces

The plain-shop takeaways

- Beginners build edge grain first, every time. Long strips, grain running lengthwise, it moves predictably and forgives a less-than-perfect glue-up.
- End grain is the premium board — the knife slips down between standing fibers like pushing a blade into the end of a bundle of straws — but it drinks glue, drinks oil, and moves fast, so it demands flat true segments and faithful oiling. Skip any of that and you get a crack down a glue line at month three.
- Don't put end grain in a wet commercial sink. For hard, wet, all-day abuse, thick edge grain outlives end grain.
- Reserve face grain for serving, not heavy chopping — that cathedral figure looks like a million dollars but the surface is soft.

Movement isn't the enemy. Uncontrolled, unbalanced movement is. Match the construction to the use, alternate your growth rings, and finish both faces equally, and all three constructions stay flat.

3. Food-Safe Glue & Finish Cheat Sheet

A cutting-board finish does only two things: it puts moisture into the wood so the wood doesn't pull it from food or lose it to dry air and crack, and it leaves a thin barrier that slows water and odor. We are not building a glossy film — any hard film on a cutting surface gets sliced to ribbons by knives and the chips trap grime. The whole system is food-grade mineral oil to saturate, then a beeswax-and-oil board butter on top to seal. Oil soaks in, wax sits on top.

Glue — one bottle does it all

- Titebond III on every board, edge grain and end grain. It's water-resistant and FDA-rated for indirect food contact once fully cured — cure is cure, so wait the full 24 hours before machining.
- Spread glue on every mating face, full coverage, no dry spots. A starved joint becomes a crack at month three.
- On end grain, size the joint first: brush a thin coat on the thirsty end-grain faces, wait two minutes, then lay your real glue bead. End grain drinks glue and a sizing coat keeps the joint from starving.
- Don't reach for epoxy thinking it solves anything — it's messy on food boards and you don't need it. A properly sized, clamped wood-glue joint holds for decades.

Finishes — what goes on a knife surface and what never does

Finish	Cutting surface?	Why
Food-grade mineral oil	Yes	Non-drying, food-safe, penetrates deep, never goes rancid
Beeswax / board butter	Yes	Food-safe top coat, adds water resistance
Fractionated coconut (food-grade)	Yes	Non-drying alternative to mineral oil
Polyurethane / varnish / lacquer	No	Hard film — knives shred it, flakes lift and trap food
Shellac	No	Film finish, wrong for a knife surface
Walnut / linseed / "drying" oils	Caution	Only if food-rated and fully cured; can go rancid otherwise
Stains, sealers, "wood treatments"	No	Often not food-rated; solvents and metallic driers

Owen's Board Butter (a batch costs pennies)

- 1 part beeswax (food-grade, pure; pellets melt fastest)
- 4 parts food-grade mineral oil (by weight, not volume)

A 1:4 ratio gives a soft, spreadable paste. Want it firmer, go 1:3; softer and easier to rub in, go 1:5. Melt the wax and oil together in a double boiler — never over direct flame — until clear (beeswax melts around 145 °F / 63 °C), pour into a clean jar, and let it cool undisturbed at room temperature to a soft cream. Don't rush it in the fridge; slow cooling gives a smoother butter.

The oiling schedule — pin this to the wall

Stage	What you do	When
First soak	Flood with warm mineral oil, re-coat until the wood stops drinking (a new board can take 3–4 floods over a day), wipe the excess	New board, in shop
First wax	One coat board butter, sit 20 min, buff off the haze	After the soak
Second wax	Second coat board butter, buff	Next day
Cure / rest	Let rest, wipe any oil that weeps back	24–48 hrs before use
Owner re-oil	Re-oil when the wood looks dull or feels dry	Roughly monthly
Owner re-wax	Fresh board butter coat	Every few months
Revive	Light 220 sand, raise grain, re-flood, re-wax	When dry or gray

Warm the oil first — stand the bottle in a cup of hot tap water for ten minutes (never heat oil on a stove). Warm oil penetrates deeper, and that first deep soak is the most important one of the board's life. A board never dies of normal use. It dies of neglect, and neglect is reversible.

4. Starter Board — Cut List & Glue-Up Plan

This is the board to build first: a 12" × 18" × 1-1/4" edge-grain board in hard maple with a few walnut stripes for contrast. You can mill, glue, flatten, and sand it in a weekend. Adjust the numbers to your stock; the steps don't change.

Cut list (12 × 18 × 1-1/4 edge-grain board)

Item	Qty	Size	Notes
Hard maple strips	9	1-1/2" wide × 13/16" thick × ~20" long	Stood on edge; the 1-1/2" becomes board thickness
Black walnut strips	3	1-1/2" wide × 13/16" thick × ~20" long	Contrast stripes; flip in among the maple
Spare strips	2	same	Always rip a couple extra
Titebond III	—	—	Water-resistant, FDA indirect-contact when cured
Food-grade mineral oil + board butter	—	—	Finish (Section 3)

- Strips run ~20" long for a 18" board so you can trim the ragged ends square — never glue up to exact final length.
- Twelve strips at 1-1/2" wide nets ~18" of width before trim; rip an extra of each so a bad strip doesn't stall you.
- Budget roughly \$40–\$70 in hardwood for this board in 2026, depending on local prices.

Glue-up plan, in order

1. Mill flat and square. Bring every strip to a consistent ~13/16" off the planer with one flat face and square edges. Square edges are everything — tapered strips become gaps in the panel.
2. Arrange and read the grain. Stand the strips on edge, set your stripe pattern, then check the end grain and flip strips so the growth rings alternate across the panel (up-down-up-down). When a pretty pattern fights ring alternation, lean toward alternating the rings — a flat board beats a board that looked good for a week. Draw one diagonal pencil line across the top as your reassembly map.
3. Tape, spread, close. Tape the joint lines, peel the strips open, spread a thin even film of Titebond III on one edge of each joint, full coverage no dry spots, and close them back in pencil-line order.
4. Clamp flat with cauls. Set the panel across your main clamps, snug to bring the joints together, then clamp a caul across each end, top and bottom, to hold the panel dead flat. Bring the main clamps to firm, even pressure — alternating top and bottom down the length — until you see a continuous bead of squeeze-out. Firm, not brutal: over-cranking bows the panel.
5. Peel tape, then wait. Peel the tape while the squeeze-out is rubbery, then walk away at least an hour, overnight if you can. A panel flattened too early springs back on you.
6. Flatten both faces on a drum sander or planer in light passes (feed downhill on the grain to avoid

tearout), sneaking up on a 1-1/4" final thickness. Don't go below 1" for a working board.

7. Trim to size on the table saw — one end square, then the other to length, then both long edges — and check for square with a framing square.

8. Ease every edge. A 1/8" roundover bit top and bottom, or 80-grit on a block, until nothing bites your hand. Round the corners to about a dime's radius.

9. Sand 80 120 180 220, never skipping grits, vacuuming between each. Between 180 and 220, wipe the board with a damp rag, let it dry, sand again at 220 — raising the grain on purpose now means it stays smooth the first time it meets a wet sink.

10. Finish per Section 3: warm-oil deep soak, two board-butter coats, rest 24–48 hours.

The build itself isn't hard. It's milling, gluing, flattening, trimming, easing, and sanding, in that order, with patience at the boring parts. Don't quit ten minutes early — the easing and the final sanding are the whole reputation.

5. Printable Shop-Safety & Board-Care Card

Cut this page in half. Tape the top to the shop wall; tuck the bottom in with every board you give away or sell.

Shop Safety — Cutting-Board Work

- [] Push stick within reach before every rip. Your fingers never travel within a hand-width of the blade.
- [] Crosscut on a sled or miter gauge — never freehand against the rip fence. A wide panel against the fence is a kickback waiting to happen.
- [] Never run an end-grain board through a thickness planer. The knives catch the standing fibers and can fire the board across the shop. Flatten end grain on a drum sander or router sled only.
- [] Melt wax in a double boiler, never over open flame. Hot wax over direct heat is a fire.
- [] Warm oil in hot tap water, never on a stove.
- [] Eye and ear protection on; dust collection running. Maple and walnut dust is fine and gets everywhere.
- [] Unplug machines before you change a blade, bit, or drum.

Board Care — Keep It Alive for Decades

- [] Hand wash only. Warm water, a little dish soap, a sponge. Wash, rinse, dry. Thirty seconds.
- [] Never the dishwasher. The heat and the long soak swell and shrink the wood violently, blow glue lines apart, and strip every bit of oil. One cycle can undo a board that would have lasted thirty years.
- [] Don't let it soak. Standing water in a sink is the second-fastest way to kill a board.
- [] Dry it standing on edge so air reaches both faces — never flat on a wet counter, or one face drinks while the other dries and the board cups.
- [] Oil it when it looks thirsty — dull, dry, or going gray. Roughly monthly at first, a few times a year once it's seasoned. A dry board isn't ruined, it's hungry. Feed it.
- [] Re-butter every few months for water resistance.
- [] Smell or odor? Scrub with diluted vinegar (or 1:10 bleach for surface mold), rinse, dry fully on edge, re-oil with mineral oil only.

That's the pack. The one habit worth more than any tool on the bench: read the end grain and get a dead-flat glue-up before you ever spread a drop of glue, then teach whoever takes the board home that the finish is a habit, not an event. Build the 12 × 18 edge-grain board first to learn the moves, then the end-grain showpiece when you're ready — both are drawn up complete with cut lists in the book. When you've stood up your first board and put that first deep coat of oil on it and watched the grain come alive, 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 at a lumber rack wondering which board to build.

Right grain, flat glue-up, food-safe finish,

Owen Brecht