



Dad Knows™ **Mowing and** **Basic Lawn** **Maintenance**

You don't need a perfect lawn.
You need a yard that works —
for the kids, for the dog, for a Saturday.



— **For the kids, not the judges.** —

Aaron Byers

Dad Knows™ Mowing and Basic Lawn Maintenance

You don't need a perfect lawn. You need a yard that works — for the kids, for the dog, for a Saturday.

Plain language, real numbers — every cut height, timing window, and fertilizer rate checked against Ohio State University Extension research.

Aaron Byers

A Dad Knows™ Guide

What this book is

This is a book about growing grass in Ohio.

Not a golf course. Not a lawn-service commercial. A yard behind a house, on a street, with a mower you didn't pay much for and a kid who wants to know why the grass turns brown in July.

Here's the thing nobody tells you when you get your first yard: an Ohio lawn is a cool-season grass trying to survive an Ohio summer. When it goes brown and crunchy in the heat, it usually isn't dying. It's doing exactly what bluegrass does when the temperature climbs. That one fact changes how you feel about the whole job.

Sixteen chapters. One promise: nothing in here is made up. Every cut height, every timing window, every fertilizer rate comes from Ohio State University Extension research and the verified sources listed at the back. Where the research doesn't publish a number, this book says so instead of inventing one.

What you'll get: how to find out what grass you have, what your soil is doing, how to cut it right, how to water it without wasting water, how to feed it in the season that actually matters, how to handle weeds without declaring war, and how to keep the mower running and the operator in one piece.

You don't need a perfect lawn. You need a yard that works — for the kids, for the dog, for a Saturday. That's a much easier target, and it's the one this book aims at.

Foreword

A word from a dad who's been there — from a \$125 mower to a yard the kids can actually use

My worst day on a mower wasn't even my yard. I mowed for a friend who owned a landscape company. We were doing a condo association that had a putting green next to the main office. I got a little too close, and I sucked that putting green right into the blades. It stalled the mower, and I just stood back and looked at it — the way Clark Griswold looks at the ladder he put up upside down.

All I had to do was walk that yard first. That's the rule I skipped. It's in the safety chapter, and it costs nothing: walk the lawn before you mow it. Look the ground over, pick up whatever doesn't belong there. Learn it from me and skip the part where you stand there staring at the mess.

My first mower cost \$125. It ran rough. The blades were dull and bent, so there were scalped spots in the yard every couple feet no matter how carefully I went. What I didn't know then is that a dull blade tears grass instead of cutting it. Now I know. That's most of why this book keeps after sharp blades, the one-third rule, and cutting at the right height. Get the blade right and the yard starts looking different.

The neighbor across the street had a yard like a golf course. It made me feel inferior. If you're asking whether you need a perfect lawn — he's not wrong, and he's not the point either. You're not mowing for the judges across the street. You're mowing for the kids.

Here's the Saturday I picture when I think of a yard done right. You're up early. You wait for the dew to go. You get the mower out and check the oil, the gas, the blades. The Crocs come off and the garage shoes go on — stained green, and they don't tie very well. You mow clean lines, run the trimmer, then take the blower to the walkway and the street.

Then the kids come out and do whatever they want to do. That's the whole scoreboard.

Where I'm at now is therapy: a push mower and a small yard. Take your time with it. It shows your kids that anything worth doing is worth doing right.

One more thing, because this is Northeast Ohio. Fall here hands you hot days and dead leaves at the same time, and I've had the mower exhaust catch those leaves. Don't do what I did. Keep the dry leaves away from the mower, and walk the yard before every cut — the safety chapter explains why, and it isn't a chapter to skim.

The last tip is the simplest. Walk the yard. Don't hit baseballs with your mower. Pick the ball up before you start.

That's my part. The rest of the book is the part we checked. Every cut height, every timing window, every fertilizer rate, and every safety rule in here comes from Ohio State University Extension research, and where the research doesn't publish a number, the book says so instead of making one up. Read a chapter, then go mow.

— A Dad Knows™ — AB

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Dad Knows™ is a practical guide brand created to help fathers and families solve everyday problems with confidence.

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Chapter 1 — Why Your Lawn Looks the Way It Does

Your lawn is not failing you. It's a cool-season grass in a hot state, doing what cool-season grass does.

Let's start with the thing that changes everything.

The grass in your yard is the wrong grass for July. That's not your fault and it's not a mistake. Ohio is planted almost entirely in cool-season grasses, and cool-season grasses grow hardest in spring and fall, when the air is cool. In the middle of summer, they slow down. Some of them shut down completely.

Kentucky bluegrass, the classic lawn grass, can go dormant in Ohio heat and stay dormant for four to six weeks without dying. It looks dead. It isn't. It's waiting. The rhizomes — the underground stems that let it spread — keep it alive while the top goes straw-brown.

So the first shift is this: change the sentence you say to yourself. Not *"my lawn is failing."* Try *"my lawn is doing what grass does in July."* Same yard. Different job for you.

Three things decide how your lawn looks

Strip away all the products and the advice and the guy at the hardware store, and it comes down to three things.

The kind of grass you have. A lawn of tall fescue and a lawn of Kentucky bluegrass want different things. Different cut height, different amount of food, different tolerance for heat and shade. If you don't know what you're growing, you're guessing on everything else.

Your soil. Grasses grow in soil, not in bags of fertilizer. Soil pH decides whether nutrients are even available to the roots. Soil texture decides how water moves. You can't see any of it from up top, which is why most people skip it — and why Chapter 3 exists.

Your timing. This is the big one, and it's the one that costs people money. Fertilize at the wrong time and you feed disease instead of grass. Seed at the wrong time and winter kills the seedlings. Pre-emergent weed control at the wrong time and you've locked out the new seed you just paid for. Ohio's calendar is not optional. Let the calendar do the work.

Most lawn problems aren't bad luck

They come from three places: how you mow, how you water, and what your soil is doing. That's it. Weeds aren't bad luck — weeds move into thin spots, and thin spots come from cutting too short, watering too shallow, or compaction the roots can't push through.

Here's the good version of that news: things you control. Nearly all of it.

The plan, in one line

Test the soil. Cut it right. Water deep and rarely. Feed it in the fall, when the roots are growing. Fix problems when you actually see them, not because a flyer showed up.

That's the book. Everything else in here is detail.

Notice what's not on the list: spraying everything, mowing twice a week forever, or buying your way out of it.

One more thing about July

When the lawn goes dormant and the neighbor's sprinkler is running every evening, it's easy to panic. Don't. Sleep on it. A dormant lawn is not an emergency; overwatering a hot lawn is a much more common mistake than letting it rest. Chapter 10 covers the math.

For now, just keep this in your head: brown in August is normal. Brown in May is a problem. Knowing the difference is most of what separates a guy who fights his lawn from a guy who lives with it.

Dad Knows quick check — Chapter 1

- Say it out loud once: brown in summer is grass sleeping, not grass dying.
- Pick one of the three that you know least about — grass type, soil, or timing.
- Read Chapter 3 before you buy anything else for the yard.
- Water nothing until you've read the one-inch rule.

Chapter 2 — Know Your Grass Before You Fix Anything

You can't care for a lawn you can't name. Five minutes with a seed bag or a lawn and you'll know enough.

If you bought a house, there's a decent chance you know the make of the furnace and nothing about the grass. Let's fix that, because everything else in this book changes based on the answer.

The four grasses that belong in Ohio

Ohio State Extension is clear on this: only four grasses are recommended for Ohio home lawns. Four. If you've seen a bag of something else, you're either looking at a specialty use or a mistake.

Turf-type tall fescue. The Ohio workhorse. OSU calls it perhaps the best choice for an Ohio lawn, and the reasons are practical: it tolerates low fertility and compacted soil better than bluegrass, it needs less maintenance, it germinates fast, it stands up to heavy traffic, and it handles insects and disease well. It also has deeper roots, so it can survive an Ohio drought without you watering. It is the most sun-tolerant *and* the most shade-tolerant of the bunch.

One warning attached to the praise: do not use old pasture-type tall fescue — the coarse, clump-forming kind sold as Kentucky-31. It doesn't have the endophytes and it doesn't make a lawn.

Kentucky bluegrass. The classic. Also the high-maintenance one. It needs more nitrogen than the others, it turns brown and goes dormant without irrigation in a hot, dry summer, and it's prone to building thatch. Its one superpower is those rhizomes: they let it knit together underground, which is why a bluegrass lawn can take a drought hit and come back.

Perennial ryegrass. Fast, tough, and not a solo act. It has exceptional cold and heat tolerance and it establishes fast, and its dense canopy crowds out weeds while the slower grasses get going. What it won't do is form a good lawn by itself — it's meant to be mixed with bluegrass. Upside: it doesn't build thatch.

Fine fescue. The shade grass. Fine leaf texture, happy in shade and in acidic, poor soil, low nitrogen needs, low thatch potential. In a shady yard mixed with bluegrass, the fine fescue is the part that thrives.

What you actually have

You probably have a mix, and there's a decent chance the mix is tall fescue plus something.

Three ways to find out, cheapest first.

Look at the seed bag in the garage. If the last owner left one, the label tells you everything. Cultivar names, percentages by weight, germination percentage. Federal law requires that label. Ohio law requires the species and cultivar name and the percentage by weight for anything over five percent.

Ask what was planted. New construction, a landlord, or a neighbor who watched the crew — somebody knows.

Look at it. Fine fescue blades are thin and needle-like; tall fescue blades are wider and the clumps feel stiffer. Bluegrass spreads into a solid mat; ryegrass comes up in quick, shiny clumps. You can also find out the hard way in August — bluegrass browns first and hardest, tall fescue holds color longest.

Don't overthink this. Rough answer is enough to start. Fine-tune later.

Read the seed bag like a receipt

If you're buying seed — for a patch, an overseed, or a whole new lawn — you're allowed to be picky. Two words to know:

A **blend** is two or more cultivars of the *same* species. A **mixture** is two or more species put together on purpose, matched for color and texture so the lawn doesn't look patchy.

What you want on the label: certified seed, zero percent weed seeds, named cultivars, and honest germination numbers. What you don't want: a bag that says "sun and shade mix" and nothing else. That's a price tag, not information.

One OSU note worth knowing: turf-type tall fescue is often recommended to be sown on its own, at 100 percent, because its color, texture, and growth habit are different enough that mixing it with others looks like mixing.

Endophytes, in one honest paragraph

Some tall fescue, perennial ryegrass, and fine fescue cultivars carry endophytes — beneficial fungi inside the plant that kill leaf- and stem-feeding insects like billbugs, chinch bugs, and sod webworms. That's real, and it's free

insect resistance.

It is not a force field. It helps with certain bugs feeding on certain parts of the plant. It doesn't replace mowing right, watering right, or the grub chapter. If a seed label says endophyte-enhanced and it's the same price, take it. Just don't expect it to fix a yard that's being cut too short.

Cut height by species

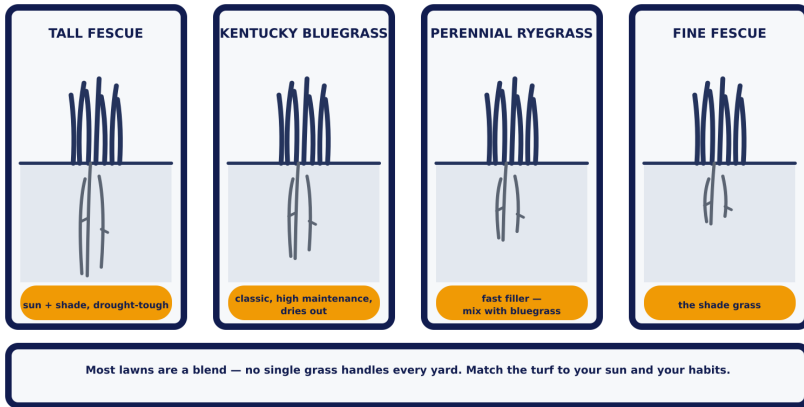
Here's the OSU table, and the reason Chapter 2 comes before Chapter 5. This is the range each grass wants:

- **Kentucky bluegrass:** 2 to 4 inches
- **Perennial ryegrass:** 2 to 4 inches
- **Fine fescue:** 2 to 4 inches
- **Tall fescue:** 2.5 to 4 inches

If you only remember one line, remember that tall fescue starts higher. Cutting tall fescue to a bluegrass height is one of the most common mistakes in Ohio yards, and it shows up two months later as weeds and dead patches.

KNOW YOUR GRASS

pick the right turf for your yard



The four grasses that belong in Ohio, side by side — turf-type tall fescue, Kentucky bluegrass, perennial ryegrass, and fine fescue — each with a blade tuft and a root-depth sketch below it (tall fescue deepest), labeled sun and shade and drought-tough, classic and high maintenance and quick to dry out, fast filler to mix with bluegrass, and the shade grass.

Dad Knows quick check — Chapter 2

- Name your grass — rough answer is fine. Write it down.
- Find a seed bag or ask the person who planted it.
- Check the tall fescue number: 2.5 to 4 inches.
- Next time you buy seed, read the label for cultivar names and 0% weed seeds.
- Skip pasture-type tall fescue, no matter how cheap it is.

Chapter 3 — Soil First: The 15-Minute Test That Saves You Money

You can't see your soil from up top. That's exactly why it's the first thing to fix.

Every spring, people spend money on the lawn and skip the one step that tells them what to spend it on.

Think of a soil test as a blood test for your soil. You wouldn't take a bottle of pills because your neighbor takes them. But that's exactly what happens with lime and fertilizer every year in Ohio.

What a soil test actually measures

A routine soil test tells you two things: your soil's **pH** and its levels of the main nutrients. Phosphorus, potassium, calcium, and magnesium are standard. Micronutrients are optional extras. Some labs also test organic matter — the satisfactory range for Ohio soils is 4 to 6 percent — and heavy metals, if you're curious or concerned.

Here's the important part on what it *doesn't* measure.

Soil tests do not reliably measure nitrogen. Nitrogen moves. It changes daily with temperature, moisture, and microbial activity. That's why no lab report is going to tell you how many pounds of nitrogen your lawn needs. Nitrogen guidance is schedule-based, not test-based — you feed on the calendar, not on a number. Chapter 11 handles that.

Numbers on the report come in parts per million, which for practical purposes equals pounds per acre. Labs that

participate in the national proficiency programs run standard packages, so a report from one lab reads like a report from another.

Use a lab that's part of those programs, and — if you can — one serving your part of Ohio. Prices vary by lab and by how many extras you add, so this book won't quote you a dollar figure. Routine tests are inexpensive, and one test can save you a season of buying the wrong thing.

How to take the sample

This is the part people dread, and it's genuinely fifteen minutes of your Saturday.

1. Get a mail-in kit from a soil testing lab. It comes with a bag, a form, and instructions.
2. Follow the lab's depth instruction. Different labs ask for different depths — don't guess at it, read the sheet that came with the kit. Use a clean kitchen trowel or a soil probe.
3. Take samples from several spots in the yard, not one. A lawn has a sunny side and a shady side and a low spot that holds water; one plug from one place will lie to you. Mix those cores together in a clean bucket so you get one honest average.
4. Label it, fill out the form, mail it. If you want to manage a problem area separately — a shady patch, a spot where nothing grows — send a second sample from that area alone.

That's it. You now know more about your soil than most of your street.

The pH window

Ohio turfgrass wants a soil pH of **6.0 to 7.0** — slightly acidic, right in the middle of the scale.

That range matters because of what happens outside it. Below 6.0, nutrients like nitrogen, phosphorus, potassium, sulfur, calcium, magnesium, and molybdenum become less available to your grass. Above 8.0, nitrogen, phosphorus, iron, manganese, boron, copper, and zinc become less available.

Read that again, because it explains a lot. When pH is off, you can pour fertilizer on the lawn and the grass still starves. You're feeding the soil chemistry a problem it can't solve. Fix the pH and the nutrients you already paid for start working.

There's a regional quirk worth knowing: eastern Ohio soils are more likely to be acidic, thanks to sandstone and shale parent material. Western Ohio soils are less likely to be, because glacial deposits there are rich in calcite. Same state, different starting point.

Lime: only when the test says so

Lime raises pH. It is not a spring tonic, and it is not free of consequences.

Apply lime only when a soil test says your pH is low — no exceptions. Yearly lime applications that nobody asked for are strongly discouraged, because you can push a lawn alkaline, and then you're on the other side of the window with a different set of nutrients locked up.

A few mechanics:

- Expect it to take **several months** for pH to change. This isn't a this-weekend fix.

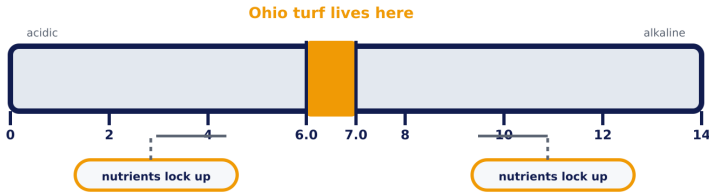
- Best applied in **spring or fall**, when rainfall is most abundant.
- **Don't apply it to wilted or frost-covered turf.**
- **Water it in** after you spread it.
- Your soil test reports lime need in pounds of **pure calcium carbonate**. To convert that to pounds of actual product, divide by the Calcium Carbonate Equivalent listed on the bag. The report does the thinking; the bag label does the conversion. If math isn't your thing, hand both to the person selling the lime.
- Aerating before a lime application helps work it into the soil.
- **Never use gypsum as a liming material.** It barely moves pH. It's a different tool for a different job.

The habit that pays you back

Soil test, then buy. Not buy, then wonder. If you're only going to change one habit after reading this book, change that one — and then remember you don't have to do it every spring. Test, correct, and re-test on the schedule your lab recommends.

THE pH WINDOW

keep your lawn in the sweet spot



Soil test first — don't guess.

The pH window: a 0–14 pH scale with the sweet spot from 6.0 to 7.0 shaded and labeled Ohio turf lives here, nutrients-lock-up tags below 6.0 and above 8.0, and the one line to remember — soil test first, don't guess.

Dad Knows quick check — Chapter 3

- Request a mail-in soil test kit this week.
- Pull cores from several spots, not one — mix them in a clean bucket.
- Circle the reported pH. The target is 6.0 to 7.0.
- Buy lime only if the report asks for it, and only the amount it names.
- Ask about nitrogen at the lab counter, once, so you hear "we don't test for it" from them and not from me.

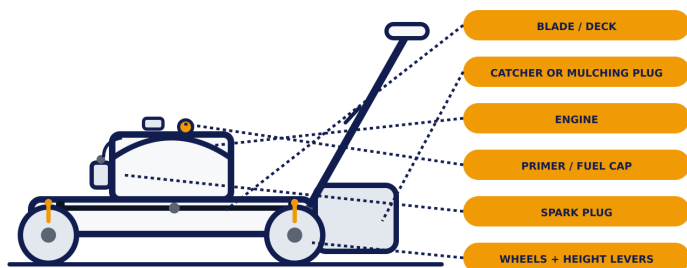
Chapter 4 — The Mower You Own (and the One You Might Want)

Most mowers are better than their operators. The machine isn't usually the problem.

Before you go shopping, know what you're steering. There's no such thing as a bad mower for a home lawn — there's a mismatched one.

KNOW YOUR MOWER

every part, named



Know what you're pushing — every part has a job, and most want attention once a year.

Know your mower: a labeled walk-behind rotary mower — blade and deck, grass catcher or mulching plug, engine, primer and fuel cap, spark plug, and wheels with height levers — navy line art with amber callouts.

Rotary: the workhorse

Almost every home lawn in Ohio is cut with a rotary mower. It's the standard for a reason.

A rotary mower has a blade spinning horizontally under a deck. It cuts by **high-speed impact**, not by scissors. The

spinning blade also creates a vacuum that stands the grass up before the cutting edges chop it, which is why a rotary mower leaves a decent finish even though it's technically bludgeoning the grass.

Rotary mowers come fuel-powered or electric, with height adjustment, from a small push unit up to a big riding machine.

Here's the sentence to remember: **speed and impact start the cut, but a sharp blade is what makes it clean.** The machine is doing its job. Chapter 7 is about the blade.

Reel mowers, and why they're fading here

A reel mower cuts differently. A set of spiral blades spins and scissors the grass against a fixed bed bar. It gives a beautiful, precise cut — think golf course, not backyard.

Where reels shine: contours, and low cutting heights. Where they run into trouble in Ohio: some models don't offer flexible height adjustment, sharpening is trickier and needs the right person, and they struggle at the taller heights OSU now recommends for Ohio lawns. That's why they've been fading here. They're a specialty tool now, not the default.

Push, self-propelled, or riding

Three size classes cover nearly everything: the walk-behind mower (push or self-propelled), the riding mower, and the commercial-style walk-behind.

The honest way to pick:

- **Small lot, flat, and you want exercise:** a push mower. Cheapest to run, least to maintain, no gas if

you go electric.

- **Slope, thick grass, or a lawn that takes you an hour:** self-propelled. You'll pay for the drive system and you'll be glad you did. The rule of thumb from the safety side: take a self-propelled mower **out of gear before starting** it, then engage the drive.
- **Big lot:** riding mower — and the moment you own one, the safety rules in Chapter 9 stop being general advice and start being rules for you specifically, because a riding mower changes what "no riders" means and how slopes work.

This book won't pick brands for you. What it will do is tell you that the mismatch is where the misery lives: a push mower on a half-acre slope is a punishment, and a big rider on a postage-stamp yard is a waste of a garage bay.

Mulch, bag, or side-discharge

Your mower's discharge setup does more for your lawn than the engine does.

Mulching. The mower chops clippings fine and drops them back into the turf. Fine clippings decompose fastest, and they feed the soil. This is the setting you want most of the time.

Bagging. The mower collects clippings in a bag you haul away. Convenient, tidy — and it takes roughly three-quarters of the nitrogen you applied right off the lawn with it. That's the number from OSU research: collected clippings can remove nearly 75 percent of applied nitrogen. If you bag and fertilize, you're doing two jobs that fight each other.

Side-discharge. Clippings fly out the side and land on the surface. Fine when the grass is short and dry. When clippings are long — after a rain-delayed cut, say — they clump, and clumps smother the grass underneath.

If you do have more clippings than the lawn can handle, collect them and use them as mulch around shrubs and garden beds. What you shouldn't do is bag them for the trash. Grass clippings don't belong in a landfill. They're free organic matter, and you paid for the nitrogen in them.

Guards, decks, and why the guard isn't in your way

That flexible flap on the discharge side is a deflector guard. It's not decoration and it's not a design flaw. It's there to keep whatever the blade throws from reaching your legs and your kids.

Keep it in place. Adjust it if it's damaged. And while you're back there, scrape the packed grass out from under the deck — a deck caked with dried clippings cuts wet grass badly. That, plus sharp edges, plus oil and lubrication in the places the manual names, is the whole deck-and-mower maintenance story.

Electric mowers: one hard rule

Electric mowers are quiet, they start every time, and they save you the fuel chapter. They come with one non-negotiable rule in OSU's safety training:

Never use an electric mower on wet grass.

That's the rule, full stop. Not "be careful" — never. Wet grass plus electricity is the wrong combination, and the whole reason you bought the quiet mower doesn't survive a shock.

A note on robot mowers

You may have seen them. This book doesn't cover them, on purpose. There's no extension or manufacturer documentation the team could verify on how they perform in Ohio home lawns, and I'm not going to make claims about a machine I can't source. If you want one, judge it on your own research and the manual it ships with.

Dad Knows quick check — Chapter 4

- Find your mower's discharge setup and set it to mulch.
- Put your hand on the deflector guard — is it attached and intact?
- Scrape the underside of the deck clean before the next cut.
- If you have an electric mower: never on wet grass. Ever.
- If you have a rider, re-read Chapter 9 today, not later.

Chapter 5 — The Right Cut: Height, the One-Third Rule, and Patterns

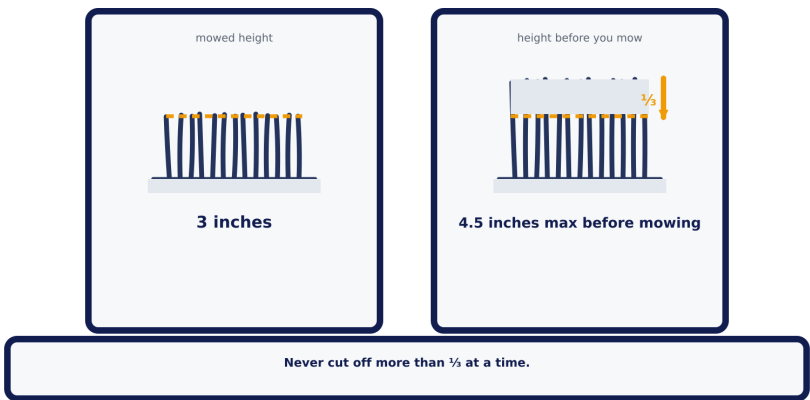
Cut height is the most important number in lawn care. Most people get it wrong in the same direction — too short.

If you only ever change one thing, change this.

Mowing height is the single most important parameter of mowing. Not the mower, not the fertilizer, not the sprinkler schedule. Height. Lawns mowed too short develop shallow root systems with less total mass, and the bill for that comes due in summer, when a shallow-rooted lawn collapses in the first dry stretch.

THE ONE-THIRD RULE

mow often, cut less



The one-third rule: a grass blade cut at 3 inches beside an uncut blade at 4.5 inches, with an arrow marking that you remove only one third of the blade — never cut off more than one third at a time.

The one-third rule

Here's the rule that keeps you out of trouble:

Never remove more than one-third of the leaf blade at once.

The worked example, straight from OSU, is the one to keep in your head. If your lawn is kept at **3 inches**, mow it before the blades pass **4.5 inches**. Do the arithmetic once and it sticks: 4.5 inches of grass cut down to 3 inches means you took off 1.5 inches — exactly the third you're allowed.

Now the honest part: in spring, when Ohio grass is growing hard, that means mowing **more than once a week**. Not because anyone's judging you, but because the grass really is growing that fast, and letting it go is how you end up hacking a third off at once and scalping the lawn.

Scalping isn't just ugly. Cutting off too much at once can severely damage turf, and in a summer stress period it can kill it. The grass spends its stored energy rebuilding leaves instead of roots, and you end up with a thin lawn that weeds walk into.

Summer: raise the deck

Here's where Ohio lawns get their color.

Raise your mowing height for summer. A taller canopy shades the soil, which keeps it cooler and holds moisture in — and that matters more in July than anything you can buy in a jug.

For tall fescue, summer means **3.5 inches or higher**, inside its 2.5-to-4-inch range. For bluegrass, ryegrass, and fine fescue, go toward the top of their 2-to-4 range. You're not being lazy by letting it grow. You're building a shade canopy over the soil for the exact weeks when the soil

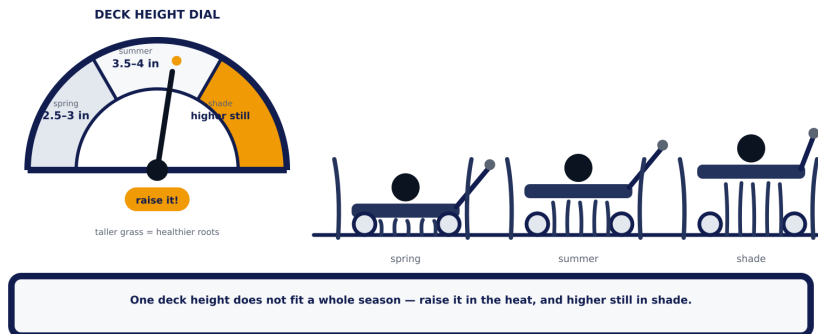
would otherwise bake.

In shade, go higher still. A shaded lawn is light-limited — it doesn't get enough sun to grow the leaf area it needs, so every bit of blade counts. Raising the deck in shade is one of the few things that genuinely helps a shady lawn.

And here's the bonus: **taller mowing significantly reduces weeds.** A dense, tall canopy shades out weed seedlings during the exact stage when they need light to make it. Mow short and you roll out the welcome mat. Mow tall and the weed seeds that land just don't get their chance.

CUT IT RIGHT

match the deck to the season



Cut it right: a deck-height dial showing spring at 2.5–3 inches, summer raised to 3.5–4 inches (raise it!), and shade higher still, with a mower silhouette at three deck settings.

Cut height, by season

A rough deck-height plan for an Ohio cool-season lawn:

- **Spring, active growth:** mid-range. Around 2.5 to 3 inches is fine and helps the lawn fill in.

- **Summer:** 3.5 inches or higher. Tall fescue and shade both push you up.
- **Fall:** back to mid-range as growth slows.
- **Last cut before winter:** see Chapter 14 — one deliberate, shorter cut.

If you remember nothing else: your deck should move up and down during the year. A mower set to one height in April and left there until November is the most common reason an Ohio lawn thins out.

Patterns: change your direction

Here's a free improvement almost nobody does.

Change your mowing direction every one to two mowings, and cut at right angles to the previous direction. Not diagonal-ish — ninety degrees, the opposite way.

Two reasons. First, grass that's always pushed the same way starts to lean and lie down; a blade that's lying flat doesn't get cut cleanly, and you get a swirly, streaky lawn. Second, always starting in the same corner and turning on the same line scalp the same spots over and over, until you have worn patches that look like tire tracks.

Those stripes you see on nice lawns, by the way? That's the same thing. Turning around at the end of a pass lays the grass in a different direction, and the light catches it differently. Striping isn't a secret product. It's direction, and it comes free with mowing at right angles.

The higher your mowing height, the more this matters — tall grass leans more, so it needs the change of direction more.

Wet grass, and the double-mow

Avoid mowing wet grass when you can. It cuts badly, it clogs a rotary mower, and mulching doesn't work when the clippings are wet paste.

But if you're in a stretch of steady rain and the lawn is getting away from you, mowing wet beats letting it get too long. Two conditions: your blade has to be sharp, and you'll want to go slow. A sharp blade on wet grass is manageable. A dull blade on wet grass is a mess you'll spend extra time cleaning up.

If you *do* let it get away from you — vacation, illness, a wet week — don't try to fix it in one heroic pass. OSU's method:

1. Set the mower at its **highest** setting and mow the whole lawn once.
2. Let the clippings dry on the surface.
3. Lower to your normal height and mow again, **in a different direction**.

That's double-mowing. It avoids overloading the mower with a third-of-a-foot of wet clippings and it avoids shocking the grass with one brutal cut. Two easy passes beat one hard one.

Leave the brown and crispy alone

Don't mow a drought-stressed lawn.

When cool-season grass goes dormant in Ohio heat, it's running on reserves. Traffic of any kind — feet, mower wheels, kids, the dog — stresses it. The right move is to stay off and let it rest.

If the lawn is brown and it crunches when you walk, that's your sign. Skip the cut. If you must cross it, cross it once and get off.

Taller is not bravado

There's a version of this where a guy decides his lawn is going to be the tallest on the block, and his neighbors think he's lazy.

Ignore that. Taller isn't neglect — it's mechanics. Taller blades mean deeper roots, deeper roots mean the lawn can find water when the rain stops, and a lawn that finds water doesn't thin out and doesn't invite weeds. The guy mowing at 1.5 inches is the one who'll be buying seed in September.

Dad Knows quick check — Chapter 5

- Find your lawn's current height. Is it inside 2 to 4 inches?
- Tall fescue? Your floor this summer is 3.5 inches.
- Apply the one-third rule: 3 inches of grass gets cut before 4.5.
- Cut at right angles to last time. Every one to two mows.
- Brown and crunchy? Stay off it.

Chapter 6 — Grasscycling: Your Clippings Are Free Fertilizer

Every bag of clippings you haul to the curb is money you already spent.

There's a habit in lawn care that costs you twice: you buy fertilizer, then you pay it forward by throwing away the part that feeds the lawn.

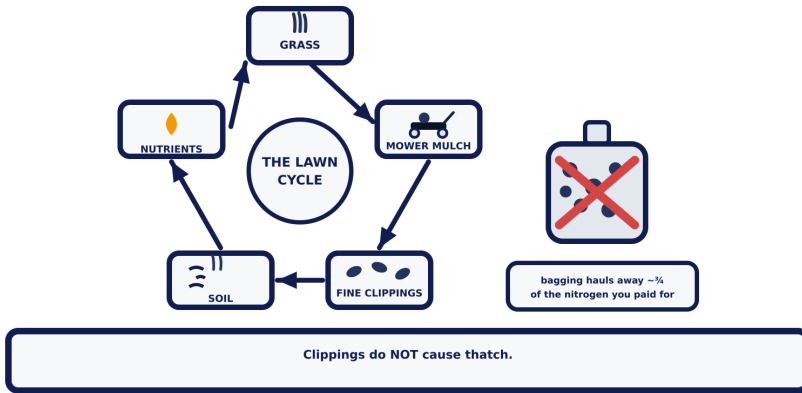
Grass clippings are nutrient-rich. Leaving them on the lawn returns nitrogen to the soil and reduces how much fertilizer you need to buy. OSU's numbers put it plainly: **clippings left on the lawn can supply up to 30 percent of a lawn's seasonal nitrogen needs.** The NC State tall fescue calendar, working the same problem from a different angle, figures clippings cover up to about a quarter of a tall fescue lawn's fertilizer needs. Different numbers, same conclusion: it's a real chunk, and it's free.

Now flip it around. Research cited by OSU found that **collecting clippings can remove nearly three-quarters of the nitrogen you applied.** Three quarters. You fertilized, then bagged most of the benefit and set it out for the truck.

That's the whole case for grasscycling — the fancy word for leaving your clippings where they fall.

GRASSCYCLING

your clippings are free fertilizer



Grasscycling: the circular flow from mower mulch to fine clippings to soil to nutrients to grass, with a crossed-out bag noting that bagging hauls away about three quarters of the nitrogen you paid for, and the reminder that clippings do not cause thatch.

The thatch myth

Let's kill the biggest myth in lawn care, because it's the reason most people bag.

Clippings do not cause thatch.

Contrary to what a lot of us were taught, clippings decompose quickly and do not contribute to thatch buildup. They add beneficial organic matter as they break down. Thatch — the spongy brown layer between the grass and the soil — is made of old roots, crowns, rhizomes, and stolons, not clippings. Chapter 13 covers the real cause.

If your dad told you clippings cause thatch, he wasn't being lazy with the truth. He was repeating what everybody believed. The research moved. That's allowed.

One clarification, because people do ask: the myth isn't that clippings *can* hurt a lawn. If they clump up thick enough to smother the grass underneath, that's a problem. But clumps are a *technique* problem, not a thatch problem, and the fix is easy.

How to leave them without making a mess

Set the mower to mulch. On a mulching mower, the deck chops the clippings fine and drops them back into the canopy, where they settle down to the soil. Fine clippings break down fastest.

Follow the one-third rule. Leaving clippings works because the pieces are small. Cut off too much at once and you're not mulching, you're spreading hay. This is why the one-third rule from Chapter 5 keeps coming back — it's the rule behind clipping management, weed prevention, and root health all at once.

If you have a non-mulching mower, the clippings come out longer and may clump. Two fixes, both easy:

- **Break up the clumps with a leaf rake** — a couple of minutes of dragging the back of the rake over the worst spots.
- **Mow it again in a different direction the next day.** A second pass over dry clippings chops them up and spreads them out.

Give it a day if the grass was wet. Dry clippings shatter; wet ones cling.

When you should bag

There are exactly two good reasons to collect clippings:

Weeds are in bloom. If you've let a patch of weeds flower, mowing spreads seed across the whole lawn. Bag those clippings and get the seed out of the yard. (The better answer is not to let them get that far — more on that in Chapter 12.)

Disease is active. If you've got a disease moving through the lawn, clippings can carry spores to healthy grass. Bag them and get them out.

Beyond that, don't bother.

And if you do end up with more clippings than your lawn can absorb — after a rain-delayed cut, say — don't bag them for the trash. Use them as mulch around shrubs, trees, and garden beds. They're organic matter, they're already in your yard, and they cost you nothing.

There is one other use for a bag, and it's a good one: when the lawn is too long to leave the clippings, collect them, dump them in the compost pile, and put them back on the yard later as compost. Chapter 14 covers topdressing with compost.

The way to think about it

You're running a small system: the mower cuts the grass, the grass feeds the soil, the soil feeds next year's grass. Every time you bag, you interrupt that loop and ship the good part away.

Keep the loop closed. It's the cheapest thing you'll ever do for your lawn.

Dad Knows quick check — Chapter 6

- Set the deck to mulch and leave the bag in the garage.
- Follow the one-third rule so the clippings stay small.

- Got clumps? Rake them out or mow again tomorrow in a new direction.
- Bag only for weed seed or active disease — nothing else.
- Say it out loud once: clippings do not cause thatch.

Chapter 7 — Blades and Basic Mower Care

The cheapest lawn improvement you own is the blade under your deck. Sharpen it.

If your lawn looks bad and you don't know why, look under the deck.

What a dull blade does to grass

A sharp blade cuts. A dull blade tears.

OSU's own wording: a dull blade will tear the grass instead of cutting it cleanly. Ragged tips cause the grass to lose more water, which leaves the plants more vulnerable to disease. Frayed leaves also show up as brown, ragged tips across the whole lawn — a general discoloration that people blame on heat, disease, or the grass itself.

Look at the tips of a few blades after you mow. If they're shredded and white-ish, your blade is done its job badly. A clean cut gives you a crisp edge you can barely see.

And here's the money part: a dull blade forces the engine to work harder, so you burn more fuel and put more wear on the machine while getting a worse result. Sharpening is the cheapest improvement in this entire book.

When to sharpen

In spring, and again through the season. That's OSU's guidance and it's simple to follow.

Practically: sharpen before the first cut of the year — as part of the preseason service — and again when the finish starts looking frayed. A lawn, a yard with sandy soil, and a

mower that hits gravel will all dull a blade faster than a clean lawn. If your mower's been run over a gravel driveway or a rock, don't wait for a calendar.

The one thing this book won't tell you about sharpening

You will find people online giving you a specific angle in degrees for sharpening a mower blade. This book won't, and that's on purpose.

That number comes from your mower's operator's manual, and the manufacturer's spec is the one that matters. So: **follow your operator's manual, and re-create the factory bevel.** If you're taking the blade off and grinding it yourself, work to match the angle that's already there rather than inventing a new one.

If sharpening your own blades isn't your thing — and for a lot of guys it isn't — that's what a mower shop is for. Drop the blade off, ask them to balance and check it, and put it back on. It's a small job for them and a real one for you.

Disconnect the spark plug before you mess with the blade. On an electric mower, disconnect the plug. A blade that spins the wrong way when you weren't expecting it is how a repair becomes an injury. Chapter 9 goes through the safety around this in detail; the short version is that no work happens with the machine able to start.

The five-minute preseason walk

Before the first mow of the year, spend a few minutes on a slow lap around the mower. Nothing here is technical:

- **Blade:** sharpened, or off to the shop.

- **Oil:** at the level the manual names, in the spot the manual names.
- **Air filter and spark plug:** clean and in condition per the manual.
- **Deck:** scrape out the packed grass from underneath. Dried clippings cake up and hurt the cut, especially on wet grass.
- **Guards and deflector:** present, attached, not cracked. If the discharge flap is broken, that's a safety part, not a cosmetic one.
- **Bolts, wheels, and height levers:** firm and moving freely.
- **Lubrication:** wherever the manual says to grease or oil.

Worth saying plainly: **the operator's manual owns the service schedule.** Oil change hours, spark plug replacement, air filter service — those intervals are different for different engines, and this book will not invent a number for you. Find your manual. If it's gone, look up the engine model. Ten minutes with the manual once a year is the whole maintenance program.

Why timing beats skill

A mower serviced in April works all season. A mower serviced in June waited in line at the shop during the two weeks you needed it most.

Do your preseason service **before the spring rush.** That's OSU's recommendation, and the reason is practical rather than mechanical: when the first warm week hits Ohio, every mower in the county needs attention at once, and you want to be the guy who isn't waiting.

The reason this chapter matters

You can do everything else right — soil test, right height, fall fertilizer, water at dawn — and still have a lawn that looks tired, because every blade of grass in it is being shredded instead of cut.

Sharp blade, clean deck, oil where it goes. That's it. The rest of the mower is somebody else's problem, usually the shop's.

Dad Knows quick check — Chapter 7

- Read the tips of your grass after the next mow. Frayed?
- Put a spring sharpening on the calendar.
- Disconnect the spark plug (or the cord) before touching the blade.
- Scrape the deck and check the deflector guard.
- Find your operator's manual — and if it's missing, look up the engine model.

Chapter 8 — Gas, Storage, and Winterizing

Four rules about gas. Get them right and most mower problems never happen.

This is a short chapter about a small number of things that go badly wrong.

The four fuel rules

From OSU's power mower and mower-safety training:

1. Never fill the tank on a mower with a hot engine.

Let it cool first. Fuel and hot metal are the whole risk, and the fix costs you nothing but a few minutes.

2. Store gasoline in an approved, properly labeled container.

3. Never store gasoline in a food container. No milk jugs, no soda bottles. A kid who finds it doesn't read the label you didn't write.

4. Never smoke while you're handling fuel.

That's the list from the source. Notice what's *not* on it: there's no angle, no additive, no secret. It's four rules about not being the reason your garage catches fire.

Where the can lives

The verified rules are the approved, labeled container and no food containers. That's what OSU says, and this book sticks to it.

Where the can actually sits — garage, shed, wherever your local rules allow — is a place where **your local fire code**

and your homeowners insurance have opinions that are stricter than a three-page fact sheet. So read your container's label, follow it, and check with your local fire department if you've never thought about it. That's a five-minute call and it's the right authority for your building.

One habit that costs nothing: keep the can capped, keep it upright, and keep it away from anything that sparks. And don't haul a full can around inside your car with the windows up — you'll smell it for a week and you'll never want to do it again.

What this book won't tell you about fuel blends

You'll hear strong opinions about ethanol blends and small engines. Some of those opinions are right, some are folklore, and the sources this book could verify don't settle it.

So I'm not going to tell you which pump to use. What I *will* tell you is that OSU's storage method — the drain-and-run-dry routine below — solves the winter problem without any debate about fuel chemistry. That's the method this book uses.

Season-end: drain it and run it dry

Here's the verified OSU storage instruction, and it's worth doing exactly as written:

Drain the fuel tank in a safe area, then run the engine on idle until it stops.

Safe area means outside, on a surface where a spill doesn't matter, away from the house, and away from anything you'd hate to stain. Not in the garage, not on the

driveway where you park, and not over the flower bed your partner planted.

Then run it dry. Engage the engine and let it idle until it runs out of fuel and dies on its own. You've just emptied the fuel system, which is the whole point. Fuel that sits in a mower all winter is the fuel you'll be fighting with in May.

Some manuals will also recommend a fuel stabilizer. Those instructions belong to your engine and your manual — follow the book that came with the machine. What this book can stand behind is the OSU method: drain, and run until it stops.

While you're winterizing

You're already out there with the machine, so knock out the rest of the season-end list:

- **Run it dry** — above.
- **Scrape the deck** one more time. Dried clippings left for six months set like concrete.
- **Sharpen the blade** or drop it at the shop now, not in April. Shops are quiet in the fall and buried in the spring.
- **Check the oil** and change it per the manual if it's due.
- **Clean the air filter** per the manual.
- **Wipe down and store it dry** — under cover if you can, out of the weather.

Then, in spring, the machine starts on the first or second pull because nothing in it had a chance to go stale.

The honest reason for all of this

A mower is a small engine with a short season. It spends four or five months working hard and seven months sitting.

Almost everything that goes wrong with a home mower goes wrong during the sitting.

Drain it, clean it, sharpen it, and put it away. Next spring, you mow. That's the whole payoff.

Dad Knows quick check — Chapter 8

- Post the four fuel rules where you keep the gas can.
- Approved, labeled container only. Never a food container.
- Let the engine cool before you fill it — every time.
- At season's end: drain the tank, run it dry, outside, in a safe spot.
- Sharpen the blade in the fall, not in the spring rush.

Chapter 9 — Mower Safety: Read This Chapter Twice

This is the chapter I'd want my kid to read before he ever touches a mower. So read it like that.

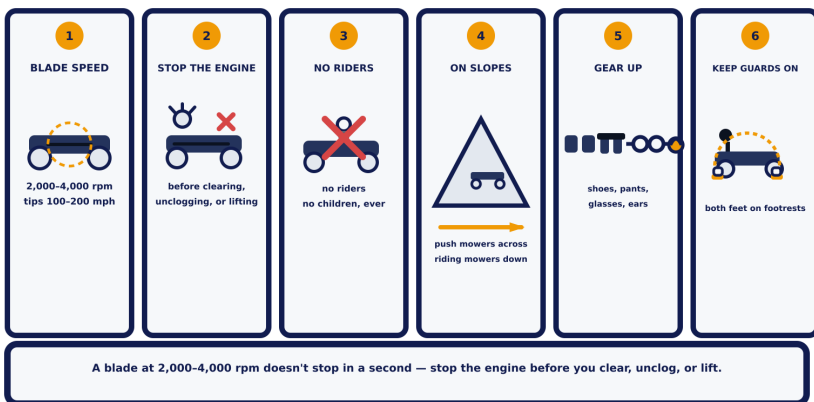
Everything else in this book is about a lawn looking better. This chapter is about somebody not getting hurt.

I'm not going to dress it up with a joke, because there isn't a joke here. A mower is the most dangerous thing in your garage and it doesn't look like it. It looks like a chore. It has a handle you hold with one hand while you think about something else.

So read this one twice. Then read it again in the spring, before the first cut.

MOWER SAFETY

six rules before you start



Mower safety, the six-panel poster: the blade spins at 2,000–4,000 rpm with the tips at 100–200 mph; stop the engine before clearing; no riders and no children, ever; push mowers across slopes and riding mowers down slopes; and the gear — shoes, pants, glasses, and ears.

The blade, in numbers

Here's the fact that changes how you treat the machine.

A rotary mower's blade spins at **2,000 to 4,000 revolutions per minute**. The tip of that blade travels at **100 to 200 miles per hour**.

Read it again. Two thousand to four thousand times a minute. A tip moving as fast as a car on the highway, but in a circle, under a deck, at ankle height.

That's the short version of why every other rule in this chapter exists. Know how to disengage the clutch and stop the engine quickly — not in theory, but with your hands, today, before you start mowing.

Stop the engine. Every time.

This is the rule people break, and it's the rule that hurts them:

Turn off the engine before you clear a foreign object, before you reach under the deck, and before you do any maintenance.

OSU states it directly: turn off the motor before removing a foreign object. Not "wait a second." Not "it's slowing down." Off.

A blade that's coasting to a stop still cuts. The mower doesn't announce when it's finished. So make it a physical habit, not a decision: the hand comes off the handle, the engine stops, *then* you bend down. Every time, including the time you're in a hurry, especially the time you're in a hurry.

Two more that belong with it:

- **Never leave a running mower unattended.** Not to grab a bag, not to answer a kid, not for ten seconds.
- **Never disengage a safety interlock switch, and keep all guards and shields in place.** The interlock is the thing that stops the blade when you let go of the handle. It's not an obstacle. It's the reason you still have fingers. If a mower won't run because of an interlock, you fix the interlock. You don't bypass it. If the discharge deflector guard is missing or broken, replace it — that flap is standing between you and what the blade throws.

Walk the lawn before you mow it

The blade doesn't just cut grass. It throws.

Stones, sticks, toys, wire, a piece of a brick — a rotary mower will pick it up and fire it. That's why OSU's rule is to remove debris from the lawn before mowing and keep the whole mowing area clear of people, animals, litter, and debris, **including the throwing distance of the blade.**

Practical version: walk the lawn first. Every time. Pick up the sticks and the dog toys and the rock the kids dragged in. Look at the places your mower's been throwing things and think about what's in that direction — a window, a parked car, a neighbor, a kid.

And once you're mowing: **the people and the pets are not in the yard.** More on that in a minute.

No riders. No children. Ever.

There is no softer way to write this, and I'm not going to try.

OSU's guidance: **no riders should be allowed on any lawn equipment.** No children — ever.

Extra riders can fall off, be run over, become entangled in the machine, or be killed. They also block the operator's view, distract you at exactly the wrong moment, and get extra exposure to noise, dust, and whatever you've applied to the lawn.

Only one person is on each piece of machinery. Not a toddler on your lap to make the mowing fun. Not a kid standing on the back of the rider holding the seat. Not a friend riding along. One operator, one machine, nobody else. And a brand-new operator needs training before they drive anything — that's in the source material, word for word as a requirement, not a suggestion.

And warn the people around you to stay away from a running mower — that includes the neighbor who walks over to talk, and the dog who follows you around the yard.

Two things this book will not do: I won't quote you a statistic about how many children get hurt by mowers each year, because the sources I could verify don't publish one and I'm not inventing a number. I also won't tell you it's a small problem. The rule is absolute in the source material, and it's absolute here. Kids stay inside or well away while the mower runs. That's a "yes, always" rule, not a "usually" rule.

Slopes: across, or down

Slopes are where mowers tip and where people get pinned. The rules are different for the two kinds of machine, and getting them backwards is a real mistake:

- **Push mower, on a slope: mow across the slope.**
Side to side, not up and down.
- **Riding mower, on a slope: mow down the slope.**
Not sideways across it.

That's how OSU states it, and the reason is weight and gravity. A push mower mowed up and down a hill can roll back on you. A riding mower turned sideways on a hill tips over, because the machine's center of gravity is high and the hill is already fighting it.

Two more slope facts worth carrying:

- **A mower can tip over easily.** If you're falling with a mower, push it away from your body — do not try to catch it, and do not try to hold on.
- **On a riding mower, keep both feet on the footrests.** Feet on the ground near a rider deck are feet the blades can reach. Dismount only after the engine is off.

If your slope is steep enough that you're nervous on it, don't mow it with a riding mower — and if it's steep enough that you're genuinely scared of it, that's a job for a professional, or a job for plants that don't need mowing.

Starting, and the stance

- **Start mowers from a firm stance with your feet safe.** No leaning over the machine, no one hand on the wall.
- **Take self-propelled mowers out of gear before starting.** The drive engages, the mower surges, and you're not where you expected to be. Every year that's a foot or a shin.

- **Read the operator's manual before you use the machine.** Not after the first problem. Before. It's a small book about a machine spinning a blade at highway speed, and it takes twenty minutes.

What you wear

Dressing for mowing isn't about looking serious. It's about what happens when the blade throws something.

- **Sturdy leather shoes.** Steel-toed work boots are the better call, and they're the recommendation. Never sandals, never flip-flops, never barefoot. This is the single most common shortcut taken, and it's the one that ends with a toe injury.
- **Long pants and long sleeves.**
- **Safety glasses or goggles** — and this matters most near a gravel driveway, where the mower throws small stones.
- **Leather gloves.**
- **Hearing protection.** A mower running for an hour is loud enough to matter, and hearing damage doesn't heal.

That's the full list from the safety training. Add a hat if the sun's out. Add a break if it's hot.

Fuel, one more time

Short version, and it's all verified:

- **Never fill the tank with the engine hot.**
- **Approved, properly labeled containers only. Never a food container.**
- **Don't smoke around fuel.**

- **Drain the tank and run the engine dry before long storage.**

Chapters 7 and 8 hold the details. They belong in a safety chapter too, because a mower fire starts in the same garage your family sleeps above.

The electric exception

One more rule, and it's absolute: **never use an electric mower on wet grass.**

Not with a cord, not with a battery, not for five minutes. Electric and wet grass is the wrong combination, and the source material states it plainly with no exceptions attached.

The two sentences to take with you

Stop the engine before you touch the blade.

Kids are not on the mower, and kids are not in the mowing area.

If those two are habits, you've handled most of the risk in this chapter. Everything else — the glasses, the boots, the slope direction, the interlock — is insurance on top.

Dad Knows quick check — Chapter 9

- Find the engine stop on your mower today and use it, deliberately, once.
- Walk the lawn for debris before every mow — no exceptions.
- Nobody rides. Kids and pets inside or far away.
- Push mower: across the slope. Riding mower: down the slope.
- Boots, long pants, glasses, gloves, ears.

- Read your operator's manual this week.

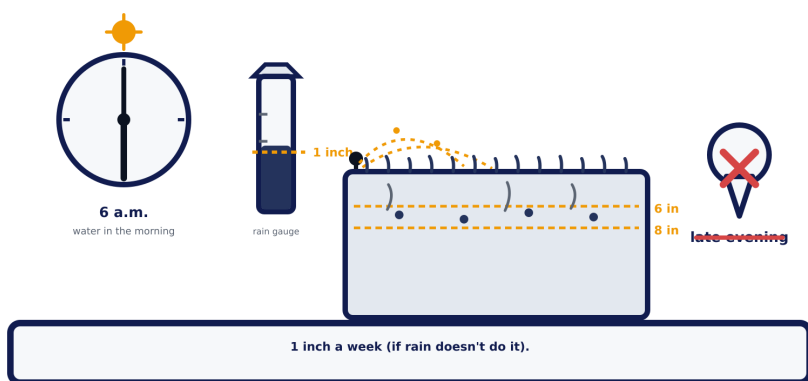
Chapter 10 — Watering the Right Way

Water deep, water rarely, water early. Everything else is a sprinkler ad.

A lawn that gets watered wrong is worse off than a lawn that never gets watered at all — because you're spending money, using water, and training shallow roots to depend on you.

Here's the rule that solves most of it.

WATER DEEP, WATER LESS deep roots beat daily sprinkling



Water deep, water less: a rain gauge marked at 1 inch, a sprinkler, a soil profile showing water reaching 6–8 inches, a clock face marked at 6 a.m., and a droplet crossed out over late evening — 1 inch a week if the rain doesn't do it.

The one-inch rule

When the rain isn't keeping up and the soil is dry, apply **about 1 inch of water per week** — or enough to wet the

top 6 to 8 inches of soil. That's OSU's figure, and it's the classic for a reason.

Two things to notice.

Six to eight inches is deep. That's the point. Water that only wets the top inch or two never reaches the roots, and grass roots grow toward water. Shallow watering grows shallow roots. Deep watering grows deep roots, and deep roots are what gets your lawn through August.

One inch per week is a target, not a schedule. If it rains an inch, you're done. If it rains half an inch, you owe half an inch. Which means you need to know how much rain fell — see the gauge section below.

The NC State tall fescue calendar corroborates the same number from a slightly different angle: about 1 inch per week, **ideally not all at once**, watered until the soil is wet several inches down — you can check with a screwdriver. Their guidance also gets more specific by soil type: sandy soils want lighter, more frequent water, on the order of half an inch every third day, because water runs right through sand. Clay soils are the opposite — they take water slowly, so you irrigate until you see runoff, let it soak in, and then repeat.

Deep and infrequent beats a daily sprinkle

A daily five-minute sprinkle is the most common watering mistake, and it's the worst one, because it feels like you're doing something.

What it actually does: wets the top inch of soil, keeps it wet, and encourages roots to stay right there at the surface. Then a hot week comes, the surface dries, and the lawn has nothing underneath to fall back on. You've built a

lawn with a shallow root system and a dependence on your hose.

Deep and infrequent does the opposite. Soak it, wait, and let the soil dry a bit between waterings. The roots chase the moisture downward. That's a lawn that can miss a week of rain without a crisis.

Morning, not evening

Water in the early morning. That's OSU's recommendation, and the reason is disease. Watering late in the day leaves the blades wet all night, and long periods of leaf wetness are exactly what fungal diseases want.

The NC State tall fescue calendar puts a specific window on it — between 2 a.m. and 8 a.m. — saying that timing decreases the incidence of certain diseases. Most of us aren't getting up at 2, so a timer set for early morning is the practical answer. If you're hand-watering, morning is fine. Just not the evening.

This is also where overwatering shows up as disease rather than as waste. The dollar spot fungus, which Ohio State describes as prevalent on bluegrass lawns, is favored by long periods of leaf wetness from dew, rain, or sprinkler irrigation — and frequent late-afternoon or evening irrigation is called out specifically as something to avoid. Water in the morning, water when the soil is actually dry, and you remove one of the conditions the disease needs.

Measure it, don't guess

Two cheap tools do all the work here.

A rain gauge. Put it somewhere open and read it after a storm. This is the only way to know whether you owe the lawn water.

A trowel or a screwdriver. Push it into the soil a couple of hours after you water. If it goes down easily, water got deep. If it stops short, you sprinkled the surface and called it watering.

If you're using a sprinkler, a rain gauge in the spray pattern tells you how long it takes to put down an inch, and then you know your number for the rest of the season. Ten minutes of measuring beats a summer of guessing.

How to tell the lawn is thirsty

Before it's brown, it tells you. Tall fescue gives two signals worth learning:

- **A dark, bluish-gray color**, instead of its normal green.
- **Wilted leaves** — folded, curled, or lying flat when you walk near them.

If you see those, water. If you wait for straw-brown, you've waited too long and you've lost growth you could have kept.

Dormancy is allowed

You don't have to water. That's a real choice, and it's the one a lot of Ohio lawns make every July.

If you choose not to irrigate, let the lawn go dormant and leave it alone. It's resting, not dying. Kentucky bluegrass can stay dormant for four to six weeks thanks to those underground rhizomes; perennial ryegrass is less tolerant of a long shutdown.

One rule if you go dormant: **in a severe, prolonged drought, even a dormant lawn may need about half an inch of water every four to six weeks** to keep the

crowns and roots alive. That's OSU's figure. It's not watering a lawn — it's keeping it from dying at the roots so it can come back.

And while it's dormant: **don't mow it.** A drought-stressed lawn is running on reserves, and traffic of any kind does damage. Stay off, and keep the kids and the dog off the worst patches if you can.

The July connection nobody expects

Here's a place where watering and insects cross paths, and it's Ohio-specific.

Most grubs in Ohio lay their eggs in **July**. Beetles looking for soft soil to lay in are attracted to a moist, irrigated lawn. So if you keep a bluegrass lawn wet through July, you're making your yard a good spot for eggs to land — and moist soil in July means more of those eggs survive.

Conversely, letting the lawn go dormant through a hot, dry July cuts down on the grub problem. By August, the grubs that are already there tolerate drought fine — so the watering you do in August doesn't help you avoid them.

If you know you've had grub problems, that's a reason to hold off on summer irrigation. Chapter 16 has the whole grub story.

The order of operations

If you only water when it's needed, water deep, water in the morning, and measure what you put down, you've done the job. A lawn in Ohio can look good all summer on about an inch of water a week and a rain gauge.

Dad Knows quick check — Chapter 10

- Get a rain gauge and put it out where you'll see it.

- Learn your sprinkler's time-to-one-inch. Write it down.
- Water in the morning — never late evening.
- Pushing a trowel in after you water. Does it go deep?
- Choosing dormancy? Half an inch every four to six weeks in a hard drought.

Chapter 11 — Fertilizer Without the Guesswork

Three numbers on a bag. Two windows on the calendar. If you know both, you don't need anybody's program.

Fertilizer is where the most money gets spent and the least thinking gets done. Let's fix the thinking part first, because it's cheaper than the bag.

The three numbers

Every fertilizer bag has three numbers. They are the **percentage by weight** of nitrogen, phosphorus, and potassium — N, P, K, in that order.

That's it. A bag that says 18-0-10 is 18 percent nitrogen, zero phosphorus, and 10 percent potassium, by weight. Not "18 units." Not "18 pounds." Percent.

Now the useful part — what each one does.

Nitrogen drives density and color. It's the most important nutrient for how your turf looks. It makes grass grow thick and green. And here's the thing that surprises people: **you can't soil-test for it.** Nitrogen is mobile and changes daily, so it doesn't show up on a soil report. Nitrogen is managed on a schedule, not a test.

Phosphorus matters mainly at establishment. It's for getting new grass going — new seed, new sod, patching. In an established Ohio lawn, phosphorus deficiency is rare, especially if you've been leaving your clippings (Chapter 6). That's why most established-lawn fertilizers have little or no phosphorus these days.

Potassium helps grass handle stress, drought in particular. But many Ohio soils already have adequate potassium — so check your soil test before you buy potassium you don't need.

And the ratio to look for on an Ohio lawn: something like **3:1:2, 4:1:2, or 5:1:2** (N:P:K). On an established lawn, products like 18-0-10 or 22-2-14 fit the pattern. Starter fertilizers are the exception — something like 18-25-12 — and they're one of the few justified uses of phosphorus, because they're for seeding. That's why many lawn-care companies have dropped phosphorus from their residential products entirely.

The math you actually need

Here's the number this whole chapter hangs on:

One pound of actual nitrogen per 1,000 square feet.

That's the standard application rate. Now, how do you know how much product that is?

Divide 100 by the first number on the bag.

A 10-10-10 bag: $100 \div 10 =$ **10 pounds of product per 1,000 square feet.**

That's the whole calculation. If your bag is 18-0-10 and you want 1 pound of N per 1,000 square feet, you divide 100 by 18, and you get a bit over $5\frac{1}{2}$ pounds of product. Same method, different number.

Two more pieces of arithmetic that make this practical.

How big is your lawn? Measure it, or pace it off, or pull up a satellite view and sketch it. You need square footage — nobody can help you without it. Front lawn, back lawn, side strips, all of it.

How much nitrogen per year? OSU's annual guidance per 1,000 square feet splits into a lower-maintenance and higher-maintenance range:

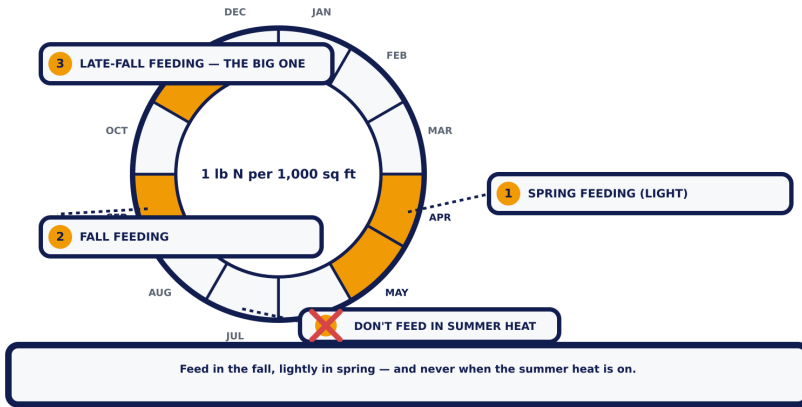
- **Turf-type tall fescue:** 1 to 2 pounds (low) — 2.5 to 4 pounds (high)
- **Fine fescue:** 1 to 2 pounds (low) — 2.5 to 4 pounds (high)
- **Perennial ryegrass:** 2 to 3 pounds (low) — 3.5 to 5 pounds (high)
- **Kentucky bluegrass:** 2 to 3 pounds (low) — 3.5 to 5 pounds (high)

Notice the tall fescue and fine fescue rows. They want less food. That's a feature, not a limitation — it's one of the reasons tall fescue is such a good fit for Ohio.

Split that annual number across the two windows below. Don't dump it all at once.

FEED IN THE FALL

timing beats everything



Feed in the fall: a twelve-month calendar ring with a light spring feeding in April–May, the fall feeding in September, and the late-fall feeding in November — the big one — a crossed-out sun for don't feed in summer heat, and the note: 1 pound of nitrogen per 1,000 square feet.

The two windows: April–May, and September–October

Here's what OSU says about Ohio timing, and it's the part that matters most.

In Ohio, lawns can generally be fertilized in April and May, and again in September and October when needed. And: fertilizing in the heat of summer increases the severity of several turfgrass diseases, which is why it isn't recommended for homeowners.

So: two windows. Spring, lightly. Fall, properly.

The fall is the season that matters

If you're going to pick one feeding to get right, pick the fall.

University research shows that a **late summer or fall (September) plus late fall (November) schedule is**

best for home lawns. Why? Because fall is when turfgrass plants are enlarging their root systems. Good root growth in the fall gives you:

- better top growth next spring
- better color late in the fall
- earlier green-up in the spring
- fewer disease problems

That's four benefits from moving one application. The NC State tall fescue calendar corroborates the same shape — 1 pound of nitrogen per 1,000 square feet in mid-September, and again in November, roughly when the grass is green but not actively growing.

OSU's organic lawn calendar lines up the same way: fertilize in September, then apply the late-fall fertilizer in November, possibly into December.

So the schedule this book stands behind:

1. **April-May:** a light feeding as the lawn comes out of winter.
2. **September:** the fall feeding. Roots are growing; this is when the food does the most work.
3. **November:** the late-fall feeding — the big one. It's for the roots, not the blades, and it's why your lawn comes out of winter looking better than the neighbor's.

About that "four times a year" thing

You may have heard a lawn program described as four applications a year, or six, or a number tied to a service package.

There's no authority behind a hard number like that. What the research supports is the two windows above, with the fall window split into September and November. So if somebody tells you four is the magic number, the honest answer is that spring and fall are what the science identifies, and fall is where the weight goes.

Slow release, and the organic shelf

Two families of product, and both work.

Slow-release and natural organic fertilizers release nutrients gradually over a longer period and feed the soil biology — earthworms, microbes — along with the grass. The tradeoff is bulk: because the nutrient concentration is lower, you're spreading more pounds of product per pound of actual nitrogen. More bags, more trips.

Some examples from OSU's organic table, with their N-P-K, so you know what you're looking at on a shelf:

- blood meal: 10-1-0
- cottonseed meal: 3-1-1
- soybean meal: 7-1-3
- fish pellets: 7-7-2
- alfalfa pellets: 5-1-2
- composted manures: about 0.5-0.3-0.5
- corn gluten meal: 10-0-0
- Milorganite-type products: 6-2-0

Corn gluten meal deserves its own paragraph, because it does two jobs.

Corn gluten as pre-emergent: applied at **20 pounds per 1,000 square feet**, it supplies about **2 pounds of actual nitrogen**, and it suppresses weed seeds. OSU's

numbers on the weed control: **50 to 60 percent in year one, 80 to 85 percent in year two, and better than 90 percent by year three.** It's not an instant kill. It's a program.

Timing: apply shortly after the last spring frost, and again in the fall. Water it in, then let it stay dry for **two to three days.**

And the warning that belongs in bold: **corn gluten inhibits grass seed germination.** If you're overseeding, don't use it. More on that in Chapter 12.

If you're running an organic program, OSU's guidance is to keep fertility up in late spring and summer with slow-release products — and to lean on the fall feeding like everyone else.

More is not better

Three honest cautions before you buy anything.

Soil test first. Same rule as every other chapter. A soil test tells you what you actually need; guessing tells you what the bag wants to sell you.

Small and frequent beats one big dose. OSU's guidance is to make minimal applications over the season rather than one large one, because a large dose can wash away before the plants use it. You paid for that nitrogen; don't send it down the storm drain.

Overdoing it causes problems. Applying fertilizer at higher rates than required raises the level of soluble salts in the soil, which can damage plants. Excessive nitrogen also increases disease pressure. This is the honest version of "you can burn your lawn" — the mechanism is salts and disease, and the answer is to follow the rate.

Why the driveway matters

Here's the part of fertilizing that has nothing to do with your lawn.

Phosphorus and nitrogen are what drive harmful algal blooms. Ohio knows this firsthand: in 2014, a bloom in western Lake Erie caused a two-day drinking water ban for 400,000 Toledo residents, with an estimated \$65 million economic impact.

Lawn fertilizer is one nutrient source among many — farming, sewage, and industry are all in it. But the fix on your side is free:

Sweep or blow fertilizer granules off your driveway, the road, and the sidewalk, and put them back on the turf.

That's the whole rule. Granules on pavement don't feed your lawn. They feed the next rainstorm. Two minutes with a broom after you spread is the difference between feeding your grass and feeding the lake.

One thing this book won't do is quote you Ohio fertilizer statutes — the state's own page wasn't readable when the research was gathered, and I'm not going to cite a law I can't verify. If you want to know what's legal in your area, your county extension office is the right phone call.

The whole chapter, compressed

Test the soil. Know your square footage. One pound of nitrogen per 1,000 square feet, applied in spring and — mostly — in the fall. Sweep the driveway. That's fertilizer.

Dad Knows quick check — Chapter 11

- Measure your lawn in square feet. Write the number down.
- Circle the first number on your fertilizer bag. Divide 100 by it.
- Feed lightly in April–May, properly in September, and again in November.
- No fertilizer in the summer heat.
- Sweep the granules off the pavement after every application.

Chapter 12 — Weeds: Dandelions, Crabgrass, Clover — and When to Let Them Be

Weeds aren't bad luck. They're a report card, and the report is about the lawn, not about you.

A weed is not a plant that showed up to ruin your day. A weed is a plant that found an opening.

That reframing does real work, because it tells you where to act. You can spray every dandelion in the county and still have a weedy lawn next spring if you don't answer the question underneath: *why is there an opening?*

Why weeds show up

Weeds thrive where grass is weak. That's OSU's framing, and the list of weaknesses is short and familiar:

- **Compaction** — hard soil the roots can't push through.
- **Drought** — grass that goes thin in a dry spell.
- **Thatch** — a layer keeping water and air from reaching the soil.
- **Disease** — damaged turf that leaves bare ground behind.
- **De-icing salts** — the strip along the driveway and sidewalk.
- **Dog urine spots** — little dead circles that fill in with whatever gets there first.

- **The wrong species for the site** — bluegrass in deep shade is a losing battle.

And one more, the big one: **cutting too short**. Every time you scalp a lawn, you thin the canopy, and the seed that's sitting in the soil gets light. That's the whole game with crabgrass. Chapter 5 wasn't just about looks.

Here's a nice bit of plant biology that pays off: your grass's growing point is the **crown**, down near the soil. Many weeds' growing points are **near the top of the plant**. So when you mow high, you're cutting above the grass's crown — the grass is fine — while you're taking off the top of the weed, including its flowers and seed heads. High mowing hurts weeds and doesn't hurt grass. That's why mowing at 2.5 to 3 inches keeps a lawn dense and discourages weed seed from germinating.

The three you'll actually see

OSU's list of lawn weeds is long — annual broadleaf weeds like henbit, knotweed, chickweed, spurge, black medic, purslane, and speedwell; perennials like plantains, ground ivy, wild violets, Canadian thistle, and oxalis; grassy weeds from crabgrass and goosegrass to yellow nutsedge and quackgrass. You don't need all of them. You need three.

Crabgrass. The summer annual. It's a grassy weed that needs **light to germinate**, and its seedlings show up most often in thin areas of the lawn in spring. Once summer's rolling, the mature plants are obvious — and that's actually useful information. **Mid-summer is the time to identify mature plants and mark the seed sources** you'll deal with next spring. Annual grassy weeds like crabgrass, goosegrass, and foxtail can significantly thin a lawn in a single season, so it's worth caring about.

Dandelion. The perennial broadleaf with the taproot. It's common where the lawn is thin or mowed too short — which is why the two habits from Chapter 5 matter so much. And it has a weakness: it stores energy in that root.

OSU describes an organic approach that works by attrition: **exhaust the root's stored energy by cutting as much root as possible, beginning in early spring right after leaf-out, and repeating as new growth appears.** You're not killing the plant, you're bankrupting it. Every time it pushes up a new leaf and you take it, it draws down more of what's left in the root. It takes persistence, and it works.

Clover. Here's one to think about before you spray it.

White clover is a perennial broadleaf, and it **fixes atmospheric nitrogen** — it takes nitrogen out of the air and puts it in the soil. That means clover **reduces how much fertilizer you need.** It's not a weed so much as a free soil-improvement program that happens to be green.

The downside is real and worth naming: the flowers attract bees, and if somebody in your family is allergic, that's a genuine reason to care. But if nobody is, a lawn with some clover in it is a lawn that needs less from you.

Keep that in mind, because it's the spine of this chapter.

Pre-emergent: the timing rule

Crabgrass is prevented, not cured. That's what pre-emergent herbicide is for.

Pre-emergent must be applied in early spring, before weed seed germination. That's the whole point — it works on seeds, not on plants. Spray it after the crabgrass is up and you've missed your window, which is

why people feel like pre-emergent "doesn't work."

Now, the standard rule in a lot of books is a soil temperature: crabgrass germinates when the soil hits some specific degree reading at a specific depth. **This book isn't going to give you that number.** The sources I could verify didn't publish one, and I'm not going to make one up and have you spread herbicide at the wrong time based on a number I invented.

Here's the Ohio answer instead, and it's a good one: **the forsythia rule.**

Corn gluten for pre-emergent control goes down in early April, about the time forsythias are in bloom.

That's from OSU's organic lawn calendar, and it's a cleaner signal than a thermometer anyway. Those yellow bushes are blooming on a schedule millions of years older than your lawn, and they're a reliable marker for that early-spring window in Ohio.

So: when the forsythia blooms, that's your cue. Not the calendar alone — the blooms.

A few notes on using it well:

- Corn gluten also feeds the lawn — see Chapter 11 on the rate and its nitrogen content.
- Water it in, then let it stay dry for two to three days.
- Corn gluten **inhibits grass seed germination.** Do not pre-emergent and overseed in the same window. Pick one.

The one exception, and it's an important one

If you're seeding and you also have a crabgrass problem, most pre-emergents are off the table — they block your grass seed from germinating too. That's the tradeoff everyone hits.

There's one exception: **pre-emergents containing mesotrione can be used at seeding.** Mesotrione prevents crabgrass without stopping turf seed from germinating.

Every other pre-emergent, do not use when establishing. Read the label, and if it doesn't say mesotrione, it's for a lawn that's already established.

Post-emergent, hand-pulling, and spot work

For weeds that are already up:

Hand-pull or spot-treat. Not the whole lawn — the spots. Walking the yard with a bucket and a weeding tool after a rain is free, effective, and weirdly satisfying. For dandelions, get the root; for the rest, get them before they flower.

If you're going organic on a bigger patch, OSU's list includes **herbicidal soaps** — contact products, non-selective, best on small annual weeds — and **chelated iron products** for broadleaf weeds. Read the label like you mean it; contact products don't care whether the plant they land on is a weed.

Mow often enough to keep flowers off. Frequent mowing prevents seed production in some weed species, and mowing an annual weed patch *before* it flowers prevents seed set. A weed that never sets seed is a weed that doesn't come back. That's the cheapest weed control there is.

The perfect lawn myth

Here's the part that most books skip, and it's the part that'll make your weekends better.

Perfection is an unreasonable expectation. That's OSU's own line in its organic lawn guidance, and it's the frame to hold onto: tolerating a few weeds is part of the approach, not a failure of it.

Which follows from everything above. A weed is a signal. A dandelion in the middle of a thick lawn is one dandelion. A dandelion in the middle of a thin lawn is telling you about the thin lawn.

So when you see weeds, ask the question the way a mechanic asks it — what's the underlying condition? Cut height too low? Watering too shallow? Soil compacted? Thatch too thick? Wrong grass for the shade? Fix the cause and the weeds thin out on their own. Treat the symptom only and you'll be back out there next spring with the same sprayer.

And keep some perspective about what the yard is for. If you've got kids and a dog and a ball game, a lawn with a few clover patches is a lawn that's being used. That's not neglect. That's the point.

Dad Knows quick check — Chapter 12

- Walk the yard and name your worst weed. Just the one.
- Ask what's underneath it: thin lawn, shade, compaction, or short mowing.
- Watch the forsythia. When it blooms, that's the pre-emergent cue.
- Seeding this fall? No corn gluten in that window.
- Mow often enough that weeds never get to flower.

Chapter 13 — Thatch, Aeration, and Overseeding

Two machines and one calendar window. This is the chapter that grows a better lawn next year.

Three things keep coming up when a lawn just won't get better: a spongy layer under the grass, hard soil under that, and a thin stand of grass that never fills in.

That's this chapter. Thatch, aeration, and overseeding.

Thatch: what it actually is

Thatch is the organic layer sitting between the green grass and the soil — **old roots, crowns, rhizomes, and stolons** that haven't broken down. It's brown, it's spongy, and it looks a lot like dead grass. It isn't clippings. Say it again: **clippings are not thatch**.

Where it comes from:

- **Kentucky bluegrass** is the biggest thatch builder, especially when it's heavily fertilized. Bluegrass spreads with rhizomes, and rhizomes leave material behind.
- **Fine fescue** builds less.
- **Tall fescue doesn't form thatch** at all — it has no rhizomes. Another point in its favor for Ohio.
- Soils rich in organic matter, microbes, and earthworms break thatch down faster, because the biology does the work for you.

The number that matters: half an inch. When thatch gets thicker than that, it becomes a problem. Past half an inch, it inhibits water, air, and fertilizer from getting into

the soil, it harbors insects, and it invites disease.

There's another reason to care about a thick thatch layer: **it attracts more grub egg-laying, and it makes grub insecticides less effective.** OSU's grub guidance is straightforward — when the thatch exceeds half an inch, dethatching or aeration is recommended.

How to check for it

Push a finger or a screwdriver into the lawn. With a healthy thatch layer you feel a thin, springy give and then soil resistance. Past half an inch, you feel a real sponge — a layer of give before anything solid. Pull up a plug with a spade and look at the side of it. Half an inch is about the thickness of a pencil.

That's the test. You don't need a machine to diagnose it.

Core aeration

Here's where people waste money, so let's be exact about what works.

Core aeration mechanically removes actual soil cores from the ground — little plugs of soil — and leaves them on the surface to break down. The number from OSU: **about nine cores per square foot.**

What that does:

- **Relieves compaction** — the hard, tight soil roots can't push through.
- **Manages thatch** — by getting air, water, and microbes into the layer.
- **Improves water and air movement** into the root zone.

- **Promotes root growth**, which is the whole underlying point.

And here's the warning:

Methods that only punch holes in the soil without pulling cores out are ineffective. Spikes, solid tines, and machines that just poke holes don't do the job. They push soil sideways, then it settles right back. If a service offers "aeration" and there's no plug on your lawn when they leave, that's not aeration.

If you're doing it yourself: rent the equipment. A core aerator is a real machine, but it's a weekend rental, not a purchase. Or hire a lawn care operator to run theirs — OSU names both options as perfectly normal.

Two practical notes:

- **Spring and fall are often ideal**, and OSU's guidance is that it can be done anytime there's adequate soil moisture to pull cores. Dry, hard soil won't give up plugs.
- **OSU's organic lawn calendar puts core aeration in October**, alongside compost topdressing. If you're building a fall routine, that's the slot.
- If you're applying lime, **aerating first helps work it into the soil.**

Overseeding: the window is everything

Now the part where Ohio's calendar is genuinely unforgiving.

Overseeding is adding seed to an existing lawn to thicken it up. Seed it at the right time and you get a thicker lawn for the price of a bag of seed. Seed it at the wrong time and winter kills the seedlings, and you've spent money on

bird food.

The Ohio overseeding window, straight from OSU:

- **Northern Ohio:** best between **August 15 and September 15.**
- **Central and southern Ohio:** any time in **September** is acceptable.
- **Hard stops:** if you can't seed by **October 15** in northern Ohio, or **October 30** in central and southern Ohio, **postpone to spring.**

Seeded later than the window, seedlings may not survive the winter. They need time to germinate, grow roots, and harden off before the ground freezes. That's why the window is where it is.

A second source, OSU's water-quality fact sheet, agrees on the shape of it: seeding and overseeding should ideally be completed **late August or September**, and turf-type tall fescue is a good Ohio choice.

The overseed sequence

Here's the method, in order. This is the procedure OSU describes, and the order matters:

1. **Mow short first — 1 to 1.5 inches.** Yes, short. You want the existing grass out of the way and seed reaching the soil, not the canopy. It feels wrong and it's correct.
2. **Core aerate.** Pull actual plugs and leave them. You're opening up seed-to-soil contact.
3. **Slice-seed.** A slice-seeder cuts shallow slits and drops seed into them, which is what gives you seed-to-soil contact. **Scattering seed on top of the ground without cultivation is ineffective** — that's

the step people skip, and it's the step that decides whether this works.

4. **Seed at 1.5 times the package rate.** More seed for an overseed, because not every seed makes it in existing turf.
5. **Top-dress lightly with compost.** A thin layer — you're not burying the lawn.
6. **Water well, then keep the seed moist with light, frequent watering until germination.** This is the opposite of the deep-and-infrequent rule for an established lawn. Seed needs the surface damp. Once it's up and growing, go back to normal watering.
7. **Keep foot traffic off it.** New seedlings don't tolerate being walked on.

Seed rates, so you know what you're buying:

- **Turf-type tall fescue: 6 to 8 pounds per 1,000 square feet.**
- **Bluegrass or ryegrass blends: 2 to 3 pounds per 1,000 square feet.**

Tall fescue is often sown on its own at 100 percent, because of its distinctive color and texture. If you're overseeding a tall fescue lawn, match what's there.

When not to overseed

When you've applied corn gluten. Corn gluten inhibits grass seed germination. Pre-emergent and overseeding don't go in the same window — you'll kill your own seed.

That's why the seasons split the way they do. Spring is pre-emergent season. Late summer and early fall is seeding season. Same lawn, different jobs, months apart.

The one exception, again: **mesotrione** can be used at seeding. That's the pre-emergent that prevents crabgrass without stopping turf seed. Other than that, pick your project.

Overseeding is not an annual chore

One more honest note. **Overseeding isn't maintenance you do every year.** OSU is clear: overseed when quality deteriorates — after drought injury, insect damage, disease, or where the lawn has gone thin and bare.

A lawn that's thick and healthy doesn't need seed. A lawn that's thin because it's being cut too short doesn't need seed either — it needs a taller deck, or you'll be back out there next fall with the same problem.

Match the species and cultivars to what's already growing, fix the underlying reason it thinned out, and overseed into the window. That's how you get a lawn that improves instead of a lawn that's perpetually being repaired.

Dad Knows quick check — Chapter 13

- Push a screwdriver into the lawn. Is there a sponge layer past half an inch?
- If you're aerating, make sure plugs come out. No plugs, no aeration.
- Circle the seeding window for your part of Ohio — Aug 15–Sep 15 north, September central/south.
- If it's past Oct 15 (north) or Oct 30 (central/south), wait for spring.
- Overseed only where the lawn is thin, and match the grass you already have.

Chapter 14 — Fall: The Season That Does the Heavy Lifting

If you do nothing else all year, do fall right. Fall is when an Ohio lawn gets built.

Everything expensive happens in the fall. Everything cheap happens in the fall. And almost everything you'll be pleased with next April was decided between September and November.

Let's walk the calendar.

September: feed the roots

The fall feeding is the one that counts. University research shows a **late summer or fall (September) plus late fall (November) fertilization schedule is best for home lawns** — because fall is when turfgrass plants are enlarging their root systems. Root growth now pays off as better top growth, better late-fall color, earlier spring green-up, and fewer disease problems.

The rate is the same as always: **1 pound of actual nitrogen per 1,000 square feet**. Chapter 11 has the math. For tall fescue and fine fescue, remember they want less food overall than bluegrass or ryegrass — this is not a season to overdo it on a fescue lawn.

September is also when the seeding window is open across most of Ohio. If you're overseeding, this is it — the sequence is in Chapter 13.

October: aerate, and topdress while you're at it

Core aeration in October is where OSU's organic lawn calendar puts it. You've got adequate soil moisture from fall rain, the grass is growing roots rather than fighting heat, and pulling plugs now relieves the compaction that built up over a summer of traffic.

While the plugs are out, topdress with compost. The cores and the compost work together: you've opened the soil, and the compost feeds the biology that breaks the thatch down and builds the soil structure. Spread it thin and let the rain and the worms take it in.

If you didn't overseed in September, October is still a fine month for aeration on its own. If you *did* overseed, you already aerated as part of that — don't do it twice.

November: the big feeding

This is the application that separates lawns.

Late-fall fertilizer in November — OSU says possibly into December, weather depending. The NC State tall fescue calendar describes the same timing in plain words: feed when the grass is **green but no longer actively growing**.

That's the whole idea. The blades have mostly stopped growing, so the nitrogen isn't going to push new top growth that winter will kill. Instead, the plant moves it into the roots and stores it. Then spring comes and the lawn greens up early and hard, off reserves it built in November.

People ask why the late-fall feeding matters more than the spring one. That's why. Spring feeding feeds leaves. Fall feeding feeds roots. The roots are the part that survives

August.

Leaves: chop them, don't bury the lawn

October in Ohio means leaves, and leaves are where a lot of good lawns go bad.

Leaves left on the lawn over a long period kill turf patches. Not gradually — they mat down, block light, and smother the grass underneath. Bags of leaves left in one spot over winter will kill what's under them by spring.

The good news is you don't have to rake if you don't want to. **Dry leaves can be finely chopped with a mulching mower and spread evenly to work into the soil.** Here's the method:

- **Mow the leaves once to chop them**, with the deck set so you're not fighting a pile.
- **Spread them out, then mow in two directions** to break them down further.
- **Keep up with it weekly.** Weekly is the whole secret. Let leaves pile up for three weeks and you're not mulching anymore, you're smothering.
- Once they're chopped fine, they work down into the soil as free organic matter.

And here's the research worth knowing: **work at Michigan State University, quoted in OSU's lawn guidance, found that recycling tree leaves on the lawn does not increase thatch buildup.** Same myth as clippings, same answer. Chopped leaves are not a thatch problem. They're food for the soil.

If there are too many chopped leaves to sift into the lawn — a big maple over a small yard can produce more than any lawn can absorb — **remove them and compost**

them. Then use that compost for the October topdressing. Nothing wasted.

Keep chopping leaves into November, and keep mowing as long as the grass is growing. Fall doesn't end on a date. It ends when the grass stops.

The last mow

One deliberate exception to the height rules: where snow mold is a concern — think prolonged snow cover, which plenty of Ohio winters provide — **make the last mowing of the season 20 to 30 percent lower than normal.**

Why: long grass laid over under snow cover is where winter fungal disease starts. Taking the lawn down a notch going into winter reduces that.

Read that carefully, because it's narrow. This is **one mow**, at the end, going into winter — not a habit of cutting low. And it's a 20-to-30-percent reduction from your normal height, not a scalp. If you go too low and the lawn isn't hardened off, you can do real damage. Late enough that growth has stopped, a bit shorter than usual, once. Then leave it alone.

Put the mower to bed

Fall is when the mower gets its annual service, and it's the smartest time of year to do it (Chapter 8):

- **Drain the fuel tank in a safe area and run the engine on idle until it stops.**
- **Scrape the deck** clean one last time.
- **Sharpen the blade** or drop it at the shop — shops are slow in the fall and slammed in April.

- **Change the oil and service the air filter** per your operator's manual.
- Store it dry, under cover if you can.

Then in spring, it starts on the first pull.

Why fall beats spring

Spring is for waking up. Spring is light fertilization, pre-emergent timing, sharpening blades, and getting the first cut in without scalping. It's a season of small, careful moves.

Fall is for building. Roots, seed, soil structure, stored nitrogen, a mower that's ready. If you only had three weekends a year for the yard, you'd spend them in the fall.

Next spring, you'll see it. The lawn that got fed in November comes out of winter greener and thicker than the one that didn't — and you'll know why.

Dad Knows quick check — Chapter 14

- September: the fall feeding — 1 lb N per 1,000 sq ft.
- October: core aerate, pull real plugs, topdress with compost.
- November: the late-fall feeding — the big one.
- Chop leaves weekly with the mower; don't let them mat.
- Last cut 20–30% shorter than normal, once, then drain the fuel and store the mower.

Chapter 15 — Spring: Wake It Up Gently

The spring lawn that looks terrible in March is usually fine. Give it time and don't panic-mow it.

Spring is the season people overreact in. March comes, the lawn looks like a wet doormat, and somebody's out there with the mower deck all the way down, "cleaning it up."

Don't be that guy. Spring is a season for small, careful moves.

March: clean up without scalping

When the snow's gone and the ground's workable, two jobs:

Rake out what's left of the leaves. Winter always leaves some matted debris in the corners and along the fence. Get it off the grass so light and air can reach the crowns.

Or chop them. If the leftovers are dry and scattered, a pass with the mower turns them into mulch and saves you the rake. Whatever didn't break down over winter goes back into the soil as organic matter.

Notice what's not on the March list: no fertilizer, no pre-emergent, no herbicide. Those are April jobs at the earliest, and some of them are fall jobs. March is cleanup.

Start mowing when the grass starts growing

Begin regular mowing when the grass resumes growth. Not when the calendar says it's spring — when

the grass says so. Some Ohio springs start in mid-March; some wait until April.

And when you do start, follow the rules from Chapter 5 without negotiating with yourself:

- **The one-third rule.** Early spring growth is fast. If the lawn was at 3 inches, mow before it's at 4.5 — which in a wet Ohio April can genuinely mean mowing more than once a week.
- **Don't take the whole winter's growth off in one cut.** That's scalping, and it sets the lawn back right when it's trying to get going.
- **Change direction** from your last mow of the previous fall.

The first cut of spring is a test of the one-third habit. A lawn left long all winter and cut hard in April starts the season stressed, thinning, and open to crabgrass.

April and May: the pre-emergent window

This is the timing chapter of the year.

When the forsythia blooms, put down your pre-emergent. That's the early-April cue from OSU's organic lawn calendar, and it's the window where you get ahead of summer annual weeds like crabgrass — pre-emergent works on seeds, before they germinate, so being early is the entire job.

The details are in Chapter 12, but the short version:

- **Corn gluten** is the organic pre-emergent — 20 pounds per 1,000 square feet, watered in, then kept dry for two to three days.

- **If you're overseeding this year, skip the pre-emergent.** Corn gluten blocks grass seed. The one exception is mesotrione, which can go down at seeding.
- If you're not overseeding, this is your moment, and it comes once a year.

April is also when hand-pulling and spot-treating makes sense. The weeds are small, the soil is soft from spring rain, and fifteen minutes with a bucket while the ground is damp does more than an hour of spraying in June. Get them before they flower — a weed that never sets seed is a weed that doesn't come back.

Fertilize — lightly

Ohio lawns can generally be fertilized in April and May. That's the spring window, and it's the smaller of the two. The fall feeding is where the real work happens (Chapter 14).

Keep it modest. Remember the annual numbers: tall fescue and fine fescue want **1 to 2 pounds of nitrogen per 1,000 square feet** on a low-maintenance program, bluegrass and ryegrass a bit more. You're waking the lawn up, not pushing it. A heavy spring feeding on a fescue lawn buys you top growth you'll have to mow off, and it feeds disease along with the grass.

And the summer rule, one more time: **no fertilizer in the heat of summer.** Ohio guidance is clear that feeding in summer heat increases the severity of several turfgrass diseases.

Sharpen the blade and service the mower

Sharpen blades in spring — OSU's guidance, and it's where the season begins. A sharp blade at the first cut means the lawn doesn't start the year with frayed tips going into the vulnerable early growth.

Do the preseason mower service before the spring rush. Oil, filter, plug, deck scrape, guards — Chapter 7 has the walk-through. Do it in March if you can, because in May every mower in Ohio needs work at once.

If you did your service in the fall (Chapter 14), this is just a blade check and a fresh tank of fuel. That's the payoff for doing it in October.

Aerate if the ground needs it

If the lawn is compacted — hard underfoot, water pooling, thin in the traffic lanes — **spring is a fine time to core aerate**, especially with good soil moisture. Chapter 13 covers it, and the standing rule applies: it's aeration only if plugs come out.

If your thatch is past half an inch, address it. If it isn't, you don't owe anybody an aeration.

Don't rush to seed

Spring seeding is the mistake Ohio springs invite, because everything looks bare and everybody wants a quick fix.

Spring seeding competes with weeds. Summer annuals like crabgrass germinate at the same time your grass seed does, and they're better at it. OSU's guidance is that bluegrass in particular can't compete with summer annual weeds in a spring seeding without mesotrione treatment, and spring freezes can injure young seedlings even when everything else goes right.

So if you must seed in spring:

- **Use fast-germinating ryegrass** rather than slow starters like bluegrass.
- **Use mesotrione** if bluegrass is involved — it's the one pre-emergent that lets turf seed come up.
- **Know that fall is the better bet.** If you can wait until late August or September, you'll get a better result for the same money and less work.

The fall window exists because fall gives seedlings cool air, warm soil, and a full season to build roots before winter. Spring gives them a race against crabgrass. Wait if you can.

The honest spring expectation

Your lawn is going to look rough in March. It will be patchy, brown in spots, and matted in others. Every lawn in Ohio looks like that in March, including the ones you envy.

Then the soil warms, the grass starts growing, and by mid-May you'll see what you're actually working with. Spring tells you the truth about your lawn. It doesn't fix it. Fall does that.

So do the small things: rake, mow on the one-third rule, time the pre-emergent to the forsythia, sharpen the blade, feed lightly, and leave the seeding for September. Then be patient.

Dad Knows quick check — Chapter 15

- Rake or chop the winter leftovers. No fertilizer in March.
- Start mowing when the grass grows — not by the calendar.

- Watch the forsythia. Pre-emergent goes down when it blooms.
- Light spring feeding. Save the real one for fall.
- Sharpened blade and serviced mower before the spring rush.

Chapter 16 — When Things Go Wrong: A Trouble-Shooting Walk

Something's wrong with the lawn. Here's how to find out what, in order, without buying anything.

This is the chapter you'll come back to. Something will go brown, or thin, or lumpy, and you'll want to know where to start.

So here's the order of operations: **look first, then test, then act.** Most lawn problems are diagnosed by hand, not by product.

Step one: the walk

Go out and stand in the bad spot. Then look up.

- **Is it in shade?** Trees, a building, the north side of the house.
- **Is it a traffic lane?** Along the fence, from the gate to the back door, where the dog runs.
- **Is it over the driveway?** Salt damage makes a strip.
- **Is it circular and small?** Think dog, or a spilled something.
- **Is it irregular and spreading?** Different category — that's the disease section.
- **Does it crunch, or does it feel spongy?**

That walk answers a surprising number of the questions people call somebody about.

Brown patches: heat stress, or disease?

Start with the calendar. If it's late July, 90 degrees, and you haven't watered all month, you've got dormant grass, and there's no mystery. That's Ohio. Chapter 10.

But if the lawn is brown in **irregular patches** and the rest of it is green, look closer.

Brown patch is the one to know for tall fescue. The NC State tall fescue calendar describes it as irregular dead and dying patches that develop under high humidity and temperatures **above 85 degrees**, and it's severe in prolonged overcast, wet weather with **evening temperatures above 68 degrees** and daytime temperatures in the mid-80s. What you can do about it:

- **Keep your mowing height above 3 inches.**
- **Water between 2 a.m. and 8 a.m.** — not in the evening.
- For severe outbreaks, a fungicide is an option. That's a decision to make with a professional, and it doesn't fix an underlying problem.

Gray leaf spot shows up on tall fescue from July through October, when night temperatures are above 70 degrees. The response is the same shape: **keep mowing at 3 inches or higher, mow consistently, and remove clippings to limit the spread.** NC State notes that fungicides are needed to suppress it — meaning this is one where the cultural practices help but don't finish the job.

Two more Ohio diseases worth recognizing, because they look dramatic and mostly aren't serious:

Dollar spot is prevalent on Kentucky bluegrass lawns in Ohio. It runs from late spring to late fall and is most prominent after cool, moist weather, favored by temperatures between **60 and 85 degrees** with long

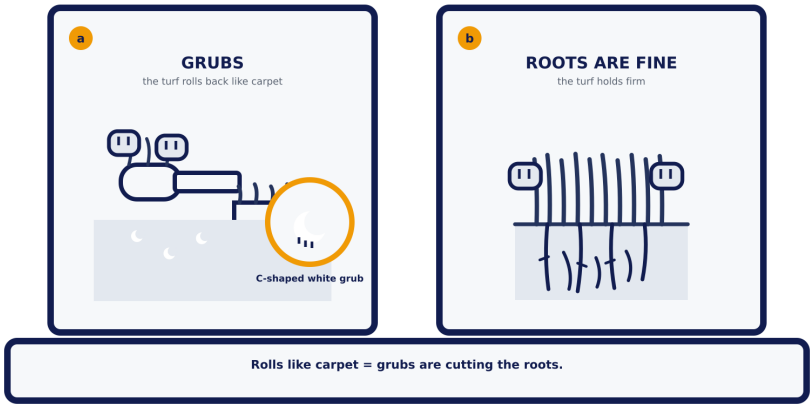
periods of leaf wetness; its growth is inhibited above 90 degrees. It shows up as light straw-colored spots **2 to 3 inches** across. The first blade symptoms are tiny yellow spots that become straw-colored bands with dark reddish-brown margins. The fix is cultural: **adequate nitrogen** (damage is more severe when nitrogen is deficient), **avoid prolonged leaf wetness and frequent late-afternoon or evening irrigation**, water during dry conditions, and prune so sunlight and air get in. Note the caution from OSU: don't overfeed to chase it, because excessive nitrogen aggravates other diseases, brown patch included.

Powdery mildew is primarily a Kentucky bluegrass problem in Ohio, and it goes after shady turf where there's reduced air circulation, low light, and moderate temperatures in the **60-to-70-degree** range with high humidity. It looks like someone dusted the blades with flour or talc. The answer is light and air: prune to let sunlight in, improve airflow, water so the area stays drier, and consider a more shade-adapted species. OSU notes powdery mildew is generally not considered serious on turf.

Slime molds are the one that scares people and shouldn't. They show up after prolonged leaf wetness as irregular discolored patches, sometimes looking like the grass has been dusted with soot — and OSU's guidance is to **let nature take its course**. The fungus isn't damaging the plant directly; it's using it for structural support. For heavy infestations, mow, rake, or hose it off — and only hose it after dry weather, or you'll spread it. Chemicals aren't recommended. It may even come back in the same spot next year. Ignore it.

One practical word on all of this: if you're going to spray a fungicide, read the label and understand what it's for. OSU publishes a current turfgrass pest management bulletin — *Management of Turfgrass Pests* (Bulletin L-187) — for the specifics, and that's the right place to check rather than a product shelf.

THE TUG TEST
grab a patch of grass and pull



The tug test: on one side, hands gripping turf that rolls back like carpet with a close-up of a C-shaped white grub; on the other, turf that holds firm — rolls like carpet means grubs are cutting the roots.

Grubs and the tug test

Now the one that people misdiagnose most, because grub damage **looks like drought stress**: irregular patches of dried, dead grass.

Here's how to tell them apart, and it takes ten seconds.

The tug test. Grip the turf canopy with both hands and try to pull it up. Where grub feeding has severed the roots, **the turf pulls back like carpet** — and you'll often find the grubs underneath. If the turf holds firm, your roots are

fine and you're probably looking at drought or disease instead.

What you're looking for: **plump, pale, C-shaped larvae** — white grubs, the young of scarab beetles including Japanese beetles, masked chafers, June beetles, and green June beetles. They have six true legs and no caterpillar prolegs. They feed in the thatch layer, sever roots, and destroy crowns. Badly infested turf also feels **spongy** underfoot.

One early sign people miss: **animal digging**. Birds, raccoons, and skunks tear up a grubby lawn to eat them. If you wake up to scattered divots, look under them.

Confirming the count. Dig with a cup-cutter or a shovel, sampling a grid every **10 to 15 feet** across the damaged area, and count what you find per square foot. Threshold varies, but for annual grub species, **about 10 grubs per square foot** justifies treating — both to prevent damage and to stop the animal digging.

If you treat, the timing is the whole thing:

- **Preventive insecticides** — neonicotinoids like imidacloprid and diamides like chlorantraniliprole — go down between **late May and mid-August**. But the windows differ by product. Imidacloprid and thiamethoxam have residual activity to about **8 weeks** and shouldn't be applied earlier than **mid-June**; clothianidin and chlorantraniliprole go to about **12 weeks** and shouldn't go down earlier than **late May**. Read the label.
- **Curative products** (trichlorfon/Dylox-type) are applied when grubs are actually present and still young, and they should be **watered in with a**

quarter to half inch of irrigation.

- **Pyrethroids are not effective for grubs.** If you buy a bottle thinking you've got grub control, check the active ingredient first.

Two more things about grubs. **Grub damage shows up in late August and September** — and OSU notes that watering at that point can promote recovery even when the roots have been severed. And if you've had grub trouble: **July irrigation of a bluegrass lawn attracts the beetles that lay the eggs.** Letting the lawn go dormant in a hot, dry July is one of the best grub-prevention moves there is.

Dog spots and salt damage

Dog urine leaves bare spots where weeds move in afterward. De-icing salts do the same thing along the driveway and sidewalk — and by the time you see it in spring, the damage is done, so prevention means using less salt or switching to a product labeled for pet- and plant-friendliness.

For repair: **follow the overseeding method from Chapter 13.** Mow the area short, open the soil, get seed into contact with soil, topdress lightly, keep it moist until germination, and keep traffic off it. And match the seed to the surrounding lawn.

There's no magic additive and no reliable wash-off trick that this book can stand behind, so I'm not going to print one. Fix the soil, get seed down in the fall window, and let it fill in.

Shade: the losing battle you can win

If the bad area is shaded, you're not fighting disease — you're fighting light.

What helps:

- **Get the grass type right.** Fine fescue has traditionally been *the* shade grass, and it still is a good one. But OSU now considers tall fescue the superior choice for shade — it's the most shade-tolerant species for Ohio — and improved tall fescues are recommended for shaded areas because they have minimal mildew problems.
- **Mow higher.** A shaded lawn is light-limited, so it needs more leaf area to catch what light there is. Raise the deck.
- **Reduce the competition.** Prune low branches and thin the canopy so sunlight and air movement reach the grass. Improving airflow also cuts down the humidity that powdery mildew likes.
- **Water smarter, not more.** Shade slows drying. Wetter isn't better in shade.
- **Accept the boundary.** If a spot is truly too dark, mulch it, plant a shade-tolerant groundcover, or put a bed there. Fighting turf in deep shade is a one-sided fight that costs you money every spring.

When to call a pro

DIY covers most of what's in this book. Here's where hiring somebody is the sensible call:

- **Grubs above the threshold** (roughly 10 per square foot on annual species), because treatment timing windows are narrow and the products aren't cheap.

- **Thatch past half an inch** across the whole lawn, where you need a real dethatching or aeration pass.
- **Soil pH that needs correcting**, where the amount of lime and the follow-up test should be worked out properly rather than guessed.
- **A lawn that needs renovation** — full reseeding or a stubborn problem you've identified but can't fix in a season.
- **Steep slopes** you don't feel safe mowing, from Chapter 9.

And if you do hire: OSU publishes a fact sheet — "What to Look for in a Lawn Care Service" (HYG-4025-88) — written exactly for vetting a company. Read it before you sign anything. Ask what they'll apply, when, and why. A good operator will answer that in plain language. If they can't, you've learned something.

Core aeration itself, by the way, is a legitimate either-way job: rent the machine and do it, or hire somebody with their own equipment. OSU names both as normal.

The year at a glance

Here's the whole calendar on one page, for the fridge:

- **March:** rake or chop winter debris. Start mowing when the grass grows. No fertilizer yet.
- **April-May:** pre-emergent when the forsythia blooms. Light feeding. Spot-treat weeds. Sharpen the blade. Aerate if it's compacted.
- **June-July:** mow tall — 3.5 inches or more for tall fescue. Water deep in the morning, or let it go dormant. No fertilizer. Stay off a dormant lawn.

- **August-September:** the seeding window — Aug 15 to Sep 15 in northern Ohio, September central and south. The fall feeding in September.
- **October:** core aeration and compost topdressing. Chop leaves weekly.
- **November:** the late-fall feeding — the big one. Keep chopping leaves and mowing as long as grass grows. Last cut 20 to 30 percent shorter where snow mold is a concern.
- **December:** drain the fuel and run the mower dry. Sharpen the blade or drop it at the shop.

That's the year. Six bullets' worth of decisions and a lot of Saturdays.

The last thing

If you've read this far, you know more about your lawn than most of the crews that drive around offering to fix it. You know why the grass goes brown in July. You know the one-third rule and the pH window and the forsythia. You know what rolls up like carpet means, and why the bag of clippings was money in the trash.

Here's what I hope you take out of it: your yard isn't a competition and it isn't a report card. It's a piece of ground you're responsible for, and the good version of it is a yard where the kids can play tag, the dog can lie down, and the grass comes back every spring because you gave it a reason to.

Your lawn is doing its job. So are you. Get the kids outside.

Dad Knows quick check — Chapter 16

- Stand in the bad spot and look up before you buy anything.

- Do the tug test. Rolls like carpet = grubs. Holds firm = not grubs.
- Brown patches in summer? Height above 3 inches, water in the morning.
- Confirmed grubs near 10 per square foot? Time the treatment or call a pro.
- Print the year at a glance and put it on the fridge.
- One Saturday this month: get the kids in the yard and mow it tall.