

## FIXING THE SWARD: THE RESEEDING BIBLE

Because we live in the transition zone of the United States, our weather is not perfect for growing any single species of grass. Something always “goes wrong” during our growing season, and it’s usually the extreme heat and humidity during the summer months. The resultant stresses allow for the development of damaging diseases. On average, we get lucky one summer out of four, where the temperatures are cool enough, and the rainfall sufficient enough, to keep our swards in good shape. But, for those other three years, we’ve got to “repair” our lawns in late summer/early fall. You can “renovate” (“repair”) or you can completely reestablish the lawn (start over).

Basically, you overseed slightly damaged turf—anything less than 60% desirable turf is a candidate for repair of some sort. But if your lawn is severely damaged, or severely infested with weeds, you should reestablish it. If you’re going to REESTABLISH the sward, which is killing the lawn off with Roundup®, and starting from scratch, NOW (mid-August) is the time to start that process. Killing the weeds and unwanted turf is required so that you get a really great stand of turf. It’s best if you can make two applications of Roundup if you have tough weeds, like black medic (Figure 1) or bermudagrass. If you’re going to renovate, which is generally just aerating and overseeding, you’ve got a few more weeks to prepare.



Figure 1: Black medic (top of photo) and white clover (bottom of photo)

Generally speaking, the EARLIER YOU START, THE BETTER YOUR RESULTS, AS LONG AS THE TEMPS ARE NOT SCORCHING (BELOW 90°F) AND YOU CAN ENSURE THAT THE NEW

TURF CAN BE WATERED PROPERLY FOR THE FIRST FOUR TO FIVE WEEKS, THE MOST CRITICAL STAGE FOR BABY TURF.

You can start this process as early as mid- to late August, if the weather is cooperative (85°F day / <60°F night), with some rainfall. Remember, you can't aerate bone-dry soil! You'll have to plan ahead by irrigating so that you can pull up at least a 2 inch core. You want to be sure to be complete by October 7<sup>th</sup> or so--our average frost date is in mid-October. While a frost won't hurt turf, a hard freeze can kill your turf seedlings. Additionally, if the turf doesn't have enough time to root substantially, the seedlings will be "heaved" out of the soil, by numerous freeze/thaw cycles. So, for optimum results have it done by October 7<sup>th</sup>. We start now because the warm temperatures get the grass seed up and growing...rapid germination and emergence. Cool nights help keep the soil uniformly moist. Hot spells in the end of August can be a detriment, though. That's why starting after Labor Day is generally a better bet for the average turf-tender. If it gets hot and humid again, plan on protecting the new turf with a fungicide. While the Turf Guys are ambivalent about fungicide use throughout the summer, we *are* advocates of using one of our fungicides on baby turf. More about this on the last page.

**Why REESTABLISH?** If your lawn "sucks", then it's better to kill it off and start over. If you can see the soil on over 40% of the surface, your lawn sucks. Below are two photos of sucky lawns. In essence, these can hardly even qualify as being "goat pastures."



Figure 2: This shows a very thin lawn, with a few surviving clumps of tall fescue



**Figure 3: This lawn is on the edge...heavy aeration and overseeding will work, but it may be easier to reestablish**

If your yard looks like either of the two pictures above, it's time to do something drastic. If your yard is mostly weeds...your lawn sucks. Kill it and start over. Or, at least spray Roundup on the weedy patches. Solid patches of turf, if thicker than the photo in Figure 3, that have survived this tough summer and really need not be destroyed! That's tough turf!

**Why RENOVATE?** Adding new and improved varieties into an existing turf sward will allow you to improve your turf, without having your lawn look like a nuclear war zone. It is far less destructive and generally, less work. But, the real key to a successful renovation is to make half a dozen passes with a core aerator, not just two. Not just four. **SIX!** For you rookies out there, "aerator" is pronounced "air-ray-tor", or maybe even "air-a-ter", but certainly NOT "air-e-ator". Jeez, please say it right, Ginger. Renovation can enhance quality tremendously. Below is a typical "sick yard" that can be readily improved via aeration and overseeding. Before you freak out about our suggestion to make six aerator passes, making just two is better than nothing. But don't expect miraculous results.



**Figure 4: Aerating and overseeding with 4 to 5 lbs of turf-type fescue seed per 1,000 sq ft is required here; use 1.0 to 1.5 lbs of bluegrass seed per 1,000 sq ft.**



**Can you use a “dethatching machine”?** You can use a “dethatcher” to work your lawn over to help prepare the lawn for the fall reseeding campaign. Bluegrass lawns should be dethatched every 3 to 5 years, anyway, from mid-August through late September. Don’t dethatch within two weeks of the first frost! You may cause some winter damage.

The dethatcher is an old-fashioned machine that basically just beats the hell out of the turf. You need to set the spinning metal tines so that they cut 1/8 inch deep grooves in the soil. It works best if you scalp the grass first with the lawn mower. If you can set your mower at 1.5 inches, that's scalping, especially if you've been cutting at 3.0 to 3.5 inches all summer. You **MUST** clean up the hay and the dead thatch before you start spreading grass seed. **WARNING:** this method is labor intensive (but usually worth it). Lawn clippings don't cause thatch. Bluegrass can build up a thatch layer, while turf-type fescues rarely have this problem. The reason? Bluegrass spreads laterally by rhizomes and stolons, and those structures actually prefer to grow very shallow, and right on top of the soil surface. That moist interface atop the clay soil is a lot easier to grow in than our dense clay soils. So, the thatch layer actually develops from the bottom up!

Finally, turf-type fescues, perennial ryegrass and true shade-tolerant ryegrasses are all “bunch-type” grasses. Thus, they don't create thatch. BTW: Zoysiagrass should be dethatched every 3 to 4 years, but you should do this in **MAY!** Don't dethatch zoysiagrass in the late summer or fall because you may stimulate its growth, keeping it too green into early fall, and possibly setting it up for winter damage.

**Should you use a “core aerator”?** Even if you use a dethatching machine to get all the dead crap off the soil surface, we still recommend that you rent a core aerator to assist you in your lawn repair. Core aeration literally pokes hundreds of thousands of holes in your soil. Those holes increase the oxygen and water supply to the roots, which is critical because our heavy clay soils are considered “tight” (“tight” ain't always a good thing). In addition, the cores that are left on the soil surface will break down on top of your "thatch." Our soils are loaded with zillions of hungry microbes, which will help degrade the thatch layer. And most importantly, the soil cores will actually crumble/smash down atop the seed that you're spreading, helping that seed grow into a new lawn much faster than just spreading it on top of the soil, compared to Joe-Blow, who makes a two-pass aeration for you. Covered seed comes up quick! As mentioned earlier, best results are achieved when you make six passes with the aerator.

**What is a “vertical seeder” and are they better than the core aerator?** The vertical seeder is often what the pros use to reseed lawns. They can be rented, too, but they're quite heavy, and can't be lifted into your trunk or back of your SUV. Vertical seeders are also known as “slicer-seeders” and “slit-seeders.” This machine has dethatching tines in the front of the unit. The tines cut a groove into the soil, and seed is dropped directly into those grooves. This provides a dramatic improvement in the seed-to-soil contact. Remember, you want your seed on soil, not thatch or dead grass. Using a slicer-seeder will generally provide faster germination and establishment than even the 6-pass aerator system we described above. There is no need to set the blades any deeper than 1/8<sup>th</sup> to 1/4<sup>th</sup> inch deep. A warning, though, if you're using a slicer-seeder...the dethatching tines on the front end of the machine will create quite a few piles of dead grass and/or thatch. These piles must be cleaned up, because they are too thick to allow new grass to emerge from underneath them.



## HOW TO REESTABLISH YOUR TURF (For crappy lawns!):

- 1) Kill the lawn portions that you want to renovate with Roundup, from mid-August to mid-September. But first, call the underground utility marking service on the same day you spray with Roundup. Call 1-800-DIG-RITE in St. Louis. It's free and they want 10 days advance notice. Remember that the Charter Cable lines are ridiculously shallow! Those no-good louts! It's really easy to cut those in half, or nick 'em. If by chance your machinery cuts a cable line, don't let them bully you into paying for repairs. Cable companies are supposed to bury their cables about 6 inches deep. Seriously, folks, if the cable company tries to bully you into paying for a cable repair, tell them to go suck eggs. Call the Attorney General and write the BBB, if they try to screw you out of your money.

Don't mow before spraying because Roundup will work better when it's sprayed onto fresh, succulent tissues. That extra leaf material will absorb and translocate more herbicide, providing a better kill. Don't be a tight wad with the Roundup! Buy the concentrated version and double the recommended dose on the label. Be sure you buy "plain" Roundup. Don't use the "extended" control or the "fast-acting" formulations! Use a hose-end sprayer to apply the Roundup to the crappy lawn and weeds. Be careful that you don't create a lot of mist, and spray on calm days, not really windy ones. If you're not sure about how to do this, just come see us.

- 2) Get a soil test if you haven't had one, or if it has been 5 to 6 years since your last test. The proper pH (soil acidity), phosphorous (P) and potassium (K) levels will improve your ability to grow great grass. To learn how to take a soil test, visit our page on our website (read the Soil Science Basics page on our website, [www.theturfplan.com](http://www.theturfplan.com)). It'll take ~2 weeks to get your soil test results, after you drop it off to our warehouse or deliver it to one of the TURF GUYS. This is important to do because you want to take advantage of all them holes in the soil that you've created by using the core aerator. Limestone, phosphorous and potassium are not sufficiently mobile in the soil to be effective when you just apply it to the soil surface. Those nutrients won't make it 2 to 3 inches deep, where they need to be to help the grass. By taking a soil test early, you'll get results back in time to fix the nutrient levels at the same time you aerate.
- 3) Scalp your turf five to seven days after you spray Roundup. Then, use flags or stakes to mark your own hazards, like irrigation heads and underground doggie-shock lines. Dog lines are usually deep enough to avoid damage, but tree roots will actually bring them to the soil surface.
- 4) After you scalp the lawn, it's more than likely you're going to see how inept you were on your first pass at nuking the lawn – so retreat with Roundup. If you see tiny weeds sprouting and green tissue all around, retreat the entire area. Trust us! It's worth the extra time, energy and money spent to start with a weed free area.
- 5) Now you've got to decide WHAT TYPE OF GRASS SEED TO USE.

For non-irrigated, sunny swards, turf-type fescue is certainly the best species to establish. Our Winning Colors seed blend has three of the top varieties, as rated by the National Turfgrass Evaluation Program (NTEP). This means our seed mix has varieties that have been rated for

having good quality, good color and hardiness, and better-than-average resistance to brown patch (no variety of turf-type fescue is resistant, or immune, to brown patch). Brown patch is the number one disease in turf-type fescue, so using good varieties is one way to minimize the damage. About 35% of the lawns in the transition zone will do best with this type of seed, particularly for new subdivisions, lacking shade trees. It is by far the best of the cool season species for lawns in full sun without irrigation. Overseed this blend at a rate of 4 to 5 lbs/1,000 sq ft. For reestablished turf, use 8 to 10 lbs/1,000 sq ft. Don't skimp on the seed, lest you have a clumpy yard!

Turf-type fescue also is great on irrigated sunny swards, too.

For yards that have the benefit of some shade, and irrigation, we sell Winning Colors Plus, a blend of the same three top performing turf-type fescues along with a vigorous, medium green bluegrass. The bluegrass will fill the divots and holes caused by diseases and moles. The picture below shows some damaged bluegrass. The dead spots will fill in quite nicely after some cooler weather. Bluegrass will spread laterally in the spring and late summer. This bluegrass was damaged by hot sun, being on a southern exposure. But it is irrigated.



**Figure 5: Kentucky bluegrass will spread laterally because it has rhizomes and stolons. Holes less than six inches wide will fill in naturally when cooler temperatures return, as long as moisture is provided.**

If you want the added benefit of a sward that can “mend itself” (to a reasonable extent) then go with our Winning Colors Plus seed mix. The bluegrass will grow where it's happy, and the turf-type fescue varieties will grow where they're adapted best. Talk about a win-win! This exact mix is a favorite for local golf courses, for their roughs. Overseed this blend at a rate of 4 to 5 lbs/1,000 sq ft. For reestablished areas, use 8 to 10 lbs/1,000 sq ft.

A pure bluegrass sward is a thing of beauty...but bluegrass is very particular and unforgiving in St. Louis. Just a few hours north of here, where they have better soil, bluegrass is very easy to grow. If you don't have an irrigation system, forget it, don't even try. Bluegrass doesn't particularly like FULL sun, but even the Turf Guys are surprised sometimes. If you've got a yard that has 20 to 40 year old shade trees, limbed up high so that you have “bright shade”, you can probably grow great bluegrass. But this doesn't mean that bluegrass is a good shade species! It's not...it needs at least 8 hours of sun each day. The newer varieties of Kentucky bluegrass are a hell ova lot tougher than they used to be. Our bluegrass blend is comprised of top performing varieties, each with deep blue green coloration and a short stature (low



growing). Overseed bluegrass at a rate of 1.0 to 1.5 lbs of seed/1,000 sq ft. For reestablished areas, seed at a rate of 3 lbs/1,000 sq ft.

If you have deep shade, and you haven't had any luck with the commercial shade mixes, don't give up, just yet. Most of those so-called "commercial" blends are just a bunch of turf-type fescues or perennial ryegrass, bluegrass, and a small amount of creeping red fescue. THE Turf Plan sells the absolute best seed mix for heavy shade... a blend of three fine-bladed fescues... meadow fescue, sheep's fescue and creeping red fescue. These are the real shade tolerant grass species. This blend is seeded at a rate of 8 to 10 lbs per 1,000 sq ft for reestablished turf. Overseed at 5 lbs/1,000 sq ft.

- 6) Five days after the second application of Roundup, rent either a vertical slicer. Be sure to get proper operating instructions from the rental company. For optimum results, you want your soil to be moist. Not too wet. Not too dry. Pre-irrigate, if we don't get the required rainfall. Plan on making at least two passes with the slicer-seeder. The second pass should be made diagonally or perpendicular to the first pass. It's hard to get the machine close to the edge of sidewalks, streets and driveways. Reserve some extra seed to spread by hand, in those areas. Rough those areas up with a sturdy rake ahead of time. Cover that seed with Penmulch<sup>®</sup>, a product designed to help "glue" your seed to the soil, and create moisture-retaining mulch.

If you want to go through the trouble of topdressing your yard with compost, when you're all done, that really works wonders. Spreading a layer of compost ¼ inch deep will cover the seed and help keep the soil uniformly moist. This is a lot of extra work! And fairly expensive. But it really, really improves the sward!

- 7) If you can tend to all these tasks, and have the seed in the ground by mid-September, you will be rewarded with a fabulous lawn. It will be green and thin this fall, but lush and full by next May -- a real "award winning" situation. We want you DONE by October 7<sup>th</sup>! You've got a 95% chance of success if you're complete by this date. After October 7<sup>th</sup>, THE Turf Plan generally doesn't accept any aeration & overseed or reestablishment requests. The picture below shows what you're striving for.



**Figure 6: A thick and lush sward. While nearly perfect, a sward like this should still be aerated at least every other year**

#### **RENOVATION/OVERSEEDING TIPS (WHAT MOST OF YOU NEED TO DO):**

- 1) Weak turf or turf damaged from disease makes for an unattractive sward. You need to repair it, because it won't get better on its own. Even if your yard is in better shape than Figures 2 to 4, your lawn will benefit from the introduction of new germplasm (new varieties). Newer turf varieties are more disease and heat tolerant than older varieties. That's why you should overseed every couple of years.
- 2) Read #1 in the section above, about taking a soil sample. Do this ASAP.
- 3) Mow your lawn successively lower from 3.5 inches down to 2 inches, starting about 3 weeks prior to your intended aeration rental. Don't do it all at once folks, because the resultant hay that you create will interfere with your seeding, not to mention that you'll harm your existing turf by scalping it too severely. If you can bag the clippings, it'll help make reseeding a bit more efficient.
- 4) Call the underground utility marking service about 2 weeks prior to your intended work day. Call 1-800-DIG-RITE in St. Louis. Reserve your core aerator while you're at it. You want a core aerator capable of pulling plugs at least 2 inches deep, and 3 inches is better.
- 5) Get your BROADCAST SPREADER out of the garage (if you're still using that rusted-out, nasty-ass old drop spreader, get rid of it...treat yourself to a nice Earthway spreader with big ass pneumatic tires!). Set the opening around 3/8<sup>th</sup> inch wide for turf type fescue and shade fescue seeds. Set the opening much finer for bluegrass, about 3/16<sup>th</sup> inch. You've got to be careful not to use too much seed in the first few passes, so use some common sense when your





seed. Before you even make your first aerator pass, spread 20 to 25% of your total seed on the worst spots in your lawn. Concentrate on the really barren areas with the first pass of seed. It helps to have an assistant. Try to get your wife (sorry, “spouse”) to help, or even a teenager.

- 6) Read #5 in the REESTABLISHMENT section, to select the proper seed. Buy your seed early and don't be a tight wad. You're better to buy too much seed than too little.
- 7) Make 2 passes with the aerator.
- 8) Spread another 20 to 25% of your seed.
- 9) Make another two passes with the aerator, perpendicular or diagonally to the first pass. All the plugs that you pull out of the ground are valuable! They're covering up seed, in addition to creating holes that provide better aeration and water penetration.
- 10) Spread another 20 to 25% of your seed.
- 11) By this time, you're dog-assed tired. But, those final two passes with the aerator will really enhance the speed at which your new turf emerges.
- 12) Spread the last of your seed. If you followed directions, you made at least two passes in good turf, and as many as 4 to 6 passes in your problem areas. All the seed that falls into the bored holes, and all the seed that ends up under a “melted” core, will germinate rapidly.
- 11) This method is the ABSOLUTE BEST, but if you're short on time and labor, just aerate the crap out of the yard (as many times as you can stand to), and then spread your seed. It works OK, but it's not going to result in the impressive new lawn as the method we espouse.

#### **FOLLOW UP CARE FOR NEW TURF:**

- 1) **FERTILIZE YOUR LAWN THE SAME DAY AS YOU RESEED:** If you don't know your ACTUAL SWARD SIZE, then don't bother with any of this. You've read nine pages of horticultural minutia, and you don't even know your sward size? Well, we've seen your type. You're sure to screw up, and you'll probably blame us. Think about it...everything we've droned on and on about requires “so and so lbs per 1,000 sq ft”. Don't you think it's important to know how many thousand sq ft of turf that you have? If you don't know, you're not going to seed at the right rate. You're not going to fertilize properly, either. See the page on our website that deals with this particular issue, called, “Know Your Sward Size” at [www.theturfplan.com](http://www.theturfplan.com). Get with the program, Jethro!

Most folks think that regular fertilizer will “burn the new turf” but that's only true if you spread *too much* fertilizer (re-read the prior paragraph!). If you safely apply "regular" fertilizer, providing a maximum of 1.0 lb N/1,000 sq ft you'll be just fine! Our fall fertilizer contains 20% nitrogen and it covers 10,000 sq ft per 50 lb bag. If you want to use a starter formulation, we have that, too. A 50 lb bag of starter has 25% P and only 12% N. It covers



12,500 sq ft and applies only 0.5 lbs of N/1,000 sq ft. Milorganite® also makes a very fine starter fertilizer; a 50 lb bag of Milorganite covers 3,000 sq ft. If you took a soil sample, and it revealed nutrient deficiencies, then apply the P, K, limestone or sulfur, all on the same day, AFTER you've core aerated.

- 2) **BAD SPOTS ALONG PAVED SURFACES:** Seed won't grow well if it's just scattered atop the soil. For the really bad spots, we suggest you cover the seed with either PennMulch® or bagged topsoil. Don't use straw because it'll bring a shit load of tough weeds along with it!!! A 50 lb bag of PennMulch will cover 700 sq ft of soil. You'll have better luck if you rake and scratch up the soil surface, before spreading the seed.
- 3) **WATERING:** Use frequent irrigation to get the seed up and out of the ground. The first couple of days after seeding you can water with your normal irrigation cycles. From day 5 to 14 you've got to sprinkle the turf babies with frequent, shallow irrigations. It's critical that the top ½ inch of soil be kept moist, but not wet. If you own an irrigation system, just run it 3X day with about 4 to 5 minutes per station. Don't water after 4 PM! We can't tell you exactly what to do for your own yard, so you'll need to be observant. As the new grass gets taller, you go start watering more deeply and less frequently. Within three weeks after the turf is up, you should be able to water every other day. Be sure to work with Mother Nature. If we get natural rainfalls, then don't overwater with your irrigation system. Your new turf needs at least 1 inch per week!
- 4) **MOWING:** Stay off the new grass as much as possible while it's short and fuzzy (less than 1 inch tall). But when it gets to be about 2.5 inches tall, run the mower over it, cutting it around 2.0 to 2.5 inches. The turf can handle the foot traffic, but don't haul ass with your mower, because the seedlings are really easy to uproot. Turn slowly!
- 5) **FALLING LEAVES:** Another reason to start in late August to mid-September is that it is a lot easier to get the turf thickened up before the leaves fall. A thick pile of leaves, left for more than 7 to 10 days, can smother your new turf. We've seen people do a lot of work to renew their lawn, only to get lazy in October and November...and they lose their new turf. We prefer to mow our lawns frequently, using a mulching blade. Grinding those leaves up into tiny pieces is really good for the sward. Obviously, mowing dry leaves is far preferable to mowing wet leaves. Using a blower is convenient, too. Be careful when raking, because it's very easy to pull new seedling turf out by the roots (kinda like a wax job!).
- 6) **USING FUNG-ONIL TO BOOST EARLY TURF VIGOR:** The active ingredient in this sprayable quart bottle, propiconazole, has remarkable effects upon plant health and vigor. It's only one member of a large family of fungicides that has proven capable of providing disease control, along with an added benefit of stimulating growth and vigor. The exact mechanism for this is not well understood. WHO CARES? If it helps the new turf, it's worth it! The 32 oz hose-end bottle covers 3,200 sq ft of baby turf. Apply it when the turf is 1 inch tall.