



## Redwood Barn Nursery

1607 Fifth Street Davis, California

### Evolution of the Modern Lawn

“Form follows function.” – Louis Sullivan, architect, 1896.

Everyone who creates a landscape can take this principle to heart. And nowhere more directly than in the decision to have a lawn.

September 2017, after a rather hot summer, I drove around to see if I could find a good-looking lawn. I noticed two things.

There are very few lawns looking good in residential or commercial areas at this time of year. Inspecting more closely, the few with good color and density were a mix of cool-season grasses and bermudagrass. I doubt the latter was planted intentionally, but it was the least stressed and greenest of the lot.

There were also a lot of lawns in pointless places. There is, for example, a practically unbroken stretch of turf in front of commercial and apartment properties, running from the Richards Blvd. off-ramp all the way around past Safeway to the intersection with the Pole Line overpass. Congratulations, Kaiser Permanente, you had the best-looking expanse of lawn in the area. I don't think I saw a single person walking or sitting on any of it.

Frank Lloyd Wright, Sullivan's student, took it one step further: “Less is only more where more is no good.”

Lawns do have functions. Imagine Central Park without a lawn. In fact, imagine any of our city parks without functional lawn areas.

They cool the air, reduce urban heat island effect, remove pollutants, and provide play spaces. Lawns are the most comfortable surfaces for our collective gathering places. From a design standpoint, they make uncluttered views, provide background and contrast for flowers, and create our outdoor living spaces.

Historically, lawns provided all those benefits at high cost, literally and environmentally. I estimate that a lawn, watered at traditional rates, uses roughly a gallon of water per square foot per week. Traditional fertilizer schedules are up to five times a year. Pre-emergent weed killers in spring and fall, others when weeds show up in summer. Fungicides to keep fusarium blight from killing the Kentucky bluegrass.

“Perfect is the enemy of the good.” – attributed to Voltaire.

There is no need to heap scorn on lawns. A lawn was just a meadow mowed by sheep. The people doing it came later. Criticism of lawns can be directed at unnecessary and unrealistic pursuit of perfection. A lawn, like a meadow, is simply a population of plants, usually grasses, that we keep as an open area and trim periodically.

As with roses, we have been sold an image of perfection with lawns, purported to require lots of water, fertilizer, insect and weed killers and fungicides, and precise mowing. All to keep our property values up, out-do our neighbors, or keep the HOA at bay.



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But it doesn't have to be that way.

Choose better-adapted types developed for heat and drought tolerance. Water less by using more efficient timers and sprinklers. Change your mowing height to improve density and shade out weeds. Some grasses naturally suppress weeds. Unmowed mixes, basically returning to the meadow look, make great play or pet areas. Lower-water ground covers can be used in less-trafficked areas, to create the openness of a lawn without the mowing.

The grass types that you use should be chosen for adaptation to your yard's sun or shade, the uses to which it will be put (function), and the most sustainable use of resources.

If you don't choose the species, they are likely to choose themselves, as with the bermudagrass above.

The history of lawn types in our area goes something like this:

Kentucky bluegrass and perennial ryegrass blends, sometimes with bentgrass, prevailed into the 1980's.

Bluegrass and ryegrass were blended with creeping red fescue for "shady lawn" mixes.

Major drought in California in 1976 – 7 caused mandatory watering cutbacks. Lawns died.

Tall fescues were widely planted in parks and schools in the 1980's. These are wider-bladed lawns. Dwarf fescues, developed from the tall fescues, became common in residential subdivisions. They grow more slowly than tall fescues.

Tall fescues were blended with small amounts of Kentucky bluegrass because it made a better sod. This combination became the most common lawn type, especially in new housing subdivisions. Often the bluegrass dies out within a few years due to fungus.

Seed breeders developed drought tolerant turfgrasses. First they worked on new types of bluegrass and ryegrass. In recent years, fine fescues have gotten attention. Chewings fescue, hard fescue, and sheep fescue, along with new strains of creeping red fescue, have been developed for use in "no-mow" lawn mixes (i.e., meadows). These had very narrow blades but somewhat clumpier growth habits, so were relegated to pasture use. Most did not take well to low mowing and weren't adapted to traditional lawn use, but that has changed.

Improved irrigation technology increased water efficiency.

Major drought in California, which officially ran from 2011 through March 2019, caused statewide water reductions of 30%.

Lawn replacements became mainstream. Use of hardscapes, bark and gravel, and ground covers increased.

### Lawns with less water?

Can a lawn, informal or otherwise, look good with 30% less water?

Yes.

Turfgrass trials test varieties for color, density, tolerance of diseases, heat, and drought, and more. The Turfgrass Water Conservation Alliance (TGWCA) "qualifies" varieties via clear protocols as to how drought tolerant they are. It's a rigorous screening process.<sup>1</sup>

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<sup>1</sup> [https://cwel.usu.edu/files/New\\_Turf\\_Varieties\\_for\\_Low\\_Water\\_UNLA\\_2018.pdf](https://cwel.usu.edu/files/New_Turf_Varieties_for_Low_Water_UNLA_2018.pdf)



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“For any variety to qualify, it must pass multiple screenings of scientifically repeatable drought stresses, and score at or near the top of any statistical analysis base. Once qualified varieties retain their qualification for a maximum of eight years (sixteen years for Kentucky Bluegrasses). After the qualification has expired, varieties must requalify against a higher standard of drought tolerance making the TWCA qualification process a series of incremental reductions in overall water need for turfgrasses.”<sup>2</sup>

Tall fescues top the list for the sheer number of varieties qualified, but there are many types of perennial ryegrass, some of Kentucky bluegrass, and increasing numbers of fine fescues.

Why do these other types matter?

Tall fescue is tough and reliable, but they aren't for everyone. They have wide leaves, they're kind of "clumpy" (they don't fill in as well as other grasses), they're less green in summer heat, and some people find them itchy. The other grasses are finer-textured, prettier, and more comfortable to sit on.

### **How to make your lawn more resilient.**

Choose the right species for your situation, with particular attention to your shade and hot sun conditions.

Creeping red fescue, for example, makes an excellent ground cover (mowed or otherwise) in shade, but can die out in hot areas. It can thin out if mowed short in summer.

So, the second principle is to experiment. Seed in other species if one isn't holding up. And don't hesitate to keep seeding.

Repetitive overseeding is the key to developing the right mix of grasses, out-competing weeds by maintaining density, and filling in areas that have thinned out during summer's heat.

This is the secret to how they keep lawns looking so good in stadiums.

Several years ago, I took my kids to OzzFest, a traveling heavy metal music extravaganza hosted by Ozzy Osbourne, at the Yuba City amphitheater. It was their idea, not mine. If you're ever considering it (don't), I strongly suggest (no, really, don't) soft earplugs. It ran for about fourteen hours, so I had plenty of time to look closely at the turf.

It was a July heat wave, over 105 degrees mid-day (amusing, since most of the kids were garbed head to toe in black). A lot of the spiked hair kind of wilted. Despite the heat, the lawn, though trampled by thousands of rather strange-looking young adults, looked great.

I noted that it was mowed at about three-inch height, the minimum lawn height I recommend here. It had a high proportion of perennial ryegrass, probably because that germinates rapidly and gets dense quickly. They probably reseed the lawn several times a year. There's a reason that 400 million pounds of turfgrass seed is produced in the United States each year.

### **How it works.**

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<sup>2</sup> <https://www.tgwca.org/>



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Cornell Cooperative Extension has a publication titled Repetitive Overseeding Can Help!<sup>3</sup> The basic principles are: use a lot of seed, do it often, do it at the right time of year, and water if you have to. “Make at least 3 applications of seed, each a week or so apart. More applications are fine, too.”

There’s no need to cover the seed, so long as the seedlings get adequate moisture, nor do you need to apply fertilizer.

Anytime mid-September into November will work here. Grass germinates and grows fast in October. High temperatures and low humidity, especially with wind, dry out seedlings and reduce germination percentage, so water daily at first. My favorite time to scatter grass seed is when we’re about to get a rainstorm in the fall. You can also seed in late winter to early spring.

### **Which species to choose?**

To match an older lawn, you’ll probably plant tall fescue. Consider blending in some fine fescues and perennial ryegrass.

To increase the shade tolerance, use some of the fine fescues.

If it’s really thin and you need quick cover, use perennial ryegrass.

For greater drought tolerance, look for varieties that have been tested and certified.

If you want to have an informal meadow, the blends of fine fescues sold as “no-mow” can be very attractive.

You can consider very low water users such as buffalograss, but be aware of the long dormant season in which it is brown.

If you have bermudagrass, make an informed decision about whether to keep it. It is very drought tolerant but has drawbacks.

If you want to get away from grass entirely, consider dymondia, hardy iceplants (*Delosperma* species), hybrid lippia (*Phyla nodiflora* ‘Kurapia’), low-growing sedums, or creeping thymes. None is perfect, but a mix of ground covers and stepstones can make an effective outdoor gathering space.

One last saying: “if the only time you walk on your lawn is when you mow it, it’s time to remove it.” – Origin unknown.

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<sup>3</sup> <http://ccerensselaer.org/gardening/lawns-ornamentals/lawn-fact-sheets>



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<http://redwoodbarn.com/images/DE lawns/WHITE HOUSE. SHEEP ON LAWN LOC hec.10789.jpg>

Sheep graze on the White House lawn, Harris & Ewing Collection - Library of Congress  
The original lawn mowers at work on the White House lawn during WWI.



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[http://redwoodbarn.com/images/DE\\_lawns/tall%20fescue.JPG](http://redwoodbarn.com/images/DE_lawns/tall%20fescue.JPG)

Tall fescue became the most popular lawn species in many regions because it was more drought tolerant, wear-resistant, and generally made a tougher lawn than the older bluegrass/ryegrass mixes. Note the wide leaf blades. It doesn't spread to fill in, so it often needs reseeding to keep it dense and crowd out weeds. It's ok to mix other types of grass with it for greater shade tolerance or finer texture.



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[http://redwoodbarn.com/images/DE\\_lawns/Festuca%20rubra%20in%20shade.jpg](http://redwoodbarn.com/images/DE_lawns/Festuca%20rubra%20in%20shade.jpg)

Most grasses don't tolerate much shade, so lawns tend to be thin under trees. Creeping red fescue has long been added to "shady lawn mix" grass seed blends because it can grow well with more shade. But it doesn't like close mowing. Here is it being grown as an unmowed ground cover under a linden tree. Note the fine leaf texture and deep green color.



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[http://redwoodbarn.com/images/DE\\_lawns/Scout%20and%20fescue.jpg](http://redwoodbarn.com/images/DE_lawns/Scout%20and%20fescue.jpg)

An informal planting of mixed fine fescues, with a single flowering clump of tall fescue (note the wider leaf blade). Scout enjoys having a meadow to run in, and these grasses thrive with as much as 30% less water than traditional lawn grasses.



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[http://redwoodbarn.com/images/DE\\_lawns/Celine%20in%20meadow%20with%20fine%20fescues.jpg](http://redwoodbarn.com/images/DE_lawns/Celine%20in%20meadow%20with%20fine%20fescues.jpg)

An informal meadow of older varieties of the 'other' fine fescues, chosen for drought tolerance. This mix was planted several years ago and comprises hard fescue, sheep fescue, and Chewings fescues. Note the 'clumpy' appearance and the fine leaf texture. There are now improved varieties of these fine fescues suitable for use in lawns.