WHAT TURF IS BEST FOR YOUR LAWN?

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A homeowner turfgrass species demonstration was established at the Noer facility in the spring of 1996 to show students and visitors many different grasses that can be used for turf in an upper Midwest climate. Two more demonstrations were established in the fall of 1998. One of those shows different cultivars of Kentucky bluegrass, which is the most versatile and often used turf species in the upper Midwest. The other shows common homeowner mixtures (combinations of different species) that are sold at retail stores around the Madison area.

These homeowner demonstrations are all maintained under typical homeowner standards: mowed once per week, fertilized three times per year, irrigated deeply and infrequently, herbicide applied only when weed population is very high, and no insecticide or fungicide applications.

The species demonstration exhibits 20 different turf choices representing most turfgrasses used in our upper Midwest climate. Eighteen of the entries are cool-season grasses and considered more adapted to our climate than the other two entries. Cool-season grasses are species adapted to favorable growth during cool portions of the growing season. The other two, buffalograss and zoysiagrass, are warm-season grasses. They are grasses adapted to favorable growth during warm portions of the growing season. They green up later in the spring and go dormant early in the fall in Wisconsin. Some people still use those two grasses in our climate so they are included in this demonstration.

The descriptions below are well-documented characteristics that distinguish the nine general species groups, which encompass the 20 entries. Four of the species -- Kentucky bluegrass, perennial ryegrass, fine fescue, and tall fescue are predominantly used turfs for homelawns in our part of the country. Kentucky bluegrass is the most widely used. These four are described first.

1. Kentucky bluegrass - This is the most popular turfgrass of all cool-season grasses in the upper Midwest region. Its attributes are a nice medium leaf texture, dark green color, aggressive spreading growth habit, and pretty good tolerance to most environmental conditions except shade. There are hundreds of different cultivars of Kentucky bluegrass to choose from, some being selected for more shade tolerance, ability to take a lower mowing height, more disease or drought tolerance, and preferred texture or color of the leaf. It is best to blend three or four different Kentucky bluegrass cultivars together to maximize the desirable traits of each and to mask any undesirable traits.

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2. Perennial ryegrass - This turf is a bunch-type turf that does not have the ability to spread like Kentucky bluegrass. It is also a shorter lived perennial in our climate thus it should be overseeded every few years if planted in a monostand. Its attributes are a very rapid establishment rate, nice medium leaf texture, good color, and high wear resistance. Perennial ryegrass is useful in mixtures with Kentucky bluegrass to control erosion until the Kentucky bluegrass can get established.

3. Fine fescues - This is the most shade tolerant of the cool-season turfgrasses. Consequently fine fescues are popular in shade seed mixtures with other turfgrass, especially Kentucky bluegrass. Fine fescues also require less fertilizer and irrigation than most other cool-season turfs. However, it is less wear tolerant than most other cool-season turfs. Red fescue is the most widely used of the fine fescues since it is the only one that spreads by rhizomes although not very aggressively. The other fine fescues; sheeps, hard, and chewings are strictly bunch grasses. A blend of several of the fine fescues is sometimes marketed under such names as "No-Mow" or "Carefree." Contrary to the name this turf should be mowed every several weeks to maintain a dense stand of grass. Unmowed it will attain a height of 12 – 14 inches and thin out or die after a few years.

4. Tall fescue - This is more of a utility grass with a little wider leaf blade than other cool season turfs. Many of the new cultivars look finer and more desirable. It's also another non-spreading bunch-type grass that may need overseeding to keep a dense appearance. The attributes of tall fescue are it's good drought, wear and salt tolerance. It also has pretty good heat and shade tolerance.

Five other species are included in our demonstration, although these are used infrequently for homelawns in our climate. The five species' descriptions are below. There are additional grasses and plants that can be used for turf in our area such as some annual herbs, perennial flowers, ornamental grasses, and even weeds. Most of these are so seldom used as turf cover that they have not been included in this turfgrass demonstration.

5. Bluegrass - This group of bluegrasses are separated from the Kentucky bluegrass group listed earlier. Annual and *supina* bluegrasses are closely related. Annual bluegrass is generally considered a weed in a homelawn situation because of its shallow rooting, bunchy appearance and intolerance for hot and dry conditions. *Supina* is a perennial bluegrass that is touted to be very traffic and shade tolerant. This is presently being investigated at the University of Wisconsin. Rough bluegrass, another perennial, is one of the most tolerant of shady and wet conditions of all bluegrasses, which makes it unique among them. Unfortunately few improved turf type cultivars of rough bluegrass are available. Rough bluegrass is also more yellow-green and flaccid than other bluegrasses. It thus doesn't blend well with other turfs and also can be very invasive, thus is considered undesirable and weedy in most lawns.

6. Bentgrass - This species is not recommended for a homelawn because of its high maintenance needs. It is primarily considered a weed in a homelawn situation. They are not compatible in their maintenance needs or texture with other cool-season turfs. Its prostrate growth habit and tolerance of extremely low mowing heights make it ideal for certain recreational uses such as golf course greens, tees and fairways. Bentgrass has poor shade tolerance.

7. Alkaligrass - One of the most tolerant of the cool-season grasses to high salt and pH. The most common use of this turf is along roadsides that receive excessive salting in the winter months.

8. Buffalograss - This is an extremely drought tolerant and slow growing turfgrass. It forms a fine blue-green leaf blade, but in Wisconsin's climate may only have color for five months since it is a warm-season grass. Buffalograss is native to the North American great plains from Texas to Canada and Wisconsin is often too humid for it to do well. There is still a growing interest to try it in low maintenance areas since it usually won't grow more than four or five inches tall, needs little or no fertilization or irrigation, and has no insect or disease problems. It's not tolerant of shady or wet conditions and should not be fertilized very often. Its success in our climate is not proven. Watch to see how well this plot does and observe other sites before trying buffalograss on a large scale in Wisconsin. Improved selections are being introduced and some may be more adaptable to the upper Midwest.

9. Zoysiagrass - This is a warm-season grass that has no real use in the upper Midwest, yet some people keep trying to use it here. The grass is going to be tan and dormant for about seven months of the year. For the five months that it is green it is touted to be low maintenance; need little fertilizing, mowing or pesticides. The low maintenance claim may be true in warmer Midwest regions and in the south. Around here, weeds will become more aggressive than the zoysia in the cooler spring and fall and take some hold into the zoysia stand. The thick mat of tough aboveground rhizomes and stems that the plant produces make a mower hard to push through it.

MORE ABOUT KENTUCKY BLUEGRASS

The two demonstrations that were installed in 1998 are intended to compliment the original species demonstration. The Kentucky bluegrass cultivar demonstration shows the tremendous variation among 32 cultivars. This is a limited representation since there are over 1000 different cultivars of Kentucky bluegrass. The 32 cultivars in the demonstration show different shades of green, leaf texture, rates of growth, rates of spring greenup, amount of seed production, and other differences all within the same species – Kentucky bluegrass.

In our study, one cultivar was observed to be of less quality than the others. This one was called, "Variety Not Stated." This is a designation often given when old "common" cultivars of a species are used. Common varieties are of medium quality when compared to the new improved ones, yet they are still sold quite extensively. Some of the

"common" cultivars of Kentucky bluegrass are Delta, Kenblue, S 21, Alene, Newport, and Park (not to be confused with "Madison Parks" which is a desirable mixture packaged by Olds Seed Company of Madison). New improved cultivars have been bred to provide a higher degree of uniformity over a longer period of time when properly maintained compared to the old common ones. They withstand insect, disease, and weed problems better and have better color and texture. Some have also been bred for better drought resistance, more shade tolerance, and lower fertilizer requirements. Thus you acquire a more desirable turf when you buy Kentucky bluegrass made of improved cultivars. It is recommended to use 2 - 4 different improved cultivars in a blend.

A WORD ON TURF MIXTURES

The other demonstration that was installed in 1998 is a turfgrass mixture demonstration. A turf mixture utilizes several different species in the makeup of a lawn. A common mixture would include Kentucky bluegrass, perennial ryegrass, and fine fescues. Sites planted with this mixture often become mostly Kentucky bluegrass in sunny locations, while in shady conditions the fine fescues predominate. The perennial ryegrass in the mixture works as a great nurse crop because of its rapid germination. There are also improved and older "common" types of perennial ryegrass like there are with Kentucky bluegrasses. Improved cultivars have greater cold tolerance, better density, darker color and better disease resistance than the older common perennial ryegrass selections and blend very nicely with improved Kentucky bluegrasses. Several cultivars of each of these species are often used to provide the best quality turf.

A couple of the mixtures in our demonstration resulted in unacceptable lawn turf. They were both mixtures made partly or mostly of annual ryegrass. Perennial ryegrass in a mixture, especially the improved turf type selections, create a much more desirable lawn than annual ryegrass. They also germinate nearly as fast to provide quick soil stabilization. There are not many reasons to put annual ryegrass into a lawn mixture except to plant a temporary groundcover, or to keep the price of the mixture cheap. The improved perennial ryegrass cultivars will cost more than the old common selections but will result in a more desirable lawn.