



Speeding Up Spring Greenup

by Doug Brede, Ph.D.

After the quirky winter we had, lawn greenup in many areas of North America was erratic or delayed. Low soil temperature is usually the most obvious culprit in sluggish spring greenup. Grass blades just won't grow until soil temps get over 40°F. And no amount of fertilizer at that point can help.

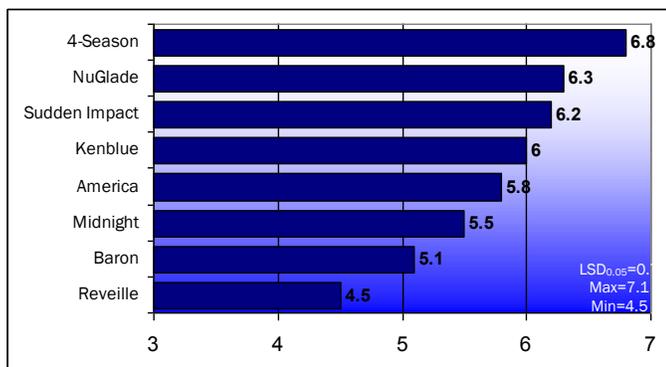


April 15, 2008 shows three patterns of spring greenup among bluegrasses. A common-type variety (left) is already a foot tall, while an improved variety (Midnight, center) is slow to wake up. '4-Season' (right), a new variety from Jacklin Seed, is already green and growing, yet with little topgrowth.

In addition to cold soils, there are other causes of slow greenup, according to the Turf Extension staff at University of Massachusetts:

- *Winter desiccation* - Large areas of straw colored grass especially where exposed to wind with little snow cover.
- *Spring frost damage* - Green leaves are killed back by frost and winds.
- *Water and ice damage* - Straw colored or rotted grass, especially where water collects in frozen pockets.
- *Snow mold* - White, pink, and gray mold in circular patches on moist grass. *cont. p.2.*

NTEP 2006 spring greenup data show '4-Season' as better than the common-type varieties in spring color and quality performance. Larger values indicate faster greenup across 5 states.



Greenup, continued

- *Salt damage* - Dead or yellowed grass along sidewalks, drive-ways, or roads where salt has been applied.

Grass species differences

Snow mold killed a lot of perennial ryegrass and tall fescue this past winter due to a prolonged snow cover in many areas. Damage was so severe in the northern tier states that reseedling may be necessary. Once the crown (growing tip) of ryegrass or fescue is killed by fungus, it has no way to regenerate.

Kentucky bluegrass, on the other hand, is rarely killed by snow mold, even if it does show symptoms. After a severe attack, bluegrass is able to regenerate its stand from underground rhizomes.

Kentucky bluegrass is commonly brown in early spring from spring frost damage. Many people have noticed that their bluegrass lawns look greener during snow breaks in January and February than in March and April.

A "cure" for March bluegrass browning in the past has been to plant common-type varieties such as Kenblue or Baron. Common varieties produce copious amounts of top-growth (clippings) in the spring which makes them seem to green up before the elite cultivars. Unfortunately, common varieties have drawbacks: They succumb to melting out and other diseases by May and can remain brown until summer.

For years, I've tried to breed an elite bluegrass that greens up early in the spring. I found that the traits of greenup and elite performance were closely linked on the chromosome, and it took years of hybridization to break that link. This year Jacklin Seed is premiering its first elite low-mow bluegrass with outstanding spring greenup. Our new variety, '4-Season,' maintains its dark green foliage through the winter, and it stays green even after snow melt. Blue-tag certified seed of 4-Season is available September '08 in limited supply.

Fertilization effects on greenup

Spring is the wrong time to consider fertilizing for better greenup. "University research has shown late-season nitrogen fertilization to be a very desirable option for [encouraging greenup]," say professors Tony J. Koski and John R. Street. "This type of program, which emphasizes fertilization during the September to December period, is reported to enhance winter turf color, quicken spring green-up, reduce lawn disease problems, and improve grass hardiness during the summer months."

Unfortunately, late fall fertilization has been dropping in popularity since it was learned that it is a prime suspect for fertilizer escape into the environment. Fertilizer can wash away from frozen soil or leach into groundwater at a time when turf is not actively consuming it.

"Nitrate (NO₃) leaching from fertilizers applied to turfgrass sites has been proposed as a major source of nitrate contamination of ground waters in suburban areas where turfgrass is a major land use," wrote Kristie S. Walker and Cale A. Bigelow of Purdue University in a study entitled, Nitrogen Fertilization Effects on Three Lawn Species in Indiana. Their study encourages September and October fertilization to boost spring color, but cautions about applying it too late, when it is unavailable to the plant. 