

## 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 out of the 40's. And no amount of fertilizer at that point can help.



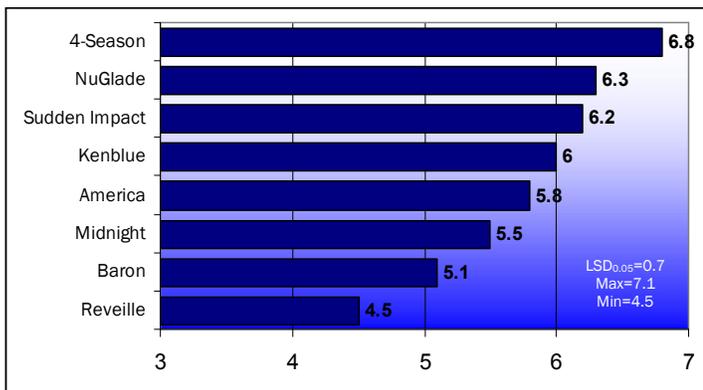
April 15, 2008 shows three patterns of spring greenup among bluegrasses. A common-type variety (left) is already a foot tall, while an improved variety (Midnight, center) is slow to wake up. '4-Season' (right), a new variety from Jacklin Seed, is already green and growing, yet with little topgrowth.

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.

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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.



## News and Trends from the Superintendent's Roundtable

JacklinGolf facilitates a roundtable discussion of current events each year at the Golf Industry Show where superintendents share experiences and solve problems. This year's roundtable included many of today's top innovators in the golf business, who shared their experiences with peers. The group discussed issues as diverse as growth regulator use in renovation, nitrogen rates during grow-in, water consumption in 100 degree heat, and grass culture in China and Korea. Below are some of their comments and tips in their own words.

### Richard Haas, Canyon River Golf Course, Missoula, MT

I've grown-in golf courses dating back to an A-4 course in California in 1998. I found that A-4 can get puffy with thatch real fast. You have to stay on top of it. I also had some issues with ball mark and wear recovery with that variety.

In my last job I grew in an **L-93** course in Missoula. The original specs were for **Putter** but it wasn't available at the time so we substituted **L-93**. I found **L-93** to be a great summer grass. It was slow to get going in the spring in Missoula but did great after the fourth of July.

My latest course is on the other side of the freeway in Missoula. Greens are **T-1**. Two days after planting I saw seeds germinating under the hand lens. By 3 weeks we were mowing.

Last year we had the hottest summer on record with 11 days in the 100's. Through the summer I was watering greens every 5 days and in between would let the profile dry down. My **T-1** was Stimp'ing 10 to 10.5 feet while mowed at .125. To get that speed I rolled three times a

cont. p.2.

The 18-hole "Locust Hill" course at the Locust Hill Country Club facility in Pittsford, New York features 6,579 yards of golf from the longest tees for a par of 72. Designed by Seymour Dunn, the Locust Hill golf course opened in 1927.

Locust Hill is the home of the Wegman's Rochester International, an annual event on the LPGA Tour. The LPGA has competed on Locust Hill's championship course every year since 1977.

Locust Hill is transitioning from *Poa annua* to T-1 greens, according to superintendent, Rick Slattery (see page 2).



### Greenup, continued

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

### Grass species differences

Snow mold whacked 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 reseeded 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. NTEP results verified this breakthrough (graph, p. 1). Blue-tag certified seed of **4-Season** is now available.

### 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 (NO<sub>3</sub>) 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. 🌱

### Roundtable, continued

week and double cut with a triplex. We had 21,000 rounds last summer. I applied 4.8 lbs. of nitrogen, and there’s no thatch. I found that potassium silicate helps heal ball marks faster. I tried Primo on the greens but gave it up because they were dense enough.

### **Brian Schafer, The Ledges Golf Club, St. Georges, UT**

I chose **T-1** for the greens at The Ledges because of its growth habit and strong performance in the Las Vegas area. The course is now 3 years old and is still not developing thatch. This year my greens survived 3 months of temperatures in the 100’s with roots down to the gravel. And if you can believe it, we went all summer without hand watering. None. We typically use 1.3 million gallons of water when we do a full irrigation of the course.

In the last 2 years I made 2 fungicide applications to the greens – both times as a preventive, right before my vacation. We topdress every 3 weeks and verticut as needed 1/16 inch deep. I’ve had no *Poa* here in 3 years. A new course in town nearby with Dominant Extreme greens had *Poa* on their opening day.

### **Rick Slattery, Locust Hill Country Club, Pittsford, NY**

I interseeded **T-1** last year right before we hosted the women’s PGA tournament. By 1 to 2 months I started seeing pencil-eraser-sized tufts of bent coming in. They became quarter-sized spots by 2 to 3 months. And the spots started to coalesce by fall. At first I didn’t think the **T-1** would penetrate the perennial *Poa*. But it did. I was surprised. I use Primo on my greens but not Cutless or Trimit.

### **Chad Mark, The Kirtland Country Club, Willoughby, OH**

Kirtland is an old course near Cleveland, Ohio, designed in 1921 by H.S. Colt and C.H. Alison. For the last few years we’ve been trying to renovate it to restore it to its original design and architecture. A lot of that involves looking on old course photos and maps and reworking bunkers. We’re also trying to introduce bent back into the *Poa* greens.

We seeded 3 lbs. of **Alpha** per thousand on the greens directly into the *Poa*, then topdressed them with a walking topdresser set wide open in early September. **Alpha** is popular in Ohio every since Sand Ridge Country Club had success with it several years ago.

We’re seeing **Alpha** on all the greens now. Fairly uniform. A good catch. But we didn’t do anything fancy to plant it. Just topdressing and a little fertilizer. 🌱

**When Richard Haas says he has no thatch on his T-1, he means it. Haas’ latest grow-in project is Canyon River Golf Course in Missoula, a high-end daily fee course in western Montana.**



“I cut the plug [below] out of the green,” says Doug Brede, breeder of the T-1 variety. “Pulling that plug out of the green was like yanking a birch sapling out of the ground by its roots. It truly had wiry roots down to the gravel blanket,” he says.