(L to R) Superintendent Bob Lively and architect Dave Esler checking grade elevations; final grading and compaction with excavator and machine; Flossmoor grounds crew doing final raking before sod work; sod being put down exactly the way it came off.

(L to R) First rolling after laying sod; second rolling one week later; first mowing 10 days after sodding; TDI installing drain lines in spring 2004.

to the green. At first Bob felt that 3.25% surface drainage would handle all of his drainage concerns, but he did not want to take the risk of the entire project failing on this one issue, so he elected to install tile, but he waited until after the green was grown in. Bob then contracted TDI to install 2-inch tile on 9-foot spacing. But Bob modified the mix that went back into the tile trench to a material that was higher in organic matter than the material that is recommended by TDI. Bob keeps his green very dry and he was concerned that the trench backfill material would dry down faster than the rest of the surface. So Bob developed a 50/40/10 blend to go back in to the trenches. This has worked out very well; the trenches are only visible in the winter when the green is dormant.

The members of Flossmoor love the new 18th green, and Bob is very happy with how Dave Esler's design matches up so nicely with the rest of the greens. If you didn't know it, you would never be able to guess which green on the golf course was remodeled.

As a sidebar, Bob is a firm believer in Vertidraining his greens the first Monday of every month in the growing season with ¼-inch needle tines. The 18th green at Flossmoor had been Vertidrained several times before remodeling, and when the topsoil was being striped from the old green, the Vertidrain channels were evident everywhere; they were still open at all levels, and packed with white roots. Bob started this procedure when he was at McHenry Country Club and he has not core-aerated greens for more than 10 years now.

—Bradley Anderson, Midlane Country Club

Trailblazing with Velocity: Firsthand Experiences with New Postemergence Herbicide

By now, many superintendents have heard about Velocity, a new postemergence herbicide on the market. Velocity has been available for use in Michigan since 2003 and is available for use in Illinois in 2005. It is labeled for use on creeping bentgrass and perennial ryegrass tees and fairways to control *Poa annua, Poa trivialis* and other broadleaf weeds.

It is not surprising that a lot of interest has been generated among superintendents by Velocity's potential to control or eliminate *Poa annua*. As with most new chemicals, a lot of hope exists for the product, but with little experience there are also many questions to be answered. For that reason, "Midwest Breezes" contacted several superintendents who do have experience using Velocity. Tim Asselin and Doug Kendziorski are superintendents in Michigan who have applied the product during the past two years that it has been available in their state. Scott Werner is a superintendent from Illinois who has used Velocity on his course in conjunction with some of Bruce Branham's research.

Table 1 contains some general information regarding the areas treated at each course, as well as details about these superintendents' Velocity applications. Here is a summary of each superintendent's thoughts and observations.

Tim Asselin, Shepherd's Hollow, Clarkston, Michigan

Tim applied Velocity to two quarter-acre plots on his 13th and 16th fairways and was happy with the results. Beginning in mid-June, he made three applications at the 20 grams a.i./acre rate at 14-day intervals. After the final application, all of the *Poa annua* had been killed and the *Poa trivialis* was extremely weak. Tim believes the *Poa trivialis* was never killed because the 14-day interval between applications was too long.

Tim made several other observations throughout the Velocity treatments. First, he noticed some bentgrass discoloration that he characterized as Granny Smith apple green. Furthermore, he observed a greater discoloration with the first application than with subsequent applications. Second, there was a reduced but acceptable level of bentgrass vigor. Though, as the *Poa annua* faded, Tim decided to topdress the area with a soil-and-seed mixture. Finally, significant brownish-gray discoloration of Kentucky bluegrass occurred in areas where the applicator had overlapped into the rough.

Doug Kendziorski, Black Lake Golf Club, Onaway, Michigan

Doug applied Velocity to all tees and fairways at his course in 2003 and 2004. In 2003, he made two 30 grams a.i./acre applications at 16-day intervals beginning on July 1. After the second application, Doug observed that none of the *Poa annua* or *Poa trivialis* had been killed. He attributed this result to the interval between applications being too long.

In 2004, he adjusted the rate, frequency and start date. Beginning on June 1, he made six 11 grams a.i./acre applications at seven-to-10-day intervals. Doug explained that he had marginal success at best. By the final application, it looked like the *Poa annua* and *Poa trivialis* were dead but several weeks later both began to recover. In the end, he estimated that less than 20% of the *Poa annua* and less than 30-40% of the *Poa trivialis* had been killed.

Following all applications, he noted a discoloration of the bentgrass described as lime green or Granny Smith apple green. Also, there was no obvious thinning of the turf and no growth regulation was observed.

Doug offers two tips to anyone considering applying Velocity. First, he recommends spraying an entire tee or fairway rather than just a test plot. He found that when he sprayed a test plot on a fairway, the plot was very obvious to golfers due to the bentgrass discoloration. However, when he sprayed an entire fairway, nothing else was there in the area to compare it to and the discoloration went virtually unnoticed by golfers. Second, Doug observed a severe dark-gray discoloration of Kentucky bluegrass when application overlapped into the rough. To avoid this issue, when spraying fairways he would first spray the entire inside perimeter of the fairway. Then he would spray the remaining inside area and make any necessary overlaps on the fairway rather than the rough. He found that the bentgrass had a much greater tolerance to overlapping than the rough.

Doug's plans for the 2005 season are to tweak the Velocity rates again and make applications to only his three worst tees and three worst fairways. This decision is due in part to the cost of the product. He estimated that his 2004 tee and fairway program cost around $9,000.

Scott Werner, Lincolnshire Fields Country Club, Champaign, Illinois

Part of Bruce Branham's research on Velocity has been conducted at Lincolnshire Fields with superintendent Scott Werner. In 2003, they tested numerous rates and frequencies of application. After observing the results, Scott applied Velocity to a 30′ x 30′ plot in his 9th fairway that contained 50% creeping bentgrass and 50% *Poa annua*. He decided to make the first application in mid-September because the turf was actively growing and if overseeding was necessary, he would have an adequate window of time in which to accomplish it. Two 45 grams a.i./acre applications were made at 14-day intervals to the entire plot. A third application at the same rate and interval was then made to half of the plot.

Scott was pleased with the results. The *Poa annua* population came down from 50% to 10% and remained at 10% throughout 2004 without any further applications. Particularly surprising was how quickly the bentgrass filled in the areas where the *Poa annua* had been killed. Even with *Poa annua* spots up to 12 inches in diameter, overseeding was not necessary. Scott points out that it is important to apply the product when the turf is actively growing and that no extra nitrogen was applied at the time of these applications. The fairways typically receive 2-2-½ lb. N/M/year with 1 lb. coming from a granular application in November and the remainder being injected through the irrigation system throughout the golfing season.

A faded green discoloration of the bentgrass occurred two to three days after each treatment. The bentgrass typically recovered four to five days later. Also, a slight growth regulation was observed that seemed to coincide with the discoloration. This was followed by a slight surge in growth about the same time the bentgrass began to recover from the discoloration.

—Brian Mores, Inverness Golf Club

TABLE 1.

Course	Year	Area	% Bentgrass/ Poa annua/ Poa trivialis	Height of Cut	Start Date	Rate/Acre	Frequency	Number of Apps.
Shepherd's Hollow (MI)	2004	Fairways	90/5/5	.425	June 15	20 grams a.i.	14 days	3
Black Lake (MI)	2003	Fairways	93/5/2	.375″	July 1	30 grams a.i.	16 days	2
		Tees	90/7/3	.375″	July 1	30 grams a.i.	16 days	2
	2004	Fairways	93/5/2	.375″	June 1	11 grams a.i.	7-10 days	6
		Tees	90/7/3	.375″	June 1	11 grams a.i.	7-10 days	6
Lincolnshire Fields (IL)	2004	Fairway	50/50/0	.437″	Sept 15	45 grams a.i.	14 days	2/3

(continued on page 28)