Use of Basamid for Fairway Re-Grassing at Edina CC

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This past summer, Edina Country Club completed an extensive renovation project under the guidance of architects Tom Lehman and Chris Brands. Duininck Golf was responsible for construction while Leibold Irrigation handled the irrigation work. Initially the project was budgeted for re-building all the greens to USGA specifications, constructing all new bunkers and allowing Tom and Chris to make the design changes that they felt followed the club’s direction to return it to a 1920’s parkland golf course, but not necessarily the original Tom Bendelow design.

During the planning process the club had the opportunity to take advantage of being closed to do some work that wasn’t needed immediately or in the initial budget, but would be in the next couple of years. The club chose to add the following:

- The entire irrigation system would be replaced because over half of the old system would be replaced due to the area of disruption dictated by the new design.
- All of the tee boxes that were not being re-built would be laser leveled, aligned and capped with the greens mix from the old greens.
- The fairways would be sterilized and re-seeded to bent grass and chewings fescue.

The fairway sterilization process would involve the use of a product called Basamid. Basamid is a non-selective granular soil fumigant that has Dazomet as the 99% active ingredient. It has fungicidal, herbicidal and nematicidal properties.

Construction began on May 26, with half of the golf course being turned over to Duininck and Leibold Construction Companies. Our first task in getting the fairways ready for sterilization was to begin dropping the mowing heights from our usual height of .375. After talking to other people that had gone through this process, the recommendation was to get as low as possible. We moved the heights down fairly quickly and reached a height of .200 on the first couple of fairways that we would be sterilizing. After reaching that height of cut we began to verti-cut the fairways at 1 inch below surface. At this time we sprayed those fairways with Finale in two separate applications at a rate of 4 quarts per acre spaced at 10 days apart. After each application we continued with the mowing and verti-cutting to remove as much material and open up the surface in preparation for the Basamid.

One of the most important parts of the planning and preparation was the communication involved with Travis Quisberg, Construction Superintendent for Duininck; Judd Duininck, Owner of (Continued on Page 6)
Duininck Construction, Dave Lindsay, Construction Superintendent for Leibold, Mike Powers, Golf Course Superintendent and myself. The five of us needed to plan when we wanted to seed and move backwards from that date. Once we knew when we wanted to seed we had to apply the Basamid about a week before that time. The last step we did before the application was to aerify the fairway with 1" solid tines with our Toro ProCore 648s and 864. In addition to that aerification Duininck also used its Aerovator on the fairways due to its shattering effect.

On the first day that we applied the Basamid (July 23) we first plugged all the surface drains in the fairway by using a 10 mil plastic and some Con-Seal Concrete Mastic to seal the drain caps. At this time Duininck would also use their GPS to give us the square footage of each fairway, approach, green and tee box that was being sterilized, flags would be put on the outer perimeter of the fairways so that the applicator would know exactly where to apply. In addition to the fairways and approach areas we also decided to sterilize the new greens mix due to the establishment qualities of Basamid. All of the laser-leveled tees also were sterilized due to the old greens mix having poa annua seed in it. At this time any trees that were deemed critical and that were too close to an application area, then the flags would be adjusted to protect that tree. It should also be noted that all the fairways were root pruned to protect all of our trees. We were fortunate that this was done during the irrigation installation, otherwise we had received a bid of roughly $10,000 to root prune all of our fairways.

Second Assistants Jeff Mold, Kevin Gruber and Intern Ben Arvidson took on the tedious task of all applications, while Judd Duininck and I always stayed in the immediate area to direct any workers away from the application zone and figure out our needed product and how close we were to our target rate of 400#/acre. Needless to say Personal Protective Equipment was of the utmost importance. Full Tyvek suits, rubber boots, rubber gloves, safety glasses and half-mask cartridge respirators were used. The applicators would discuss and mark where the larger tractor-driven spreader would stop and the smaller walk spreader would begin. All product would be on hand once application started so that there would be no waiting to re-load the spreaders. With the aid of the GPS we were able to constantly check and adjust to ensure our target rate. For spreaders we used an eight foot wide Gandy pull behind drop spreader and 36" Gandy drop spreader for the smaller areas. On the larger spreader we outfitted it with two pieces of plexi-glass so that the Basamid was dropped in an enclosed area. Even with the slightest breeze or just the 4mph tractor speed would cause the product to move before hitting the ground due to its very fine granular state, I would compare it to an ultra-fine sugar.

Once the application was completed on the desired area, the watering would begin. This was one of my many tasks this summer and with the new irrigation system, specifically the Network VP controllers, it made my job a lot easier. Initially 1/10 of water was recommended to move the product into the soil and to activate it. It was very important not to let anything pool or puddle so that the Basamid wouldn't move into an area that wasn't desired. I would usually start with 10 minutes down the center row of the irrigation and then six minutes down the outside rows. I would continue this cycle until the product was watered in and the profile was wet. For four days we would need to keep the product wet but not waterlogged. This initially was one of the most difficult parts of the project. We had dead turf areas, bare soil areas, and sand areas. Watering these three conditions with constantly changing weather was one of the best irrigation lessons one could have. I was very lucky to have the Network VP Satellites with single head control. The controllers can do just about anything that SitePro could, except you have to go to the satellite. Every fairway, green and tee had different water requirements as we completed about 3-4 holes per week. Overall, I would describe the
watering regimen as a little bit more aggressive than watering in new seed. One of the nicest things about the Basamid process was that I already had a good idea what some of the characteristics of the new holes were, and how it related to watering seed and the grow-in process.

The seeding on the fairways was done with a Brillion seeder at a rate of 1#/1000 of Dominant X-treme 7 over two directions. We also seeded in SR 5130 Chewings Fescue at 1#/1000 over two directions to aid in shaded areas. Mowing started at a height of 6" and was moved down to .400" on the most mature fairways by the end of the fall.

I was asked over the summer by numerous individuals whether members, employees, or colleagues, "How do you know it is working or it is going to work?" I first I would say, "Well I can smell it, so it must be working!" but still not 100%.

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sure myself. Later this fall as the grass began to mature I would notice on some of the tees that we did not apply Basamid due to some key trees, our old friend poa annua was back!!!

This was a very time-consuming and labor intensive process to go through but in the end I think it will be very beneficial. Some suggestions I would have for anyone that is thinking about it or about to take on this process would be to:

• Talk to people that have used it in the past and ask what they would have done differently or what worked very well.
• Start preparing your fairways as soon as you can for the application, the quicker you can take the heights down and prep them, the better.
• Get your spreaders properly working with plexi-glass windshields, foamers and tractors well ahead of time; that way there are no surprises once you begin applying.
• Write everything down, especially how much and where you make irrigation changes, weather events, anything and everything and take lots of pictures.

Germination.

Lacey checking out the golf course.

Basamid application close-up.

Fairway after final aerification and verti-cutting.

Watering in Basamid.

Finished product on September 21, 2010: 1st fairway seeded.