

Clark Talks Turf

■ TIMELY TURF ADVICE



→ Follow the Water to Protect the Environment

Brian Horgan is an associate professor of turfgrass science at the University of Minnesota. Brian and his colleagues have studied the fate and transport of nutrients and pesticides from turfgrass stands. Brian can be reached at bphorgan@umn.edu.

Q Brian, to go along with the “Turf on Trial” theme this month, what do you think is the biggest environmental problem facing the golf industry?

Golfer expectations for perfect playing conditions are without a doubt the most significant problem the golf industry faces. Meeting these unrealistic expectations leads to high maintenance costs and large quantities of inputs. With the inputs comes the potential for environmental concerns.

In many instances, the end result is an unsustainable system used to maintain golf courses. Golfers and superintendents must be willing to accept less-than-perfect aesthetics while maintaining functional playing conditions. If the golf industry doesn't lead this change, it will be forced upon us. The major national golf organizations need to join together to lead the effort to moderate golfer expectations and achieve sustainability in golf course maintenance operations.

Q So we've identified the what, now who do you think is responsible for driving the golfer expectations for perfect playing conditions? The superintendent. Golfers have no idea of

the limits turfgrass can be pushed or the level of conditioning that can be achieved, but superintendents sure do. It is a tribute to superintendents that they push beyond the current standards. But the net result is extreme playing conditions, unrealistic golfer expectations and large sums of money spent to make minor improvements – all in the quest for perfect playing conditions.

Superintendents are taught to be perfectionists. That is fine; however, they should pursue perfection in environmental stewardship. They should change their mindset and focus on the services that the golf course provides to the environment – services such as carbon sequestration, water purification, wellness and recreation for the community, etc.

Q Agronomically, what is the greatest environmental challenge?

Any surface water that leaves the property is a concern. Exit points for surface water include streams, wetlands, overland flow, gutters and tile drains. In every surface water sample we collect from our research plots we detect nutrients and pesticides.

The best method to reduce potential for environmental contamination is to reduce or prevent the loss of surface water from the property. Prevent water from flowing off a turfgrass stand directly into any water conveyance that leaves the property. For example, if water from a turfgrass stand

flows into a lake with an outlet that ultimately leaves the property, work to prevent the water from ever reaching the lake. Incorporate bioswales or rain gardens into the golf course to retain surface water so it can either evaporate or infiltrate. Water from tile drains should be collected and reused if possible, or diverted to bioswales. Daylighting a tile drain into flowing water is asking for problems.

In short, follow the water and prevent surface flows of water from leaving the golf course.

Q What are other simple steps that can be taken to improve environmental performance on golf courses?

Soil testing is a tried and true technique to produce healthy turfgrass while minimizing inputs. Let's face it, soil testing is not glamorous, but it is effective. Superintendents need to soil test regularly, particularly on fairways and rough. Fairways and rough comprise the largest acreages of fertilized turf on a golf course. Hence, the largest amount of fertilizer is applied to these areas. Soil testing also offers the opportunity to save money by only applying the needed nutrients.

Q Any parting thoughts you'd like to share?

We need the public to think of golf courses as an asset to their community. The environmental benefits and services a golf course provides can be numerous. We need to maximize these opportunities and show that a golf course is much more than a place to play golf.

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