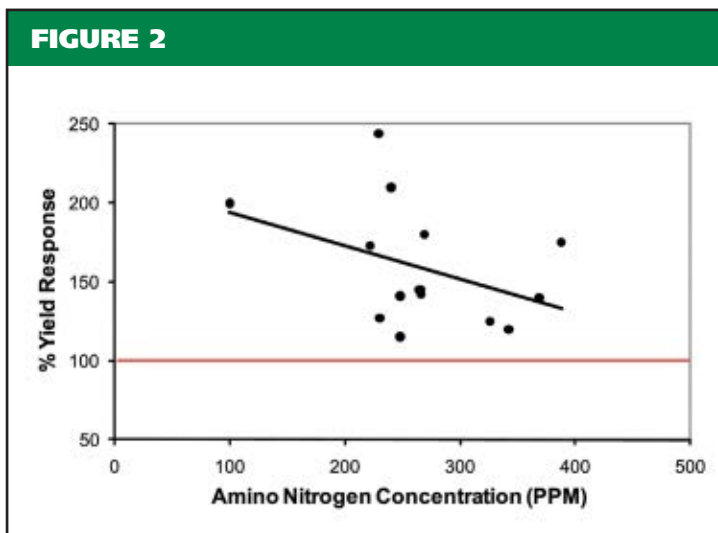


Figure 2. The clipping yield response of turfgrass over a 4-week period following the application of 1 pound N per 1,000 ft² as affected by the level of amino nitrogen detected in the soil. Our hypothesis is that as the level of amino nitrogen in the soil increases, the clipping yield response due to added fertilizer decreases.

techniques are sufficient to predict higher and lower amino sugar N values on golf course fairways. Also, amino sugar N in the soil decreases with depth, which means no special attention to depth of soil core is necessary when sampling.

While the exact number from which we would not expect a response from added fertilizer N has yet to be determined, numerous field studies have been conducted across the North Central U.S. Based on our preliminary data, our hypothesized value for turfgrass response to fertilizer is a soil amino sugar N value of 200-300 ppm (Fig. 2).

The relationship between organic matter and amino sugar N was very strong at some



locations (Fig. 3) which would further simplify the prediction of mineralizable N. Unfortunately, that was not the case at all the golf courses we sampled and we are no longer pursuing the possibility.

This work is ongoing and enjoys the support of the USGA. Next time you fertilize your fairways, conduct your own experiment. Instead of applying a full rate of N, only apply a half-rate on a small area in play. Don't consider just the color response from the fertilizer but also the turfgrass's function and playability. If the half-rate is sufficient to maintain playability, your soil may be exhibiting the very process described in this article, which can save you money and protect the environment at the same time.

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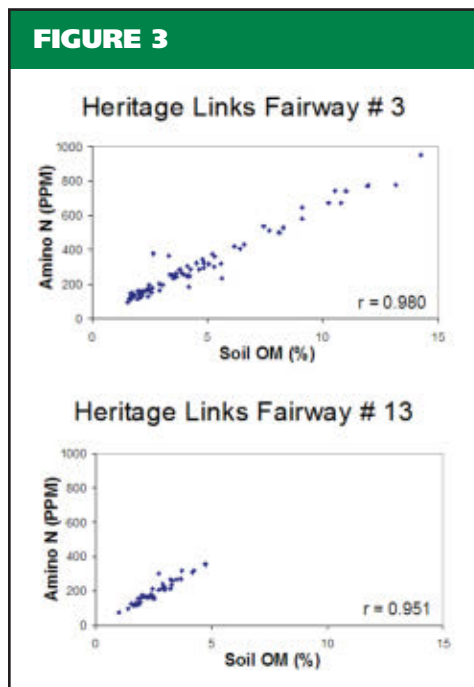


Figure 3. Correlation between soil organic matter and amino nitrogen content in the 0-15 cm soil horizon for the sampled fairways at Heritage Links.

Ad Index

Advertiser	Page
B A S F Corp	5, CV3
Bayer Environmental	17A
Champion Turf Farms	21
Civitas	7
Dakota Peat	25
FMC Professional	10-11, 23
Golfdom Summit	27
Gro Power	2
Jacobsen	CV2
John Deere	28
Kocheck	20
Lebanon Turf	CV4
PBI Gordon	15
Seago	2
Sonic Solutions	18
Tee 2 Green	17B
Toro	9
Turfco	3, 22
White Metal Golf	24
Wireless Solutions	16

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Eight Reasons Scoring Went Low at the U.S. Open

Another United States Open means another several weeks of questions, spin and even a few absurd accusations. And all of it centers around course preparation.

Last year at Pebble Beach the greens were said to be too hard and bumpy. Monday morning golfers asked why the USGA allowed the greens to die, even though one nice deep watering brought them back the day after Graeme McDowell's victory.

This year the entire course was proclaimed by most as too soft, too easy and too kind, even though Rory McIlroy probably would have won had they set it up backwards. Though a promising young man played incredible golf, set records and was the undisputed winner, too much scoreboard red has a way of inspiring people to make funny statements. None more ridiculous than HBO Real Sports anchor Bryant Gumbel declaring the PGA Tour-like setup a ploy by the USGA to boost ratings.

Yet as we know, many frustrated golfers find a more rewarding USGA setup off-putting, still believing the U.S. Open's priority is to make golfers suffer instead of identifying the most skilled player. Even if it means making the setup spill over the top into absurdity, a bizarre number of golfers miss the point of our national championship. It's not about making lousy golfers feel good about themselves. It's about identifying a worthy champion.

So for the point-missers, here is a bulletin-board ready list of eight reasons scoring was low at Congressional:

8. The bunkers had no bite. With no

IT'S NOT ABOUT MAKING LOUSY GOLFERS

FEEL GOOD ABOUT THEMSELVES. IT'S ABOUT

IDENTIFYING A WORTHY CHAMPION.

GEOFF SHACKELFORD



rain 18 days prior to the event, steps were taken to firm up sand that was too soft. During practice rounds the sand was just right, mushy enough yet balls were not plugging. When overnight downpours came, the sand firmed up and the lower cut surrounding bunkers went from sending balls to tough lies to more typical modern day manicured bunkers.

7. The Blue Course design features almost no strategy, does little to make players uncomfortable and only posed significant danger in three places: the 10th, 11th and 18th holes. With little to think about and fear, today's players are quite proficient at scoring.

6. The temperatures were warm and today's players drive it a mile in hot weather.

5. After Thursday, there was almost no wind whatsoever. One less thing for today's already unburdened players to worry about.

4. Elite players today hit the ball ridiculous distances with equipment that allows them to swing freely. As the USGA and PGA of America stated in their Tee It Forward campaign, a course at 7,600-7,900 yards puts mid and long irons into their hands. Congressional, even from the tips, is too short to test today's players in a manner comparable to Opens from

eras when equipment rules were in sync with architecture.

3. Congressional's greens have very little contour and slope, require little local knowledge and make putting quite easy for today's players.

2. The greens were receptive to all shots, including from the rough. This could be attributed to their newness along with the USGA's call to not strain them further with a lower cut just to pick up a few inches of Stimpmeter reading speed.

1. Congressional was in immaculate and amazing condition. Mike Giuffre and his crew of hard-working staff and volunteers had the fairways absolutely perfect. Parts of the greens looked bad in high-definition but perked up after Thursday's rain. The greens could not have been more different than those at Pebble, nor more conducive to making putts.

The takeaway: great conditioning trumps all else when it comes to red numbers. The new edict should be: the better the conditioning, the lower the scoring.

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