

Less Is More

Superintendents find that applying less fertilizer more often makes the best sense for their turf-nutrition programs

By Anthony Pioppi,
Contributing Editor

Nowadays, it appears as if the golf course maintenance business is changing on an hourly basis — with new machines, pesticides, diseases, turf types and environmental rules coming from every direction.

While all this is happening, the changes in the way superintendents feed and nourish their grass in the last 15 to 20 years are relatively small. It all comes down to nitrogen and how it is applied.

At York (Maine) Golf and Tennis Club, superintendent John Laprey says he has reduced the amount of nitrogen he puts down per year since coming to the club in 1990, but his applications have increased like many superintendents' applications across the country.

At first, Laprey says he would put down 1 pound of nitrogen a month on his small Donald Ross-designed greens that received extensive play, pushing them the best he could with granular. Now he puts down one-tenth of a pound every week to 10 days in soluble form.

According to Laprey, what has changed is the attention given to the grass. Not only are superintendents eyeballing the turf (he checks his clipping yields on a daily basis), it is now

normal for regular testing of the turf to determine its health.

"There is a lot more spoon-feeding of soluble fertilizers on a more frequent basis," Laprey says.

Stan George, the longtime superintendent at Prairie Dunes Country Club in Hutchinson, Kan., agrees.

"You can target specific microclimates," he said. "It was always if you did one thing to a green, you did it to every green. (Today), microclimates are taken into consideration much more."

As an example, George points to his 14th green, which sits in the shade for virtually the entire day and stays damp longer than any of the other greens. As a result, George mows the green slightly higher. "It deals [with the shade] much better," he says.

Now George applies one-eighth to one-tenth of a pound on a foliar basis where before he was previously at one-quarter of a pound per 1,000 square feet. Sometimes he'll mix in a little nitrogen and iron with a fungicide application.

George's fairway application plan calls for 1 pound of nitrogen in the late fall, or two 1-pound applications over two months if he is able to work it in.

In his 21 years at the Honors Course in



Ooltewah, Tenn., superintendent David Stone has reduced his nitrogen application from 2 3/4 pounds per year to 1 1/4 pounds. "In the past six years I've reduced it by 25 percent," he says.

Stone came on board 21 years ago when the Honors Course was just about grown in. Back then it had bermudagrass fairways. A few years later, however, Stone convinced his owner to make the switch to zoysiagrass, one of the first courses in Tennessee to do so. Zoysia sod had to be shipped in from a farm near Cincinnati for the conversion. Stone reduced his nitrogen rate by half after the switch.

Like Laprey and George, Stone says one of his biggest changes in fertilizer application is

getting to know his turf — "just watching the grass," he says, "and knowing when it is growing well and doesn't need anything," even if his calendar calls for an application.

Changes in fertilizer applications since the early 1960s is almost staggering. In 1963, Doug Petersan was out of college and working at Pioneer Golf Course, a municipal course in Lincoln, Neb., that was getting 65,000 rounds a year. For the eight-month golf season, the superintendent applied between 7 and 9 pounds of nitrogen on greens and mowed them seven days a week.

"We had to keep the grass growing to keep it recovering," Petersan says. "If we didn't get

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Given the rapid developments in other aspects of golf course maintenance, the way superintendents feed the turf have changed little.

MIKE KLEMM



At Austin (Texas) Golf Club, the L-93/Crenshaw blend requires superintendent Doug Petersan to apply only 3 pounds of nitrogen per year.

"[Golfers] want June-like conditions right through the year."

JOHN LAPREY
SUPERINTENDENT
YORK (MAINE) GOLF
AND TENNIS CLUB

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three baskets of clippings off a green, it needed fertilizer."

In contrast, Petersan — now in his 40th season as a superintendent — grew in Austin (Texas) Golf Club that opened in 2001. With a 12-month growing season and greens that are an L-93/Crenshaw blend, his yearly application total is about 3 pounds. Petersan thinks the drop in rates coincided with the increase in green speed.

"As everybody became more acclimated to faster greens, (they) became more of a demand than a luxury," he says. "You can't have fast greens if you put a lot of fertilizer on them."

In 1965, Petersan lowered the height of cut on the greens to one-quarter inch at Pioneer, causing an uproar with other superintendents in the area. "Everybody thought I was crazy, and that I was going to kill everything," he says.

Almost coinciding with the drop in rates was the change in the means of application. David Sexton, superintendent at Meadow Club in Fairfax, Calif., says it has virtually eliminated one big problem.

For 22 years, Sexton has been superintendent at the Meadow Club, Alister MacKenzie's first design in the United States. He remembers when an incorrect application of a granular product would leave putting surfaces

covered in green spots. Even when the Cyclone spreader came along, there were still problems trying to keep the nitrogen levels uniform throughout. "There were green strips that showed up and areas that got missed," he says.

With the current application rates so low and the means of dispersion in liquid form, problems occur far less. "Even if you overlap, the consequences are hardly noticeable," he says.

Maybe the most radical change in the past 10 years is the acceptance of fertigation. Petersan opted for fertigation during the growth of his zoysia-sprigged fairways at Austin. Fertigation, which is becoming more and more popular, allowed Petersan to correct pH problems with his water source when establishing his turf. But Petersan uses his fertigation system only rarely now.

"I don't use it now for maintenance-type fertilizer applications," he says. "[I'll use it] maybe to put down nitrogen for an event to green things up."

All the refinements in nitrogen application have led to one big problem — unfair expectations from golfers.

"They want June-like conditions right through the year," Laprey says. "That might help us if golf was televised in black and white."

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Geoff Shackelford