The Styrofoam Solution: Ross cures North's spring sprinkler problems

By MARK LESLIE

Ross cures North's spring sprinkler problems, emerging from winter to find that frost heaves had pushed up many of their sprinkler heads, which had to be dug up and reset. But he has discovered a simple and cheap solution to this age-old problem — a solution colleague Chuck Ravis said should have "ramifications throughout the northern tier of the country, wherever you get serious frost in the ground."

Styrofoam. After four winters of testing — even shoveling snow off the ground "to drive the frost as deep as it would go" — Ross has found a 2-by-2-foot piece of one-inch Styrofoam is worth more than its weight in gold. It translates to money — and many man-hours saved.

"After two years, it [Styrofoam] looks very promising," said Ross, superintendent at Falmouth (Maine) Country Club. "It's a renewable resource. It's light, so it's easy to put out and bring in. Stor- age is easy. After the initial investment, you may have to replace a few pieces each year, but generally we're talking minor costs."

"It worked wonders this year," agreed Ravis, who followed Ross' lead in his own experiments starting in 1993 at Augusta (Maine) Country Club. "I think it will take off [among superintendents]." I'd like to see it used a couple more years before I endorse it beyond a shadow of a doubt. But it has great possibilities."

"Four or five years ago, when I started this experiment, everybody thought I was nuts," Ross chuckled. "They don't think so any more."

He pointed to the reduction in man-hours for irrigation: 1,700 in 1999 before he started experimenting and 500 in 2003. He pointed to the $10 to $12 an hour he no longer has to pay for labor to reset heads. Ravis estimated it takes two workers, paid 57 per hour, a half an hour to reset each sprinkler head ("and that's if it goes correctly"), so the Styrofoam saves $700 to $1,000 on labor just to fix the heads.

When he fully institutes his program next winter, Ross estimates he will average 500 to 600 labor hours in irrigation. He has eliminated an irrigation position that encompassed 30 weeks a year, 30 hours a week.

The insulation from Styrofoam, according to Ross and Ravis, also protects the heads themselves and the fittings and swing joints underneath them. Also, Ross said: "I have separate gate valves at each fairway head. I used to have problems with them cracking. At one time it was not uncommon to replace 20 a year — for about $30 each. This year, I doubt if we do more than five."

"I'm convinced," Ravis added, "because we kept the heads from heaving and putting stress on the main line and swing joint, we stopped the breakage we usually experience in springtime. It's hard to put a [savings] figure on that, but it's worth a lot to avoid."

Ross used two- to three-inch-thick wafers of two-foot diameter oak to weight down the Styrofoam, while Ravis settled for eight- and 12-inch spikes. Ross also warned superintendents trying this method to treat the turfgrass around the heads for winter-kill diseases before covering it with the Styrofoam.

In the meantime, Ross is also experimenting with Celotex insulation, which has had backing on both sides. "That worked great," he said. "I think foil backing gives it extra strength."

When Ross started his experiments he used hay bales on 20 heads and insulation on another 20 of his total 380 heads. "That spring we had quite a few problems elsewhere, but all 40 of those heads were perfect," he said.

He added that hay was easy to place in the fall, riding down the fairways and dropping it on the heads. "But it's hard to pick up in the spring. It breaks, or freezes on the ground. And it is not reusable. We sell it for 50 cents a bale for mulch."

Last winter he cut one- and two-inch-thick Styrofoam into sizes of two-by-three, two-by-two, 2-1/2-by-three and 1-1/2-by-three. "No matter what size I used, they worked," he said.

At Augusta Country Club, Ravis last fall covered all 240 sprinkler heads — 30 with Styrofoam and 210 with hay bales. "I haven't had to touch a single head," he said, "and normally from my shop area alone, I can pick out 10 heads that have moved."

"Even if we had 10 on the entire course, that would be phenomenal."