

Out, damned pests

NUMEROUS WEEDS AND INSECTS PRESENT MORE OF A PROBLEM FOR SUPERINTENDENTS IN THE SOUTH THAN IN THE NORTH

by JOHN TORSIELLO

Any golf course superintendent worth his salt realizes a golf course is a miniature ecosystem that presents unique maintenance challenges. Perhaps in no other area of course management is this more evident than with herbicide and insecticide programs. While some superintendents might only have to worry about a few dandelions and some crabgrass, others must constantly arm themselves against an array of weeds and pests, ranging from mole crickets and fire ants to thistle and goosegrass.

The cost to wage these battles ranges significantly according to which part of the country a course is located. In the North, herbicide and insecticide programs might amount to only 10 percent of a facility's overall maintenance budget, while in some areas of the South, herbicide and insecticide programs might even be more than 50 percent of the budget. Pests and weeds vary from region to region and from golf course to golf course.

"You're dealing with microclimates and unique ecosystems that demand different management programs," says Todd Lowe, a Green Section agronomist with the U.S. Golf Association who's based in Florida. "We have golf courses in Florida that were built on old tomato fields or citrus groves that have wall-to-wall nematodes. On other courses, the problem might be on one green and a tee box."

Being completely aware of a course's ecosystem and having detailed knowledge of soil types, average weather conditions, and pests and weeds common to the area allow superintendents to prevent and manage quickly potentially damaging pests and weeds. But the best defense is always a healthy turf.

"When I came here six years ago, our herbicide program was way up on the list

At Eagle Rock Golf Club in Billings, Mont., golf course superintendent Lee Bestrom doesn't need to apply insecticides but sprays for weeds as needed.
Photo: Eagle Rock Golf Club

of priorities," says Joe Tennyson, golf course superintendent at The Sagamore Golf Club in Bolton Landing, N.Y. "We had an extremely tough problem with weeds. We attacked it by spraying the entire course and got a handle on it. Then the challenge was keeping the turf healthy because the best defense against weeds is a tight turf canopy."

Scott Neumann, golf course superintendent at Fairview Farm Golf Course in Harwinton, Conn., concurs, saying the best way to keep a golf course disease and pest free is growing good grass.

"That means an aggressive fertilizer and fungicide program and attacking problems immediately when they appear," he says. "We call it integrated pest management. Superintendents should always conduct soil tests to determine the condition of their turf. It's like a person – you get sick and have to have some type of treatment. It's the same way with grass."

Fewer intruders

In the Northern regions of the country, growing healthy turf, spraying on an as-needed basis and remaining vigilant to control potential weed and pest problems usually suffices.

"Fortunately, in this area, we have very few insect problems," says Dave Brandenburg, golf course superintendent at Rolling Meadows Golf Club in Theresa, Wis. "We will spray for cutworms on the greens every third or fourth year and spray for grubs in the fairways occasionally. And we will put an application of herbicide down for weeds on the majority of the golf courses each spring. We'll have a little thistle in the rough areas that we spray for as needed."

Rolling Meadows, which is built on open, rolling prairie land, enjoys a climate conducive to growing strong, tight turf and keeping it that way.

"It's unusual for us to have more than three or four days in a row with temperatures in the 90s," Brandenburg says. "Generally, we have cool nights in the summer and normally have a breeze that dries the course out."

Lee Bestrom, golf course superintendent at Eagle Rock Golf Club in Billings, Mont., is fortunate as well.

"We don't use insecticides on the course because there's no need to," he says. "We'll spray a little herbicide to keep dandelions and thistle down, usually in the spring and fall, because that's a forever type of problem. We have a climate well-suited to growing strong turf. We aren't humid, even in the summer."

Bestrom and his maintenance crew spray for weeds as needed, but mostly look to prevent problems.

"If you don't prevent, then you have to control," he says.

Tennyson treats the fairways at Sagamore with an insecticide annually to prevent grubs that attract skunks and crows, which can seriously damage the turf when they chase grubs in the soil.

At Fairview Farm, Neumann and his crew spray insecticides with the active ingredient imidacloprid wall-to-wall in June or July to control grubs.

"We're pretty aggressive with the greens to keep the cutworms down," he says. "Our herbicide and insecticide spraying amounts to about 10 percent of our budget. Where we're spraying and applying fungicide and fertilizer on a regular basis, we might spray once a year to control weeds and pests and then attack an area as needed."

Jonathan Burke, golf course superintendent at The Ranch Golf Club in Sheffield, Mass., sprays once or twice a year to prevent the emergence of Japanese beetle grubs, but he doesn't spray for the Bluegrass weevil. In fact, he encourages the weevil in some areas, as long as they don't chew on the bentgrass, because they can help keep *Poa annua* out of some areas.

"I'm spraying fungicide perhaps once a month or even once a week in some parts of the course," he says. "I spray herbicide to control crabgrass every other year. We'll go after postemergent crabgrass or broadleaf as needed, and in general, keep a close eye on things."

"Sometimes the members at a club care if there's a dandelion by the third tee box," he

IPM development

An integrated pest management program can be a valuable tool to help superintendents prevent and control insects, weeds and diseases. An IPM program also can reap economic and environmental benefits by reducing the amount of materials and manpower needed to maintain turf.

Six important steps when developing an IPM program are:

- Site assessment;
- Monitoring;
- Setting thresholds for action;
- Stress management;
- Identification and optimization of management options; and
- Evaluation.

Source: GCN research

adds. "If you have the time and the budget to be that selective, it's great, but most golf courses don't have that luxury."

The building of American links-style golf courses recently led to hands on weed management in some instances.



Knappenberger

"On two of our courses that have fescue and bluegrass in the rough areas, we go in and spray to keep the crabgrass, dandelions and clover down during the spring," says Andy

Knappenberger, superintendent of Turning Stone Casino Resort's three 18-hole golf courses in Oneida, N.Y. "Later in the



Crabgrass, dandelions and clover are some of the pests in the fescue and bluegrass roughs on two of the three golf courses at Turning Stone Casino Resort in New York. Photo: Turning Stone Casino Resort

season, we don't do much about it, but we will go in and hand-pull some of the larger plants like milkweed. We don't want them crowding out the grasses."

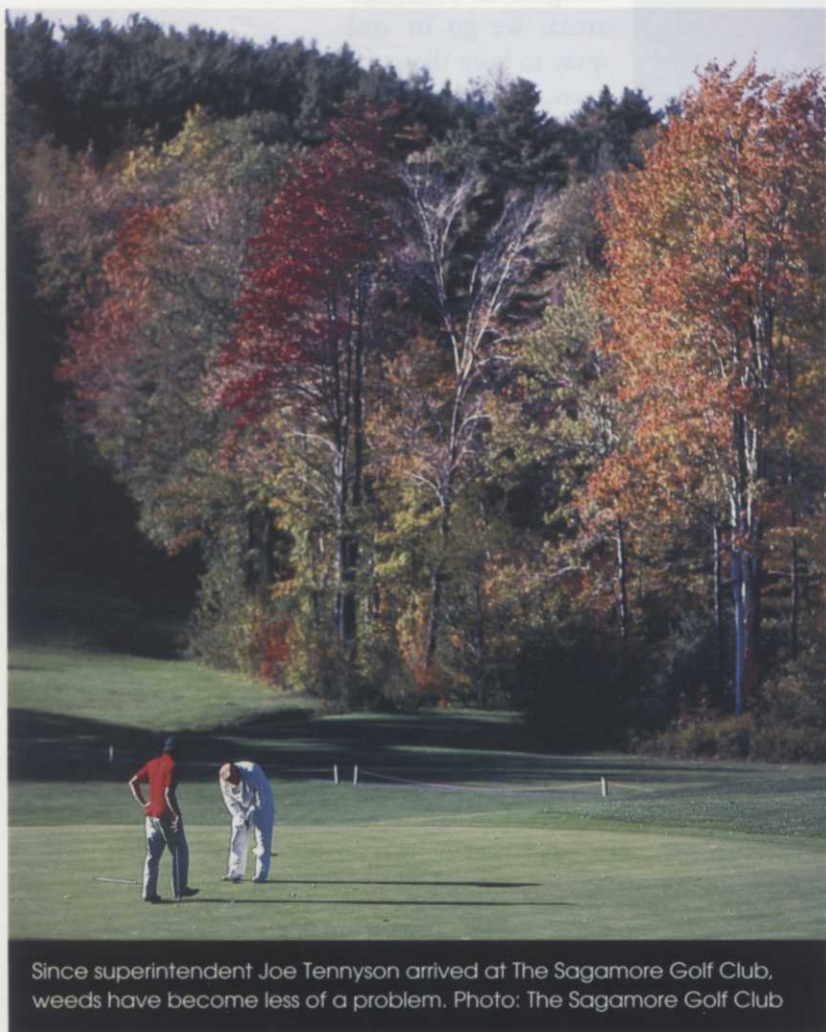
A bigger battle

In the Southeast region of the country, weed and insect management on golf courses is much different.

"We have a broad spectrum of pests in the Florida market," Lowe says. "Mole crickets and nematodes are our number one pest, but we have had some wonderful, very specific products come down the pike the last few years [that have the active ingredient fipronil], which [are] wonderful on mole crickets and gives us a good six months of suppression."

"Interestingly, we're seeing pests that weren't pests 20 years ago," Lowe adds. "The common earthworm, which throws castings onto the turf and can gunk up mowers, is one. You're even seeing the problem pop up in the Northwest where the climate is conducive to their multiplying."

Because of the mild climate and constant growing season, superintendents in the South and Southwest spend much more time and money managing pests and weeds than their brethren in the North and Midwest.



Since superintendent Joe Tennyson arrived at The Sagamore Golf Club, weeds have become less of a problem. Photo: The Sagamore Golf Club



Jonathan Burke, superintendent at The Ranch Golf Club, encourages weevil in some areas because they can help keep *Poa annua* out of areas. Photo: The Ranch Golf Club

"We're treating almost year-round for some weeds," Lowe says. "We might do three or four applications to attack *Poa annua* and goosegrass in the pre-emergent stages. If it breaks out, then you attack it as needed. The *Poa annua* seeds can sit there dormant for up to 15 years ready to go. It all goes back to the budget of the club, and some clubs have members that have higher standards for their course than others."

In some areas of the South, a herbicide and insecticide program might be as much as 60 percent of a superintendent's total material and manpower budget, according to Bud White, USGA senior agronomist in the mid-continent region of the United States that includes Texas, Oklahoma, Louisiana, Arkansas and New Mexico. Brown says it's probably about 40 percent in the Southeast.

"Most superintendents I work with are on a regular schedule for herbicide and insecticide spraying," he says. "Many use [pesticides with the active ingredients trifloxysulfuron sodium and proflaminate] to control sedges and green kyllinga in the fairways, roughs and green and tee slopes. In January, they'll touch up with an application of Roundup (active ingredient glyphosate). By doing this, it isn't such an astronomical cost than if you're going out in the spring and summer with postemergent applications. That can be very costly in material and manpower."

In some areas of the Southeast and Southwest, fire ants are a big concern for superintendents. Fire ants are working their way up the coast in the East and into the southern parts of the West Coast, White says.

"In the Midwest, it's been a rapid spread," he says. "Superintendents are very aggressive with them because a bite to an allergic person can send him or her to the hospital. Some of the [pesticides with the active ingredient fipronil] work well to control the ants."

Rotating weapons

Many industry experts consider it wise for superintendents to rotate their chemicals when treating for pests and weeds. Studies have shown insects and weeds can build resistance to certain products. Some experts say one should use five or six different chemicals, and others say one should wait to see if a pest or weed develops a resistance and then change, according to Neumann.

"We rotate our mixes," Brandenburg says. "One reason is because different chemicals work differently on weeds and fungi. There has been proof of some resistance to the same chemical, so it's a good idea to rotate mixes."

"You rotate your chemistry for several reasons, the most important of which is to guard against resistance," Lowe says. "You don't want to spray for pests using a chemical they have become resistant to. That could lead to outbreaks."

Superintendents say they'll mix herbicides and insecticides with fungicides and fertilizers whenever possible to eliminate the need for separate spraying, saving time and manpower cost. GCN

John Torsiello is a freelance writer based in Torrington, Conn. He can be reached at jtorsiello@megahits.com.