Biological mole cricket control also checks sting nematode

“there is a linear response with higher use rates,” he reported. Last year, Martin tested both the liquid and the water-dispersible granule (WDG) formulations applied at rates from 0-6 billion nematodes per acre (the label calls for 2 billion per acre). “In this trial, the more we put on, the greater suppression of sting nematode we got,” Martin said. “We were cutting the numbers [of sting nematodes] in half with progressively higher use rates, which was a significant regression.”

Martin points out that golf course superintendents and other turfgrass professionals are in need of alternative materials to combat nematodes. Standard nematicides are limited in efficacy, and can’t be used in environmentally sensitive areas. “We are still looking for an alternative to the standard materials.” With this riobravis nematode, it looks like we have one,” he said.

The economics of using the beneficial nematode against sting nematodes are favorable as well. The 2-billion-per-acre rate of Vector MC or Devour cost about $140-$145, according to the manufacturer.

Dr. Leon Stacey, a consultant to golf courses in Florida, Georgia, and South Carolina, has been conducting commercial trials with S. riobravis on plant parasitic nematodes in these states. He has made the observation that the beneficial nematode product “appears to be much more effective at suppressing plant parasitic nematodes (sting and root knot) when applied prior to or at the time that PPNs reach their action threshold.” In the Southeast, the treatment threshold for sting nematode is 10 per 100 cc of soil. For root knot nematode, it is 80 per 100 cc of soil. Seasonal development depends on several factors, but age of a golf course is most significant, according to Stacey.

On younger courses, there will be a gradual seasonal growth of PPNs that will spike in October,” he said. “On older courses there will be three spikes—in May, July, and October—and it’s not unusual to see counts of sting nematodes get as high as 250 per 100 cc on some older courses,” he explains.

Under these conditions, superintendents must still rely on standard nematicides for suppression, Stacey said. “However, if you can make applications of S. riobravis when counts are low, this will gradually bring about suppression of PPNs and you do see a visual improvement in turf quality in density and color,” he said.

The first to discover sting nematode in California was Richard Sail, superintendent at Tamarisk Country Club in Rancho Mirage. He believes the pest has been in California for years, arriving in imported soil and sand, and that the damage it has caused in turf has been misdiagnosed as moisture stress, ataenius grub damage, or poor spring transition.

Once he discovered the real problem, he began a treatment program with standard nematicides plus heavier overseeding and fertilization in trouble spots. And last March, he added S. riobravis to a 5000-square-foot section where sting nematode pressure was exceedingly high.

“We applied the material at a rate of 3 billion per acre, and you could see the area where we sprayed,” he reports. “In those areas, nematode counts went down by 30 to 50 percent. This spring, Sail said he will continue experiments with S. riobravis, making applications earlier in February before sting nematodes are active to see if he can “get a jump on them.”

Both Martin and Stacey believe S. riobravis will play an increasing role in nematode control programs. “I suspect it will be better as a preventive approach to nematode control,” Stacey said. “But I also think it will fit well in an overall IPM program where you’re trying to use all practices and methods of control.”

“You might, for example, apply S. riobravis in the spring when counts are gradually building, followed by a nematicide treatment in the fall. There may also be other options. Additional research will tell,” he concluded.