Curative management of dollar spot in fairways

A curative management test was conducted at The Ohio State University Turfgrass Research Center in Columbus, Ohio, on Penncross creeping bentgrass and annual bluegrass. The mowing height was 0.4 inches with the clippings removed, and the area was irrigated as needed.

The condition of the sward was poor because of active dollar spot with fair color, no thatch and good density. No fertilizer was applied before or during the evaluation unless noted in the treatments. The soil was Crosby B silt loam with a pH of 7.3. Individual plots measured 6 feet by 10 feet and 2 feet between blocks. They were arranged in a randomized complete block design with four replications.

Treatments were applied with a hand-held, carbon-dioxide-powered boom sprayer with 6503 TeeJet nozzles at 40 psi (a water equivalent to 2 gallons of water per 1,000 square feet). All treatments were started July 24, 2003. A single application was made with each of the fungicide treatments.

The percentage of plot area blighted was assessed visually on a linear 0-to-100-percent scale in which zero equals no blight, and 100 equals the entire plot blighted. The average high and low air temperatures (F) and rainfall (inches) for each month were: 83.6, 62.7 and 4.3 in July and 84.0, 64.1 and 12.9 in August.

Environmental conditions were favorable for dollar-spot development and activity from mid-July to mid-August. At the beginning of the evaluation, high levels of the disease symptoms were expressed in the test area from natural inoculum. The test area has no resistance to fungicides.

The study was to evaluate how rapidly a single application of a fungicide, or combination of fungicides and other products, would reduce dollar spot to an acceptable level and how long the disease would be managed. After six days, all treatments showed a significant reduction of disease compared with the untreated check. A less-than-2-percent disease rating was required to be considered acceptable. Low label rates, single applications of contact fungicides, fertilizer alone and the use of growth regulators were unacceptable in the management of the disease. GCN

Product evaluations

Treatment, formulation, rate per 1,000 square feet	% plot blighted by dollar spot			
	July 15 1 DAT*	July30 6 DAT	Aug. 8 15 DAT	Aug. 20 27 DAT
1. Untreated	27.5	43.8	62.5	22.5
2. Emerald, 70WG, 0.18 oz.	23.8	4.5	0.3	1.8
3. Banner Maxx, 2EC, 1.0 oz.	27.5	4.5	1.8	14.8
4. Daconil Ultrex, 82.5WG, 1.8 oz.	30.0	13.0	38.8	31.3
5. Daconil Ultrex, 82.5 WG, 3.2 oz.	31.3	8.0	18.8	32.5
6. Daconil Ultrex, 82.5WG, 1.8 oz., plus Banner Maxx, 2EC, 0.5 oz.	23.8	5.5	3.3	22.5
7. Daconil Ultrex, 82.5WG, 3.2 oz., plus Banner Maxx, 2EC, 1.0 oz.	30.0	6.8	0.5	4.8
8. Daconil Ultrex, 82.5 WG, 3.2 oz., followed by Banner Maxx, 2EC, 1.0 oz. 7 days later	28.8	8.5	0.8	0.5
9. Daconil Ultrex, 82.5WG, 3.2 oz., plus Banner Maxx, 2EC, 1.0 oz., plus Green Relief, 0.75 lb. N per 1,000 sq. ft.	23.8	7.3	0.3	5.8
10. Daconil Ultrex, 82.5WG, 3.2 oz., plus Banner Maxx, 2EC, 1.0 oz., plus Primo, 1ME, 0.25 oz.	26.3	13.3	20.0	45.0
11. Fertilizer 18-3-18, 0.75 lb. N per 1,000 sq. ft.	20.0	47.5	48.8	22.5
12. Chipco, 26GT 2SC, 2.0 oz.	23.8	3.3	1.8	14.3
13. Chipco, 26GT 2SC, 4.0 oz.	27.5	5.3	1.0	18.8
14. Banner Maxx, 2EC, 0.25 oz., plus Bayleton, 50WG, 0.13 oz.	21.3	3.0	5.8	26.3
Least significant difference 0.05	14.17	15.05	14.67	13.17

* Denotes days after treatment

Source: The Ohio State University, Department of plant pathology, J.W. Rimelspach, T.E. Hicks and M.J. Boehm; 2003.