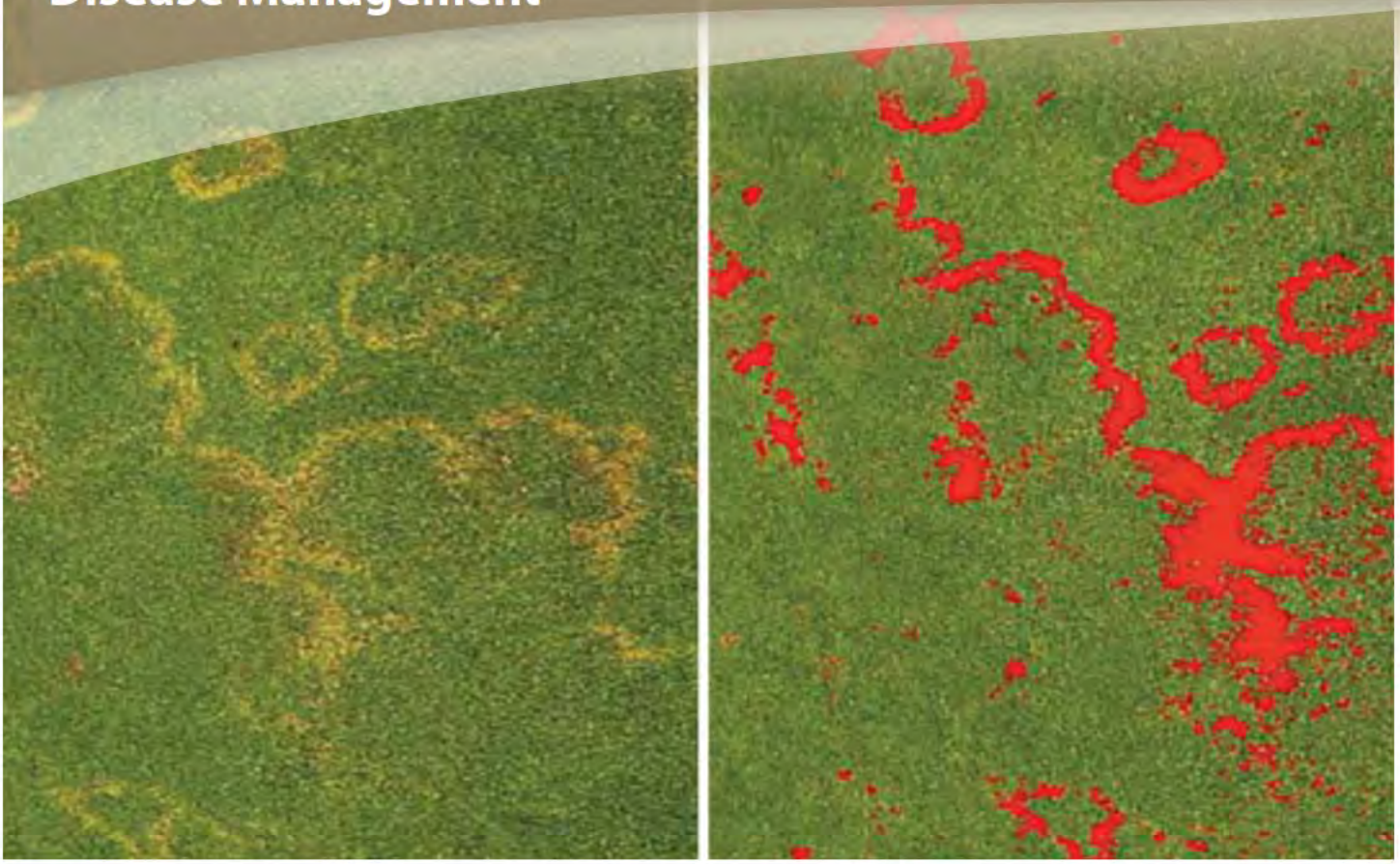

Photos by L. Stowell

Effects of Nitrogen and Primo Maxx on Brown Ring Patch Development

Frank Wong, Ph.D.,
University of California, Riverside
(frank.wong@ucr.edu)
and Larry Stowell, Ph.D.,
PACE Turf

Objective

Determine the effects of nitrogen rate and source, and Primo Maxx on brown ring patch severity on annual bluegrass greens.

Summary

Brown ring patch (also known as Waitea patch) is an emerging disease in the U.S., affecting annual and roughstalk bluegrass. Best management practices are still being developed for management of the disease.

Nitrogen was applied at two rates using calcium nitrate, ammonium sulfate, or urea with and without Primo Maxx to annual bluegrass greens. Brown ring patch severity was determined using digital image analysis.

Results

- In these studies, increased nitrogen fertility reduced the severity of brown ring patch.
- No differences in disease severity ratings were detected among treatments using the 1-pound rate of ammonium sulfate, calcium nitrate or urea.
- Primo Maxx used alone appeared to slightly increase disease severity in some cases; this effect was not observed in plots treated with nitrogen and Primo Maxx.
- Applications of Primo Maxx with nitrogen resulted in the best turf color and in disease suppression equivalent to nitrogen used alone.
- Even the 0.5-pound rate of calcium nitrate (with or without Primo Maxx) greatly increased the effect of a fungicide applied at the low label rate.

Funded by

California Chapter GCSAA
Northern California Chapter GCSAA
Southern California Chapter GCSAA
Sierra Nevada Chapter GCSAA
Hi-Lo Desert Chapter GCSAA
San Diego Chapter GCSAA
EIFG Environmental Institute for Golf

Published in GCM, May 2009, pages 117-121.