



### Management and biology of brown ring patch on annual bluegrass greens

Brown ring patch (*Waitea circinata* var. *circinata*), a recently discovered *Rhizoctonia* disease of turfgrasses in the U.S., has caused severe damage to annual bluegrass greens in the western, Midwestern and eastern states. Little is known about the biology of the pathogen, and control has been difficult for many superintendents. This research will examine the population structure and genetics of the pathogen to determine how

it has become an emergent disease. Field studies will examine the effects of nitrogen fertility, plant growth regulators and fungicide spray programs on the disease. Results from these studies will help researchers develop effective control programs and provide superintendents with information about management and control of brown ring patch. This research is part of the GCSAA Chapter Cooperative Research program. The GCSA of Central California, GCSA of Northern California, GCSA of Southern California, Hi-Lo Desert GCSA, San Diego GCSA, Sierra Nevada GCSA, California GCSA and The Environmental Institute for Golf are providing funding. — Frank Wong, Ph.D. ([frank.wong@ucr.edu](mailto:frank.wong@ucr.edu)), University of California-Riverside, and Larry Stowell, Ph.D., PACE Turfgrass Research Institute



Photo by L. Stowell



Photo by J. Walworth

combined effects of plant growth regulators, desiccants and various types of cultivation on overseeding performance. The results will help superintendents develop successful overseeding programs for seashore paspalum fairways. This research is part of the GCSAA Chapter Cooperative Research program. The Golf and Environmental Foundation of Arizona and The Environmental Institute for Golf are providing funding. — David Kopec, Ph.D. ([dkopec@ag.arizona.edu](mailto:dkopec@ag.arizona.edu)), University of Arizona

### Attenuation of PPCP/EDCs through golf courses using re-use water

Many golf courses currently use re-use water as their irrigation water source, and more will do so in the future. A number of studies have found many pharmaceuticals and personal care products (PPCP) and endocrine-disrupting compounds (EDCs) in treated re-use water, raising concerns about the impact of these products on human and ecological health. Golf courses have the potential to remove PPCP/EDCs from re-use water. The objective of this study is to determine the ability of soil turfgrass systems to remove common PPCP/EDCs from re-use water. Laboratory, growth-chamber and field studies on golf courses will be used to determine the fate and transport of common PPCP/EDCs in turfgrass stands. Scientists from three institutions will work on the project. This research is part of the GCSAA Research Program. Many agencies are providing funding, including The Environmental Institute for Golf, which is providing the Mark Kizziar Research Grant. — Mike McCullough ([mike@ncga.org](mailto:mike@ncga.org)), Northern California Golf Association

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### Successful overseeding of fairway seashore paspalum

Seashore paspalum has several attributes, including excellent salinity tolerance after establishment, that make it a good choice for fairways in the arid Southwest. One limitation is that it is difficult to produce a good stand of winter overseeded turf on fairway-height seashore paspalum. Successful overseeding is a must if seashore paspalum is to be accepted where winter overseeding is required. The objective of this research is to develop a protocol for successful overseeding of fairway seashore paspalum by examining the

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