

## Notes From The 1999 Southwest Region Green Section Conferences

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The Southwest Region just concluded a very successful tour of five Green Section Conferences designed to provide up to date information on golf course management issues to superintendents, golf professionals, club managers and club officials. The following notes are highlights from some of the presentations:

Dr. Ronny Duncan, University of Georgia – Managing Salts, Sodium, and Bicarbonates in Southwestern Soils – Dr. Duncan offered some very practical advice to help superintendents effectively manage difficult southwestern soil and water conditions. He noted that managing such conditions could require as much as a 50% increase in the maintenance budget. Salinity in particular is an increasing problem throughout the United States, and Dr. Duncan estimates that 55% of ground water sources are saline. Salinity negatively impacts turf growth in the following ways:

- Reduction in water availability to the plant.
- Negatively affects soil structure.
- Direct toxicity to roots and leaves (chlorides and boron).
- Causes nutrient imbalances.

Dr. Duncan offered the following strategies for managing such conditions:

- Perform regular soil and water testing.
- Accurately assess the site to evaluate drainage, soil type, and chemical properties.
- Establish salt tolerant turfgrass species.
- Restrict salt additions through fertilizers, poor quality water, and other products.
- Do everything possible to encourage good drainage and leach excess salts before levels reach the critical point based on the turf species.

Dr. David Zoldoske, The Center for Irrigation Technology – Water Monitoring Makes Sense – The Center for Irrigation Technology at Fresno State University conducts research on improving water use efficiency and offers services to test the performance irrigation products. Dr. Zoldoske explained the various methods used to evaluate sprinkler uniformity, pointing out that the scheduling coefficient (SC) is the most accurate and useful method for superintendents because of the following factors:

- SC is based on a user defined dry spot within the irrigation pattern of three to four sprinklers. The superintendent determines how large of a dry spot can be tolerated within an irrigation pattern.
- The SC compares the driest portion of the pattern with the average area and shows how much extra water is needed to compensate for the dry area.

- This analysis allows for economic comparison, and ties directly to turf quality.

Dr. Zoldoske has just completed a computer software program, SIS, that can model current and proposed changes to your irrigation system (nozzle replacement, changing heads, adjusting operating pressure, etc.) and calculate the financial impacts of such changes.

Dr. Tony Koski – An Update on Research at Colorado State University – Dr. Koski highlighted three projects in progress.

*1. Turf Response to Irrigation Regime* – This is a project studying competition between turf and trees for water at three different watering regimes of 40%, 80%, and 160% of ET. Preliminary results indicate that the trees are suppressing turf growth, and that the trees (green ash and honey locust) seem to use more water than the turf.

*2. Saltgrass* – Dr. Koski is working with Dr. David Kopec at the University of Arizona to collect saltgrass (*Distichlis picata*) for a potential breeding program to improve the turf quality of this species. Very little research has been done on this grass, which grows naturally along roadsides and other areas and is extremely salt tolerant. Some of the major challenges are that saltgrass is a poor seed producer, and the seed that is produced is very slow to germinate. Several experiments are underway to improve seed production, turf quality, and seed germination.

*3. Evaluation of improved seeded varieties of Poa annua var. reptans* – According to field plots at CSU, Dr. Koski observes that P184, Petersen's Creeping Bluegrass, is the best poa variety adapted to Colorado conditions. The new seeded varieties of poa in his plots germinated faster than creeping bentgrass and seemed to establish well at a seeding rate of 1 lb./1000 sq. ft.

The next newsletter will highlight additional projects and hopefully provide more practical information you can use at your course.

### California GCSAA Supports Pine Pitch Canker Bill

The CGCSA is supporting Assembly Bill 954 by Assembly Member Mazzoni. This bill is a follow up of last year's Pine Pitch Canker Bill. The original bill was sponsored and supported by the CGCSA and got passed into law with the help of the CGCSA Network. The bill authorized the Dept. of Forestry to use an appropriation of \$2,100,000 to undertake research programs to develop a Monterey pine genetically resistant to Pitch Canker. Initially, the bill allocated the funds over six years. This current bill would attempt to release the funds for research immediately.