



# TURFAX™

of the International Sports Turf Institute, Inc.

Volume 6, Number 3



May-June 1998

The International Newsletter about Current Developments in Turfgrass

## IN THIS ISSUE

- Turfax Projections
- What Causes Weed Population Shifts in Turf?
- *Pythium*-Induced Root Dysfunction of Creeping Bentgrass Greens
- New Prospects for Controlling Ants on Putting Greens
- "Open House" Approach
- Research Summary: An Assessment of Mercurial Fungicide Residues in Golf Course Soil and Clippings
- JB Comments: The Need for a Gravel Drained
- Ask Dr. Beard

## Turfax Projections

**T**he El Nino effect is causing major seasonal climatic changes in many parts of the world: extended winter cloudiness from Florida west in the United States; continual rainy periods along the Atlantic Coast states of the U.S.; mild winter in the North Central U.S. Summer droughts in Australia and parts of the South Pacific. A relatively warm winter in the United Kingdom and Scandinavia.

**Turfgrass managers who implement cultural practices based on calendar dates or traditional seasonal changes could be faced with significant problems.** These major climatic changes from the seasonal norms dictate adjustments in turfgrass cultural programs based on a sound understanding of basic principles.

\* \* \*

**Golf course construction and golf play remain very active due to favorable economic conditions in the United States;** while a major slowdown has occurred in the Pacific Rim Countries which follows a strong period of growth. A

slowing of new construction to more realistic levels has occurred in Europe.

**Sports field and stadium constructions also are very active in many parts of the world.** Certain countries are especially active. France has completed preparations for the soccer World Cup 1998 and Malaysia has completed construction for the Commonwealth Games of 1998. Australia is involved in major construction for the Sydney 2000 Olympics, and Japan/South Korea are progressing well in developments for the soccer World Cup in 2002.

**There is a great need for more public golf courses** in many parts of the industrialized world, including the United Kingdom, Japan, United States, and most European countries. The National Golf Foundation reports that 66% of the golf rounds played annually in the United States are on public golf courses. Furthermore, 79% of all golfers play a majority of their rounds on public golf courses.

**The demand for sod to be used on new construction sites remains high in most regions of the United States.** The problem for many sod growers is maintaining adequate inventories. **Sod marketing exclusives of proprietary cultivars are increasing,** especially for warm-season turfgrasses.

\* \* \*

**Consolidations of companies involved with the turfgrass industry are moving at a pace that has never before occurred, and will continue.** During the past year:

- Jacobsen Division of Textron Inc. acquired Ransomes/Cushman/Ryan.
- The Scotts Company acquired Emerald Green, Miracle Garden Care Ltd., Levington Horticulture Ltd., Earthgro, Sanford Scientific, Inc. and the U.S. Home and Garden Consumer Products Business of AgrEvo Environmental Health, Inc.
- AgriBioTech, Inc. acquired 18 turfgrass and forage seed companies in the United States, including Fine Lawn Research Inc., Lofts Seeds, Inc., Willamette Seed Co., and Zajac Performance Seed.

Continued on page 6

## ...Root Dysfunction...

Continued from page 4

### References


Abad, Z.G., H.D. Shew, and L.T. Lucas. 1994. Characterization and pathogenicity of *Pythium* species isolated from turfgrass with symptoms of root and crown rot in North Carolina. *Phytopathology* 84:913-921.

Endo, R.M. 1961. Turfgrass diseases in California. *Plant Dis. Repr.* 45:869-873.

Feng, Y. 1998. *Pythium* species associated with the roots of creeping bentgrass and annual bluegrass in Maryland.

Master of Science thesis. Dept. of Natural Resource Sciences and Landscape Architecture, Univ. of Maryland, College Park.

Hodges, C.F. and L.W. Coleman. 1985. *Pythium*-induced root dysfunction of secondary roots of *Agrostis palustris*. *Plant Dis.* 69:336-340.

Nelson, E.G. and C.M. Craft. 1991. Identification and comparative pathogenicity of *Pythium* spp. from roots and crowns of plants exhibiting symptoms of root rot. *Phytopathology* 81:1259-1535. 

## Turfax Projections

Continued from page 1

- Central Garden and Pet acquired Pennington Seed, Inc. and Seeds West, Inc. (formerly Farmers Marketing).
- The Toro Company acquired James Hardie Irrigation, Exmark Manufacturing, and Dingo™ Digging Systems.
- J.R. Simplot Company acquired Jacklin Seed.
- The Monsanto Company and American Home Products recently have announced plans to merge, which includes the Crop, Turf, and Ornamental Section of American Cyanamid.

A key driver in these acquisitions is the **rapid biotechnology developments** toward transgenic turfgrass cultivars and the progress being made in biological control agents for pests of turfgrasses.

\* \* \*

Putting green construction with a **high-sand root mix and a perched hydration zone will continue to increase** worldwide, on greens subject to intensive play.

The next 5 years will see a **major emphasis on the conversion of putting greens** composed of creeping bentgrass (*Agrostis stolonifera*) or dwarf hybrid bermudagrass (*Cynodon dactylon* x *C. transvaalensis*) to the newer cultivars that can sustain high shoot densities at cutting heights below 4 mm.

Emphasis on **use of slow-release nitrogen and potassium carriers** as a key part of turfgrass fertilization strategy.

Increased use of a fertilization strategy for putting greens involving **macro applications of granular fertilizer combined with micro applications of foliarly applied nutrients** at light rates to make short-term, minor adjustments in turfgrass responses as needed.

Increasing use of **intensive sand topdressing on poorly drained, clayey fairways.**

The use of **three-dimensional, interlocking mesh in root zone stabilization** of turfed sport fields, race tracks, and golf course tees and cart paths will increase worldwide.

A very desirable trend which is not yet at a significant level would be **the use of composted, living organic matter sources** in the original construction of root zones and in subsequent topdressing mixes.

**The trend is to a smaller total area devoted to fairway turf** on many golf courses, but with a higher intensity of culture and with an increased area of intermediate rough.

**Genetic transformation will provide for cultivars** that better resist pests and tolerate herbicides. Some genetically improved germplasm will be delayed entering the market due to legal and patent problems.

**Some relatively effective biological agents will be marketed in the next several years.** Because of environmental factors, consistently efficacious biological agents may never be developed that will match the performance of the chemical pesticides.

**Many new effective pesticides will be developed from chemicals produced naturally by plants and microorganisms.**

**Rough bluegrass (*Poa trivialis*) is rapidly surpassing annual bluegrass (*Poa annua*) as one of the most difficult-to-manage weeds on golf courses** where cool-season turfgrasses are grown. Currently, there are no herbicides that selectively control rough bluegrass in cool-season grasses. It must be spot-treated with a nonselective herbicide or physically removed.

Moss problems will increase rapidly on closely mowed putting greens, with **more effective moss control methods being developed.** A warning on moss control programs you may read about in the press: **any product used to control moss is technically illegal unless moss control is stated on the label.** Any product used to mitigate a pest problem is considered a pesticide by the U.S. EPA, and thus must be labeled for that use.

Look for a trend of **even greater restrictions regarding setbacks from wetlands and aquatic ecosystems.** Policy-makers continue to ask more questions about the fate of nutrients and pesticides applied to golf courses. 