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Summer Stress on Turfgrass

Henry T. Wilkinson, Professor Depts. of Plant Pathology and Agronomy University of Illinois, Urbana-Champaign, IL

urfgrass stress is not limited to summer conditions; but without question, this is when it is the most severe. Stressed turf is generally recognized by poor growth (slower leaf growth or light green or yellow turf color), and the causes of turf stress are both complicated and numerous. However, instead of identifying the causes of stress, focus on how the turfgrass plants respond to the many stresses that they are exposed to. The grass plant is the "control center" in terms of determining the quality of a turf. Every year, your turf will be exposed to numerous stresses; and at certain times, the com-

bined effect of multiple stresses could result in turf destruction. More often, turf plants respond to stresses in a way to minimize the damage, thus preventing destruction. As a turf manager, your goal should be to predict and understand the various stresses that your turf is exposed to and use proper methods to minimize their impact. To help you achieve this, I will first consider the natural behavior of turf exposed to summer climatic conditions and then look briefly at the various pests and cultural practices and how they could affect your turf.

Cool season turfgrasses respond to the change in seasons much as trees do. In the spring, the roots are active and the leaves are extending at rapid rates. Midspring brings on the drive to flower and produce seed. When a turf is trying to flower and produce seed, root growth and leaf extension will naturally slow down. These various processes are controlled by hormones produced by the plant. The stress of flowering causes the plant to slow leaf and root growth. One possible means of reducing this natural stress is to supplement the turf with fertilizers, especially nitrogen and potassium. As the turf completes the flower-seed forming stage of growth, the soil and air temperatures have warmed considerably. Generally, it is June by this time, and the turf will resume root and leaf growth. During this time, the turf generally shows very little symptoms of stress. When grass is growing strong, the amount of stress required to significantly weaken the turf is high. Consequently, you often do not (continued on page 30)





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1996 Charity Gin Tournament "Three-Peat" for Brother Peter

Paul Voykin

he annual Gin Charity Tournament on March 25 began after a delicious lunch at Hackney's in Wheeling. This year, I won't bore you with minor details as I've done in the past. Stuff like, Who fell asleep? Who went to the lunch buffet three times (Wally and I)? Or, Whose wife kept calling our group wanting to talk to her darling husband, insisting he went to Hackney's to play gin? No, this year, I will go straight to the final game between Dudley Smith and Brother Peter.

The play between the two finalists was slow, deliberate and defensive. It was close, a good, serious game. Then, toward the end, a smile appeared on Dud's face. Peter had dealt him three pairs, queens, nines and threes-a break for any gin player in a tight game; and it came at a crucial time. Dudley knew all he had to do was wait, and soon it would be all over and he would be our new champion. That's exactly what happened...but not to Dud. He flipped Peter a card. Peter grabbed the card and called with a nine and caught his old friend with 60 points and went out in all three games. This was a third-

time win for Peter. Later, when he was interviewed by the news media, Peter straight out told the reporters that he had always had an easy time with Penn State graduates.

Now comes the very serious part; and I warn you, it is heartbreaking to read. So if you would rather do something else, please do so. You're not going to feel very good after reading this except that I hope you might want to send a check. It's tax exempt, and it might make you feel a bit better. Let Dudley, the best writer in our Midwest

(continued on page 22)





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ROSEMAN TRACTOR EQUIPMENT CO. INC. 2620 Crawford Avenue Evanston, IL 60201 847-864-1842 FAX 847-864-1938 Japanese Beetle (continued from page 6)

entirely cover the abdomen. On each side of the abdomen is a row of five lateral brushes of white hairs and a pair of these brushes on the dorsal surface of the last segment of the abdomen. Adult beetles vary in length from onefourth to one-half inch and oneeighth to one-fourth inch in width. The female of the species is usually larger than the male.

Adult beetles feed on the upper leaf surface eating all of the leaf tissue except the veins (skeletonization). Defoliated leaves turn brown and may drop from the plant. Excessive feeding by the beetle can result in a lack of plant growth and vigor, stress, loss of aesthetic value, and potential invasion by secondary organisms such as wood-boring insects and plant pathogens. Adults may also feed on the

fleshy tissues of fruit and chew their way into buds.

Larvae, otherwise known as "grubs," are particularly destructive to turfgrass found on golf courses and lawns. The grubs have a characteristic C-shape, creamy white with a dark brown head. Young larvae are about one-sixteenth inch long but reach a length of one inch when mature. Japanese beetle grubs have a Vshaped arrangement of hairs (raster pattern) on the tail end of their bodies which makes for easy positive identification. Kentucky bluegrass is the favored host of the grub, but it may also feed on other grasses, roots and underground stems.

Life Cycle of the Japanese Beetle

The Japanese beetle has an annual life cycle similar to other grub species. After overwintering in the soil as a partially grown grub, pupation occurs in the spring with adult emergence from June through August depending on local climatic conditions. Upon emerging, the adults seek out host plants for feeding and mating. Beetles tend to feed in groups at the top of the plant and then work their way downward. Plants in full sunlight are preferred. In late afternoon, they return to the soil for the night. Their activity is greatly reduced on cold, wet days. The female lays her eggs two to four inches deep in the soil. Upon egg hatch, the young grubs feed until cold weather and then overwinter. The following spring, they mature and eventually develop into an adult. Irrigated areas and poorly drained sites with loose soil are prime egg-laving sites. Soil moisture and lack of or presence of snow cover can greatly affect grub survival.

(continued on page 24)

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Bull Sheet

DATES TO REMEMBER

June 11 — MAGCS monthly meeting at Odyssey G.C. July 1 — ITF Northwest golf event at Forest Hills C.C., Rockford. July 16 — MAGCS monthly meeting at Heritage Bluffs. July 22 — 1996 John Deere Team Championship at Bull Valley G.C. July 26-28 — Ameritech Open at Kemper Lakes G.C. July 30 - Midwest Regional Turf Field Day at West Lafavette, IN. August 7 — ILCA Field Day at Bork Nurseries, Onarga, IL. August 12 - MAGCS monthly meeting at Fox Run Golf Links. August 21 — University of Illinois Field Day, Urbana. August 23 - Family picnic and Kane County Cougars baseball. September — MAGCS monthly meeting at Skokie C.C. October 1 - ITF golf day at Schaumburg G.C. and Poplar Creek G.C. October 8 — MAGCS monthly meeting at Bryn Mawr C.C. November 7 — MAGCS clinic and annual meeting at the Butterfield C.C.

Wanted: Used 5- or 7- gang rough unit. Call Paul at Huntley Park District, 847-669-5463. For you computer buffs who have a modem and want to access the Michigan State Turf Library, here is the number for them on the World Wide Web: http://www.lib.msu.edu/tgif. Chris Smith at Bittersweet G. C. has hired a firm with a portable saw mill. They are using the trees cleared from the routing of the golf course to make various size timbers and lumber. He has had benches made, decking for a patio and the thick timbers for between his bins for soil, sand, etc. Now, that is recycling. Oscar Miles at The Merit Club has offered to do tissue testing on the Karsten NIR Tissue Testing equipment he has at the club. He will charge a fee for this service. He states it works very well on those "mystery" sand-based greens. Call 847-816-6985, or by e-mail at olmmerit@aol.com. Assistant needed: Crystal Lake C.C., Crystal Lake, IL. Call Steve

VanAcker, 815-459-7240.

Attention Michigan State University alumni involved in the turf and ornamental fields. A group is forming to socialize, help out our industry and to network. We need help! Please call Kerry Anderson, 815-923-1323, or Mike Conley, 708-668-5537. If you know of any additional alumni, share this information with them.

For sale: Toro Hydraulic 690, 670 and 650 sprinklers, VT3 satellite and central controllers, Foley bedknife and reel grinder. If interested, call Bob Kronn, LaGrange C.C., 708-354-0537. Bob Baker, long-time member of MAGCS and sales rep of Arthur Clesen, Inc., had open heart surgery April 20, 1996. It is great to report that Bob is fine and doing quite well. He would welcome phone calls at 847-428-5797. Bob sends his "thanks" for the beautiful azalea plant the MAGCS sent to his home while he was recovering.

The College of Lake County will offer Turfgrass Management (HRT 212) in the fall of 1996. The class will start on August 26 and run for 16 weeks from 6 to 9:50 p.m. The class will be taught by Bruce Williams. A prerequisite of Basic Horticulture (HRT 111) is Turfgrass Management. Basic Horticulture will be offered as a summer course beginning June 10. Contact Dr. Mark Zampardo for more details at 847-223-6601, ext. 2320.

NECROLOGY

It is with a deep sense of loss that we announce the death of Benjamin F. Coker at age 83. The deepest sympathy of the members of the Midwest Association of Golf Course Superintendents is extended to the Coker family.

A note from Dudley Smith on Ben Coker: "Fred, another true gentleman bites the dust. Benny was a "Hoosier" with that infamous Krafft group that played golf every Monday. He owned

(continued on page 28)





MAGCS MembersTeam Up With Johnsons for Another Successful Hockey Season

John Gurke

he Nels J. Johnson Tree Experts company sponsored our unofficial MAGCS hockey club this past winter, and once again our guys showed evervone else in the "Thirteen and Under Full-Contact" league who's the boss. In truth, the league is an adult, no-check (hey, we all have jobs to get to in the morning) format with games being played at the Centre Ice Rink in Glen Ellyn. After winning last year's session, expectations were high for this year's squad, and they didn't disappoint. As of April 7, the team was 6-4 overall and was heading into the playoffs with a 6-4 streak in its last 10 games!

The MAGCS members who comprise the majority of the Johnsons (several players wanted the name to be the Big Johnsons, but we're a respectable bunch) are as follows and in alphabetical order: Matt "Just grab his jersey and hang on!" Springer of Sunset Ridge

Dave *"Unsportsmanlike Conduct"* Blomquist of Naperville Country Club

John "Must be on the injury list, 'cuz we ain't seen him for a while" Otis of Weber Park

Dave "He's really quicker than he appears" Schlagetter of The Indian Hill Club

Joel "Take one in the ankle weekly and like it" Purpur of River Forest Country Club

Kevin "Most improved player 'cuz fewer teammates are getting flattened by him" DeRoo of Bartlett Hills

> Pete "Not related to Karch but still a big man in front of the net" Kiraly of Lake Shore

John "Plays like Mikita, Hull, and Gretzky combined 'cuz I'm writing this" Gurke of Aurora Country Club (It was hockey-playeralphabetical order)

Also on the team, but classified as R.G.U. (Rostered, but Geographically Undesirable), are Dave Fisher of Park Hills: Hank Wilkinson from the U. of I.; and Irwin McKone, a student at U. of I. and Bob Kronn's new assistant at LaGrange The Country Club. remainder of the club is comprised of guvs who actually CAN play hockey (i.e., Ringers) and are responsible for our strong showing. Many thanks to the Johnson family for their generosity and support this season.