THE BULL SHEET, official publication of the MIDWEST ASSOCIATION OF GOLF COURSE SUPERINTENDENTS.

#### 1988 Board of Directors

President	Dave Meyer (Penny) Prestbury G.C.	Home: 820-1040 Office: 466-4177
Vice-Pres.	Bruce Williams (Roxane) Bob O'Link G.C.	Home: 680-1074 Office: 432-0088
2nd Vice Pres.	Alan Fierst Oak Park C.C.	Home: 456-7815 Office: 453-7525
Sect'yTreas.	Roger Stewart (Sue) Stonebridge C.C.	Home: 961-2803 Office: 898-6139
Exec. Sec.	Penny Meyer (Dave) Office: 820-8181 MAGCS (Mailing Address) P. O. Box 248, Eola, IL 60519	
Board	Michael Bavier Inverness G.C.	Home: 382-7654 Office: 358-7030
	Timothy Kelly (Linda) Vill. Links of Glen Ellyn	Home: 858-8174 Office: 469-2077
	Joel Purpur (Debbie) River Forest C.C.	Home: 832-6763 Office: 941-1651
	Ray Schmitz (Jan) Flossmoor C.C.	Home: 815-469-2773 Office: 798-2498
	Dennis Wilson (Pat) Sunset Ridge C.C.	Home: 441-8387 Office: 446-5222
Pres. Emeritus	Mike Nass (Jean) Cantigny Links	Home: 462-1547 Office: 668-3730

#### Official Photographer Raymond Schmitz

Dr. Randy T. Kane, Turfgrass Advisor (312) 954-2753 University of Illinois & CDGA

#### ECKHOFF AWARD

For Excellence In Golf Journalism



We are not copyrighted and would like to share our articles with any who would like to use them, but please give the author and "The Bull Sheet" credit.

#### Editor -

Fred D. Opperman, CGCS 1022 Shady Lane Glen Ellyn, IL 60137 Phone (312) 469-3444 or (312) 858-0601

Bull Sheet printed by Ever-Redi Printing, 5100 East Ave., Countryside, IL 60525.

The Bull Sheet is published once a month. All articles are required by the 10th of the month to make the next issue. Advertising is sold by the column inch, by the quarter page, half page, and by the full page. All artwork to be finished and in black and white. Circulation is over 600 issues per month.



#### **Spring and Early Summer Problems** A Review of '89 to Date

by Randy Kane, Turfgrass Advisor Univ. of Illinois and CDGA

July 7, 1989. Guess what?? Another late, cool spring rolled in for 1989, which meant slow green-up and growth of bentgrass and Poa annua turf. Especially hard hit were putting greens with older bentgrass varieties such as Washington or South German derivatives. Some regions green-up fairly well early, but were set back by the late, hard frosts in May (remember the snow May 6th?). In some cases, cool soil temperatures slowed the availability of P and K, causing problems with growth and color (purple to orange) well into mid-May.

There were several interesting diseases working in early June, during a wet period with very cool nights. Fusarium patch, or pink snow mold was prevalent on greens and tees of several area courses. The causal agent is Fusarium nivale, which is favored by cold, wet conditions. The disease appeared as small circular patches or rings — usually appearing in shades of red or orange.

Also in early June, "Helminthosporium" leaf spots and blights, as well as cool temperature Rhizoctonia were observed. In one interesting case, a Dreschlera fungus was selectively attacking a clone of bentgrass in an old, mixed bent/Poa fairway. No disease was observed on other types of bent or on the Poa annua, which is disconcerting if you are trying to reduce the population of Poa and increase the bentgrass.

Now that it's getting warmer and more humid, are your new bent fairways getting puffy?? If so, slight scalping can occur and cause circular to oval brown or grayish colored patches. Localized dry spots are also quite common on newer bent fairways, probably for several reasons; thatch builds up quickly from fertilization during grow-in; fungi that decay the old mat from renovation causes hydrophobic areas; or, irrigation water is utilized less (underutilized?) in an attempt to reduce the competitive ability of Poa annua — the "keep 'em dry" syndrome. One does need to water one's bentgrass, especially when it turns blue ...

Be on the lookout for another patch disease, this one on relatively new stands of Penneagle and Penncross bentgrass. I have found several instances of take-all patch, caused by the fungus Gaeumannomyces graminis, on one to three year old bent fairways. The disease was formerly called Ophiobolus patch, as the pathogen was named Ophiobolus graminis at one time.

(cont'd. next page)

Gaeumannomyces graminis is an ectotrophic root parasite which is very closely related to Magnaporthe poae and other fungi with Phialophora conidial stages that cause summer patch of bluegrasses. Take-all patch first appears as 4-8 inch or larger circles of turf which wilt under heat stress. Plants in affected patches are stunted and leaves turn grey to yellow to brown, which gives the patch a grayish-brown color not unlike the scalping injury previously discussed. Plant roots are sometimes visibly rotted, especially at later stages of disease development.

Take-all patch is fairly new to Illinois, but is frequently found in New England and the Pacific Northwest. So far, this disease has proved very difficult to control (as with summer patch), probably because the fungi inhabit the soil and plant roots in or below the thatch layer. Even the best fungicides are not very effective when drenched into the rootzone on a curative basis. Future research will center on methods to control this disease, including timing of preventative fungicide treatments, use of acidifying fertilizers, and addition of antagonistic bacteria to soil.

#### Western Open Pictures

by Tim Kelly



Day 1 — Oscar Miles, Rich Davis, Bob Padula, & Tim Kelly



Day 2 — Tim Kelly, Penny Meyer, Dave Meyer, Dave Blomquist, John Gurke, Tony Meyer



Day 2 — Tony Meyer, Oscar Miles, Sam DiGiovanni (President WGA), Dave Meyer, (President MAGCS), Don Johnson (Ex-Director WGA), Jack Shea, Green Chairman of Butler National. Dave Meyer is presenting a check to Mr. DiGiovanni.



Day 2 — Larry Castle presents a \$1,000.00 check to MAGCS President, Dave Meyer, with Oscar Miles, looking on.



Day 3 — Tim Kelly, Jim Foster, Harry Laovero, Keith Johnson



Day 4 — Jim & Lois Latham, Al Fierst, John Turner, Dan Hill, Dave Schlagetter, Bob Patterson, & Pam Turner

MAKE PLANS TO ATTEND THE 1989 UNIVERSITY OF ILLINOIS TURFGRASS, NURSERY, LANDSCAPE, AND TRIAL GARDEN FIELD DAY!

August 16, 1989

Features of the 1989 University of Illinois Turfgrass, Nursery, Landscape, and Trial Garden Field Day Current Field Research and Demonstrations

TURF

Weed, Insect, and Disease Management Plant Growth Regulators Alternative Turfgrasses Fertility Studies

NURSERY—LANDSCAPE

Herbicide Management Omamental Grasses Landscape Plant Selection Landscape Roses Verticillium Wilt Research

TRIAL GARDEN

Latest Bedding Plant Selections and Evaluations

PLANT PROBLEM DIAGNOSIS—Bring Samples for Examination TURF AND LANDSCAPE MANAGEMENT WORKSHOPS





(216) 333-9250

## Improvement of Poa Annua and Poa Supino for Golf Turf

University of Minnesota St. Paul, Minnesota

Dr. Donald B. White Principal Investigator

1988 Research Grant: \$30,000

(fifth year of support)

New materials were added to the program from Alabama, California, Texas, Rhode Island, and Minnesota. Several tall seeded accessions were collected in Northern Minnesota.

Severe drought and heat conditions resulted in identification of stress tolerant strains of **Poa annua** and **Poa supina**. Summer dormancy mechanisms were observed in several materials in the field. All these materials were collected, increased and established in a new field space planting.

Replicated plantings of 8 selections were established at 18 golf courses located in 16 different states for evaluation. Progeny testing is being conducted for heritability for materials up to the 7th generation from when received. Seed dormancy of up to 3 months was found in some biotypes. Stolons of **Poa annua** and **Poa supina** maintained viability throughout 24 weeks of cold storage. Chlorophyll (green color) was maintained in the dark cold storage in **Poa annua** for 12 weeks.

Poa annua was separable from Poa supina and pedigree relationships were distinguishable in some crosses and selfs. Paper on stolon storage, electrophoresis, reproductive biology in poas, and chemical suppression of flowering to maintain pure stands were or will be presented at Society meetings. Experiments demonstrated that Poa annua and Poa supina are resistant to the grass herbicide Sethoxydin.

The "floral pic" technique for isolation and control of crossing performed equally well whether the carbon sources were sucrose or fructose sugar. Approximately 1,000 matings and seed collections were accomplished with the floral pic technique and analysis of resulting data is underway. Analysis of data indicates that, with some biotype, more than twice as much seed is produced from sib crossing as with selfs or crosses. This information is extremely important to developing a seed production system.

Divergence — Incongruity (Barriers to crossing and hybridization) were found. The phenomena was found in materials that were collecte from wide geographic areas. For instance, materials from Arizona will not cross with materials from western Canada and materials from New York did not cross as well as local materials with Canadian materials.

Twenty-seven different esterases\* were found in 54 **Poa annua** biotypes while 23 were displayed by 10 **Poa supina** biotypes. The electrophoretic gels of the 64 biotypes displayed 46 different esterase patterns.

In addition to maintaining the vitality of the project, the work for 1989 will focus on seed production evaluations and problems and field evaluation of selected materials.

\*Esterase— any of a group of enzymes by whose action the hydrolysis of esters is accelerated.

Ester— an organic compound, comparable to an inorganic salt, formed by the reaction of an acid and an alcohol.

(Credit: USGA Research Summary, 1988)

For Sale: 1973 International 2 Ton Dump, will 2½ yards. Good Condition. \$900. Call NILCO (312) 669-3625.

# Schroeder's Nursery, Inc.



TREES

SHRUBS

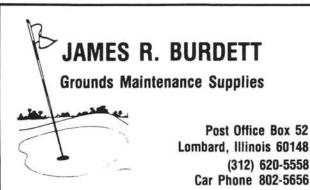
EVERGREENS

RICHARD A. SCHROEDER DON VIRGENS CARL DRAVIS

Specializing in Large Caliper Trees We offer complete installation

TELEPHONE: 312 - 546-9444

23379 W. Route 60 — Grayslake, Illinois 60030 Located on Route 60 between Rt. 12 (VOLO) & Rt. 83 (IVANHOE)



## Nels J. Johnson, Tree Experts, Inc.

Nels J. Johnson, Sr.
Nels J. Johnson, Jr. - Karl G. Johnson
Complete, economical tree service for Private Estates,
Parks, Municipalities, Golf Courses, Cemeteries,
Schools, Industrial Areas.

All phases of Arboriculture, Diagnosing, Pruning, Treating, Transplanting, Fertilization, Hydraulic and Mist Spraying. Removals. Stump Routing, Municipal Forestry. Chemotherapy for elms, and other trees.

FULLY INSURED
 Graduate -- Licensed Arborists

MAIN OFFICE - 912 Pitner Avenue, Evanston, Illinois 60202 Phones: GReenleaf 5-1877 - GR 5-5255 Hinsdale, Illinois - FA 5-0970

## The Ex Stands For Excellence

# Why the EX STANDS FOR EXCELLENCE in professional turf care.



- ☐ Par Ex is the only professional fertilizer line containing IBDU, undisputedly the finest slow release Nitrogen source in the world.
- ☐ IBDU gives you the highest level of WIN, or Water Insoluble Nitrogen.
- ☐ IBDU delivers all of its Nitrogen in a single growing season.
- ☐ The Nitrogren release rate of IBDU is generally affected by only two factors: soil moisture and granule size.
- Slower release makes Par Ex products perfect for your Fall Fertilization program.
- Fewer applications are required, labor costs are cut.
- The salt index of IBDU is the lowest of all commonly used fertilizer materials.
- □ IBDU fights nitrate pollution because very little Nitrogen is lost through leaching or volatilization.
- Choose from over 60 different product formulations.

Territory Manager Thomas E. Skinner Keokuk, IA 319/524-8912

Turf Products Ltd.

West Chicago, IL 312/668-5537



#### **Looking for Poa Annua This Summer**

by Howard E. Kaerwer & Donald B. White

Because of close mowing, individual plants on greens may be a bit difficult to recognize. Often we do so based on the belief that Poa annua plants are of a lighter green color than are bentgrass plants. This is not always true. Through closer observation you may find Poa annua plants which are at least as dark as bentgrass. While the miscellaneous Poa annua population tends to bloom over an extended time period, some plants may bloom once or not at all. Many plants are not distinguishable from their neighbors and look similar. Some plants may be identifiable for only a few days or weeks. Others may be recognizable throughout the season.

A short description of those characteristics which will help you distinguish Poa annua from bentgrass growing on greens is covered below:

1) LEAF TIP. POA ANNUA leaves have blunt (boat shaped) tips. BENTGRASS leaf tips are tapered and sharply pointed.





Poa annua

Bentgrass

2) TOP SIDE OF BLADE AND LEAF SHEATH. Young POA ANNUA leaves will be folded and V-shaped. The upper leaf sheaths will also be folded and flattish in appearance and feel. BENTGRASS leaves are not folded. The emerging young leaves and the upper sheath will be rolled and round. After emergence from the sheath, the blades are flat.





Poa annua

Bentgrass

3) VEINATION-TOP OF LEAVES. POA ANNUA has one prominent midrib running up the center of the leaves. Side veins are not easily distinguished. When held to light you may be able to see a translucent light-line running either side of the midrib. BENTGRASS leaves do not have a noticeable central midrib. Instead you should be able to spot multiple ridges (veins) running lengthwise uniformly across the width of the leaves.



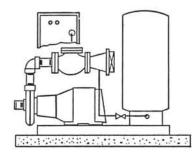


#### Poa annua

Bentgrass

4) LEAF COLOR. POA ANNUA leaves range from light green to dark green. BENTGRASS leaves generally are rather (cont'd. page 19) dark green.

#### **TURF • TENDER**



WHAT DO YOU NEED MOST FROM YOUR AUTOMATED PUMPING SYSTEM?

#### RELIABILITY AND SERVICE WHEN YOU NEED IT!

You only have a few companies from which to choose when you need new pumping equipment and Commercial Pump Service, Inc. is the only pumping system manufacturer that has "Service" in its name. Not only is it in our name — we stake our reputation on II. Our people are highly trained specialists in service and maintenance of automated pumping systems and you can count on prompt and courteous response to your call. As another part of our service, we build our stations the way YOU want them, as simple or as defune at you desire. Commercial Pump Service, Inc. prides listelf on being a leader in the industry but a servant to its customers' needs:



Builders Of Energy Efficient Pumping Systems For:

Golf Courses, Industry, Agriculture And Municipalities

Your Area Representative For:

- Standard Prelabricated Automated Pumping Stations
   Custom Prelabricated Automated Pumping Stations
- Turf Feeding Systems

COMMERCIAL PUMP Commercial Pump 500 N. Plum Grove Rd. - Ste. A Service Incorporated Palatine, III, 60067 312 - 991-7430

#### **BROOKSIDE SOIL TESTING** and IRRIGATION WATER ANALYSIS

includes a complete report, and recommendations for producing quality turf on golf courses.

#### **ADVANTAGES:**

- Improves the environment of the grasses and eliminates turf diseases
- · Decreases expenses for pesticides
- · Reduces thatch and eliminates fairway renovation
- · Decreases expenses for costly fertilizers
- · Healthy turf attracts more golfers and increases income

Golf course specialists for over 25 years

V. J. Zolman and Son 2618 Harvey Avenue Berwyn, Illinois 60402

Phone: (312) - 788-4565 (312) - 461-3679



# PRECISION BLENDED TOP DRESSING

Custom blended to your specifications by our modern equipment.

Buy when you need — Eliminate costly storage

We sell an air-dried, uniform and free flowing top dressing.

ASK THE MAN WHO HAS USED IT.

HUMUS - BLACK SOIL

#### HENRY FRENZER

Area Code 312 658-5303 620 Webster St. Algonquin, IL 60102

# BROUWER TURF EQUIPMENT LIMITED Triplex-376 mower A TRULY PROFESSIONAL TRIPLEX MOWER



For Quality Equipment, Service & Parts, Contact



CHRISTENSEN POWER EQUIPMENT INC

815-469-5898 MANHATTAN-MONEE RD. FRANKFORT, IL 60423

### Irrigation Engineering Co.

... SOUND ENGINEERING and QUALITY MATERIALS

Your Exclusive



Distributor



2612 S. 9TH AVE. • BROADVIEW, IL 60153 (312) 450-1400



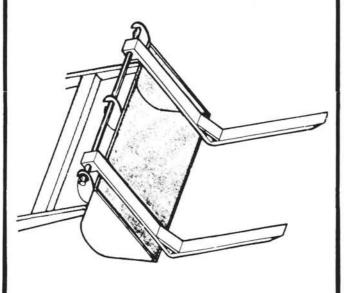
#### YOUR NORTHERN ILLINOIS DISTRIBUTOR OF TRIPLOID WHITE AMUR

- White Amur Now Available for Biological Control of Nuisance Aquatic Algae & Weeds.
- More Economical & Safer than Chemicals
- Other Species of Fish also Available for Stocking — Ask About Our Complete Fish Management Services

8609 CLARK ROAD RICHMOND, IL 60071 815-675-6545

#### CTI FORKS

Make your tractor-loader more versatile with CTI forks.





Martin Implement Sales, Inc. 16400 South 104th Avenue Orland Park, IL 60462 312-349-8430

#### A Maintenance Problem Solved

by Tony Rzadzik, Asst. Supt. Cantigny Golf Club

Early last March my mechanic came to me with a legitimate gripe. "We need a better way to clean our equipment after the guys are done mowing or when they break down!"

Before March all that we had to clean our equipment with was one fire plug that we attached a one inch hose to, and a standard three-quarter inch garden hose valve off of our maintenance building. This caused a big problem. It seemed that everyday at quitting time; three, four, sometimes five guys would pull in and only one or two could clean their machine at the same time. Two or three guys would stand around for 15 or 20 minutes and wait. If it was time to punch out; well, the machine never got cleaned.

I decided that before this season started we would resolve this problem. So instead of one good line and three-quarter inch line with minimal pressure I came up with a manifold design with four one inch lines at 60 psi or better. I also stole an idea from the Evanston Golf Club and incorporated an overhead two inch pipe to fill our spray tanks. We can now fill a 300 gallon tank in 5 minutes.

Once I put my thoughts on paper I let our irrigation expert Dave Schlagetter loose. He and his partner Byron Ambrose piped and framed together a very functional and easy to maintain system.

Our water from this fire plug is potable and is pumped from our own irrigation system on our grounds. Dave also incorporated a drain to winterize our manifold also.

All in all this system is fairly easy to install near anyone's maintenance facility where ever irrigation, fire, or potable water is available under high pressure or large volume.

We used our potable fire line instead of our golf irrigation line just for the fact that if the irrigation system is shut down for a leak, winterizing in late fall, or if we haven't turned our system on in the spring yet; we can still clean our mowers.

We are all very pleased and satisfied with this maintenance problem solved. It really worked out well. If you have any questions, give us a call.







#### Distributors of:

- Agri-Dianostic Disease Kits
- Acclaim
- Banol

- Subdue
  - Banner
  - Naiad

# HE TOUGHEST

For the turf care industry, Kubota has designed a team of tough precision instruments that work hard, but provide maximum economy.

Powerful but economical Kubota Tractors. Mowers. Tillers. Box scrapers.

Front Loaders. Even mini-excavators.

For golf courses, athletic fields, parks, and even private residences, Kubota equipment satisfies the most demanding standards.

Kubota's versatile turf equipment works both independently, and with most

existing implements and attachments.

Standard features on many of our tractors include hydrostatic transmission, comfortable operator platforms, and Power steering, safety and noise reduction

Add the operating economy special to Kubota, and you have precision instruments to satisfy even the most exacting professional See the Kubota confidence of the Confidence of t sional. See the Kubota turf team today.



Schneider, IN 219/552-0552 IN 800-553-0552 • IL 800-553-0554

# Build your Pythium control program on a firm foundation. Chipco Aliette





P.O. Box 12014, 2 T.W. Alexander Drive Research Triangle Park, NC 27709 919/549-2000

#### **Practical Pregermination**

by Rod Johnson

This past winter's harsh weather and prolonged periods of ice cover have led to a great deal of concern for Wisconsin superintendents. With the arrival of spring it is now time to take inventory of our losses and to lay plans to insure the fastest possible recovery.

Experience continues to be an excellent teacher. The winter of 1987-1988 provided many similar circumstances at my locale with a resulting loss of seven plus acres of *Poa annua* fairway turf. The returfing of large areas is always a major headache, but doing it under less than optimum conditions is double jeopardy.

Winter damage, whether it's from extended ice cover, crown hydration, desiccation or other forces of nature, can cause a real dilemma. There are numerous frustrations and inherent problems. Recovery never seems fast enough for overly anxious golfers waiting to flex their golf muscles and to test their newfound "Golf Digest Swings."

Seeding of new grass seems logical, but cold spring temperatures usually limit success. Soils at a two-inch depth must warm to temperatures of at least 60°F to be capable of germinating bentgrass seed. It could be mid-June in many areas of Wisconsin before soil temperatures reach this level. Waiting that long to seed would be unsatisfactory and I doubt new seedlings started in June would be able to survive the coming summer's stress. A June seeding would also probably be a wasted effort due to the competition from a fresh croup of *Poa annua* or possibly from common turfgrass weeds.



Seed soaking in livestock watering tank.

Faced with a large scale turf loss and willing to try anything short of sodding seven acres (the \$52,000 price tag would have been tough to sell), I decided to try the pregermination of bent-grass seed. Like most of us, I had tried pregermination on a limited basis with a reasonable success level. The pregermination of 350 pounds of bentgrass seed presented a physical challenge as well as a mental stress. The cost of the limited availability of bentgrass seed leads to a great deal of anguish.

Having gathered information from numerous experts, a Cushman load of Penncross seed was readied for action. Penncross was the grass of choice due to its known aggressive growth characteristics with hopes of its future competitive abilities. Ryegrass, known for its fast establishment, was ruled out because of past failures and a questionable ability to survive future winters.

Mark Grundman, Field Representative for Northrup King, provided a great deal of the expertise for the project. His research and experience showed that to achieve maximum results several specific steps needed to be taken. Seed was to be fully (cont'd. page 14)

# To Keep Your Course In Classic Condition, Use These High-Quality Products from NOR-AM

- NITROFORM SLOW-RELEASE NITROGEN
   Releases by slow bacterial action to provide consistent 38% nitrogen
- to provide consistent 38% nitroge

  TURCAM INSECTICIDE

  Controls a wide range of turf and
- TURCAM 21/2G
  All the benefits of regular TURCAM in convenient granular formulation
- PROGRASS' HERBICIDE
   Controls certain annual grasses and
   broadleaf weeds in ornamental turf
- DELTIC INSECTICIDE
   Gives fast knockdown and long-term control of fleas, ticks and other pests
- BANOL' TURF AND ORNAMENTAL FUNGICIDE
  Controls pythium and phytophthora
- PROXOL 80SP INSECTICIDE
   Controls white grubs, sod webworms, cutworms and armyworms in fine turf

#### WNOR-AM

THE FAIRWAY CLASSICS to keep your course in top condition

John M. Turner Sales Representative (312) 462-9866

