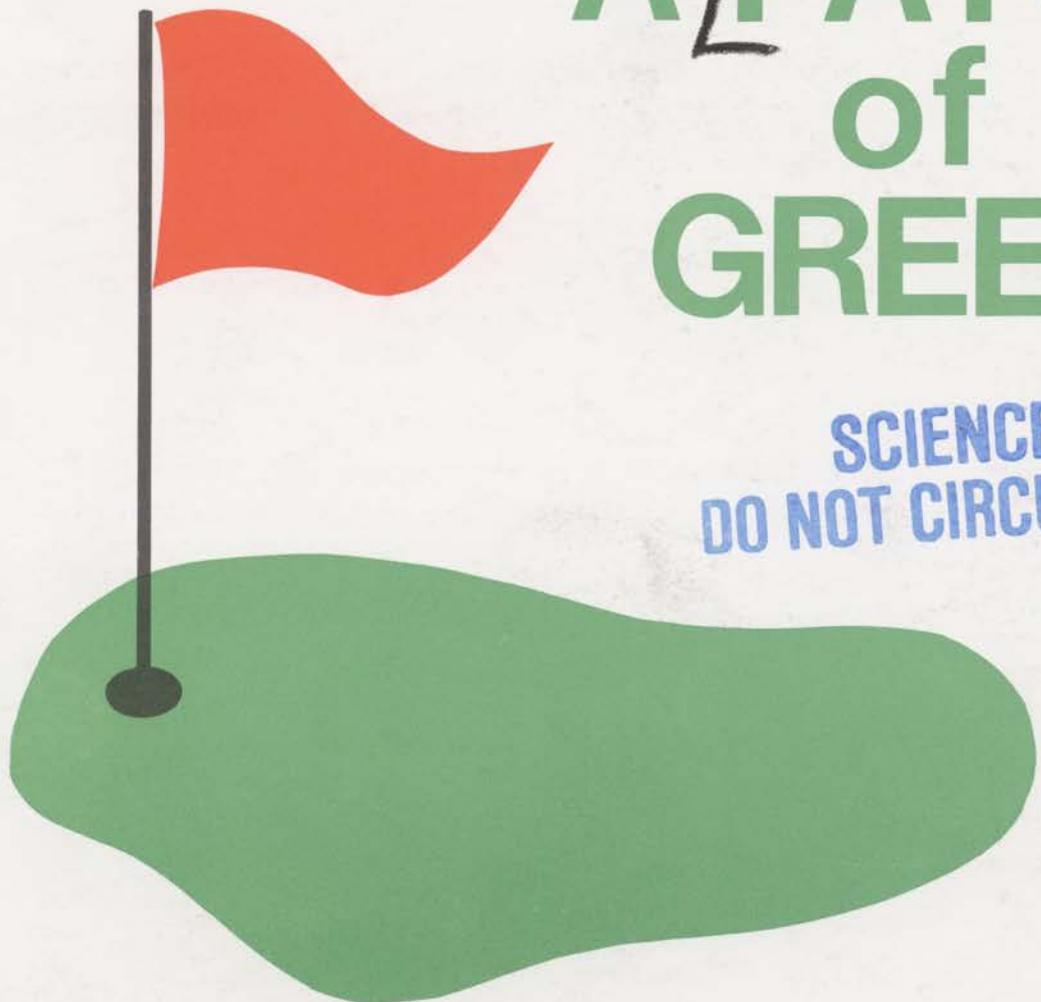


SB
433
A1
P37

main
SEPTEMBER/OCTOBER 1991

Our 66th Year



A PATCH of GREEN

SCIENCE
DO NOT CIRCULATE



OFFICIAL PUBLICATION OF THE MICHIGAN & BORDER
CITIES GOLF COURSE SUPERINTENDENTS ASSOCIATION

DISTRIBUTORS GROUP

Your Irrigation Specialists

711 West Pickard Street • Mount Pleasant, Michigan 48858
(800) 334-7011 • (517) 772-5621 • FAX (517) 773-1880

Turf Managers Workshop

COMPUTER SOFTWARE

Designed with the assistance of grounds keeping professionals to meet the needs of the industry. Flexible enough to be used by superintendents of golf courses, parks or gardens...

Features:

* Budgeting

- import/export from Lotus 123
- two years account history
- entry of expenditures
- actual/budgeted reports

* Inventory control

- entry/removal of inventory
- two years inventory item history
- inventory master file reports

* Chemical application

- tow vehicle calibration
- sprayer calibration
- coverage information
- toxicity information

* Fertilizer application

- spreader specifications
- coverage information
- cost comparisons

* Equipment maintenance

- equipment records
- maintenance records
- maintenance history reports

* Employee records

- employee records
- employee master file report

Minimum Equipment Requirements:

IBM PC-XT or compatible
e/w floppy disk drive
20 meg. byte fixed disk
monochrome/colour monitor
dot matrix printer

For a Personal Demonstration Contact: CARL GRAEF

The 1991 Season - At Least It Wasn't Boring

James M. Latham, Director
Great Lakes Region USGA Green Section

SERIALS
NOV 26, 1991
MICHIGAN STATE UNIVERSITY
LIBRARIES

The 1991 season has been a good news/bad news affair so far, with weather conditions determining the difference much of the time. Good news came to the West in the spring, with timely rains which have brought precipitation records up to par for the first time in 5 or 6 years, but they were preceded by winter desiccation damage to greens, tees AND fairways on many courses. Desiccation? How about 80-mile-an-hour winds with still air temperatures at 20 degrees below zero!

Crown hydration/winterkill of *Poa annua*, which has plagued northern latitudes of Wisconsin to Montana the last two years, moved south to the Wisconsin-Illinois state line area and southward. Rather than general, across-the-board damage to all courses, it was a patchwork of turf loss. One course could be almost undamaged, while a neighbor was hurt severely. This provided an early season supply of grist for the mills of locker room agronomists. At the same time, though, it gave superintendents an opportunity to reintroduce bentgrass into weak spots and justify the formulation of pro-bent maintenance programs.

For other areas, the worst was yet to come. Southern Michigan and Chicagoland went through a most disquieting season. It was an accelerated

growing season, according to one Michigan superintendent. July weather came in May, August in June, and a breath of September in late July. Not a very deep breath, though, because another spell of hot, humid weather finished off a lot of *Poa annua* already weakened by disease and the hot, humid, but rainless weather earlier in the summer. Any time winterkill or Summer Patch becomes destructive is the time to present a plan for regeneration of bentgrass to The Powers so that a means of funding can be found. In this way, adversity might become a positive beginning to more reliable playing surfaces.

All of these woes were not shared democratically, however. Many courses have come through the hard times in fine condition. Those with a predominance of bentgrass and Kentucky bluegrass fared well. Naturally, *Poa annua* seedlings came on strong after winterkill, but the high temperatures in late spring applied some degree of stress.

Hopefully, the poa plants got a lot of competition by inter- or over-seeding with more dependable species. In hot weather, the percentage of bentgrass or bluegrass seedling survival is low, but poa competi-

CONTINUED PAGE 25



"A PATCH OF GREEN"

Published Bi-Monthly by the
MICHIGAN AND BORDER CITIES GOLF
COURSE SUPERINTENDENTS ASSOCIATION

President
TOM MASON

Vice-President Secretary/Treasurer
KEN DeBUSSCHER **GARY C. THOMMES**

Directors

JAY DelCAMP **STEVE KOLONGOWSKI**
MICHAEL BAY **CAREY MITCHELSON**
JIM ECCLETON **PAUL KOLBE**

President Emeritus
CHARLES GAIGE

Editor
TED WOEHRL

Printed at
BLAKEMAN PRINTING COMPANY, INC.
Fraser, Michigan
(313) 293-3540

If you have changed your address,
please let us know so we can keep
our addressing plates up to date.

Present Address:

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

Fill In New Address:

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

Mail this form to:

A PATCH OF GREEN
31823 Utica Road
Fraser, Michigan 48026

. . . it was twenty years ago, today —

PATCH OF GREEN, OCTOBER, 1971
Sixth Annual MBCGCSA Golf Day nets \$5,000 for Turf Research



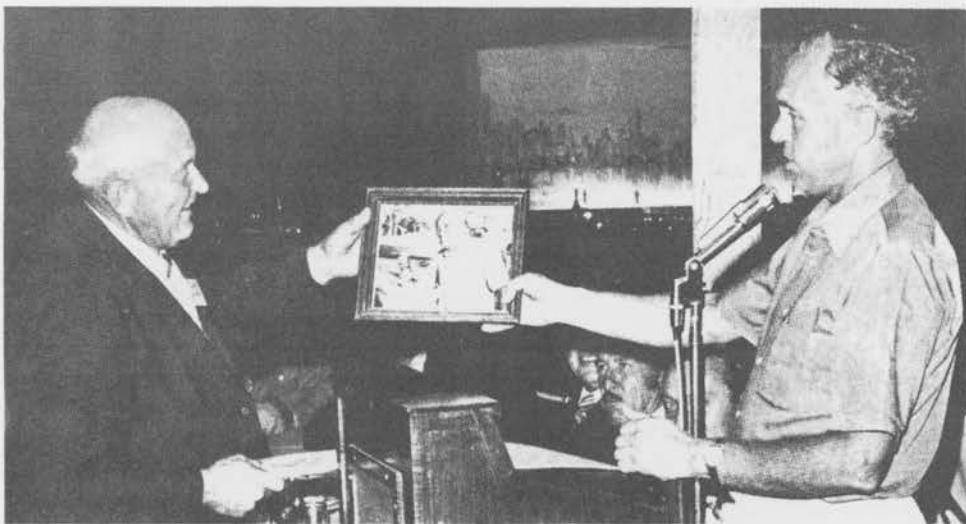
Left to Right: Don Benham, General Chairman of our 6th Annual Golf Day, Ted Fuller, one of the owners of Bay Pointe, and Don LaFond, host Superintendent of Bay Pointe Golf Club.



President Ward Swanson (center) presenting trophy and 1st Place prizes to winning team from A to Z Landscaping (Left to Right: Don Trombly, Albin Zupance, Bruce Harris, and Kenneth Mott).



Head table dignitaries with golf and raffle prizes displayed on table.



"From one beer lover to another" . . . Dr. Ken Payne, on right, presenting Clarence Wolfrom, Supt. of Maple Lane Golf Club, with a picture taken last year on Golf Day.



Dr. James Beard, of MSU, expressing his thanks to the Association for the continued effort given turf research in the State of Michigan.

TURFGRASS NUTRITION STRATEGIES

By Dr. James Beard
Texas A & M University

Turf and lawnglass nutrition can be complicated. In order to adequately meet plant needs, a combination of different strategies may be employed. Dr. Jim Beard has devoted considerable time and effort to research in this area. Here he presents the following for your consideration.

- There are 9 major effects of nitrogen on turfgrasses:
 - 1 - Shoot growth;
 - 2 - root growth;
 - 3 - shoot density;
 - 4 - color of foliage;
 - 5 - disease proneness;
 - 6 - heat, cold, and drought hardiness;
 - 7 - wear tolerance;
 - 8 - recuperative potential and rate;
 - 9 - composition of the turfgrass community.
- Nitrogen rate of application should be limited to no more than one pound of nitrogen per 1000 square feet of water soluble types.
- The first response of nitrogen is on color of foliage. There are many gradations of green. The darkest green turf is not necessary the most healthy.
- Nitrogen has an effect on disease. The application rate, the nitrogen carrier and application timing can either increase or decrease disease incidence.
- Under low nitrogen turf management, grasses are more prone to dollar spot, red thread and rust, for example.
- Use of nitrogen carrier Oxamid has resulted in no brown patch on St. Augustine grass.
- Timing of nitrogen applications in the late fall have produced more snow mold.
- Look for nitrogen deficiency first by checking the tips of older leaves (the lower and outer leaves). When they are pale green, this is the first indication. The yellow of these leaves will progress toward the base as deficiency intensifies.

- Nitrogen deficiency is encouraged by removal of clippings. As much as 2 pounds of nitrogen per 1000 square feet may be lost in a year.
- Coarse textured soils that are low in organic matter are prone to production of nitrogen deficient turf.
- Where there is intensive rainfall, nitrogen leaches away and the turf becomes nitrogen deficient.
- Phosphorus is not readily leached from the soil. At soil pH levels from 6 to 7, it is most available. In addition, turfgrass requirements for phosphorus are low.
- Phosphorus has 4 major effects on turfgrasses:
 - 1 - aids in establishment;
 - 2 - promotes rooting;
 - 3 - causes maturation of plants;
 - 4 - enhances seed production.
- When phosphorus is deficient, the foliage becomes darker green - a dull bluegreen. Older leaves exhibit this coloration first. Only a little phosphorus is required to correct this.
- Potassium is a good turf restorer. It affects rooting, drought, heat and cold hardiness, wear tolerance and disease proneness.
- With adequate potassium, there may be $\frac{1}{3}$ more roots. More roots are observed under conditions of moisture stress.
- Hardiness is related to soil temperature (both hot and cold) and only indirectly to air temperature. Nitrogen to potassium balances are important in the promotion of turf hardiness — 2 to 1 or 3 to 2 (nitrogen to potassium). This balance is needed year round.
- With more potassium, there is less wear damage on turf. Up to 3.6 pounds of potassium per 1000 square feet per year have been found beneficial.
- Addition of potassium has led to increased resistance of turf to brown patch, dollar spot and fusarium.
- Potassium is subject to luxury consumption by turfgrasses. High levels are not needed but grasses accumulate it anyway. After growth rates increase with added potassium, concentrations of potassium in the soil are seldom adequate. These need to be increased for maintenance of healthy turf.

- Sulfur was thought for years not to be a limiting factor in the growth of turfgrass.
 - Sulfur availability is reduced at pH levels below 6. At that point the foliage looks like there is a nitrogen deficiency.
 - Iron is the most likely micro-nutrient to become deficient. Zinc and copper are heavy metals that do not move much in the soil. Higher than normal concentrations can lead to toxicity. Iron is required in very small amounts. At pH above 7, there is reduced availability.
 - Iron is important for root and shoot growth for drought hardiness and for dark green foliage.
 - Intervenal yellowing of the youngest leaves develops as iron becomes deficient.
 - A foliar application of iron can produce a response in just 30 minutes.
 - In turfgrass nutrition, nitrogen and potassium are the key.
 - Nitrogen requirements of the turf are based on need indicators - pounds of nitrogen per growing month per 1000 square feet.
 - Zero nitrogen is the lowest and the highest amount of nitrogen ranges from 0.5 to 1.5 pounds per 1000 square feet.
 - The objective of turfgrass management is to grow grass and maintain the existing quality of turf.
 - There are timing guidelines for use of nitrogen:
- not during heat stress;
not during drought stress;
30 to 40 days prior to winter where turf is subject to snow mold and winter kill, nitrogen should not be used;
watch for disease proneness;
watch for weed infestations.
- Potassium in mid-summer where traffic is a problem.
 - Use nitrogen after slicing and aerification.
 - Use nitrogen after disease has run its course.
 - Use phosphorus based on soil test results. Also, base potassium application on soil test results.
 - Sixty-five to eighty-five percent of the nitrogen applied may be matched 1 to 1 with potassium.
 - Iron can function as a part of the nitrogen requirement by substituting it for nitrogen. Use iron at 2 ounces per 1000 square feet.
 - From day 1 to day 5 following mowing, there is a 40 percent increase in the water use rate as leaves regrow.
 - Eighty to ninety percent of the water lost by turf is through stomata. Most stomata close at mid-day and stay closed for a couple of hours. There is not as much foliar absorption if iron during this period.

Credit: Turf 2/90

Six Reasons Why Aqua-Master Fountains Are Better Than The Competition



- Bigger spray patterns at same horsepower
- Interchangeable nozzles
- Integrated light systems - no more brackets
- Power cable entry through bottom plate reduces bulkhead connector breakage
- 3-yr pro-rated warranty on 1 hp and up motors
- Less expensive



For A FREE Quote Call 1-800-347-4272



CENTURY RAIN AID

- Madison Heights, MI • 31691 Dequindre • (313) 588-2990
- Ann Arbor, MI • 2461 S. Industrial Hwy. • (313) 668-1020
- Grand Rapids, MI • 3400 Jefferson S.E. • (616) 452-3373
- Southfield, MI • 22159 Telegraph • (313) 358-2994

OSBURN INDUSTRIES



Custom Top Dressing Blends

- ◆ TDS 2150 Dune Sand
- ◆ 540 Best
- ◆ Local Mason Sand



- ◊ Michigan Sphagnum
- ◊ Canadian Sphagnum
- ◊ Sandy Loom Topsoil
- ◊ Reed Sedge Peat

Trap Sand

- ◊ Best 530
- ◊ Local 2NS Sand
- ◊ Local Mason Sand

Other Materials

- ◊ Cart Path Slag
- ◊ Pea Pebble
- ◊ Decorative Boulders
- ◊ Parking Lot Stone

Call for details

(313) 292-4140

Ask for Dick, Rick or Tim

5850 PARDEE
TAYLOR, MICHIGAN 48180



TORO

The No. 1 name in golf course irrigation.



It's no coincidence that the country's top golf courses use TORO irrigation systems. Because there are more TORO systems installed on golf courses than any other kind. For a number of very good reasons.



WILKIE

Turf Equipment Division, Inc.

TORO®

1050 Opdyke Road, P.O. Box 430749, Pontiac, Michigan 48343 - (313) 373-8800

LESCO HAS IT!

**Everything you need
for professional
turf management.**

- Fertilizers • Control Products • Seed
- Irrigation • Equipment • Replacement Parts
- Golf Course Accessories • Safety Products
- Service Brochures • Low Voltage Lighting

(800) 321-5325

Your Growth Partner

LESCO, Inc., 20005 Lake Rd., Rocky River,
Ohio 44116

Water treatment plant.

A golf course is a living, breathing water treatment system. It filters water, inhibits runoff and recharges groundwater. In fact, golf courses are increasingly used as disposal and treatment sites for unusable wastewater.

Who's in charge of keeping these amazing ecosystems in harmony with nature? Today's golf course superintendents. They're part troubleshooter, part business manager, part scientist and all environmentalist—dedicated to making our world a greener place.

WE KEEP GOLF GREEN.



IMAGINATION, EXPERIMENTATION ARE KEYS TO CREATIVE THINKING, PROBLEM SOLVING

When you have a problem to solve, you can easily attack it in the same old ways and come up with the same old solutions that sort of work or that once worked — but are you missing some new and unique solutions because you aren't thinking creatively?

The next time you're faced with a problem of any sort, serious or minor, routine or unusual, try one or more of these mental exercises in creativity:

1. Reverse the way you look at the problem. Turn it upside down, take a completely different approach to it. Don't be afraid to be absurd in your thoughts once in a while — the fanciful can lead to some very practical solutions. How would Moon Maid solve it?

2. Tear it apart. Then analyze the relationships among the pieces. How are they the same? How do they differ? What if you could change one link in the chain — what effect would it have on the whole? Try altering the color, shape, timing or size of one or more parts.

3. Change the order of the parts. Sort things, massage them, jiggle them, line them up in different ways. New ways of seeing the problem will begin to emerge.

4. Find an analogy. What is this problem like? Is it like a little kid pushing an apple up a hill and every time he gets halfway up someone rolls an orange down on him? Find an analogy and you'll see the problems more clearly.

5. Challenge your assumptions. This isn't easy, but ask yourself absurd questions like, Who says it has to be like this? Why should I believe that organizational structures need a boss? Challenge every assumption you can identify. It will strengthen your understanding of the problem itself.

6. Let your thoughts run wild. Fantasize. Play a crazy game of "... What if?" What would I do if there were no more water available for a year? What would I do about this if I were three years old? Where would I start to build this system if I were the only survivor after a nuclear holocaust?

7. Cash in on the bonus of your own odd thoughts. Carry a notebook, and keep one by the bed at night. When an idea strikes you — silly or not — write it down. When you have a brilliant idea as you are falling asleep or waking up — write it down. Then periodically go through your book of thoughts and toss out the trash — there will be more wisdom there than you might have thought, and it will all be information and ideas you might otherwise have forgotten or not noticed.

These seven steps are parts of a process called creative thinking. People who come up with good ideas use creative thinking. They aren't afraid of some silly ideas, because they know that even in the silliest, there might be a grain of wisdom to use to their advantage. Try it, you'll like it.

Credit: Forefront



Air conditioner.

Did you know a golf course actually improves the atmosphere? It's an invaluable green belt that acts as a "heat sink" to moderate surrounding air temperatures and it releases pure oxygen into the air in exchange for carbon dioxide. Who's in charge of keeping these amazing ecosystems in harmony with nature? Today's golf course superintendents. They're part troubleshooter, part business manager, part scientist and all environmentalist — dedicated to making our world a greener place.

WE KEEP GOLF GREEN.



DETROIT CONCRETE PRODUCTS CORPORATION

MacInnis Bros.

Asphalt Mixes • Asphalt Paving

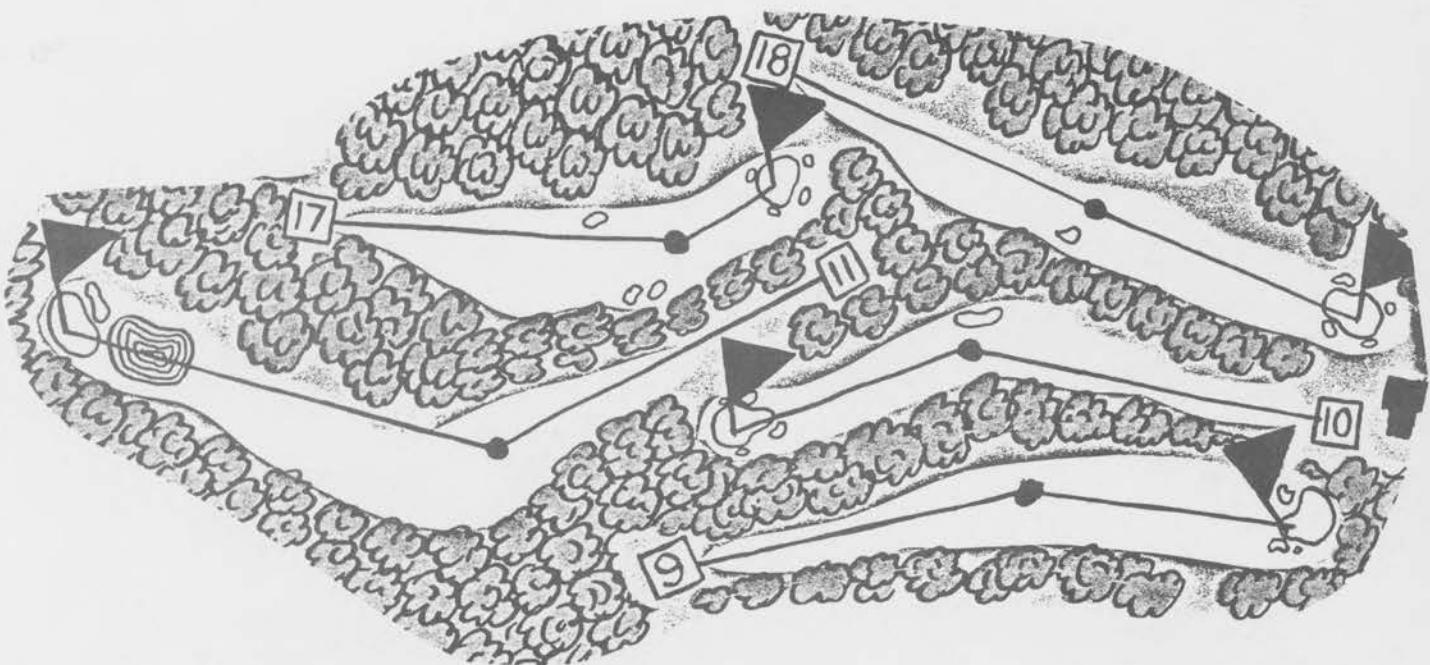
- GOLF CART PATHS
- PARKING LOTS • ROADS

4900 McCARTHY
MILFORD, MICHIGAN 48042

BILL MacINNIS
Office 685-9590
Plant 476-5360

FROM TEE TO GREEN. . . .

. . . and HAZARDS IN BETWEEN.



Trap & Topdressing Sands

CONTROLLED TO USGA SPECIFICATIONS

GREAT LAKES TOPDRESSING SAND
IS AVAILABLE IN TRUCKLOAD QUANTITIES

ALSO AVAILABLE —TRAP AND SPECIALTY SANDS



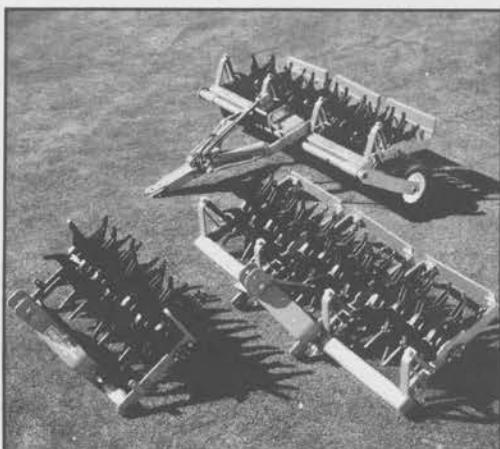
EVANS MINING CORP.

1900 RICHMAN ROAD • SMITH'S CREEK, MICHIGAN 48074

1-800-541-0434 367-3021

TORO®

AERATORS



Greens Aerator

- Greater Power
- Easy Operation
- Minimizes Compaction
- Quick Tine Change
- Up to 13,000 Square Feet Per Hour

Turf Aerators

- 1/2", 3/4" Open Or Closed Tines
- Slicing Tines
- A Model For Every Application



Fairway Aerator

- Incredible Durability
- Large Flotation Tires
- Up To 61,000 Sq. Ft. An Hour
- Adjustable Depth
- No Belt Or Chains

Call Today!

**WILKIE****Turf Equipment Division, Inc.**

1050 Opdyke Road, P.O. Box 430749, Pontiac, Michigan 48343 - (313) 373-8800

TORO®



GCSAA NEWS

GCSAA LOOKS TO THE FUTURE AS IT DEDICATES ITS NEW HEADQUARTERS

A vision of meeting the future challenges of golf course management unified the crowd gathered to dedicate the Golf Course Superintendents Association of America's new international headquarters.

GCSAA members, golf industry's VIPs and local dignitaries arrived in force on September 7, 1991 to celebrate the formal dedication of the association's new state-of-the-art facility in Lawrence, Kansas. The two-day celebration also commemorated GCSAA's 65th anniversary.

GCSAA President Stephen G. Cadenelli, CGCS, presided over the formal ceremony and officially gave the new headquarters building to its members, saying that the new structure embodies where the association has been, what it stands for now and where it is headed.

"This building is a symbol," Cadenelli said. "It is more than brick, mortar and steel. It is a symbol of

***Developing and producing
the highest quality seed
possible has been a
Scotts® tradition
for more than
100 years.
No one in
the seed in-
dustry can
match our
standards
for seed
purity.***



Ask your ProTurf® Tech Rep for details the next time you need to order seed.

Scotts®
ProTurf®

John Skaife
Technical Representative
ProTurf Division
The O.M. Scott & Sons Company
9467 Mandon Road
Union Lake, Michigan 48085
Telephone: 313/360-2595

how far this organization has come in a relatively short — but long also — period of time. More importantly, it is a symbol of the profession. We have truly become a leading profession throughout the world of golf."

Cadenelli added that the entire association owed a debt of gratitude to all of the past presidents who helped bring GCSAA to where it is today.

Rep. Jim Slattery, a U.S. congressman from Kansas' 2nd District, also attended the dedication and addressed the crowd. Slattery, familiar with environmental issues, said the association should be proud of its new building and of its accomplishments in the environmental arena.

"This is truly a spectacular building," Slattery said. "I'm absolutely convinced that those who succeed you will be able to take pride in your vision and creativity."

The congressman added that he is pleased that an organization so committed to protecting the environment is located in his congressional district. "As a member of the Energy and Commerce Committee of the U.S. Congress that has jurisdiction over this nation's environmental laws, I am particularly grateful for the leadership that this organization has demonstrated in environmental areas — your new environmental management program, the recent development of the PSA (public service announcement) with the EPA (Environmental Protection Agency) entitled "Think Before You Apply" designed to educate homeowners about the proper use of pesticides to help protect our environment, the environmental research you are sponsoring with the USGA — all demonstrate this organization's commitment to the protection of our nation's environment. For this, I thank you and I am confident that in the years ahead that commitment will serve this organization very well."

GCSAA invited its sole surviving charter member, who has witnessed firsthand all of the association's achievements and celebrations since the first meeting back in 1926. Chester Mendenhall, a GCSAA past president, traveled from Green Valley, Arizona, to attend the ceremonies marking one of GCSAA's highest achievements. Mendenhall, who celebrated his 96th birthday in September, cut the ceremonial ribbon to officially dedicate the building.

The two-day celebration teed off on Friday, September 6, with a golf tournament and barbecue at Alvamar Golf Club in Lawrence. GCSAA members, allied associates and local media participated in the events.

In closing his keynote remarks at Saturday's ceremony, Cadenelli pointed to GCSAA's future, adding, "This building represents our (GCSAA's) willingness to meet the future head on. The future of golf course management is challenging. The regulations with which we must comply, the concerns over the environment are critical. I am convinced that golf course superintendents will be able to meet those challenges.

"This building is a dedication and commitment to excellence."



GCSAA President Stephen G. Cadenelli, CGCS, (front, left) assists Chester Mendenhall, a GCSAA past president and sole surviving charter member, in the ribbon-cutting that marked the official dedication of the association's new international headquarters in Lawrence, Kansas. Joining them for the September 7, 1991, ceremony are current and past members of the GCSAA board of directors: (from left) John M. Schilling, executive director; William

R. Roberts, CGCS, vice president; Randy Nichols, CGCS, secretary/treasurer; Gerald L. Faubel, CGCS, immediate past president; Joseph G. Baidy, CGCS, director; (obscured by Mendenhall) Gary T. Grigg, CGCS, director; Charles T. Passios, CGCS, director; Dennis D. Lyon, CGCS, past president (1989); and John A. Segui, CGCS, past president (1988). The festivities also celebrated GCSAA's 65th anniversary.



Unveiling a bronze casting commemorating the dedication of GCSAA's new state-of-the-art headquarters facility on September 7, are GCSAA Executive Director John M. Schilling (foreground,

left) and GCSAA President Stephen G. Cadenelli, CGCS (foreground, right). The Lawrence, Kansas-based association celebrated the dedication in conjunction with its 65th anniversary.



GCSAA NEWS

GCSAA SCHOLARSHIP & RESEARCH COMMENDS GOLDEN TEE CLUB SUPPORTERS

The Michigan and Border Cities GCSA was one of 14 chapters that provided financial support to GCSAA Scholarship & Research during the foundation's recently completed 1990-91 fiscal year. In addition to the chapter's donation of \$1,000, 11 residents of Michigan were members of the Golden Tee Club, the grassroots support organization for GCSAA S&R.

"Chapter and individual member support are absolutely crucial to our ability to fund turfgrass research and to offer scholarship assistance to future golf course superintendents," said Stephen G. Cadenelli, CGCS, president of GCSAA. "We commend the Michigan and Border Cities GCSA and its members for their high level of involvement and assistance."

The Michigan and Border Cities GCSA earned a "group" membership in the Golden Tee Club for its

contribution. Cadenelli and fellow board members also noted with appreciation the following Michiganers who held individual memberships in the Golden Tee Club:

Kathy M. Antaya-Gebauer

Carol Colein

J.A. Dorward

Gerald Faubel, CGCS

John L. Kirtland

Thomas E. Mason

Gerald Matthew

Dr. Kenyon T. Payne

William R. Roberts, CGCS

Roy A. Szyndlar, CGCS

Gary C. Thommes, CGCS

Golden Tee Club membership is open to individuals who contribute \$100 or more annually and corporations, clubs, chapters and other organizations that contribute \$1,000 or more annually to support GCSAA S&R. During the past fiscal year, contributions to the Club totaled almost \$20,000.

STUDY WILL AID ENVIRONMENTAL RESEARCHERS

A new study on pesticide and fertilizer use will help guide scientists reviewing the environmental impact of golf course management. The study, which documents chemicals typically used to control weeds, insects and diseases on America's courses, is being provided to the United States Golf Association's Environmental Research Committee thanks to funding from the GCSAA Scholarship & Research, Inc., a non-profit science and education foundation.

"This survey and subsequent report continues GCSAA's commitment to working closely with the USGA in turfgrass and environmental research," said Stephen G. Cadenelli, CGCS, president of board of trustees of GCSAA Scholarship & Research. "The information from this report will assist researchers who are carrying out work funded by the USGA by providing them accurate data as to which materials are being used on America's courses."

Cadenelli added, "Obviously, we share the USGA's commitment to sound environmental management of our nation's golf courses and are pleased to assist them in any way possible."

William Roberts, CGCS, vice president of the board

of trustees and a member of the USGA environmental committee, said that "it was critical to know exactly what chemicals we should be studying rather than just making assumptions. This report allows us to efficiently direct the researchers' efforts and to get the most from the investment USGA is making."

GCSAA scholarship & Research commissioned the report from the Center For Golf Course Management, the marketing research division of GCSAA. The study, which is based on a nationwide survey of golf course superintendents, examines insecticide, fungicide, herbicide and fertilizer usage in terms of the type of golf course, region of the country, type of turfgrass and exact products used. The USGA Environmental Research Committee will pass the information along to various independent researchers involved in pesticide and fertilizer fate studies at universities around the nation.

GCSAA Scholarship & Research, Inc., is a 35-year-old charitable foundation that provides funding for educational and scientific advancement in the field of golf course management.



Are we missing someone?

Is there a golf course management professional who is missing out and could benefit from membership in GCSAA?



You bet there is!
and
GCSAA is "In Search Of" them

If you or someone you know
is missing out on the many GCSAA benefits including:

- ◆ Professional Affiliation
- ◆ Continuing Professional Education
- ◆ Various Industry-leading Publications
- ◆ Government Involvement, and
- ◆ Many member discounts on programs and services

ACT NOW — Join or encourage a colleague to join GCSAA—the only international association that identifies, defines and supports the golf course superintendent's profession.

Contact the GCSAA Membership Department
1421 Research Park Drive
Lawrence, KS 66049-3859
(913) 832-4480

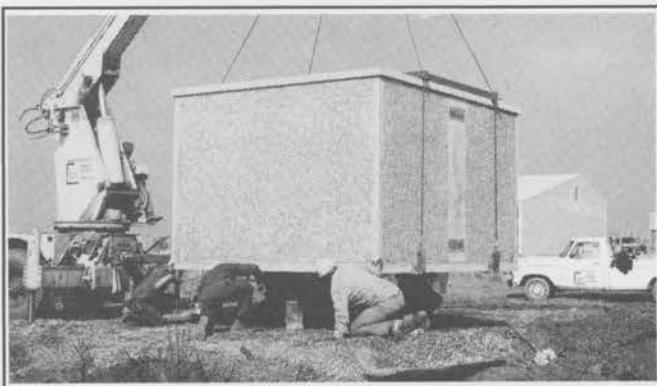
JENNINGS

PARK • PLAYGROUND • SCHOOL EQUIPMENT



supplier of

Shelters
Storage Buildings
Rest Rooms
Bridges
Benches/Tables/Litter Receptacles
Pool Furniture



★ ★ NEW ★ ★

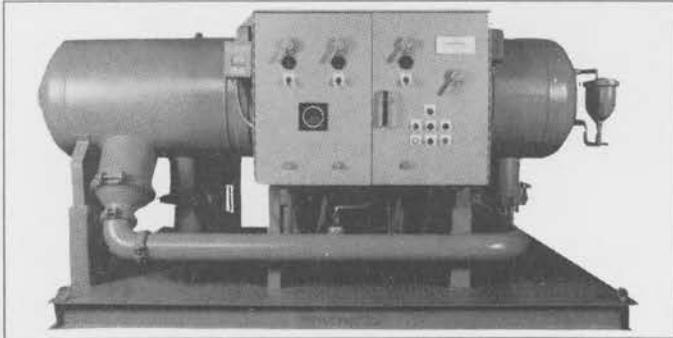
Hazardous Materials Storage Building

— Relocatable, meets E.P.A. standards

CALL: 1-800-632-4153

for a complete listing!

SyncroFlo Pumping Systems Save Time and Money.



EAGLE® Series Performance Guaranteed!

Call Now For Your
FREE Estimate
1-800-347-4272

- SyncroFlo provides the design, installation, service and technical support you need.
- Two-Year Total System Guarantee On System Components, Parts and Materials.
- Five-Year PC Guarantee - Includes Parts and Materials, No Questions Asked.
- Advanced Screen Filter Option prevents clogging, pro-longs system life and prevents downtime.

CENTURY RAIN AID

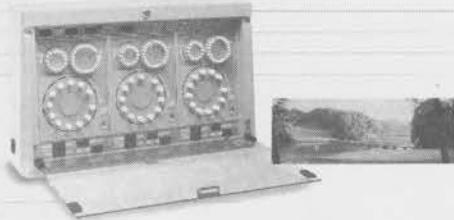
- Madison Heights, MI • 31691 Dequindre • (313) 588-2990
- Ann Arbor, MI • 2461 S. Industrial Hwy. • (313) 668-1020
- Grand Rapids, MI • 3400 Jefferson S.E. • (616) 452-3373
- Southfield, MI • 22159 Telegraph • (313) 358-2994

RAIN BIRD® PREFERRED BY PROFESSIONALS WORLDWIDE

Links Master

Flexible. Powerful. Affordable.

Links Master brings you a new dimension of irrigation control at an affordable price!



- **Linking** - permits uninterrupted watering between groups and eliminates the need for cycle time calculations, dramatically reducing costly pump cycling. Syringe starts, irrigation starts, or both, may be linked.
- **Stacking** - up to four irrigation starts and four syringe starts eliminates the need to calculate cycle lengths.
- **Separate Syringe Timing** - with each group and each station having its own syringe timing provides absolute flexibility in setting specific schedules for individual areas.
- **Upgradeable** - to a maxi-central control system without future disruption to the golf course.

Call Now For Your Special Price! **1-800-347-4272**

CENTURY RAIN AID

- Madison Heights, MI • 31691 Dequindre • (313) 588-2990
- Ann Arbor, MI • 2461 S. Industrial Hwy. • (313) 668-1020
- Grand Rapids, MI • 3400 Jefferson S.E. • (616) 452-3373
- Southfield, MI • 22159 Telegraph • (313) 358-2994



IBDU® (31-0-0) and PAR EX® fertilizers with IBDU are custom formulated for high maintenance, high quality turfgrass. Check with your local PAR EX distributor for other available grades.

par ex®
PROFESSIONAL PRODUCTS

BENHAM CHEMICALS

24800 N. Industrial Drive
Farmington Hills, Michigan 48331

313-474-7474
OFFICE & WAREHOUSE

1-800-482-6520
TOLL FREE (Michigan Only)

• **SPECIALS ON DORMANT FEED FERTILIZERS AND FALL FEED FERTILIZERS**

CALL FOR A QUOTE TODAY!

FLASH! BAM!

By Chad Eberhardt
The Sporting Green

When seeking shelter from lightning storms, most people follow old wive's tales and other questionable advice.

The problem, according to a national lightning expert, is that these tips are merely myths and do not protect people from the greatest dangers of lightning.

"Carrying heavy metal does not increase your chances of being hit by lightning. . . wearing cleats does not increase your chances of being hit and wearing heavy galoshes does not protect you," said Theodore Bernstein, UW-Madison professor emeritus of electrical engineering.

Bernstein's two biggest tips for those caught outside during lightning strikes are:

- Get inside as quickly as possible.
- Or, if stuck outside, stay away from tall objects, which are more likely to be struck by lightning, and remain as close to the ground as possible.

Gathering under a large tree was the mistake made at this year's U.S. Open at Hazeltine National Golf Club in Chaska, Minnesota, Bernstein said. One man was killed and several others were injured by a lightning strike there.

"If you are out-of-doors, your probability of being struck by lightning is related to your height," he said. The chances of a person 5 feet tall being struck by lightning are increased 20 times if they stand under a tree 100 feet tall.

Each year, lightning kills nearly 100 people and injures 250 to 300 people in the United States. This is down from the early 1900s when 300 to 400 people died each year from lightning strikes. The decrease can be attributed to the fact that people spend more time inside, according to Bernstein.

With May to October being lightning season, Bernstein had some advice on how to stay safe in a lightning storm:

- On a golf course, continue to walk toward safety or stay on the open course. Do not seek shelter under trees or in ungrounded small shelter houses. Avoid tractors and other golf course maintenance equipment.
- Stay inside a metal car. The lightning will travel harmlessly around, along the metal body, into the ground.
- If stuck outside, squat down keeping feet together to reduce current that could be running through the ground. The greater the distance between the feet the larger the current flow. If possible, put a raincoat or tarp underneath you. Do not lay down!
- If in a boat, get off the water immediately since you tend to be the tallest object in the area.

- Swimming is unsafe because the current travels faster and farther in water, but you do not increase your chances of being hit if you are in the water.

Deaths and injuries can be avoided by simply not getting caught in lightning storms. If one waits until lightning is seen and thunder heard, the common advice given by the majority of members in our profession to their crew members, it may be too late. Until recently, the only way to determine the presence and proximity of electricity in the air was to call a local weather service. Personally, I've started to wonder if the "1991 Old Farmer's Almanac" isn't a more reliable source.

Recently, technology has been developed by Airborne Research Associates for the NASA/Kennedy Space Center called the M-10 Lightning Detector. Introduced last year, the M-10 has been widely accepted and is being used with much success by every major professional golf tour.

One simply points the M-10 at suspicious looking clouds and listens for beeps caused by rapid invisible light intensity changes. As a storm approaches, it can determine distance to the lightning.

Looking back at that dark cloud that will forever cloud one of the best Open courses ever, one can easily blame the M-10 for not doing its job. In reality, from all accounts, the M-10 successfully warned of imminent severe lightning. Play was suspended and the golfers fled to vans for protection back to the clubhouse.

But no such provisions can be made for over 40,000 spectators. It was an accident waiting to happen, and worse yet, there was tragedy. A very valuable lesson should be taken from this incident and applied to our profession. Under no circumstances should an employee be expected to be out on the course to finish up that last fairway or any other job. It must be stressed upon crew members the seriousness of seeking proper shelter or taking necessary precautions as mentioned earlier by Professor Bernstein.

After reading numerous reports and success of the M-10 Lightning Detector, I feel every golf course would find the device beneficial in not only clearing the course of golfers but also employees. It would certainly eliminate the hit and miss situation of a local weather service.

Contact ARA for more information (617) 899-1834
— Ralph Markson Ph.D., President.

Forget your opponents; always play against par.
SAM SNEAD



The Business of Life

BY ARCH N. BOOTH

THE WORLD is an unfinished job. Everywhere you look, you see something that needs to be done to improve things.

Man, too, is an unfinished job. We sense this. We feel within ourselves the urge to be something more today than we were yesterday.

This, it has always seemed to me, is the business of life: To keep on growing and developing, and to do so by overcoming the difficulties we are up against, and by helping solve the world's problems.

Every person who has any ambition at all, it seems to me, must sooner or later ask himself seriously: **What do I want most out of life?**

This question is simple. But it is not always an easy question for an individual to answer. He may have to ponder over it deeply and long, and even prayerfully, to know what he really wants out of life — what field of work he would prefer to be in above all else, what he would like to accomplish for himself and for the good of others, and what would give him the greatest personal satisfaction.

Once you know for sure what you most want out of life, you are off to the right start. It is then a matter of keeping at it persistently and patiently. And optimistically.

This applies to an organization as well as to an individual. It has always been my philosophy that a dream comes true in proportion to our comprehension of, and application of, what might be called "the law of positive expectation."

Under this law, it is said that you can have anything you want, **within reason**, provided:

First, that you know definitely what it is that you do want;

Second, that you want it hard enough;

Third, that you confidently expect it;

Fourth, that you persist courageously and honorably in your effort to obtain it; and

Fifth, that you are willing to pay the price.

This, of course, is not for the person who has his eye set merely on a life of ease, or who hopes somehow to escape responsibility and self-discipline.

But for the person who wants to amount to something, to develop his talents and abilities to the fullest, and to improve things in this unfinished world, it is a key to success.

Good Reading, March, 1972

TURFGRASS INC.



Serving you better with . . .

Technical information

Fungicide programs

Free timely delivery

... Quality products

Fertilizers	The Andersons, Lebanon Country Club, Nitroform, Turfgrass
Chemicals	Dupont, Ampel, Ciba-Geigy, W.A. Cleary, Chipco, Daconil, Mobay, Elanco, NAIAD, Dow, Monsanto, Bio Greenskeeper, Agri Diagnostics, Mallinckrodt, Nor-Am, Riverdale, Pana Sea, Miller, Agri-Plex 4X
Seeds	Northrup King Medalist Turf Products
Spreaders & Sprayers	Cyclone, Spyker, Back Pack, Wheely, Spray-Hawk
Golf Supplies	Lewisline, Par Aide, Standard, Fore- Par, Yankee, United Stockmen, Chix, Fox Valley
Safety Equipment	Mine Safety Equipment
Soil Management	Grid System, TerraFlow, TerraBond, TerraCover
Markers	Richway, Blazon

1-313-437-1427

Office

Rich Locke

Douglas Johanningsmeier

1-800-521-8873

(Michigan Only)

Keith Richards

Gene Johanningsmeier

Tire Wholesalers Co., Inc.



- As our name implies, we are a wholesaler of tires.
- We are an established business, having been in business for over 19 years.
- We deliver.
- We have UPS service daily.
- We guarantee what we sell.
- We want your business.
- We have a huge inventory of Passenger, High Performance Truck, Trailer, Motorcycle, Carlisle Lawn & Garden, Industrial Tires & Tubes, Shocks, Struts, Custom Mag Wheels and Accessories, all in stock for immediate delivery.

Cordovan GRAND PRIX **ARMSTRONG**

PIRELLI

CARLISLE

19240 West 8 Mile Road
Southfield, MI 48075

Phone: (313) 354-5644 Phone: (616) 775-6666

Thank you for your past and present business.

Wm.F.Sell & Son, Inc.

SINCE 1923

RENTAL
SALES - SERVICE



★ LOADERS ★ SWEEPERS
★ TRENCHERS ★ MOWERS
★ ROTARY CUTTERS
★ BACK HOE DIGGERS
★ BACK FILL BLADES
★ POST HOLE DIGGERS

JOB TAILORED EQUIPMENT

COMPLETE LINE OF
MATERIAL HANDLING
& FARM EQUIPMENT

CALL

282-5100

16555 TELEGRAPH RD. - TAYLOR
1 Mile South of Eureka

Blowing one's stack is a tempting way to handle vexing situations. And a foolish way as well. Losing one's temper is a form of temporary insanity. The person who loses his or her temper always loses more than he wins.

When Art Linkletter arrived at an airport in Jordan to make a TV Christmas special, a high-ranking Arab official told him he wouldn't be allowed to take pictures there. Keeping calm (although he had a written contract to do the filming), Linkletter asked why the permit was revoked. The Arabs, it seemed, were upset because twice as much film had been shipped to Israel as to Jordan. They assumed this meant the special would be biased in Israel's favor.

This wasn't the case. More film was needed in Israel because inside shots were to be filmed there, and this took more film. But rather than arguing this point with the Arab official, Linkletter said, "Maybe I don't understand all the available opportunities for pictures. Do you have a map that shows each place having to do with Christ?"

The official proudly showed him the many sites on the map; Linkletter promised to give equal coverage; and the difficulty was settled.

Whenever you're tempted to argue strenuously with someone who says "no", stop for a minute. Perhaps Linkletter's thoughtful "Maybe I don't understand" would help you reach a quicker agreement and avoid needless hassling. After all, you don't understand what the other person's objection is. In any case, learning the cause of the problem may help you clear it up.

Bits and Pieces, January, 1985

If a friend offers you a ride in his or her sports car, be wary. The modern sports car, a cross between a bullet and a torpedo, is strictly an ego trip for drivers. Owners will insist on showing you how quickly it accelerates (fast enough to sprain your back), how it stops on a dime (abrubtly enough to lose your lunch), and how it holds the road while spinning dizzily around curves. In the hands of most drivers it's not a relaxed, comfortable way to get anywhere.

Bits and Pieces, January, 1985



**BE A
PART OF
GOLF'S
FUTURE**

You can help preserve the traditions and true spirit of the game in a very special way — by becoming a Member of the United States Golf Association.

Your membership will assist the USGA in promoting the best interests of golf today...and for generations to come.

CALL 1-800-345-GOLF



Buckner® **COPS UNIVERSAL**

Gain control of any existing controllers, regardless of make or manufacturer!

Each COPS-Universal radio field unit has up to 42 stations per field unit. Ideal for retro-fitting parks, median strips, school grounds, and golf courses. COPS-Universal lets you change any field controller into a field satellite and manage your entire system from a central PC. COPS-Universal offers:

- Communication by repeating or direct radio. (No new controllers or communication wire.)
- Unlimited programs, unlimited start and run times to meet all of your water management needs.
- Freedom to use valves as you choose, regardless of hard-wiring constraints.

For a personal demonstration, contact:

CARL GRAEF
800-334-7011

Buckner®
Water Management
By Design

DISTRIBUTORS GROUP

Your Irrigation Specialists

711 West Pickard Street • Mount Pleasant, Michigan 48858
(800) 334-7011 • (517) 772-5621 • FAX (517) 773-1880

D & C Distributors Inc

51000 Grand River Wixom, Michigan 48393
(313) 349-7779 FAX (313) 349-4670

Midwest's Largest Stocking Dealer For R & R PRODUCTS

QUALITY REPLACEMENT PARTS

TORO
RYAN
NATIONAL

JACOBSEN
ROSEMAN
YAZOO

HAHN-WESTPOINT
RANSOMES
FORD

CUSHMAN
MOTT
EXCEL

REEL SHARPENING COMPOUND
FLYMO — POWER PRUNER — AaB-SORBOIL EMULSIFIER

CALL US TOLL FREE

800-888-7779

YOUR ONE STOP SHOP
FOR YOUR GOLF COURSE MOWING EQUIPMENT
REPAIR PARTS AND SUPPLY ITEMS
FLAGS - POLES - RAKES - CUPS

RICO MFG.

EXCELLENT QUALITY PERSONALIZED TUBE FLAGS
SOLID FIBERGLASS POLES WITH SOLID IMPREGNATED COLOR
FIBERGLASS RAKE HANDLE, FOAM FILLED TO FLOAT
(14" or 22" RAKE HEAD — ONE YEAR WARRANTY)
PUTTING GREEN FLAGS, POLES AND CUPS
WE ALSO HANDLE LEWIS AND PAR AIDE AND STANDARD

BIG ENOUGH TO SERVE YOU BETTER — SMALL ENOUGH TO CARE

(313) 373-5264

Cliff Dawson



Free Estimates — Fully Insured

**SPECIALIZING IN
GOLF COURSE WORK.**

**TREE TRANSPLANTING
YOUR TREES OR OURS**

**Tree Removal,
Trimming, Shrubs,
Power Stump Removal.**

Visit Our Nursery at

**6220 GRASS LAKE ROAD,
WHITE LAKE, MICHIGAN 48383**

NEW MONSANTO TURF HERBICIDE REGISTERED BY EPA

ST. LOUIS, June 21, 1991 — Monsanto Company today announced the registration of Dimension® turf herbicide by the U.S. Environmental Protection Agency.

Dimension is designed for use by golf course superintendents to control crabgrass and other problem weeds. The active ingredient in Dimension, dithiopyr, comes from a new class of chemistry developed by Monsanto. This new chemistry is characterized by desirable environmental features, including low use rates.

"Dimension is unique because it offers true season-long control of crabgrass and other weeds with only one application," said Jim Budzynski, Monsanto Dimension product manager. "In research conducted to date, Dimension has provided longer control than other preemergence crabgrass herbicides. However, it still allows golf courses to conduct normal fall overseeding programs after a spring application."

Dimension offers both preemergence and early postemergence control of crabgrass, providing the widest possible application window available today for controlling this significant pest. This allows turf managers to focus on other maintenance tasks in the busy early springtime period. "No other turf herbicide gives golf course superintendents as much application flexibility," Budzynski said.

Dimension also controls a broad spectrum of annual grasses and broadleaf weeds, including especially tough species such as goosegrass, foxtail, spurge and oxalis.

Dimension can also be applied over a wide variety of turfgrass species without fear of foliage or root injury. It can be applied to bentgrass without fear of injury, and it will not harm ornamental plants adjacent to treatment areas. "There is no other turf herbicide like Dimension," said Budzynski. "We're excited by the unique benefits it brings to golf courses. With Dimension, golf course superintendents can expect great looking turf, even late in the season."

Dimension will be available in one-gallon containers.

Monsanto Co. is a broad-based, agricultural products, pharmaceutical, specialty products and biotechnology company headquartered in St. Louis.

Dimension® is a registered trademark of Monsanto Company.

GCSAA MOURNS THE PASSING OF ITS LAST CHARTER MEMBER

Chester Mendenhall, a past president and the last of the GCSAA's founding fathers, died September 25 at a hospital in the Kansas City area at the age of 96.

Mendenhall died 18 days after helping dedicate GCSAA's new headquarters building and observe its 65th anniversary in ceremonies in Lawrence, Kansas.

Taking part in GCSAA's building dedication and anniversary proceedings September 7 "meant everything to Chet," said his wife, Sue. "Chet said many times after GCSAA invited him to participate, 'I've got to stay well.'"

During the ceremony, Mendenhall delighted the crowd with recollections from GCSAA's past. He also cut the ceremonial ribbon, officially dedicating the new building.

An enthusiastic advocate of the association and the profession, he helped GCSAA develop into more than a regional organization by moving its annual conference and trade show to the West Coast in 1949. Previously, the event had been confined to the Midwest and East.

"GCSAA was a big part of Chet Mendenhall's life," said GCSAA Executive Director John M. Schilling. "Not only did he help found the organization and serve it diligently over the years, he also personally recruited many members. To Chet, GCSAA and the profession represented a cause. Unassuming though he was, Chet worked fervently for the organization virtually until his breath. We shall miss him, but he will live on in our hearts and in the history of GCSAA."

Mendenhall entering "greenkeeping" in 1920 at Sims Park, Wichita, Kansas, and became a charter member of what now is GCSAA on March 1, 1927. He became superintendent at Wichita Country Club in 1928 and moved to Mission Hills (Kansas) Country Club in 1934, where he stayed for 31 years. He spent the next 10 years designing golf courses in Kansas and Missouri.

Mendenhall served as a director of GCSAA from 1940 to 1946. He was elected vice president in 1947 and served as president in 1948. He received

GCSAA's Distinguished Service Award in 1986 and the United States Golf Association's (USGA) Green Section Award in 1990.



Left - Jim Brandt, CGCS, past president of GCSAA and most recent winner of Distinguished Service Award; center, Chester Mendenhall, oldest living past president of GCSAA (1948); right, Sherwood Moore, CGCS, winner of the 1989 Leo Feser Award and also past president of GCSAA.



Turf Chemicals Inc.

1011 E. Main
P.O. Box 451
Owosso, Michigan 48867
Phone: (517) 725-7145

FOR ALL OF YOUR FERTILIZER,
CHEMICAL AND GRASS SEED NEEDS

EXPERIENCED, DEPENDABLE
PEOPLE TO SERVE YOU

* RUSS HANCOCK	* LOU BECKMAN
* JIM HYDE	* JAY SIDDOCK
* FRED MILLER	* TED KASEL

POND DREDGING SPECIALIST

Off Road Trucking



Wide Track Bulldozing

Shore Line & Land Development

Grading



SWEETCO INC.

27405 Henry Rd.

South Lyon, Michigan 48178

313-437-1830

LATHAM, CONT.

tion will not be as great as it is in either fall or spring. And what is wrong with aeration, slit-seeding, etc., weak or dead areas during the prime playing season? At least the golfers see something POSITIVE being done to their course rather than our usual moaning about that blankety-blank P.a.

Golf Courses in the Midwest

Have you noticed the number of golf championships being played in the Mid-lands these days? Medinah, Hazeltine, Oakland Hills, Crooked Stick, Cog Hill, Edinburgh USA, SentryWorld, Crystal Downs, Kemper Lakes, Interlachen, Otter Creek, Golden Valley, Minikahda, Indianwood, and others have become better known to competitive golfers of all ages in the last few years because of the USGA and PGA championships conducted in these environs in recent years. Architecture and style are, of course, the primary reasons for the associations to accept invitations to use these venues, but you can bet that course care comes next. The golf course superintendents at these courses, with backing by forward-looking Green Committees, have produced turf quality fit for champions as well as the non-handicapped.

The playing conditions at these courses did, at some time, favorably impress visiting golfers who communicate with The Powers who make decisions on competition sites. Potential hosts may not even be aware of this. That's why PLAYING QUALITY OF

the turf is usually as important as cosmetic greenness. Probably more. Thatchy, overwatered fairways are underwhelming, regardless of the shade of the green. P.J. Boatright believed that play to firm, fast, fair greens demands firm, fast fairways.

The Courts

Litigation or legislation? When the U.S. Supreme Court ruled that communities could indeed promulgate rules exceeding those of USEPA, the door was opened for the political intimidation of governing bodies of all sizes. Timid politicians and highly vocal Anti groups can legislate away all pesticide use unless someone LOCALLY speaks up in their favor. This means that individual golf course superintendents, golfers, pros, club managers, as well as their organizations, will have to speak up.

We must talk to and inform our down-home folks in wards or precincts. Company lobbyists and pro-pesticide organizations cannot be of much help at community levels. If golf course managers DO know more about pesticides than anyone in the neighborhood, they'd better begin speaking up. And BEFORE restrictions are proposed, not afterward, because the Anti's already have their ducks in a row. Remember that they know HOW to intimidate the pols, and scientific facts are of little concern. They deal in fear of the unknown and threaten law-givers with fear of being unseated. Golf courses of America are, OR SHOULD BE, prime examples of positive pesticide use, without distorting the population balance among 'harmless' bugs or beasts.

The Audubon Cooperative Sanctuary program has attracted a great deal of positive comment from both public and private golf operations in this initial year of operation. It is a first step in removing some of the unintended secrecy about golf course operations. This program does require an accountable performance of some projects, but if it didn't, it would mean nothing to anyone. It provides LIVING proof that good golf course operations do not interfere with the natural scheme of things. It also provides a means of communicating with golfers and neighbors and politicians that golf courses exert a positive effect in their environment.

It will also be to the advantage of golf course

CONTINUED NEXT PAGE

MOMANY'S MAINTENANCE CO.

PROFESSIONAL COMPLETE LANDSCAPE DESIGN & CONSTRUCTION

* AWARD WINNING DESIGNS

- CUSTOM BRICKWORK & PATIO
- CUSTOM RETAINER WALLS
- HYDRO SEEDING
- LARGE QUALITY TREES OUR SPECIALTY
- DOZING & CUSTOM GRADING

COMPLETE LAWN MAINTENANCE

* QUALITY LAWN FERTILIZATION & WEED CONTROL

- STATE CERTIFIED APPLICATORS
- EXPERT MOLE CONTROL
- INSECT & DISEASE CONTROL
- COMMERCIAL 24 HR SNOW REMOVAL & SALTING

FREE ESTIMATES

391-6880

KENT JACOBY
GOLF COURSE CONSTRUCTION CONSULTANT

933 E. BROWN RD., ORION TWP., MI 48359

**LOW COST DAMS
SEA WALLS
RETAINER WALLS**
WOOD • STEEL • PVC
VERTICAL INSTALLATION
BRIDGES

MINIMAL OR NO DAMAGE TO COURSE

**american marine
shore control**

(313) 887-7855

superintendents to tell anyone, whether they are deeply interested or not, about the special environmental research being funded by the USGA. It is a Straight-Arrow evaluation of what happens to fertilizer and pesticides after they are applied and have done what they were supposed to do. They don't just disappear, so what DOES happen to them? The nationwide study is being conducted by outstanding researchers at a number of cooperating universities. Talk it up to show people that golf is a responsible member of a community.

Green Section Greens

An inordinate amount of ink has been sloshed around this year about some imagined or contrived controversy about well-established procedures which have proven to be successful for over 30 years. **CONTROVERSY!** is a media cliche used to grab attention by creating doubt or fear, not unlike the words used by Anti groups. The Green Section is making use of Dr. Norm Hummel's expertise in soil laboratory technique to ensure that the physical tests on putting green mixtures are consistent with the procedures established early on and that their results are reproducible.

Anytime a single green building procedure is adopted on a national basis, some local problems arise. That leads to a lot of nickel and dime nit-picking by people who ought to know better, thus confusing the issue and distorting the purpose of this construction technique. Personalities, prejudices and pettiness get in the way of performance. And who suffers? The golf course superintendent trying to do the best for his organization, who has learned that hip pocket soil mixes are hazardous to his employment longevity but is being mislead by egotists or corner-cutters riding on short-term performance.

Green Section greens are real and they perform according to the construction procedures used. Maintenance is easy when one learns their characteristics. They are easily over-watered because they accept water easily. You might be surprised at the low water **REQUIREMENT** when the perched water table is managed properly. And that, Virginia, is the reason we harp on having a sharp textural change just below the growing medium and feel that an intermediate sand layer is necessary between it and the gravel drainage bed below.

Green Speed

When the putts don't fall and approach shots don't hold, what's the matter? According to some competitors in the Senior Open at Oakland Hills, the greens became "crispy and faster" during the gorgeous weather they enjoyed during the Thursday - Sunday rounds. To answer that complaint, we measured the greens in the afternoon as well as in the morning. At 6:30 a.m., Stimpmeter readings were 10.5 feet and at 5:30 (or so) in the afternoon they were 9.5 feet, except near the holes where the distance was 10.0 feet. So when your speed demons ask for more Stimp distance, ask them to play in mid-morning, not late afternoon.

TRIPLE PLAY

Elite Turfgrass Seed Mixture

Triple Play is the unique blend of ryegrasses that has been carefully selected to meet specific needs for seeding Athletic Fields, Lawn Areas and Golf Courses.

Triple Play contains the elite turf-type ryegrasses of **PENNANT**, **PEBBLE BEACH** and **STALLION**. Triple Play will produce a beautiful dark green color with excellent heat and drought tolerance.

Seeding Recommendation

5 to 7 lbs. per 1,000 sq. ft.



Turf Chemicals Inc.

1011 E. Main

P.O. Box 451

Owosso, Michigan 48867

Phone: (517) 725-7145

FOR ALL OF YOUR FERTILIZER,
CHEMICAL AND GRASS SEED NEEDS

Introducing The Perfect Bag For Greens And Tees.



For overseeding low cut areas and establishing greens and tees, no other fertilizer provides the kind of coverage and nutrient distribution that Country Club 10-18-18 does.

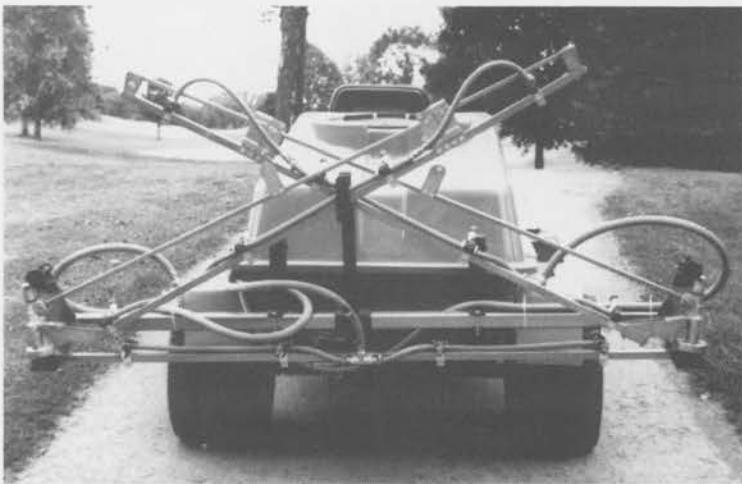
Country Club
10-18-18 

BENHAM CHEMICALS –
(313) 474-7474

TURFGRASS, INC. –
(313) 437-1427

Spray Star 1600

SMITHCO Standards You Trust
SPRAY STAR



PUMP:

High volume centrifugal,
60 gpm, 0-70 psi
OR
3-Cylinder piston,
diaphragm, 25 gpm, 0-200 psi

CONTROLS:

Standard with super control
valve system; master "on/off"
individual boom controls
OR
Raven 440 computerized
sprayer control system

POWER:

18hp twin-cylinder Kohler
Magnum gas engine
"2-Year Warranty"

TRANSMISSION:

Manual syncro-mesh;
3-speed forward, 1-reverse

CONFIGURATION:

4-Wheel,
Front Wheel Steering,
Rear Wheel Drive,
60" Wheel Base

COMPARE TO THE COMPETITION:

Ultra low profile tank design for visibility and stability.
The strongest spray boom ever built, manual or hydraulic control.
Dual ground speed control [no more foot clutch].
160-Gallon Fibreglass tank; low profile, 5-year guarantee.
Wide rear flotation tires 24x1300x12 Super Softrac available.
SMITHCO Torque Master automatic clutch [no more tricky foot clutch].

LAWN EQUIPMENT SERVICE & SALES

151 N. PERRY
PONTIAC, MICHIGAN 48342
(313) 858-7700



W.F. MILLER COMPANY
GARDEN AND LAWN EQUIPMENT

25125 TRANS-X

NOVI, MICHIGAN 48050

(313) 349-4100

Until now, most utility trucks have been better known for carrying repair bills than materials. Our new line of four utility trucks—built Jacobsen tough from end to end—changes all that.

For example, the 2315 has a durable 23.5 hp liquid-cooled diesel, 5-speed transmission with reverse and heavy-duty automotive-type clutch, creating a new standard of dependability.

The 2315 packs a 1,500 lb payload. Unlike other utility trucks, it comes complete with heavy-duty hydraulic dump box, removable side panels and tailgate, implement PTO, lights, full hydraulics and complete instrumentation—standard.



Our rugged line also includes the 20 hp gas model 2015 and the 1,000 lb payload, gas powered 810 Express and electric 610 Express. For maximum versatility and productivity, the 2315 and 2015 can be outfitted with sprayer, top-dresser, aerator and spreader attachments. If you already have attachments, our universal mounting kit lets you use them on either truck.

To see them in action, ask your Jacobsen distributor for a demonstration today.

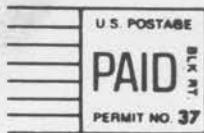
JACOBSEN
TEXTRON

Jacobsen Division of Textron, Inc.

THE SHARPEST THINKING ON TURE.

BUILT BECAUSE OTHER
UTILITY TRUCKS JUST DON'T
GO FAR ENOUGH.

"A Patch of Green"
31823 UTICA ROAD
FRASER, MICHIGAN 48026



MICHIGAN STATE UNIVERSITY
LIBRARY-SERIALS
EAST LANSING MI 48824