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“Our 3-year warranty* is the strongest in the industry. That's because our 5-gang tractor reel mower is the best in the business.”

G. J. Brouwer.

And the features speak for themselves:

- Kubota diesel power for reliability and economy
- Unbeatable 4-wheel drive traction
- Golf course and parks models
- Floating cutting heads with quick lock-out
- Built-in backlapping system
- Single point bedknife to reel adjustment...
- and much more. So much more that your choice is easy...BUY BROUWER, BUY WITH CONFIDENCE

Long Lake Ford Tractor, Inc.
2073 West Highway 12, Long Lake, Minnesota 55356 Telephone (612) 475-2281, MN WATTS 1-800-548-FORD FAX 475-0386
...serious about beautiful turf?
put the Brouwer T.M.
anti-thatch team to work.

Verti-Cut
For fast, economical, vertical mowing, the Brouwer Verti-Cut T.M. is the ideal machine.
A regular use program enables you to control the level of troublesome thatch. It allows valuable chemicals, fertilizers and also water to penetrate to the roots. Other important benefits are improved aeration, better results when overseeding and reduced surface compaction.
- Low 35 h.p. tractor requirement
- 138 in. cutting width
- Easy blade depth adjustment
- Variable blade spacing
- Economical to buy and operate

Brouwer-Vac. T.M.
Largest capacity vacuum unit of its type, for fast, economical work cleaning up thatch from verti-cutting on sod farms, golf courses, parks and recreation areas. A huge pick-up head and powerful suction fan make easy work of trash and litter at airports, parking lots, racetracks and hard surface areas. The optional hose extension allows easy clean-up around trees, fences, culverts and ditches.
- Up to 10 ft. wide suction path
- Huge 335 cu. ft. capacity
- Hydraulic unload conveyor
- P.T.O. drive 35-45 h.p. tractor
- Finger-tip hydraulic controls

For more information about this and other fine turf care equipment, phone your Brouwer dealer ... TODAY

Contact Steve Bush for details of a Verti-Cut / Vac program at your course!

Long Lake Ford Tractor, Inc.
2073 West Highway 12, Long Lake, Minnesota 55356 Telephone (612) 475-2281, MN WATTS 1-800-548-FORD
This past month offered us two opportunities to meet as Superintendents.

The first was at Woodhill Country Club, site of our January meeting. The temperatures dipped in the teens, yet many members participated in various outdoor activities. Our thanks to George Jennrich and his staff for hosting this event.

The second was Anaheim, California, site of the GCSAA International Golf Course and Trade Show held February 6th through the 13th. Registration exceeded 15,000 and over 1,600 members attended the various seminars available from Monday through Thursday. The Trade Show attracted over 430 companies and encompassed 169,000 square feet of floor space. The fourth annual Minnesota Hospitality Night was held at the Disneyland Hotel and over 130 were in attendance. A sincere thank-you to all Associate Members for sponsoring this event and especially to Dan Miller and Tom Haberman for chairing this function. On Sunday afternoon, MGCSA was honored at the Golden/Platinum Tee Club reception. This club recognizes all individuals, associations, and companies who annually donate money to the GCSAA Scholarship and Research Fund. Monday morning, the MGCSA presented a check to Mr. William Bengefield, USGA Green Section Director, and to Mr. William Roberts, director and chairperson of the GCSAA Research Fund, for joint research between these two organizations.

Fred Anderson, MGCSA Vice President, has submitted his resignation from the Board of Directors to pursue a career with Scotts Proturf division in Western Michigan. Fred was a very active member and will be missed greatly. We wish Fred and his family the very best in their move. With the approval of the Board, I have appointed Kerry Glader from the St. Cloud Country Club to fill the vacancy. Kerry’s past experience on the MGCSA board will be an asset to this Vice President position.

With a number of impending state and federal regulatory issues that will definitely effect the golf course industry, the MGCSA Board of Directors has retained legal council
to look into and report back their findings to our membership. Following along the same lines, I hope that all of you took time to fill out the Golf Course Water Usage and Economic Survey that was sent to you. Some courses already face water restrictions and the DNR is extremely interested in working with MGCSA for adequate and fair water appropriations.

Hope to see you at our March 15th Mini-Seminar.

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**CALIFORNIA DREAMING**

by GREG HUBBARD, CGCS
MGCSA Editorial Chairman

Visions of sand, surf and sunny southern California quickly faded as Minnesota superintendents made their annual pilgrimage to the 60th Annual International Turf Conference and Trade Show in Anaheim, California, February 6-13 of this year. Over 1500 preconference seminar attendees were greeted in the beginning of this spectacular week by below normal temperatures and snow as Old Man Winter made an unusual visit to this land of sun and fun.

Temperatures moderated as the week continued and the conference heated up as the opening session began Thursday evening. Bob Drum, noted TV personality, began the formal conference proceedings by giving a coolly received talk about golf and his life on the pro tour as a CBS golf analyst. A well attended reception followed at the Marriott Hotel were rock 'n' roll warmed the California visitors along with drink and friendly conversation.

The educational program continued Friday as the concurrent educational sessions began. Highlights of these sessions included talks on environmental and regulatory concerns, bacterial control of poa annua, and a whole host of topics ranging from bulkhead construction to concrete cart paths. Those attending the Golf Course Builder's workshop on Saturday were treated to talks by Jim Fazio, Jay Morish and Pete Dye as they commented about golf course architecture and future trends. Alice Dye expressed her concerns about meeting the needs of women players through golf course design. A new feature on Sunday was a symposium presented by Dr. Alex Shigo, noted tree expert, who presented his controversial thoughts on trees and their care.

For many superintendents, the highlight of the Conference was the Trade Show where golf course equipment manufacturers introduced their new lines. Hot items included Monsanto's Nomix pesticide system, Toro's fixed head greensmower, and Jacobsen's LF-100 fairway mowing unit. Miltona Turf Products, a local Minnesota company, also introduced a hexagonal turf plugger which drew waves of interest judging by the crowded booth. In all, many superintendents were struck by the enormity of this Show as evidenced by their inquisitive looks and sore feet.

The Minnesota chapter held its caucus early Monday morning to determine its support at the annual election of officers later that day. Support for each candidate was determined on the individual qualifications of each candidate rather than political tradeoffs and campaign promises. Our support was apparently well directed as the following winning candidates received our vote.

**President**  
Dennis Lyon  
**Vice President**  
Jerry Faubel  
**Directors**  
Steve Cadenelli  
Gary Griggs  
Randy Nichols

Randy Zidek was appointed to fill Jerry Faubel's remaining term and will join incumbents Bill Roberts and Joe Baidy as additional members of the current GCSAA board.

The week ended on a festive note as Chi Chi Rodriguez received the prestigious Old Tom Morris Award at the annual banquet, Monday night, in appreciation for his contributions to the world of golf.

As superintendents took off from the California basin on their return flight, many thoughts returned to Minnesota's frigid winter, and suddenly cool California wasn't such a bad place after all. The reality was that they were returning to another new season in Minnesota rather than California dreaming.

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**BEARD RECEIVES USGA GREEN SECTION AWARD**

Dr. James B. Beard, an internationally recognized turfgrass researcher, has been named the recipient of the 1989 Green Section Award of the United States Golf Association.

Announcement of the award was made by F. Morgan Taylor Jr. chairman of the USGA Green Section Award Committee.

The award has been presented by the USGA annually since 1961 in recognition of distinguished service to golf through work with turfgrass. Beard received his award at the GCSAA Conference and Show in Anaheim California.

Beard has served as president of the Soil Science Division of the American Society of Agronomy and has received the Meritorious Service Award of the International Turfgrass Society. He also was one of the organizers of the International Turfgrass Research Con-
The Toro Greensmaster® 3000 delivers a precise, uniform height of cut for superb appearance and playing characteristics.

This riding Greensmaster 3000 is designed with its cutting units isolated from both the traction unit and the grass baskets. This unique feature allows the Greensmaster 3000 to cut the greens evenly. No matter what your height of cut requirements are, the Greensmaster 3000 gives you cutting adjustments from as low as 3/32" up to 11/16". Just what you need to cut your greens to tournament standards and deliver a precision cut to aprons, tees or fairways.
ference, served as the association’s first president, and was president and a charter member of the 5,500-member Crop Science Society of America.

In addition to having authored five books on turf, he has written more than 100 scientific journal papers and approximately 300 technical papers. "Turfgrass Management for Golf Course"; published in 1982 by Beard in cooperation with the USGA Green Section, is one of the prime reference sources for golf course superintendents.

A professor at Texas A&M University, he currently provides coordination of research programs in stress physiology and culture of turfgrasses. His studies have attempted to provide a better understanding of how turfgrass reacts to its environment.

As one nomination of Beard noted, "His research of mechanisms of energy efficient grasses over the last 10 years has been the cornerstone for the physiological work in the USGA turfgrass thrust… His tireless pursuit in promoting golf course turfgrass management worldwide has had a tremendous influence on how we think and manage turf."

He was graduated from Ohio State University and earned master’s and doctorate degrees from Purdue University. He was a member of the Soil and Crop Science faculty at Michigan State University for 14 years before joining Texas A&M in 1975.

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**HAROLD STODOLA MEMORIAL SCHOLARSHIP**

by RICK FREDERICKSEN, CGCS
MGCSA Scholarship Chairman

The committee to select this year’s recipients of the Third Annual Harold Stodola Memorial Scholarship has been formed. The committee members are Dale Caldwell CGCS, Dan Hanson CGCS, Dave Krupp, Mike Leitner and Doug Mahal CGCS.

The scholarship, originally started in 1987 in honor of Harold Stodola, has had 6 scholarships awarded since. The scholarship winners are recognized at the Annual Conference Banquet in December. This past year’s recipients were Scott Thompson of Iowa State, Rich Traver Jr. of Penn. State, and Greg Iden of the University of Minnesota, Waseca. Each of whom received $1,000.00 scholarships.

To qualify, applicants must have completed either the first year of a two year turfgrass technical program, or the second or third year of a four year turfgrass program. The applicant must also be a Minnesota resident, or be working for a MGCSA member. The scholarship is presented to the candidate who is interested in golf course management as a career, has high scholastic capabilities, and has superior performance as an employee of a golf course.

Applications are available by contacting a Scholarship applying is July 1, 1989.
Milorganite is a natural organic fertilizer that provides a balanced diet of essential nutrients. Along with the major nutrients like nitrogen and phosphorus, Milorganite also contains boron, zinc, copper, sulfur and iron. This entire spectrum of nutrients is released slowly in amounts your grass plants can more completely absorb.

Milorganite supplies iron, an important element vital for growing healthy and beautiful green turf. Just as your blood needs iron for strength, grass needs iron to form the chlorophyll that gives it a dark, green color. What’s more, iron-rich grass grows up faster in the spring, without excessive growth, and maintains its color better and longer during dry weather.

Milorganite gives full nutrient value. Milorganite’s organic composition ensures almost total nutrient uptake by plants. You get what you pay for. That is not true with many synthetic fertilizers where much of the nutrients evaporate into the air and leach out of the rootzone.

Milorganite doesn’t burn. Milorganite does not contain chemical salts as synthetic fertilizers do. It is an organic product that breaks down slowly and naturally. It will not burn and is safe for your grass.

Milorganite adds valuable humus to the soil, improving the soil’s ability to grow and nurture grass. The humus:
- improves the soil’s ability to hold moisture.
- increases the soil’s efficiency in holding nutrients, releasing them when needed.
- expands the soil’s buffering capability, helping to withstand the effects of side swings in soil pH (acidity).
- makes the soil more resistant to damage caused by the addition of potentially harmful chemicals.

Milorganized turf is less susceptible to grass diseases and other damage. Milorganite promotes a healthier grass which:
- is more resistant to pest attacks and recovers quickly from damage.
- reduces the effect of many grass diseases such as Fusarium blight, dollar spot, red thread snow mold and others.
- reduces the effects of winterkill.
- reduces damage caused by harmful nematodes that attack grass roots.

Milorganite reduces thatch by promoting the buildup of beneficial microorganisms which decompose the thatch.

Milorganite is easy to apply and does not have to be “water in.” Because Milorganite is granular, it is easy to apply. It flows easily through any spreader. For high quality turf use a spinner spreader (open side) or a drop spreader (set at #10). Because it does not have to be watered in, Milorganite can be applied under the driest conditions and during the hottest months without endangering the lawn. And, because it’s virtually dust free, it can be applied even under windy conditions.

### GOLF COURSE FERTILIZERS

<table>
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<th>PRODUCT</th>
<th>BAG WT.</th>
<th>RATES LBS/M</th>
<th>LBS/A</th>
<th>BAG COVERS</th>
<th>#N/M</th>
<th>NITROGEN</th>
<th>FEATURES</th>
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<td>5.5% WIN .5% WSN</td>
<td>100% Milorganite 4% Iron 2% Sulfur</td>
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THE EXTENSION LINE
From the Minnesota Extension Service

GROWING TULIPS AS PERENNIALS

Dr. Paul V. Nelson, horticultural nutritionist at North Carolina State University has found that within 48 hours after the roots come out, tulips begin to take up nutrients and never stop until after flowering. To maintain the same number of blooms the second year, the bulb must replace itself with one of equal size and, in addition, must produce several other "daughter" bulbs of smaller size. This bulb-building requires an increased accumulation of nutrients.

Although phosphorus, potassium, and calcium are necessary nutrients, nitrogen is the most important one. Fertilizing at planting (using a common fertilizer such as 8-8-8) will nourish the bulb until its stalk breaks through the ground.

This fertilizer should be applied again in the same amount six to eight weeks before bloom after shoots emerged from the ground but before the leaves have opened. The second application of fertilizer will carry the bulb until the tulip blooms.

The gardener who wants to fertilize only once can use a longer-lasting slow-release commercial fertilizer, applied in the fall.

After the tulip blooms, it is important not to fertilize again until fall. The bulb does not take up nutrients in the summer between flowerings and planting time, and an excess of nitrogen in the soil increases disease.

Adapted from North Carolina State University Information Services.

NEW EXPLORERS ROSES

Following are some comments and observations regarding three new hardy climbers for our area. These roses are part of the explorer Rose Series developed in Ottawa, Canada. In this case, hardy means no additional or extraordinary winter protection. They are able to remain on the trellis or other supporting structure over winter. Like other roses, they will perform best when planted in full sun. These three will be available from retail outlets Spring '89. Descriptions of the roses were provided by Mr. Terry Schwartz of Bailey Nurseries.

HENRY KELSEY Svejda, Ottawa 1976 (R. kordesii hybrid): Extremely vigorous trailing shrub which can be used as a climber. Will grow to 10 feet. Resistant to mildew and although not immune to blackspot it is seldom a problem. Foliage is shiny deep green. Quite hardy requiring only slight pruning of tips in spring. Flowers are semi-double, deep red when opening changing to medium red as they expand. Contrasting golden stamens. Blossoms appear in large clusters from June to hard frost. Delightful delicate fragrance. The best hardy red climber we know of. We believe this will be an important new variety and recommend it highly.

JOHN CABOT Svejda, Ottawa 1978 (R. kordesii "Wulff" x "Masquerade" x R. laxa): Strongly arching pillar rose which can be used as a climber. Grows to nearly 10 feet. Foliage is exceedingly healthy and glossy medium green. Very hardy. Flowers open up a medium red and change to a deep orchid pink as they mature. Blooms throughout season. Pleasant fragrance. An award winning rose which forms an excellent climbing rose for cold areas. Highly recommended.

WILLIAM BAFFIN Svejda, Ottawa (R. kordesii hybrid): Vigorous pillar type rose which can be used as a climber. Grows to 8 - 10 feet. Foliage is glossy green and completely disease resistant. Does not kill back at our site. Flowers are semi-double, luminous pink and are borne in large clusters which appear continuously till frost. Nice fragrance. A very important new variety which will soon grace many a trellis.

Compiled by BOB MUGAAS
County Extension Agent
Environmental Horticulture
Minnesota Extension Service
Hennepin County

THE LONG AND SHORT OF IT

by JOHN HALDEMAN
Ortonville Municipal Golf Course

In the midst of a long Minnesota winter, all of us involved in golf smart thinking about the past season. As superintendent of Gem Lake Hills Golf Course, an 18 hole facility consisting of an executive nine and a par three nine, I am no different. After a stint at an 18 hole regulation course in Ortonville, I wondered what it would be like to care for a so-called "short" course. Just try to tell golfers how short it is!

There are many similarities in maintaining long and short courses, most of them obvious. Golfers are the same the world over, usually making those unreasonable demands after they've had a bad round. Mother Nature is also pretty consistent. Whether you're at the country club or the municipal, it is always too hot or too cold, too wet or too dry. And, of course, you must meet all of those unreasonable demands with a limited set of resources. I have yet to meet the superintendent who has everything
he feels he needs to do his job, and probably never will.

There are also a few differences involved in the maintenance of a short course. Because of the smaller acreage involved, we can mow the entire course in one eight hour day, leaving plenty of time for projects and repairs. We are capable of responding to problems quicker, whether they be golfer or weather related. However, the smaller area also causes some problems. Because of all the traffic on so few acres, we are always fighting compaction and wear. Our high volume of play also causes problems. By seven o'clock most mornings there is a foursome on every hole. We really have to hustle to stay out of their way and have even investigated doing some of our maintenance at night. Our smaller size can cause big problems.

While comparing the similarities and differences, I came to one conclusion. We are all in the business of providing the best golfing conditions possible given a limited set of resources. If the next ten years continue the present increase in golfing activities, it is certain that the short course will play an important role. Higher land and maintenance costs will see to that. Meeting these future challenges is what keeps the job interesting. Meanwhile, let's hope for a healthy and productive season in 1989 and an "average" summer.

Attending the National Conference is always a highlight of my winter season as I look forward to visiting new places and learning what's new in the world of golf. It's also an opportunity to acquire more knowledge in my chosen field and visit with my fellow superintendents on a casual, relaxed basis. Most important though is the opportunity these visits provide in recharging my batteries after a long golf year and hectic holiday season. I'm sure I'm not alone in these feelings and have recognized that indeed, this period of recommitment is necessary to my mental and spiritual health. Any job follows certain periodic or cyclical cycles which influence our attitudes towards our position. High points have corresponding valleys. Think about the times when you've been hired for a new position. It's an exciting time, full of apprehension, as you become familiar with your new employer and environ-

CUSHMAN 1989 SPECIAL!!!

22-hp for $4,850.00

MODEL 531 RUNABOUT

SEAT: Two-passenger, vinyl-clad seat with backrest and hip restraints/hand holds

STEERING: Wheel-type

SUSPENSION:
- Front: Leading-link type supported by 2 tension springs; front shock absorbers
- Rear: Two multiple leaf-type springs and shock absorbers

TIRES:
- Front: 18-6.00 x 6, 4-ply turf rib
- Rear: 18-9.50 x 8, 6-ply turf softrac

PERFORMANCE:
- Payload: 1500 lbs. (681 kg)
- Speed (Maximum): 18 mph (29 km/h)

POWER:
- Engine: 22-hp
- Clutch: 6 1/2" (165 mm) commercial
- Transmission: H-shift pattern; 3 speeds forward and 1 reverse; synchromesh in second and high
- Differential: Worm-gear with 10.25:1 axle ratio
- Governor: Mechanical overspeed

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