Introducing our all-new golf car batteries. We've gone to great lengths to make sure they'll go the distance. Longer.

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**No course is too tough for them.**

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Inside, we gave our batteries new PVC fiberglass mat separators for greater service life and less internal resistance. Thicker plates and high-density oxide for improved cycle life. Increased electrolyte above the plates to reduce the chances of low water-level failure. And unique grid-alignment lugs that lessen the possibility of premature shorts.

In all, they're the longest lasting 6-volt electric vehicle batteries we've ever made. And further proof that at Gould, up to par isn't good enough.

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Yes, I'd like to know more. Please send me your complete Action Pack electric vehicle brochure.

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GB 011

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Options include reel shut off kit, quick height of cut adjustment, 3 rollers, comb, brush/scaper.

Greensmaster 3®
Isolated cutting heads give each green uniform cutting height, appearance, playing characteristics.

Spiral thatching blades for more efficient thatching and throwing into baskets.

Quick disconnect reel motor means easy change to spiking or thatching reels.

Turf Pro 84™

Reversible reel motor permits "backlapping" for reduced sharpening frequency.

All wheels are drive wheels for excellent traction and maneuverability.

You’re concerned with not only the appearance of your course but every facet of its playability. So we’re letting you in on some ways we engineer turf care products with you in mind.

Reels with independent suspension follow ground contour, improve quality of cut.

Consider this Toro foursome of Professionals. Our Turf Pro 84™ is an all hydraulic triplex with the ability to give you the right clip for each desired height of cut and type of grass.

Hydraulically powered reels and wheels eliminate belts and gears.

For your greens, our Greensmaster 3® still has no equal. Because no other greensmower has cutting heads isolated from the traction unit and grass baskets.

And meet our Sand Pro®.
Exclusive reel couplings mean more freedom to follow ground contour for finest quality cut. Gentler on the grass with custom designed reel units that weigh 110 lbs. less than our wheel drive gangs.

Reliable 4-cylinder diesel engine with 236 cubes of lugging power for hills and heavy cutting. Simpler to drive with automotive steering out front. Minimizes operator training.

Maneuvers completely around in its own length for raking traps and tight "peninsulas".

The only trap rake with total hydraulic power. Plus the lower upkeep, longer life and superior performance that go with it. Finally, the ultimate in precision. Our HTM-175™Its superbly balanced cutting units can match the needs of your course with a smooth, exacting cut down to 3/8 of an inch. Want to know more? Call your Toro distributor. He's a professional, too.
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ONE GREAT GRASS

Super Bowl XIV and the Rose Bowl classic were the great games. The turf? That was Derby Turf-type perennial ryegrass.

Derby was selected by George Toma, the man responsible for the Super Bowl XIV turf and Gus Huntly, turf manager for the Rose Bowl game, because of the special requirements for these special games.

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- Persists in heavy, compacted, poorly drained areas where traffic is not intense
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- Thrives when cut to 3/16, 1 inch or 1½ inches
- Mixes nicely with fine fescues and bluegrass

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Program: 52nd GCSAA Conference

GCSAA, Speakers and Topics
SATURDAY AND SUNDAY

Nutrition Seminar
Instructors: Dr. Robert Shearman, Dr. Thomas L. Watschke, and Dr. James B. Beard
Meets 8 a.m. to 5 p.m. Saturday and Sunday, Jan. 24 and 25.

Disease Seminar
Instructors: Dr. Houston B. Couch and John F. Shoulders
Meets 8 a.m. to 5 p.m. Saturday and Sunday, Jan. 24 and 25.

Insect Seminar
Instructors: Dr. Houston B. Couch and William R. Kneebone
Meets 8 a.m. to 5 p.m. Saturday and Sunday, Jan. 24 and 25.

Cardiopulmonary Resuscitation Seminar
Instructor: Orange County Heart Association
Meets 8 a.m. to 5 p.m. Saturday, Jan. 24, or 8 a.m. to 5 p.m. Sunday, Jan. 25.

Photography Seminar
Instructors: George S. Butt and Gary Whelpley
Meets 8 a.m. to 5 p.m. Saturday, Jan. 24, or 8 a.m. to 5 p.m. Sunday, Jan. 25.

MONDAY

Thinking Superintendent—Meeting the Challenge
Session Chairman: James W. Timmerman, CGCS
1:30-1:45 p.m. Building a Solar Greenhouse, Mark G. Fuller
1:45-2 p.m. Color on the Golf Course, Sidney E. Puddicombe
2:15-2:30 p.m. Irrigation System Maintenance, Dan Jones, CGCS
2:30-2:45 p.m. Recovering from Hurricane Damage, William M. Norris, Jr., CGCS
3:15-3:30 p.m. Fairway Renovation of Cool Season Grasses, Gerald L. Faubel
3:30-3:45 p.m. Having a Purchasing Agent, Thomas J. Burton
3:45-4:30 p.m. Golf Course Personnel Management, Fred Reese
3:45-4:45 p.m. Employment Opportunities and Your Personal Goals, William L. Burdick
4:45-4:55 p.m. Certifying—A Controversial Viewpoint, A Tool, Stephen K. Gibson, CGCS
4:40 p.m. Half Cut Greens, John Souter
4:10-4:20 p.m. To be announced

TUESDAY

The Researcher's Challenge
Session Chairman: C. Richard Skogley
1:15-1:5 p.m. Ophiobolus Patch: An Increasing Turf Disease Problem, Noel Jackson
1:5-1:30 p.m. Use Patterns for Systemic Fungicides in the Control of Turfgrass Diseases, Houston B. Couch
1:30-1:45 p.m. Water Conservation Research with Turfgrasses, William F. Kneebone
1:45-2 p.m. Coping With Turfgrass Heat Stress, Robert Shearman
2:15-2:30 p.m. Root Die Back: Preliminary Cultural Effects on Ball Roll, James B. Beard
2:30-2:45 p.m. Impact of Volcanic Ash on Turfgrasses in the Pacific Northwest, Roy L. Coss
2:45-3 p.m. Comparisons of Poo Supina, Annuus, Pratensis, William Daniel
3:15-3:30 p.m. Nitrogen Sources for Turf Maintenance, Victor Gibauil
3:30-3:45 p.m. Frequent Sand Topdressing Up-date, John H. Madsen
3:45-4 p.m. Nortron for Poa Annua Control, Ray Dickens
4:10-4:20 p.m. To be announced

Efficiency in Ornamental Pest Control
Session Chairman: Donald J. Pekkala, CGCS
1:1-1:20 p.m. Northern Climate Insect Control, David G. Nielsen
1:20-1:30 p.m. Question and Answer Period
1:30-1:50 p.m. Southern Climate Insect Control, James A. Reinert
1:50-2 p.m. Question and Answer Period
2:00-2:20 p.m. Northern Climate Weed Control, Clayton M. Switzer
2:20-2:30 p.m. Question and Answer Period
2:30-2:50 p.m. Southern Climate Weed Control, Clyde Elmore
2:50-3 p.m. Question and Answer Period
3:30 p.m. General Disease Control, Noel J. Axson
3:30-3:45 p.m. Question and Answer Period
3:45-4 p.m. General Question and Answer Period

WEDNESDAY

Efficiency Through Planning
Session Chairman: James G. Prusa
9:40-9:50 a.m. Organizing Multiplex Maintenance, Richard L. Lemmel
9:50-10 a.m. Cultural Conditions Every Day, Paul E. Rieke
10 a.m.-10:30 a.m. Fertility—Low Levels of Nitrogen, Alexander M. Radko
10:30-10:50 a.m. Quality Playing Conditions and Priorities, Edward C. Horton, CGCS
10:50-11 a.m. Quality Playing Conditions and Priorities, George Thwing
11 a.m.-11:30 a.m. Effective Report Writing, James W. Timmerman, CGCS
11:30 a.m.-12 noon Public Speaking, H. A. Richardison

Efficient Management
Session Chairman: Tom Burrows
9-9:30 a.m. Pesticide Use From an Historical Perspective, William A. Harvey
9:30-10 a.m. Update on RPAR Registration, Warner H. Anthony
10-10:30 a.m. Care of Reel Mowers, Robert KRick
10:30-11 a.m. Hydraulics—A Power Source, A Labor Saver, Chuck Alsdurf
11 a.m.-12 noon Fitness for Busy People—The Answer to Rising Medical Costs, Ronald E. Useldinger

THURSDAY

Meeting Our Challenges in the '80s
USGA Green Section Educational Conference
Session Chairman: Stephen J. Horell and Alexander M. Radko
9:15-9:45 a.m. Welcome and Introductions, Stephen J. Horell
9:45-10 a.m. Quality Playing Conditions Every Day, Robert V. Mitchell, CGCS
10 a.m.-10:30 a.m. Efficient Use of Your Natural Resources, Melvin B. Lucas, Jr., CGCS
10:30-11 a.m. Designing Golf's Challenges for Economy and Maintenance, Richard M. Phelps
11-11:30 a.m. Experience from the Field and Quality Playing Conditions North—Stanley Zontek, Southeeast—James B. Monrief, Southwest—Dr. Douglas T. Hawes, East—William G. Buchanan III, West—Don D. Hoos
11:30 a.m.-12 noon USGA Green Section Award Presentation
2-2:30 p.m. A Breakthrough—New Spray Techniques for the '80s, Edward C. Law
2:30-2:45 p.m. GCSAA Citation of Performance Presentation
2:45-3:05 p.m. Quality Playing Conditions—The Chairman's Challenge, George Thwing
3:05-3:30 p.m. The Challenges of Industry Hills, William H. Bengseyfield
3:30-4 p.m. Conditioning the Golf Course; Grooming the Putting Surface, James T. Snow
4 p.m. Question and Answer Period
Floor plan:
52nd GCSAA Trade Show

[Diagram of the trade show floor plan with various booths and areas labeled, including RESTAURANT, Theme Center & Lounge, CARPETED AISLE, CARPETED AISLE, MEN'S, WOMEN'S, CONCESSION AREA, Ford Motor Co., Ryan Turf Equipment & Cushman OMC-Lincoln, Giant Vac 206, Giant Vac 201, E-Z Go Texton Inc., Royal Coach Sprinklers, Smithco, Inc., Landscapers, and more.]
Exhibitors: 52nd GCSAA Trade Show

GOLF BUSINESS has listed the exhibitors at the 52nd GCSAA Trade Show, their booth numbers, the personnel who will be in the booths, and the products and equipment that the companies will be exhibiting (to the best of our knowledge at press time). A floor plan is located on pages 16 and 17. Because the show will cover approximately four and one-half acres this year, it is essential to plan your time and visits so that you see whom you want to see. By getting business out of the way first, there will be plenty of time to stroll and enjoy all the fine equipment and products that are being displayed.

A-1 Turf Irrigation Sales, Inc.
Booth 660, 661
Write 792 on Reader Service Card

AMF/Harley Davidson Motor Co., 3700 West Juneau Ave., Milwaukee, WI 53207
Island 230
Harley-Davidson will be exhibiting three- and four-wheel cars, gas and electric, including their Classic America limited edition model.
Personnel attending: Tom Duffey, Mgr./Prod. Mktg., Dick Gaedke, Gen. Sales Mgr.; George Hollander, Hugh Rawlings, Mike Stapleton, all district sales personnel, along with engineering and service staff.
Write 701 on Reader Service Card

Advanced Drainage Systems, Inc., 330 Riverside Dr., Columbus, OH 43221
Booth 160

F. J. (Bill) Palacek, Market Manager, Commercial Sales, Carl Hedlund, Regional Sales Manager, and Mike Love, Regional Sales Manager, will be in the booth exhibiting Advanced Drainage’s corrugated polyethylene plastic drainage tubing.
Write 702 on Reader Service Card

American Pelletizing Corp., P.O. Box 3628, Des Moines, IA 50322
Booth 1220
Marv Zeliger will be in the booth exhibiting Reveille limestone pellets, gypsum pellets and dolomitic lime pellets.
Write 294 on Reader Service Card

American Society of Golf Course Architects
Booth 1023
Write 793 on Reader Service Card

AMETEK/Plymouth Products Div., 502 Indiana Ave., Sheboygan, WI 53081
Booth 659
Ed Knauf, Bill Kreisa and Ken Lasky will be in the booth exhibiting Ametek’s line of Turf Irrigation Control Boxes with Evergreen Covers.
Write 703 on Reader Service Card

Cal-Turf, AMFAC Garden, 2186 Knoll Dr., Jacksonville, FL 32216
Booths 605, 606
R. K. Curley, Charles Patrick, and W. Dawes will be in the booths exhibiting AquaTurf’s programmable Pumping System with a “brain”.
Write 706 on Reader Service Card

C-E Turf Irrigation Sales, Inc.
Booth 660, 661
Write 792 on Reader Service Card

Aquatrols Corp. of America, 142 Union Ave., Pennsauken, NJ 08110
Booths 314, 316
Robert A Moore, President, Edward A. Ovrright, Director of Research, Demie S. Moore, Director of Marketing and Sales, and Jerry Curtis, Southwestern and Western representative, will be in the booths exhibiting Aqua-GRO “J” and Aqua-GRO “S” wetting agents.
Write 705 on Reader Service Card

AquaTurf, 11363 San Jose Blvd., Jacksonville, FL 32216
Booth 1220
Bob Scobee, Doug Masters, Roger Brown, Darrell Johnson and Mike Bryant will be in the booths exhibiting fertilizer and fertilizer pesticide products.
Write 295 on Reader Service Card

Atwater Strong Co., 6244 Waterloo Rd., Atwater, OH 44201
Booths 269, 270, 271
Continues on page 23

Grey background indicates a January advertiser.
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