

He's Challenged By Increasing Demands In Golf Course Construction



By Lori Ward Bocher



You see your course every day. You know it like the back of your hand. But unless you're in the middle of a construction project, how often do you think about what made it the course it is today? Did glaciers or bulldozers form those hills, ponds and wetlands?

And what is the future for your course? Could it be rebuilt to keep up with trends in new course construction – up to eight tees per hole, more wetland areas, more prairie areas, more sand traps, depressions and contours?

Charlie Kisow deals with these issues every day as a golf course construction project manager for The Bruce Company. "It's not getting any simpler," he says of golf course construction. "The trend now is toward more earth moving, more features, more contouring. Now the big craze

is depressions with a storm sewer type drainage system.

"And more tees," he continues. "It used to be three tees per hole. Now it's as many as eight. But I think it's a good concept. The more tees you have, the more suitable the golf course is to a variety of player skill levels. You can change the length of the golf course quite a bit with multiple tees. And, with different angles from the multiple tees, the holes play differently.

"There's definitely a big trend toward more wetlands and prairie



Construction Services to the Golf Industry

Your source for Golf Course Construction, Reconstruction & Improvement.

You have the Projects, Ideas & Needs. We have the Experience & Equipment to do the job Right the First time.

Many Trucks
Equipped with
High Floatation
Tires to
Minimize
Damage to your
Golf Course



- New Construction
- Remodelling
- Irrigation
- Drainage
- Feature Shaping
- Trap Sand Replacement

- Water Control Structures •
- Pond Cleaning •
- New Ponds •
- Pond Lining •
- Cart Paths •

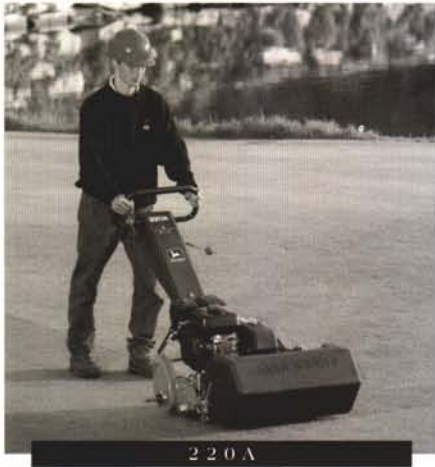


Specialized
Equipment
suited to
Cleaning your
existing Golf
Course
Water
Features.

CALL US TODAY!!

Lee Bruce (608) 836-7041 Dave Weber

Established 1953



220A



TURF GATOR



1200A



RZ1 700



3235A



AERCORE 800

OUR QUALITY IS ON COURSE.

No one can accuse John Deere of standing still. Since 1995, we've added ten quality machines to our line. Another strong statement about our commitment to your business.

Effective and environmentally friendly, the RZ1 700 lets you inject liquids directly to the root zone, eliminating drift and minimizing surface toxicity. The RZ1 700 delivers treatments up to six inches through 16 single- or multi-orifice nozzles. The 5,000-psi system ensures injections penetrate even hard-packed soil.

The Aercore 800 delivers the same advantages found in the Aercore 1000 and 1500. Powered by an 18-hp engine, the 800 covers a lot of ground at a coring swath of 31.5-inches. Four gears allow you to match productivity and speed.

Add superior parts support plus our existing line of quality mowers, tractors, aerators, and utility vehicles, and you'll see why John Deere is the fastest growing golf and turf equipment name in the world. Talk with us soon for a firsthand look.

www.deere.com



NOTHING RUNS LIKE A DEERE®

THE JOHN DEERE GOLF & TURF PROMISE

If for any reason you are not completely satisfied with your purchase, simply return it to your distributor within 30 days or the first 100 hours (whichever comes first) for a full refund.



J.W. TURF INC.
Hampshire, IL
847/683-4653

21600 W. Capitol Dr.
Pewaukee, WI 53072
414/781-9050

Official
Golf Course
Equipment
Supplier



areas," Charlie points out. "The last job on which I worked had 15 created wetlands."

Drawn to golf courses...

Charlie has been with The Bruce Company since November of 1992. Before that, he worked for golf course architect Bob Lohmann for six years as a construction superintendent. And before that he was the golf course superintendent at Prairie du Chien Country Club for six seasons.

A native of Cambridge, Wis., Charlie grew up playing golf. After graduating from Cambridge High School in 1977, he attended the University of Wisconsin-Madison because, as he says, "It was a good school and fairly close to home. I started out as a business major and didn't like that. So I became a soils major, originally in soil and water conservation.

"But then I came in contact with some turf students. Add that to my own interest in golf, and turf management seemed like a good way to go," he recalls, adding that J.R. Love was his advisor. Charlie graduated in December of 1981 with a BS in soils and a turf emphasis.

He's helped build several courses...

As a construction project manager for both Bob Lohmann and The Bruce Company, Charlie has left his imprint on 11 new courses in Wisconsin, Illinois and Iowa. He's also worked on smaller rebuild projects, which comprises about 25 percent of The Bruce Company's business. The new courses he's built include:

Lohmann years:

- LaCrosse Country Club -- remodel
- Cedar Creek, Onalaska, Wis. --18-hole course
- Merit Club, Gurnee, Ill. --18-hole course
- Settler's Hill, Geneva, Ill. -- 9-hole addition
- Indianhead Golf Course, Mosinee, Wis. -- 18-hole course

The Bruce Company:

- Country Club of Wisconsin,

- Grafton, Wis. --18-hole course
- Hunter's Ridge, Marion, Iowa --18-hole course
- Players Course at Geneva National, Lake Geneva, Wis. -- first 9 holes one year, second 9 holes this year
- Thunderhawk, Beach Park, Ill. --18-hole course
- The Meadows of Six Mile Creek, Waunakee, Wis. -- 18-hole course

- The Meadows, Jefferson, Wis. -- 18-hole course
- North Hills Country Club, Menomonee, Wis. -- remodel
- Fox Valley Golf Club, Kaukauna, Wis. -- remodel

Managing people...

As a project manager, Charlie's biggest challenge is managing people. "I supervise all of the people

**EVEN WHEN
IT'S EMPTY,
IT'S LOADED.**



Carryall Turf II

Our new Turf II is loaded with a great package of standard features. All of which makes a great vehicle an even greater value. Turf II is part of Carryall's complete line of versatile, dependable vehicles.



Club Car, Inc.
Wisconsin Branch

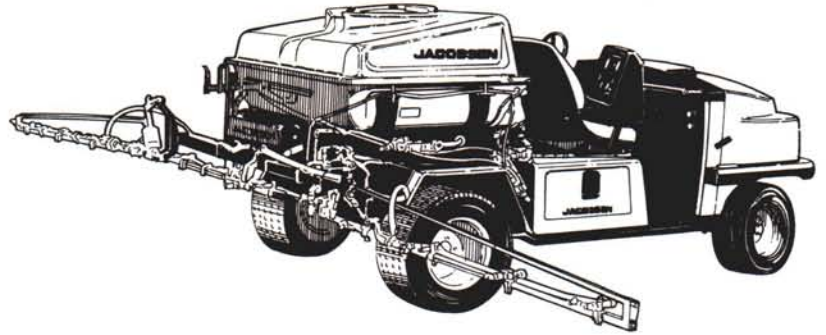


CLUB CAR
INGERSOLL-RAND

4485 South Racine Avenue
New Berlin, Wisconsin 53146
Phone: 414-896-9570
Fax: 414-896-9578

JACOBSEN

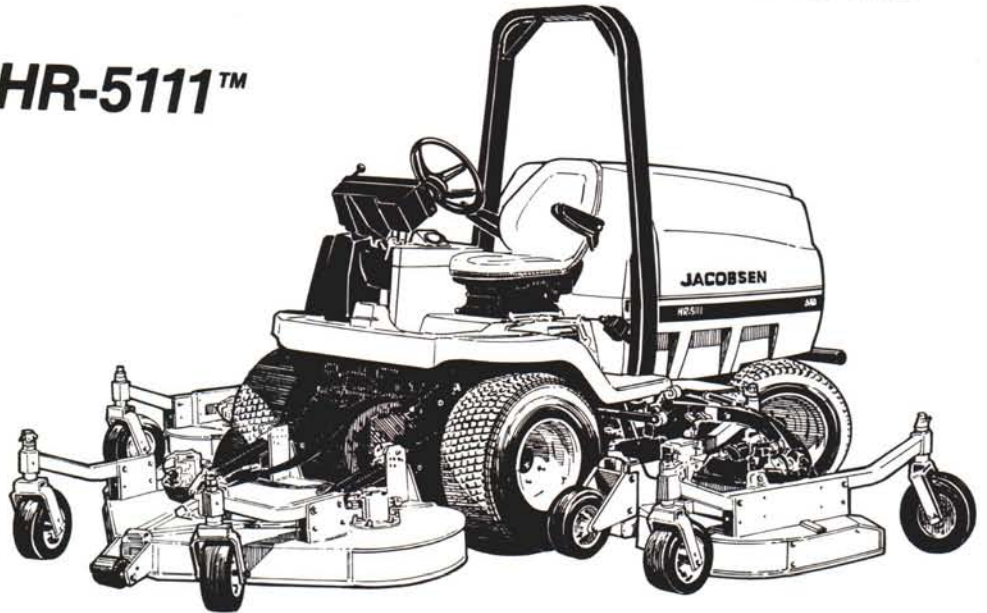
TEXTRON



SV Utility Truck

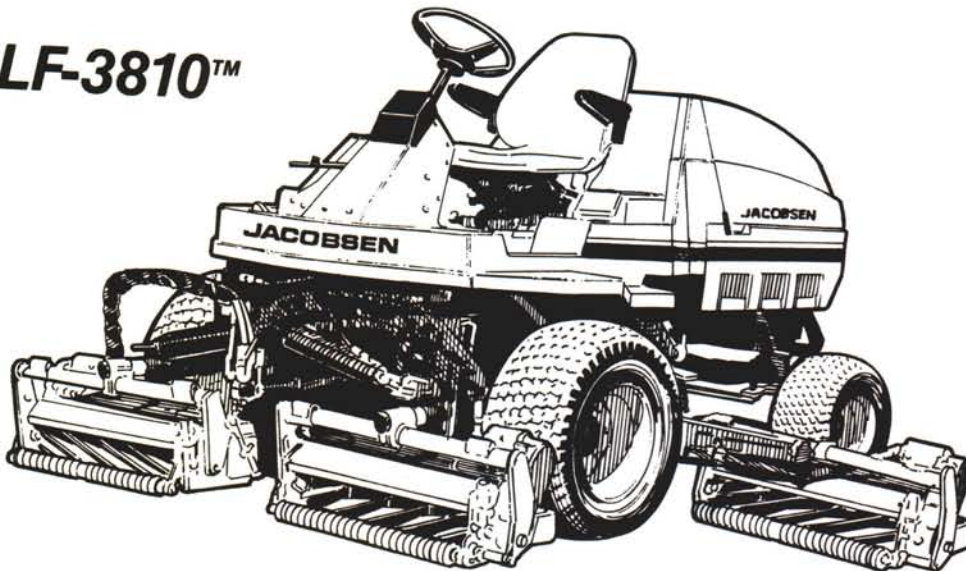
HR-5111™

11' CUT
50 HP. DIESEL ENGINE
4 WHEEL DRIVE
ALL HYDRAULIC DRIVE
NO BELTS
NO PULLEYS



LF-3810™

5 OR 10 BLADE REELS
10' CUT
38 HP. DIESEL ENGINE
2 OR 4 WHEEL DRIVE



WISCONSIN TURF EQUIPMENT CORP.

TWO LOCATIONS

1917 W. COURT ST.
JANESVILLE, WI. 53547
608-752-8766

21520 W. GREENFIELD AVE.
NEW BERLIN, WI. 53151
414-544-6421

involved in construction," he points out, adding that The Bruce Company employs 12 to 30 people per project at any given time. "Managing people is the most difficult for me. Everybody is different, wants different things. Getting people to work together – and to live together when we're out of town – can be difficult. Communication between everybody is a big challenge."

Charlie also keeps an eye on the subcontractors. "We have subcontractors do the irrigation installation and storm sewer work, and the asphalt cart paths and bridges," he points out.

Although he spends some time indoors working on payroll, records and a construction diary, Charlie is out in the field nearly 100 percent of the time. "I do a lot of the design decisions that are made from day to day," he explains. "I work on the engineering of the drainage, which seems to get more complicated with catch basins and storm sewers. I do operate some equipment on occasion, if necessary."

How long does it take to build a course? "It depends on how many bells and whistles. But generally it's between a year and two years," Charlie answers. "We work pretty much year-round, depending on what stage of the project we're in when we hit winter. A lot of times we do some of the rough earth work in winter because we need frost in the ground to get our heavy equipment on low ground. It varies. Last winter I had just about the entire season off. Sometimes I work all winter long."

Permits and financing...

After managing people, Charlie lists "permits and financing" as the next biggest challenges of his job. "Seems like one or the other is always delayed. Then time becomes a challenge. For example, if there's a project scheduled to be done on a certain date and the start of the project is delayed by two months due to permit or finance problems, the people still want it done the same day. It puts

a lot more pressure on all of us to get it done faster. And that seems to be getting more common all the time.

"Permitting can get pretty complicated and cause a lot of delays," Charlie adds. "On our last project, we had verbal permission to proceed, but actually didn't have the Army Corps of Engineers permit until we were done with the project."

Each course is unique...

Every project is different in terms of the time, effort and money needed to transform the original site into a golf course. "I like to compare it to building a house," Charlie says. "How much does it cost to build a house? Well, it depends on how big the house is and how much goes into it.

"The same with golf courses," he continues. "One of the biggest differences in golf courses is in what the owner or architect want to accomplish, and what ideas they use to accomplish their goals.

"And the site conditions vary greatly," Charlie adds. "Some sites lend themselves very naturally to a golf course and don't involve a lot of earth moving. Others are too flat or too hilly for a golf course and involve a lot of earth moving. Sometimes creating wetlands makes the job easier, sometimes it makes it more difficult. It depends on so many conditions."

Charlie works closely with superintendents. "They're usually on site full-time when we get to feature construction," he points out. "For architects, time spent on the course varies. If they're coming from far away, it may be every two to three weeks. If they're close, it may be weekly or biweekly. As far as owners, it depends. Some are here all the time. Some less often."

Likes creating and variety...

In spite of the rigors of golf course construction, Charlie likes his job. "I just enjoy creating something, building something," he says. "And the design aspect of it is very interesting. There's a certain amount of creative input that goes into building a golf course. And there's a variety of dif-

ferent phases in construction – earth moving, shaping, feature construction, irrigation, grassing. We're always going from one thing to another, doing a variety of things on any given day."

The downside of the job? If you work in golf course construction, you expect to spend long periods of time away from home. "I really don't like it," Charlie says frankly. "But it's a part of the job I have to accept. We generally have apartments that we live in while on the job. If the job is too far away to drive home on a regular basis, we have a twin-engine plane so we can be flown home every three weeks for a long weekend. For the shorter-term rebuild work, we generally stay in hotels."

Charlie, who is single, maintains a permanent residence in his home town of Cambridge. In his limited spare time he likes to hunt (mainly waterfowl) and fish. "I also like to play golf, but I don't get to do that very often," he adds.

Guess that's because he spends his time on golf courses in a different way – building new and exciting courses for the hordes of people who are flocking to the sport and creating a demand for his work. ♣

PENDELTON TURF SUPPLY

Ed Witkowski

- Chemicals
- Full Line of Turf Products
- Competitive Pricing
- New Product Information

Satisfaction Guaranteed

414-421-6474

9305 Oak Creek Ct.
Franklin, WI 53132

High performance turf tending with ease...

AMAZONE Groundskeeper

ELIMINATE PLUGGING as you collect leaves, pine needles, limbs, twigs, wet grass and other debris. The **AMAZONE Groundskeeper** is ideal for golf courses, parks, commercial landscaping and athletic fields as it mows, cleans and rolls in one pass. This new machine works exceptionally well in wet conditions.

AERATE and SCARIFY with optional blades to eliminate moss and thatch.

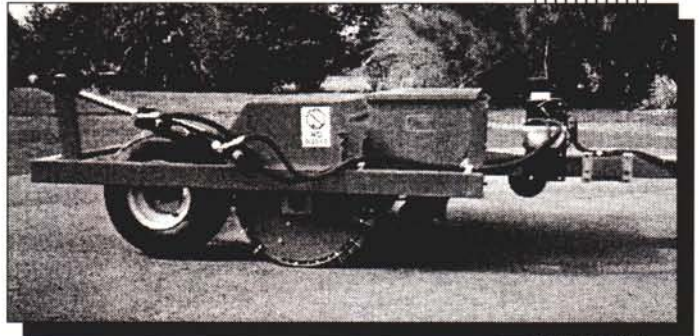
No tools required to change blades!



Greens Spiker/Seeder

SAVES TIME & MONEY! Tapered spikes push seeds tightly into the top rim of the quarter-inch hole. The surface blades of grass then immediately reclose to approximately eighth-inch holes, incorporating seed at optimum depth for improved germination and better seed bed establishment. Percolates and loosens soil to allow moisture and nutrients into the turf, and is less disruptive to the putting surface.

AERATE and OVERSEEDS in one pass.
DO 18 greens in under 3 hours!



Terra Topper

The Terra Topper's dual spinners and auger are all hydraulically driven and can be controlled from the driver's seat. The spinner speed can be controlled from very slow to fast and the spinner assembly tilts up or down. The auger speed can also be set for the amount of material the operator likes to spread. The Topper can be pulled by most any turf vehicle. It produces a very fine spread putting the material in the grass. Play or putting are not affected.

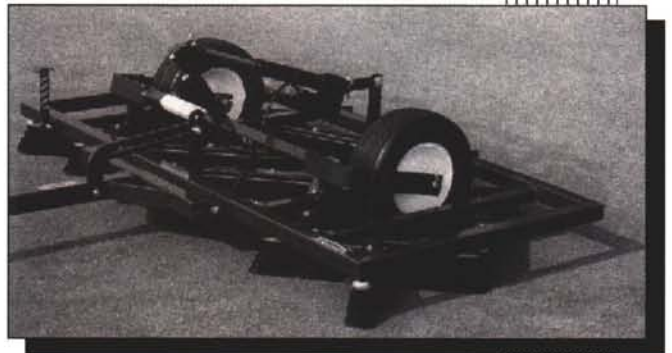


GreensGroomer™ Topdressing Brush

has revolutionized the way topdressing is done. The unique patent-pending brush design makes the sand dance and allows for one pass topdressing by one person. You eliminate greens scuffing, potential damage and stress to the grass. The GreensGroomer™ also eliminates the problem of waiting for the sand to dry. You can topdress immediately after application.

Make quick work of fairway brushing with the GreensGroomer™ Triple Head. With a span of 17 feet, fairways can be brushed in no time. Dew is quickly removed to allow for better early morning play. The GreensGroomer™ patent-pending brush design provides one pass brushing of fairways and greens. When finished, the Triple breaks down in 2 minutes for transport.

Simple, efficient, easy to use. The GreensGroomer™ Triple—Simply the Best!



Johnson Turf Equipment

P.O. Box 196 • Wautoma, WI 54982

PH: (920) 293-8247
PH/FAX: (920) 293-5131



Fine Fescue Fairways

By Dr. John Stier, Department of Horticulture, University of Wisconsin-Madison

Most golf course fairways in Wisconsin sport a preponderance of the superintendent's arch nemesis, annual bluegrass. Relief may finally be in sight. One of the surest ways to rid a system of *Poa annua* is to stop irrigating and fertilizing. This may work; unfortunately the creeping bentgrass or Kentucky bluegrass usually dies out too, providing the superintendent an opportunity to seek out a course with less *P. annua* (or 100% *P. annua* depending on one's inclination).

Fine fescues have long been known for their tolerance to dry, infertile soils. In the 1800's golf courses lacked irrigation systems. Mowing was performed using horse-drawn reel-mowers. Fertilization was slim to nonexistent. Fine fescue was the grass of choice for fairways because it could withstand the infrequent mowing

and lack of irrigation and fertility.

Humankind is constantly searching for improvements regardless of the situation. "New" is often synonymous with "superior". As golf evolved throughout the 20th century, particularly after WWII, Kentucky bluegrass came to be favored over fine fescues partly because it retained its green color better during the summer than fine fescues. Recently creeping bentgrass has come to be the elite standard for fairways in the northern U.S. But elite grasses bring elite problems: more chemicals to control diseases, more irrigation water, increased fertility, and expectations of continuously lower mowing heights (many superintendents are now under pressure to maintain bentgrass fairways at 3/8").

Golf courses will remain subject to public scrutiny as

**Our fertilizer has absolutely no effect on ball roll.
Sorry.**

SPRING VALLEY®

Step up to an improved level of play by contacting one of our golf greens professionals. Make a toll-free call to 1-800-635-2123 today.

our society continues to develop environmental awareness across many levels. The need to develop golf courses on poor soils plus restricted use of water, fertilizer, and pesticides will dictate management changes compared to what we now take for granted. Fine fescues, now restricted to golf course roughs, may once again take their place on fairways. I was always taught fine fescues couldn't survive the low heights of cut typical of a fairway, but the teaching was perhaps not from a broad enough perspective. Dr. Beard's 1973 publication, *Turfgrass: Science and Culture*, points out that red fescue provides an excellent fairway turf at heights between 0.5 and 1.0 inch. Most recent textbooks, however, indicate a minimum height of 1.5 inches is required for fine fescues. If one doubts the ability of fine fescues to succeed at less than 1" height, all one has to do is visit Europe, where fine fescues are used not only on fairways but are routinely mixed with bentgrass for greens.

Types of fine fescues

As an extension specialist I constantly find myself providing recommendations to people for grass types

to grow in adverse situations. My recommendations for shaded sites usually rely heavily on fine fescues. Invariably, I need to explain the types of fine fescues, then discuss what makes one type different from another before the client feels sufficiently comfortable to purchase seed. While their extremely fine textured leaves characterize all fine fescues, distinct differences do exist among the primary four turf-grass types.

Creeping red fescue, often simply called red fescue, includes two subspecies: strong creeping red (*Festuca rubra ssp. rubra*) and slender creeping red (*F. rubra ssp. trichophylla*). The strong creeper is more rhizomatous than the slender creeper; the two types also have different numbers of chromosomes. Both subspecies have reddish lower sheaths and produce reddish inflorescence ("seedheads"). The creeping red fescues exhibit the widest range of color variation, ranging from light to very dark green varieties.

Chewings fescue (*F. rubra ssp. commutata*) is closely related to creeping red fescue and is sometimes lumped in descriptions as red fescue. Unlike the

Spray in the wind with the WINDFOIL



- ▶ Reduce Environment, Public Pesticide Exposure
- ▶ Increase Productivity / Stay on Schedule
- ▶ Maintain on Target Applications
- ▶ Increase Public Confidence
- ▶ Adapt to your Current Sprayer
- ▶ Current Customers Thru-out Wisconsin



Windfoil
PROLAWN®

Commercial Turf Equipment and Supplies®

1-800-292-3628 (414-782-8869)

"DEMONSTRATION DRIVEN"



creeping red fescues, however, Chewings fescue has a bunch type growth habit. It is capable of excessive tillering, however, and Turgeon points out in his book Turfgrass Management that it is capable of producing a dense turf at heights of approximately one inch.

Hard fescue (*F. longifolia*) has a bunch type growth habit but may be a good candidate for Wisconsin fairway turf. Several times when I have accompanied Dr. Mike Casler (UW-Agronomy department) on collecting trips we have found large patches of fine fescue growing in what are otherwise *P. annua*, bentgrass or Kentucky bluegrass fairways. What's really exciting is when we find a large patch of fine fescue, one foot or more in diameter, growing amidst *P. annua* which has been killed by snow mold. The hard fescues are often distinguishable due to their dark bluish/grayish green color. Mixtures of fine fescues often include hard fescue because they tend to retain their color further into the summer than creeping red or Chewings fescue.

Sheep fescue (*F. ovina*) is another fine fescue, which is routinely entered into evaluation trials. A very dark blue-green color, only one cultivar of sheep fescue is commercially available. While it probably has the greatest tolerance of dry, acid soils of any of the fine fescues, it is not adapted to intensive culture and is used primarily for soil stabilization.

So what are we doing with fine fescue?

One of the ways we are attempting to make a difference is to breed turfgrasses adapted for Wisconsin conditions. The turfgrass breeding program is led by Dr. Mike Casler. Since 1997, we have been collecting fine fescue plants from older Wisconsin golf courses (pre-1950) for breeding purposes. The goal is to develop low input turfgrasses for Wisconsin fairways which can withstand sub-freezing conditions, low fertility and sandy soils, acidic pH, minimal irrigation, and snow mold diseases. Unfortunately, worthwhile breeding efforts take time to yield usable material, and testing methods need to be worked out in advance of breeding commercially viable cultivars.

In February 1998 I submitted a proposal for a fine fescue trial to the National Turfgrass Evaluation Program (NTEP). I proposed maintaining the turf as a fairway situation, with fertility limited to 0.2-0.5 lb/1000 ft² per growing month and irrigation only as needed to prevent drought stress. The turf was to be mowed between 0.5 to 1.0 inch height, two to three times weekly. Fungicides were not to be applied. NTEP not only accepted the proposal, but also called to ask if I would install a second trial and subject it to traffic. Since we may learn very little from a field research program unless we kill some turf, I said sure, then began scrambling to figure out how to simulate a uniform level of golf cart simulated traffic

on 79 varieties of fine fescue.

Fortune favors those prepared. Within a week of finding out my proposal had been accepted by NTEP, Tom Schwab told me the Biological Sciences Engineering department at UW-Madison (I still call it the Ag Engineering department) was seeking proposals for class projects. I described my vision for a traffic simulator, explained the need, and sent the proposal to BSE. I was excited, not to mention surprised, when they called and said they had accepted my proposal as one of the class projects for autumn 1998. They liked it because they said it was "unique" and presented new challenges. Dr. Kevin Shinnars was the instructor in charge of the project. One of the first things I did was have him visit the O.J. Noer Facility to give him a flavor of turf research. I believe Kevin left the O.J. Noer Facility not only with a better understanding of the type of traffic simulator I wanted but a very favorable opinion of the facility and the turfgrass industry in Wisconsin. Another thing I did right away was using the Noernet to collect data on the number of carts rented during a typical Wisconsin golf season. The number varied greatly but I was able to get a decent average. The plan was to emulate the number of golf carts a fairway turf might be subjected to in

LEADERS IN TURF FUNGICIDES



LESCO offers a wide range of products for turf and ornamental disease control. Available in sprayable, granular and fertilizer combination options.

For more information contact LESCO, the company providing the quality you expect, backed by the service you deserve.

800-321-5325 **LESCO**[®]

Manicure and Acco-Stick are trademarks of LESCO, Inc.
LESCO is a registered trademark of LESCO, Inc.

FINES FREE TOPDRESSING™



You take pride in your greens.
This season give them the best
topdressing available...Fines Free™
from Waupaca Sand & Solutions.

Free quotes and test results.
Call Jim, Brett or Curt
715-258-8566.



A DIVISION OF FAULKES BROS. CONSTRUCTION, INC.

Exclusive Distributor of

GREENSMIX®
CONSTRUCTION MIXES

**NORTHWOODS
ORGANICS®**
SPHAGNUM & REED SEDGE PEATS

Supporting member of WGCSEA