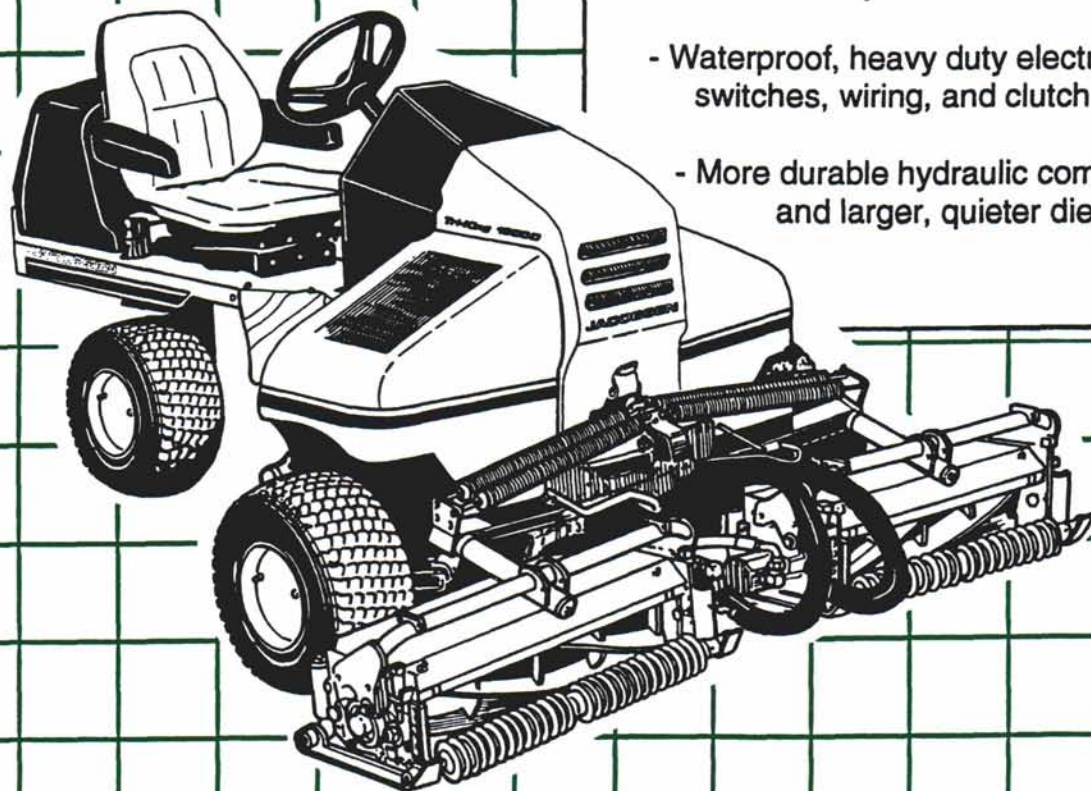


Product Profile : Tri-King 1900 D



The **JACOBSEN 1900D** - a completely new machine with five major improvements.

- Hydraulic power steering and automatic three wheel drive
- Three piece hood for a no tools, easy access to all components
- Easy to adjust, positive height and reel to bed knife adjusters
- Waterproof, heavy duty electrical switches, wiring, and clutch
- More durable hydraulic components and larger, quieter diesel engine

THE PROFESSIONAL'S CHOICE ON TURF.

JACOBSEN **TEXTRON**

Jacobsen Division of Textron Inc.



illinois lawn equipment, inc.

16450 South 104th Avenue • Orland Park Illinois 60462

708-349-8484



Technology Backed By Tradition

Hiring an Irrigation Consultant

Gary Hearn, Salt Creek G.C.

What's it! I am tired of night watering, dragging hoses, quick couplers, and dodging skunks. I am disgusted with inconsistency in water pressure and distribution, brown fairways, and priming a PTO pump. Boy! I need a new irrigation system. Where do I start; let's try with an irrigation consultant.

Define "consultant": "a person who gives expert or professional advice." An irrigation consultant, as defined by the trade, is an independent person or firm who specializes in irrigation system design and management. In general, they offer complete professional services including: analysis of existing systems, feasibility studies, master planning, detailed plans and

specifications, staking of sprinkler locations, construction observation, water management and programming of irrigation schedules.

There are normally three phases to an irrigation consultant's procedures:

1. Design
2. Bidding
3. Installation

Phase I, Design

The consultant spends considerable time analyzing the layout of the course and the management aspects of its operation. Given the opportunity, the consultant would want to know your likes, dislikes and preferences regarding irrigation system options. The consultant stays current with all developments in the irrigation field and can recommend state-of-the-art equipment that fits

your irrigation situation. The consultant, through investigations of your situation, makes intelligent choices for your irrigation system and should avoid the choice of sub-standard materials and equipment or equipment that may be overly sophisticated for your needs.

A typical golf course irrigation consultant's services should involve analysis of your existing system. If there is no existing system, the consultant will look over the course to determine, with the superintendent's input, what areas require watering and what areas may not be watered, what to use as a water source, soil conditions where wet and dry areas are located, course boundaries, locations for pumps and controllers and availability of electrical supplies.

(continued on page 30)



**the
bruce
company**
of Wisconsin, Inc.

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*



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

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



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

CALL US TODAY!!

Lee Bruce

(608) 836-7041

Dave Weber

Established 1953

PUT YOUR MONEY WHERE YOUR DOLLAR SPOTS

A lot of different turf products suggest using them as your "cornerstone."

Problem is, few tell you why. But with **CHIPCO® 26019** the reasons are clear. You see, **CHIPCO® 26019** offers you the dual action of both a contact fungicide *and* a local systemic fungicide.

So whether you tankmix or rotate, you can count on season-long control of Dollar Spot, Leaf Spot, Brown Patch, Fusarium Blight, Necrotic Ring Spot, even Pink and Gray Snow Molds. *And that's* what we call a cornerstone.

CHIPCO® 26019

KERRY ANDERSON

815-923-1323
Fax 815-923-1323
Car 815-592-3948

P.O. Box 21
Union, IL 60180



Rhône-Poulenc Ag Company, 2 T.W. Alexander Drive, Research Triangle Park, NC 27709. For further product information, please call 1-800-334-9745. As with any crop protection chemical, always read and follow instructions on the label. CHIPCO is a registered trademark of Rhône-Poulenc. ©1995 Rhône-Poulenc Ag Company.



FULL SERVICE GROUND WATER SPECIALISTS



Meadow Equipment Sales & Service, Inc.

Well Drilling Contractors / Pump Service
27 W. 021 St. Charles Road
Carol Stream, IL 60188

- Water Well Drilling
- Pump Sales and Service
- Water Well Sealing & Capping
- Complete Waterwell Systems
- Large Selection of Pumps
Line Shaft / Submersible
- Well Rehab & Chlorinations
- Maintenance Programs
- 24 Hour Emergency Service

Authorized Sales and Service for
Leading Pump Manufacturers

WHEATON: (630) 231-6250
ST. CHARLES: (630) 584-6210
BENSENVILLE: (630) 766-1906



"Where Meadow Goes,
the Water Flows"

Inside the Ropes

*A 1996 Masters Tournament
Journal submitted by John Jordan*

John Jordan is currently a senior majoring in Turfgrass Management at Iowa State University in Ames, Iowa. He has been named to the Dean's List six semesters and was member of the Iowa State golf team for two years. John was recognized as a 1995 GCSAA Scholar and was recently appointed student representative of the GCSAA Education Committee. John has interned at several quality golf courses including Interlachen in Minneapolis, Minnesota, and most recently at Augusta National, Augusta, Georgia.

Monday, April 8

Four o'clock came awfully early on this Monday morning of Masters week. Months of hard work finally began to pay off as the admission gates opened at 8 a.m. to the general public. Once inside this majestic compound, the spectator is easily overwhelmed by the perfectly manicured turf and the stunning display of flowering dogwoods, rhododendrons, and azaleas. Sure would be nice to have some of these 10- to 15-foot Japanese maples up North! Crew morale was very high as the approximately eighty-five paid and volunteer workers headed out to the course for their morning tasks. My tasks for the week included mowing the

3rd and 4th greens as well as the 1st and 2nd greens of the par 3 course. As I walked the fairways of Amen Corner whipping away clippings left behind from the 15 fairway mowers, I couldn't help but notice the impressive number of people on the golf course. The afternoon was spent with backpack duty on the second green, and it was a treat to watch the greatest golfers in the world hit shots into this par 5. Evening green runs were fun, especially in front of thousands of people taking your picture while mowing these famous greens. No cameras after Wednesday please! Bunker, flymo, and mowing crews finished up at dusk, and irrigation checks

(continued on page 24)

Hollembeak Construction, Inc. **Golf Course Construction and Remodeling**

"We believe in a quality job and take pride in our finished product."

- New Construction
- Feature Shaping
- Bunker Sand Replacement
- Pond Dredging
- Pond Construction
- Boulder Features
- Cart Paths
- Drainage

Mike Hollembeak

P.O. Box 103
Big Rock, Illinois 60511
Phone (708) 556-3891

Jeff Hollembeak



LEGACY™
GOLF IRRIGATION

Now There's A Third Option...

**Backed Up With 30
Years of Experience.**

In the past, golf course superintendents generally got two bids when replacing an irrigation system. But now there's a new option. Legacy, with three decades of experience. Legacy has brought together the world leader in gear-drive technology and the leader in control systems and valves. This combined track record is unsurpassed for quality products and experience.

**Century -
Your Link to Legacy**

Whether you're replacing just one head, an entire system or planning a new course, call a Century golf professional. With more than 30 years of experience and an impressive list of satisfied customers, Century can show you the advantages of a third option with Legacy

800-347-4272

<http://www.Rainaid.com>

CENTURY RAIN AID

Legacy now available at
44 Century Rain Aid locations
in the eastern U.S. and Canada.
There's a branch near you!

**It's easy to
get attached to**

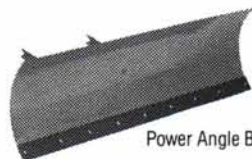


Looking to move up to the quality of a Steiner? You'll find the same quality Steiner engineering – with many of the capabilities of our most powerful models – in our four-wheel drive 410. It's designed for



Rotary Sweeper

dirt and snow, edge, blow, chip, aerate and more – in minutes. Find out why the 410 is so easy to get attached to. See your authorized Steiner dealer today.



Power Angle Blade

smooth handling with our unique articulated frame, low center of gravity, high flotation tires and responsive power steering. Best of all, thanks to its "Quick-Hitch" attachments, you're ready to mow, move



Tiller

STEINER

THE STEINER

A TURF TRACTOR WITH A DIFFERENT TWIST

ROSEMAN TRACTOR EQUIPMENT CO. INC.

2620 Crawford Avenue

Evanston, IL 60201

847-864-1842 FAX 847-864-1938

Biological Disease Control...

(continued from page 8)

"There is currently more skepticism than optimism among the university professionals doing this type of research," said Dinelli. "None of the scientists dispute the disease suppressive abilities of *Pseudomonas* spp. They do, however, doubt the ability of the organism to establish itself on a long-term basis in the competitiveness of the real world soil environment," he continued. "And they're right."

The key, according to Dinelli's experience, is the constant re-inoculation of the root and crown environment with *Pseudomonas* bacteria with each irrigation application. Spoon-feeding, if you will. Before the BioJect system became available, the only method of applying *Pseudomonas* was by mixing dormant bacteria from a bottle into a spray wagon. There were the obvious logistical challenges of applying sufficient quantities of bacterial agent at a frequency proper to maintain the desired bacterial population. Aggravating the situation was the ultraviolet sensitivity of *Pseudomonas* bacteria; they are optimally applied in the dark.

BioJect solved these issues by incorporating into the system vastly greater quantities of bacteria, which are maintained live in the bioreactor (rather than dormant, as before). By applying them via irrigation at night, ultraviolet degradation becomes a non-issue. And, as long as you're irrigating, frequency of application concerns are also overcome.

Field trials at North Shore

"We set up some test areas last year around our golf course that were not to be sprayed with preventive fungicides," said Dinelli. "Our #8 fairway, a par 3 of creeping bentgrass and *Poa annua* approximately one acre in

size, was used along with two of our bentgrass nurseries. The nurseries were maintained like putting greens. One of the nurseries, containing seven varieties of bentgrass, was disconnected from our irrigation water source and connected to village water, so it received no preventive fungicide applications or any *Pseudomonas* inoculant," according to Dinelli. "It was our true control."

"In retrospect, the weather we experienced during the 1995 season here in the Chicago area created a worst-case 'acid test' of environmental extremes and disease pressure—a perfect opportunity to see what this biological control system would (or would not) do,"

"The second nursery had 35 varieties of creeping bentgrass, many of which are unnamed experimental varieties. This nursery received only *Pseudomonas* applications through the irrigation water. No preventive fungicides were applied. The rest of the golf course was treated as we normally would," explained Dinelli.

"In retrospect, the weather we experienced during the 1995 season here in the Chicago area created a worst-case 'acid test' of environmental extremes and disease pressure—a perfect opportunity to see what this biological control system would (or would not) do," said Dinelli.

"By the end of July, our 'bare-bones' control nursery was literally wiped-out by brown patch, *Pythium* and dollar spot. We actually stopped mowing it, it was so bad. During the third week in August, we had three consecutive days of rain, totalling over 2.5", with extremely high temperatures and humidity. We were obviously not irrigating during this period, so the *Pseudomonas* bacteria were not being applied, either. Four days after the rain stopped, we saw brown patch move into the #8 fairway. The next day it appeared in the second nursery. We applied Thiram to check the brown patch, which was the only fungicide application these areas received all season until snow mold control in November," Dinelli noted.

"The brown patch did not kill to the crown and grew out within two weeks. By that time," according to Dinelli, "we were back into the watering regimen, applying *Pseudomonas* again."

"During this period of extremely high disease pressure (aggravated by heavy rains), the apparent population of *Pseudomonas* bacteria fell under the threshold for adequate control after four to five days. We now know to intensify our scouting efforts after a similar period and apply a contact fungicide as needed until we get back into a regular watering regime to re-establish the *Pseudomonas* population," advised Dinelli. "Given proper drainage, it would be possible to run through a syringe cycle even while raining. But we have old soil push-up greens here, and the overall agronomic downside of the added water outweighs any benefit from the added bacteria, in my mind," he concluded.

(continued on page 22)

“Don’t Be Caught Off Guard By The 1998 Underground Storage Tank Regulations Act”

SERVICES OFFERED

- *Underground Tank Removal, Installation & Upgrades*
 - *Above Ground Tank Installation*
 - *Petroleum Equipment Distributors*
 - *Distribution & Installation of Compressed Natural Gas Equipment*
 - *Pump Sales & Service*
 - *General Contracting*
 - *Key and Card Fuel Management Systems*

“FULL SERVICE PETROLEUM EQUIPMENT INSTALLATION SPECIALISTS”

TRANSPLANTING


TREE
Specialists

*“Plant a tree . . .
create a legacy”*

- SPECIMEN LANDSCAPE MATERIAL
- CUSTOM DIGGING
- SHREDDED BARK MULCH





HORTICULTURAL ENTERPRISES, INC.
14440 MARENGO ROAD • UNION, ILLINOIS 60180
847-669-8658 • FAX 847-669-8662
Formerly known as WILLIAMSON NURSERY & ASSOC., INC.




Greenlinks
CUSTOM-BLENDED FERTILIZER

BULK SACKS

CUSTOM-BLENDED TO YOUR EXACTING STANDARDS
Featuring The Following Premium Products...



- ★ 1,000 Lb. Sack!
- ★ Ecologically-Sound, Returnable Container!
- ★ Can Be Lifted By Most Tractors Found on Golf Courses!
- ★ Economical!
- ★ Eliminates Bag Disposal!
- ★ Eliminates Loss From Broken Bags!
- ★ Quick Application!



Tyler Enterprises of Elwood, Inc.
P.O. Box 365 • Route 53 • Elwood, IL • 60421
1-800-421-4740 • 815-423-5551 • Fax: 815-423-6331

Adequate Drainage Key to Holding Courses During 1964 Heat and Humidity

Minutes from the CDGA special meeting of November 12, 1964.

Editor's Note: These minutes were sent to me by Dan Dinelli, North Shore C.C. We felt that they were appropriate after what took place in the summer of 1995.

A panel of turf authorities arrived at the above truth during a seminar called by the Midwest Association of Golf Course Superintendents and the Chicago District Golf Association at the LaSalle Hotel on August 21, 1964. The meeting was attended by 212 people vitally interested in what happened to Midwest golf courses during the summer of '64 and what can be done to avoid recurrence. They were welcomed by Charles N. Eckstein, CDGA Green Chairman, and the following is a distillation of the opinion represented.

It was established that two types of fairway turf are present in the Chicago area: *Poa annua* bentgrass and Kentucky bluegrass fescue. *Poa annua* is an annual bluegrass which will withstand short cut, has a shallow root system and requires frequent watering. It is a fair weather friend which exhibits extremely vigorous growth in cool weather but thins-out during periods of extended heat and humidity. Bluegrass fescue is a hardier turf with a deeper and more vigorous root system. It requires less water than *Poa annua* bentgrass.

On heavily watered, short cut fairways *Poa annua* predominates and makes up the fairway turf, even though many people are under the impression that bentgrass is the primary cover.

Chicago District Golf Association
Room 221, LaSalle Hotel, Chicago 60602
Code #312-782-7485
November 12, 1964

**PANEL OF
TURF AUTHORITIES**

James L. Holmes
Mid-Western Agronomist,
United States Golf Association

Warren Bidwell
President,
Midwest Association of Golf
Course Superintendents
Superintendent,
Olympia Fields Country Club

Dr. Mike Britton
Turf Pathologist,
University of Illinois

Jack D. Butler
Turf Pathologist,
University of Illinois

Dr. William Daniel
Professor of Agronomy,
Purdue University

Roy Nelson
Past President,
Golf Course Superintendents
Association of America
Superintendent,
Ravisloe Country Club

Therefore, it must be kept in mind that the culture of *Poa annua*, and not bentgrass, is the first concern. This is important because *Poa annua* will succumb to the vagaries of nature more quickly than will bentgrass.

Many clubs have attempted to establish and encourage a greater percentage of bentgrass in fairway areas. Results to date have not been heartening primarily because *Poa annua* crowds out

bentgrass during spring and fall when *Poa annua* is undergoing vigorous growth.

Equipment which semi-tills the soil, thus presenting a more suitable seed bed without greatly interfering with play, has been introduced. It is possible that through diligent and proper use of such equipment, larger amounts of bentgrass can be encouraged in fairway areas. Current knowledge indicates this would be desirable. Even so, the absolute necessity of rapid surface drainage can never be overlooked.

Surface drainage is the unequivocal answer to the perplexing problem of holding *Poa annua* during periods of high heat and humidity. Continued observation proves that turf in well-drained areas does not die. Conversely, turf in areas of poor drainage frequently shows 100 percent kill. A two-inch rain should (and CAN) be drained in 15 minutes to prevent death of turf. *Poa annua* cannot tolerate standing water.

An excellent case in point is the surface drainage work done by Mr. Roy Nelson, superintendent of Ravisloe Country Club. Mr. Nelson developed a new system of drainage slit trenches filled with pea gravel, which, combined with proper tile installations, has afforded rapid surface run-off. The Ravisloe program to insure adequate drainage began in 1958. Prior to that date, large fairway areas were frequently lost. Since the new drainage program has

(continued on page 32)

Consult Your *Turf Products* Representative For The **Bayer** Products You Need



Bayleton Mini- This resealable air-tight drum is the equivalent of 5.5 cases of Bayleton with 88 individual water soluble packets. The Bayleton Mini is recyclable, reuseable and convenient. Choose Bayleton, the fungicide you have always trusted, for the foundation of your disease management program.



Tempo GC- This new label and package is specifically designated for golf course use. Tempo, a synthetic pyrethroid, provides excellent control of surface feeding pests.

**Merit-The Most Effective Grub
& Ataenius Control on the Market**



**2N 255 County Farm Road
West Chicago, IL 60185
(630)231-8441**

the Bull Sheet

DATES TO REMEMBER

August 7 — ILCA Field Day at Bork Nurseries, Onarga, IL.

August 12 — MAGCS monthly meeting at Fox Run Golf Links.

August 21 — University of Illinois Field Day, Urbana.

August 23 — Family picnic and Kane County Cougars baseball.

September 16 — MAGCS monthly meeting at Skokie C.C.

October 1 — ITF golf day at Schaumburg G.C. and Poplar Creek G.C.

October 8 — MAGCS monthly meeting at Bryn Mawr C.C.

November 7 — MAGCS clinic and annual meeting at Butterfield C.C.

November 12-14 — Penn State Turf Conference at State College, PA.

November 19-21 — Three-day Turfgrass and Ornamental Seminar at Purdue.

December 2-4 — NCTE at Pheasant Run Resort & Golf.

In your August meeting notice, there was an enclosed postcard asking for information on what diseases troubled you the most. Please fill in your answers on the card and send it on to the University of Illinois.

We have some new assistant superintendents in the area this year. Chad Millang, who graduated from Iowa State, is at Biltmore C.C. under Brian Thompson, and Doug Wright is the assistant at Idlewild C.C. under Dave Holler.

For Sale: 1994 BANJ Slury Tank, 100 gal., never used; 1994 Gandy 12' roller; 1993 Mill Creek spreader; 1990 Lesco Turf saw; 1987 SDI-D14, 100 gal. sprayer; 1985 Toro Greensmaster 300; 1981 Toro Greensmaster 3; 1985 5-gang hydraulic fairway mower; 1977 Dedoes aerator; old leaf sweeper; and a Ryan Spread-Rite. Best offer. Call Brian or Chad at Biltmore C.C., 847-381-1963.



Some Guys Can't Make The Team And Must Be Cut. A Winning Tradition, JoPa and the Bear

The American Society of Golf Course Architects has published its new 1996 listing of the Society's members. The redesigned directory of all the members' addresses, telephone and fax numbers provides a quick and easy reference to the Society's 128 members. To obtain a free copy of the list, send a stamped, self-addressed

envelope to the American Society of Golf Course Architects, 221 N. LaSalle, Chicago, IL 60601.

The National Arborist Association at its Annual Management Conference this past February in San Diego presented their Award of Merit to John Hendricksen of Hendricksen, the Care of Trees. This award, determined by nominations from peers, recognizes a person, company, or an institution for outstanding service in the field of commercial arboriculture.

Four plus one equals FIVE. Debbie and Joel Purpur, along with daughter Kailey, age 7, and brother Hayden, age 4, welcomed brother Riley R. Purpur into the family on June 20. Riley weighed 8 lbs. 7 oz. Congratulations!

Congratulations to the latest CGCS. Dan Dinelli became certified on June 4. Dan is at the North Shore C.C. and is the third-generation superintendent. The Dinellis have been maintaining turf on the North Shore longer than most people can count.

The 1996 Michigan Turfgrass Field Day will be held Thursday, August 15, at the Hancock Turfgrass Research Center, Michigan State University, East Lansing, MI. For information, call Kay at 517-321-1660.

This past winter/spring has really been tough on the plant material. Everyone has experienced some losses of trees or shrubs. It didn't seem to matter the age or species of what died. Joel Purpur, for one, counted 53 trees that never leafed out; and as mentioned, they were all sizes and species. The tree nurseries experienced many losses as well. This past year and a half, the weather has been very hard with the very wet spring of '95, the heat and

(continued on page 34)