possible, are run under pipe for maximum protection.

Controllers, available in stainless steel or plastic key-lockable pedestal versions, permit control of up to 100 stations (plus a pump/master valve) from a single controller. From the controller, a single twisted pair of wire is run through the area to be irrigated. A decoder is spliced into the two-wire path. Decoders, in turn, are connected to their solenoids and additional decoders are spliced in as needed.

When the controller turns on a station, it sends power down the twisted wires along with a digital signal specific to a particular decoder. As the decoder hears its own signal, it applies voltage to the solenoid and communication from controller to the field is complete.

Of course there is the obvious benefit of being able to control and adjust irrigation in the field from a single location. Also, up to 65 programs can be stored in the controller’s non-volatile memory allowing the system to water massive irrigation schedules.

With such a high capacity controller, your complete system will require fewer controllers to operate all of your sprinklers without giving up local access (in view of your plants) that field controllers provide. Plus, the two-wire decoder path also makes retrofitting new stations after the initial installation a snap – just snip the wires and splice in another decoder.

As a decoder is actually a simple switching device, there are many functions that it can perform for the benefit of the operator. For example, rain sensors and/or moisture sensors as well as flow sensors can be installed. The latter are particularly useful in shutting down the system if there is a water restriction or a pipe break.

Finally, decoders can operate gates, lights and any other security applications on the park site.

Projects that can benefit from a decoder irrigation system include:

School and Industrial Campuses
Parks and Cemeteries
Town Centres, Urban Plazas and Shopping Malls
Businesses with Branch Locations
Apartment Buildings and Condominiums
Large Residential Estates and Homeowner Associations
Sports Field Complexes

In addition to the standard four independent programs, two other distinctive programming options are available. One is blocks, from where 2-8 stations can all be turned on at once and irrigated together. The other is presets, custom programs created to perform special applications only run when instructed from the keypad.
What is your role at Ridley College?
My title is manager of the grounds/arena department. My role is to attend property and landscape committee meetings as well as set budgets, schedule work and employee shifts. I also do all the purchasing for the department and oversee the day to day operations.

What kind of team do you work with?
The core group has four full time employees. We bring in four students to help with landscape projects along with some of the daily jobs. I am happy to say that our full time staff is knowledgeable and have been with the school for a number of years.

What are you and your team responsible for?
We are responsible for the maintenance of all the turf and gardens during the growing season. We do some landscape projects and we also do the preparation for all sporting events. During the winter months, we are responsible for the ice maintenance and flooding for the user groups along with snow removal. We also look after all of our equipment maintenance.

What is the biggest challenge in your job?
I find there are two extremely difficult challenges in my job. The most difficult is trying to get all of our work done on a very tight schedule. A heavy field usage schedule along with a small department creates a real nightmare for scheduling work. I also find it difficult to juggle budget monies to accomplish much needed work especially when I have very little control over determining exact costs.

The only fixed spending for me is fertilizer and everything else is an experienced guess.

What is the most satisfying part, what makes the job worthwhile for you?
To look at the quality of the grounds and to accomplish what we do with so little. I was determined to provide athletes with better quality facilities than what I had when I went to high school. The ultimate compliment was paid to us last year when the Headmaster told us that some students had enrolled at the college and the determining factor was the campus and quality of the outdoor facilities.

What is the biggest misconception about your job?
Simply put, it is not that difficult to maintain the grounds. Many compare caring for a 100 acre campus with maintaining their own home lawn and gardens. We also have many who think that our department is off during the summer months, as are the teachers. It has taken me over ten years to explain and teach others how and why we do things.

What is your educational/employment background?
I received my ODH in general horticulture in '82 and my ODH in turf management in '92. I also received certificates of achievement as a home gardener in '89 and in grounds maintenance services in '96. I studied business administration for one year at university. Finally, I've spent 14 years in the horticultural industry (garden centres, nurseries and landscape maintenance) and 16 years in the sports turf industry.

Tell us about your family.
I was born and raised in the Windsor area. I moved to the Niagara Peninsula in '83 to continue my career in horticulture. This is where I met my wife Lori with whom I have been happily married for 14 years. Lori is presently employed as a keeper/horticulturalist at the Niagara Falls Aviary. My daughter Lindsay works in the field of law and security and resides in the Windsor area.

What do you enjoy doing outside of the workplace? Hobbies, favourite past times?
I'm a sports buff. At present, I play squash and attempt to play golf. I enjoy working on home renovation projects and gardening. I also enjoy having pets around the house.

What direction(s) would you like to see the industry, as a whole, move towards?
I have found throughout my career that many people do not take our industry seriously. There are inconsistencies in the industry such as hiring practices and
standards of care for sports fields that contribute to these inconsistencies. We need to reach common denominators when it comes to hiring practices. Employers need to demand prerequisites like schooling and minimum years of experience. We also need to set standards for wages and minimum standards for sports field maintenance. By doing this, we create consistency throughout the industry and therefore our credibility increases. Our voices are weak right now because of these inconsistencies. This proves difficult when trying to fight such things as pesticide bans.

What do you consider to be the biggest benefit of being a member of the Sports Turf Association?
Being a member of this association provides me with the tools needed to succeed in this industry. The association offers seminars and field days geared to our special needs. It also affords me the opportunity to keep up on the educational aspect of our industry. I benefit from the business contacts and can meet and discuss topics with fellow members.

Environmental Benefits of Turfgrass
DR. JAMES B. BEARD, PROFESSOR EMERITUS, TEXAS A&M UNIV.

A s well as being attractive, turfgrasses have numerous important functional purposes. These important dimensions that contribute to our quality of life are too often overlooked.

Functional Benefits
- Soil erosion control – the best and most cost-effective means for protecting a vital resource.
- Dust stabilization – the best and most cost-effective approach.
- Reduces precipitation run-off (flood control) due to a dense canopy biomass.
- Increases ground water recharge by water entrapment in dense canopy.
- Active entrapment and biodegradation of organic chemicals via a large, diverse microbial population.
- Atmospheric pollution control, both particulate and chemical, by canopy entrapment.
- Carbon sequestration (soil organic carbon accumulation) in grass-based soils from extensive root decomposition.
- Reduces noxious and nuisance pests – mosquitoes, chiggers, rodents and snakes – Lyme disease, West Nile virus, etc.
- Enhances property security by providing open visual site lines.
- Lower fire hazard spread via green fire-breaks in urban areas.
- Safety in vehicle operation, equipment longevity on roadside and air fields.
- Urban heat dissipation via evapotranspiration.
- Noise abatement – a 40% reduction in 70 ft. of roadside turf.
- Lower water use rate than trees due to lower leaf area per unit land area.

Recreation and Aesthetic Benefits
- Enhances physical health of participants including cardiovascular functions.
- Serves as a safety cushion against impact injury – best in cost-effectiveness.
- Provides a low-cost surface for outdoor sport and leisure activities.
- Even home lawn care offers physical exercise, especially for senior citizens.
- Improves mental health, especially in urban areas.
- Contributes to social harmony among people.
- Contributes positively to attitudinal work productivity.
- Has therapeutic value to individuals recovering from serious illness.

Among may other benefits, turfgrasses control erosion, increase ground water recharge and enhance property security.

Summary
Properly maintained lawn and recreational turfs:
1) Contribute a diverse array of benefits that make turfgrasses one of the best friends of the urban environmentalists.
2) Greatly enhance our quality of life, especially in densely populated urban areas.

Acknowledgement
This article summarizes a detailed research review paper published in the Journal of Environmental Quality by J. B. Beard and R.L. Green. Copyright 2004 by James B. Beard. For a complete copy of the research review paper, contact info@TurfGrassSod.org.

— Turf News, Volume 28, Number 2, March/April 2004
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THE HOME OF SPORTSTURF MAGIC

14 SUMMER 2004 | Sports Turf Manager
Jacobsen Names G.C. Duke Equipment, Ltd. Dealer of the Year

Charlotte, NC, March 3, 2004. Jacobsen, a Textron company, named G.C. Duke Equipment, Ltd. of Burlington, Ontario, as Dealer of the Year during the company’s annual dealer meeting held in conjunction with the GCSAA show in San Diego, California.

“We are very proud to present this award to G.C. Duke Equipment, Ltd.,” said Jon Carlson, President of Jacobsen. "In earning this award for superior performance in both sales and customer service, G.C. Duke demonstrates that Jacobsen dealers do more than just mow."

Jacobsen manufactures a full range of vehicles and turf maintenance equipment for golf, turf, professional lawn care, sports field and industrial applications. The company markets Bob-Cat®, Brouwer®, Bunton®, Cushman®, E-Z-GO®, Jacobsen®, Ryan® and Steiner™ brand products internationally through an extensive distribution network. Jacobsen is a Textron company. Additional information is available online at www.jacobsen.com.

Textron Inc. (NYSE: TXT) is an $11 billion multi-industry company with 49,000 employees in 40 countries. The company leverages its global network of businesses to provide customers with innovative solutions and services in industries such as aircraft, fastening systems, industrial products and components and finance. Textron is known around the world for its powerful brands such as Bell Helicopter, Cessna Aircraft, Kautex, Lycoming, E-Z-GO and Greenlee, among others. More information is available online at www.textron.com.


Plant Science, Inc was founded in June 2003 as a research and development company for Professional Sports Turf Fertilizers. Environmental pressures affecting the turf industry have created a demand for new products and services founded on a scientific approach. Plant Science has introduced two new products during the spring of 2004.

Nature's Time™ 7-2-5 is a 100% Natural and Organic fertilizer derived from plant proteins from soybean and alfalfa meal. Plant protein is in a desirable form for decomposition by soil bacteria producing a consistent slow release nitrogen profile.

Rob Field, President of Plant Science, Inc., congratulates Jane Arnett-Rivers on the first shipment of Plant Science fertilizer received in Canada.

Tru-prill™ fertilizers combine Nature's Time Plant based organic material with conventional slow release nitrogen to produce homogeneous bridge products.

Plant Science in conjunction with A&L Laboratories offer an extensive technical services program which includes soil, tissue and irrigation water analysis. The information is used to promote balanced fertility as a first line of defense against pressures from insects, weeds, and disease.

For more information contact Plant Science at 1-866-499-0659.
So yet again it's time to train new staff and refresh the rest of us. Training all staff on all equipment can be daunting for both trainer and trainee. One step of starting or operating a piece of equipment missed can compromise all other safety precautions taken. It is imperative that you have a written plan for training and orienting workers. In order to train 60 summer staff in a short period of time, Oakville has devised a system which has greatly improved past practices. By designing a Safe Operating Procedure for every piece of equipment, the message is loud and consistent for every employee. Once reviewed, the trainer and trainee sign off that the information is acknowledged and understood. The safety of the operator and the corporation's investment in the equipment is protected. The following is an example of a Safe Operating Procedure.

**WARNING!**
This Safetygram is designed as a tool to be used in conjunction with the operator’s manual in the safe operation of Front Cut Mower. Further site training and experience are necessary for competent operation.

**SAFE PRACTICES**
- **DO NOT USE** equipment unless trained.
- If equipment is damaged or malfunctions, **DO NOT USE**. Report to your supervisor immediately.
- **DO NOT REMOVE** or circumvent any safety devices on the equipment.
- **ALWAYS WEAR** prescribed personal protective equipment.
- **FAMILIARIZE** yourself with the operating manual before use.

**PERSONAL PROTECTIVE EQUIPMENT**
- Safety footwear
- Gloves
- Hearing protection
- Long pants
- Eye protection

**PRE-USE INSPECTION & MAINTENANCE**
- Use diesel
- Use 15W40 Oil
- Refuel on hard surface
- Check all levels
- Clean entire machine daily
- Grease all fittings as prescribed
- Ensure all guards are in place and secure

**STARTING PROCEDURE**
- Understand how to start and stop machine
- Adjust seat and (mirrors) to suit you
- Remove feet from the pedals, turn the implement switch to the off position and engage the hand brake
- Turn ignition switch to the ON position
- Depress the glow plug if cold for 7 seconds
- Turn key to start engine

**OPERATING PROCEDURE**
- Walk area to be cut checking for debris that could cause damage to equipment, operator or property
- Do a complete circle check each day before starting
- Make sure mower is set at the proper height
- Be aware of people and surroundings close to work area
- Never leave running when unattended
- Always stay well clear of bystanders, be aware of chute direction
- **WEAR SEAT BELT**
- **DO NOT** engage blades until mower deck is lowered, disengage blades prior to lifting deck
- Mow so discharge is away from uncut area
- Mow across the face of slopes, never up or down. Keep off of wet slopes
- To **STOP**, slow engine speed by moving throttle lever to stop position and releasing deadpan lever
<table>
<thead>
<tr>
<th>TRANSPORTATION</th>
<th>CAUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Shut off machine</td>
<td>• Use only CSA approved fuel containers with WHMIS label attached</td>
</tr>
<tr>
<td>• When loading avoid hot parts</td>
<td>• Familiarize yourself with the manufacturer’s recommended operating procedure</td>
</tr>
<tr>
<td>• Always make sure mower is properly secured before transporting</td>
<td>• Wear all necessary PPE when operating this machine</td>
</tr>
<tr>
<td></td>
<td>• Never operate this equipment if it is broken or you feel that it is not running properly</td>
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<tr>
<td></td>
<td>• Exercise caution when refuelling</td>
</tr>
<tr>
<td></td>
<td>• Never tow this vehicle</td>
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<tr>
<td></td>
<td>• Never unclog machine with hands or feel while still running</td>
</tr>
<tr>
<td></td>
<td>• Keep hands and feet away from cutting blade while machine is running</td>
</tr>
<tr>
<td></td>
<td>• Never bypass or disconnect any switches</td>
</tr>
<tr>
<td></td>
<td>• Exercise caution when refuelling</td>
</tr>
<tr>
<td></td>
<td>• Never use your hands to search for hydraulic oil leaks</td>
</tr>
<tr>
<td></td>
<td>• Avoid stopping or starting suddenly</td>
</tr>
<tr>
<td></td>
<td>• Before leaving the operator’s position for any reason; disengage all drives, lower implements, set the parking brake, shut the engine off and remove the key from the ignition</td>
</tr>
</tbody>
</table>

Reviewed by: __________________________ Date: __________________________

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Coming Events

July 19-21
Ontario Parks Association
Annual General Meeting & Summer
Educational Institute
Oakville, ON
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www.opassoc.on.ca

July 27-30
Turfgrass Producers International
Summer Convention & Field Days
Harrisburg/Hershey, PA
Info: (847) 705-9898
www.TurfGrassSod.org

August 17
Guelph Turfgrass Institute
Summer Research Field Day
Guelph, ON
Info: (519) 767-5009

August 23
Ontario Turfgrass Research Foundation
Fundraising Golf Tournament
Burlington G & CC, Burlington, ON
Info: email cchar26920@aol.com

September 16
Sports Turf Association
Annual Field Day
Mississauga Valley Community Centre
Mississauga, ON
Info: (519) 763-9431
www.sportsturfassociation.com

October 20-21
Landscape Ontario
Garden Expo featuring Florist Expo
Toronto, ON
Info: 1-800-265-5656
www.hort-trades.com

November 16-18
New York State Turfgrass Association/
New York Golf Course Owners
Association
Turf & Grounds Exposition
Rochester, NY
Info: (518) 783-1229
www.nysta.org

January 11-13, 2005
Landscape Ontario
Congress 2005 featuring
Fencecraft 2005
Toronto, ON
Info: 1-800-265-5656
www.hort-trades.com

January 31 to February 25, 2005
Guelph Turfgrass Institute
Turf Managers' Short Course
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