

## Managing native grass

IRRIGATION, SPECIES SELECTION AND SEEDING RATES ENSURE NATIVE GRASS BENEFITS AREN'T OUTWEIGHED BY DRAWBACKS

by KEVIN J. ROSS, CGCS

**G**olf courses featuring native grass areas have existed for at least 200 years. But in the United States, native grasses have become en vogue during the past 25 years.

Native grass is any species indigenous to an area growing in nearby fields. These species survive with natural rainfall and no fertilizer or mowing. Pull them out of their normal environment, and they perform quite differently.

The extensive use of native grasses is often called the "Scottish look" because the practice can be traced back to the great golf courses in Scotland and Ireland. There are two primary reasons why the Scottish look

has become so popular recently.

The first is design value. Golf course design has moved to imitate the great architects and natural designs of the past, and what better way than to use design features of where the style originated, especially on older courses being restored to their original design intents.

Native grasses also suit courses that are built on open sites with little or no tree growth—an important consideration as more of the land available for golf course development lacks trees or strong, natural features. Such sites require designs that use mounding features to separate and define holes.

Architecturally, designers deal with fewer constraints during the routing process and in most instances, have an open canvas to work with when using native grasses. And the finished look of native grass areas offers aesthetic appeal even to the nongolf enthusiast.

The second major factor of this look's popularity is the environmental advantages native grasses provide. Native grasses reduce mower and labor costs and create natural buffer zones between maintained areas and waterways, ponds or nonmaintained areas. In addition, native grasses serve as a natural wildlife haven, providing an environment for small animals and stalking grounds for larger predators.

Native grasses also can be selected to meet the environmental needs of challenging climactic and soil conditions. Native grass species tolerate drought or wet (riparian) conditions, as well as alkaline, saline or acid soils.

With all of these advantages, are there any disadvantages to native grasses? The one debate concerning these areas is their effect on play. Many superintendents have heard golfers comment, "I hit my ball 2 feet out of the bluegrass rough, and I'm in this 3-foot-high area of thick, lush grass and can't find my ball."

The underlying question behind such comments is how native grass areas are managed. Establishment and management are the keys to having native grass areas perform as intended.

### Managing native grass

Native grass cultivar selection often results in grasses that aren't native to the area. In some instances, there's no problem with this, but in other cases, mistakes are made with selection. The typical mistake is selecting a cultivar that performs more like a turfgrass than a native grass.

Another mistake is the seeding/establishment rates for these grasses. Many times, superintendents and architects use rates that are too high and create a stand that's too dense and acts like a turfgrass stand. For example, the normal seeding rates for native fescues should be 30 percent to 50 percent less than a turf stand. This will provide a thinner stand and a much more playable situation than with a higher seeding rates. The grass will develop with a clumping growth habit and will seed better and obtain the wispy seedhead look that's desirable.



Photo: Kevin J. Ross

Properly maintained native grass areas can offer excellent aesthetic contrasts and perfect playability.

Balancing design integrity, aesthetics and playability is the challenge superintendents face when managing native areas. To achieve this balance, irrigation design and watering are top management issues. Native areas that receive water, or get even partially hit by water, create thick, dense and unplayable conditions. For a new golf course, being able to control and/or turn off the watering in these areas is imperative once the course is established to let the native grass grow as it was intended.

The most challenging area of water management is the interface area where the mowable rough meets native grass. The mowable rough needs water, but watering 100 percent coverage is difficult without some overspray hitting the native grass along the edge. Failing to accomplish this task often results in golfers commenting that they would rather hit the ball 10 feet into the native grass than 1 foot into the rough. In truth, an inter-

face zone can become unplayable from irrigation water hitting the edge of the native grass stand, while 10 feet in from the edge of the native grass stand is playable because the area received no water. Facing such a situation, the best solution might be to live with some rough on the dry side by setting the irrigation arcs slightly on the short side. An alternate solution could be to control the fine line of watered native grass by selectively mowing it.

Perhaps the most difficult area of native grass management is around bunkers and on bunker faces. Golf purists agree that bunker faces ringed with native grasses have a look second to none, and adding surrounding native grass to a bunker can make a regular sand bunker increase two to three times in size. Again, controlling the watering in these areas is difficult, and when watered, the grass tends to become thick and unplayable. Around such bunkers, many golfers agree the sand is the place to be and not in the native grass around it.

## A misunderstanding

Unfortunately, golfers often misunderstand design principles, strategies and hazards. Too many golfers expect every square foot of the course to be completely playable. Bunkers are hazards, according to the Rules of golf. Native grass edging isn't a hazard, but might play as difficult or even more difficult than other types of grass. The faces or fringes of the bunker are completely unplayable in some situations, and that's only if the golfer can find the ball. However, aren't these annoyances part of the game?

Unfortunately, there is no simple answer to how to manage native areas successfully? The decisions about managing native grass will lie with each club and its objectives for speed of play and playability. Most certainly, the architect's design should be considered before changes are made to create native grass areas. But the most important considerations are careful irrigation management design, species selection and seeding rates. Attention to these factors can help ensure the benefits of native grasses aren't outweighed by the disadvantages. GCN

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Native grass areas can offer an environmental balance with nature.

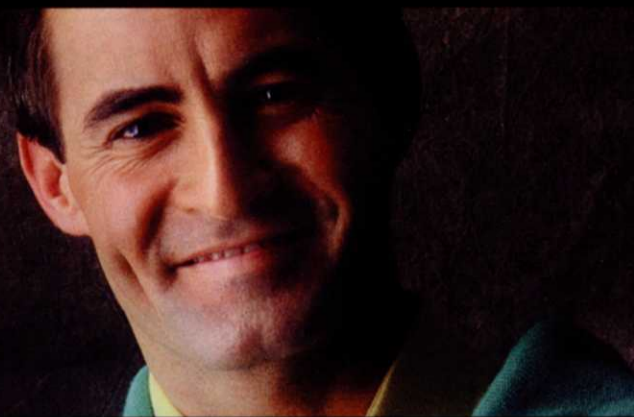


Native grass edging around bunkers that receive water result in a penal situation.



Few golf course designs are carved out of true native grasslands such as Sand Hills Golf Course in Nebraska.

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Responsible Industry  
for a Sound Environment

**DATA**

2003 (continues through 2005),  
Dan Potter, Ph. D., University of  
Kentucky

**SOURCE**

Jeff L. Nus, Ph.D., United States  
Golf Association, 2004  
*Turfgrass and Environmental  
Research Executive Summary*

**MORE INFORMATION**

<http://usgatero.msu.edu>

## Biologically-based management of white grubs and ants

**R**oot-feeding white grubs and cutworms are widespread and destructive insect pests of turfgrasses on golf courses in the cool-season and transitional turfgrass climatic zones. Ants are abundant in turfgrass habitats where they are beneficial by preying upon the eggs and other life stages of pest arthropods. Ants become pests, however, when their nesting and mound-building occur on closely-mowed turf of golf courses.

Researchers at the University of Kentucky are conducting research focusing on factors that determine the abundance and distribution of white grubs, cutworms and mound-building ants on golf courses. Parasitic wasps belonging to three different families were

discovered attacking BCW eggs or larvae, causing mortality as high as 27 percent. A baculovirus isolated from BCW cadavers has the potential to provide season-long BCW control from a single application. Studies to characterize its activity, host range, residual activity and potential as a bio-insecticide are planned for 2004. Mound activity of *Lasius neoniger* ants started in late winter, peaked in May and declined steadily thereafter. Nearly all mounds on sand-based greens were located within two meters of the outer edge. *Lasius* queens were active in late summer with synchronized emergence periods. Planting peonies as a nectar source for spring-active *Tiphia* wasps significantly increases parasitism rates of white grubs in nearby turf.

**DATA**

2003 (continues through 2005),  
Bingru Huang, Ph. D., Rutgers  
University

**SOURCE**

Jeff L. Nus, Ph.D., United States  
Golf Association, 2004  
*Turfgrass and Environmental  
Research Executive Summary*

**MORE INFORMATION**

<http://usgatero.msu.edu>

## Physiological and molecular basis heat tolerance in bentgrass

**S**ummer decline in turf quality is a persistent problem for creeping bentgrass (*Agrostis stolonifera*).

The overall goal of this project is to improve heat tolerance of creeping bentgrass by identifying mechanisms of heat tolerance in *Agrostis*. Researchers are determining whether any specific gene can be identified and used for direct genetic manipulation, and if heat-stress proteins or other genetic components can be used as genetic markers for heat tolerance.

The study examined thermal *Agrostis scabra*, non-thermal *Agrostis scabra*, *A. rossiae*, and *Agrostis palustris* cv. L-93. Soil temperatures were 20 (control), 35 and 40 C, while air temperature was held at 20 C. Treatments

were imposed for 70 days. After 10 days, all plants grown at 42 C had lower chlorophyll content than plants grown at 35 and 20 C. Differences in chlorophyll content between 35 and 20 C were not significant. Both ecotypes of thermal *A. scabra* had greater chlorophyll content than other *Agrostis* species at 35 C. Canopy temperature for all species at 35 and 42 C increased over time as much as 6 and 8 C respectively. These physiological measurements showed that thermal *Agrostis scabra* species had superior tolerance to elevated soil temperatures. These species had better cooling mechanisms and produced large numbers of roots at 5 cm at 35 C soil temperatures, while root growth declined for creeping bentgrass.

**DATA**

2003 (continues through 2005),  
Bruce Marin, Ph. D. and Paul  
Peterson, Ph. D., Clemson  
University

**SOURCE**

Jeff L. Nus, Ph.D., United States  
Golf Association, 2004  
*Turfgrass and Environmental  
Research Executive Summary*

**MORE INFORMATION**

<http://usgatero.msu.edu>

## Rapid Blight biology and integrated management

**R**apid Blight, presumably caused by an undescribed species of Chytridiomycete fungus, has caused extensive and costly damage to golf course greens, tees and fairways with rough bluegrass, perennial ryegrass, annual bluegrass and creeping bentgrass in several western states and in the southeastern United States.

Researchers at Clemson University have recently initiated research to investigate the identification and basic biology of the causal organism, including elucidation of the life cycle of the pathogen and disease epidemiology. They are also determining the influ-

ence of irrigation water (salinity, sodicity, and bicarbonates) and soil edaphic properties on disease severity and epidemiology. Preliminary data indicate that salinity linked to irrigation water quality plays a major role in disease development. Rapid Blight has been diagnosed primarily in the fall, winter and spring months, suggesting that cooler temperatures also may promote the disease. Additional preliminary results indicate a high degree of susceptibility in cultivars of rough bluegrass and perennial ryegrass, while certain cultivars of alkaligrass and creeping red fescue appear to contain levels of resistance. GCN



Photo: Jacobsen

Designed to be lightweight and maneuverable, the versatile triplex mower also is the choice of many superintendents for tees, approaches and fairways.

## Triplex mowers offer versatility, quality cut

**G**etting the job done faster on greens is probably the greatest advantage of triplex mowers. They offer golf courses increased productivity and a quality cut.

Designed to be lightweight and maneuverable, the versatile triplex mower also is the choice of many superintendents for tees, approaches and fairways.

### Toro trim-mower technology

In 1999, Toro introduced the first triplex trim mower with the patented Sidewinder cutting system, according to the company. Since then, trim mower technology has helped superintendents reduce labor, control costs and achieve a high quality of cut with reel and rotary trim mowers.

Producing a skillfully manicured golf course requires looking at all aspects of mowing.

"There's a distinction between quality of cut and the after cut appearance," says Tony Ferguson, Toro's marketing manager for Reelmasters. "Many people think they're synonymous, but they're really two different things. Quality of cut is how well you're cutting the grass as you're cutting it. The after-cut appearance is

what it looks like when you're done. Is it uniform? Is there overlap? Is it cleanly cut?"

Quality of cut and after cut appearance are important to golf course superintendents because both impact the aesthetics and playability of a golf course. And although these two terms can sometimes overlap, Toro considers quality of cut and after-cut appearance separately when designing and testing mowers.

Superintendents typically use trim mowers for trimming surrounds around bunkers, greens and sometimes even small rough areas, according to Kevin Conry, marketing manager for the Groundmaster product line.

"Our rotary trim mowers essentially have made it possible to mow trim at higher heights of cut where rotary mowers thrive," Conry says. "Toro rotary trim mowers are equipped to handle undulations commonly found around bunkers and surrounds because each 27-inch deck floats independently. This quality of cut from a rotary changed how many courses managed their trim areas."

The Toro Groundmaster 3500-D, which Conry refers to, is a riding trim rotary mower with a 35-hp turbo-charged engine and

## course maintenance

Photo: National Mower



National Mower's 68 Deluxe triplex mower (top) features a 68-inch cutting width, as well as a compact and lightweight design that lets the mower maneuver through tight spaces. John Deere's 2500A triplex greens mower (right) features a new cutting unit suspension that carries the weight of the lift arms on the traction unit and not on the cutting units.



Photo: John Deere

free-floating rotary decks, which can be shifted 24 inches right and left with the Sidewinder feature.

"The Sidewinder provides a lot of versatility because the traction unit doesn't have to operate as close to a lake or bunker edge," Conry says. "The decks can be shifted from day to day so the tires aren't driving over the same track. That means less compaction and turf damage."

The Sidewinder feature also is available on the Toro Reelmaster 3100-D for trim applications.

"The Reelmaster 3100-D has cutting unit options that provide either a 72-inch or 85-inch width of cut," Ferguson says. "For those that need a narrower unit to maneuver around obstacles or a wider unit for maximum productivity, Toro has it."

Additionally, the Reelmaster 3100-D features a distinctive operator-out-front design and Series/Parallel 3-wheel drive traction system, which minimizes spin-outs.

"It has superior traction capabilities on hilly and wet turf conditions," Ferguson says. "You would actually have to spin one of the front wheels and the rear wheel at the same time to get stuck. That's pretty tough to do. This prevents scuffing the turf as well."

**USING AGILE TRIPLEX MOWERS FOR TRIMMING ALSO CAN OFFER PRODUCTIVITY GAINS AND CORRESPONDING LABOR SAVINGS.**

Using agile triplex mowers for trimming also can offer productivity gains and corresponding labor savings.

"One course in particular replaced their hand mowing entirely with a Reelmaster 3100-D by justifying the labor cost savings," Ferguson says. "That's not going to be true for everyone, due to slopes that are too severe, but in many cases, courses are finding that they can replace some or all of their hand and fly mowing operations, thereby saving time and money."

Another benefit the reel and rotary trim mowers provide is an attractive after cut striping pattern.

"With the rear rollers you have an aesthetic benefit that you usually wouldn't get with a standard rotary," Conry says about the Groundsmaster 3500-D.

Conry boils the key features of the mowers down to three things.

"The most important attribute is the ability to follow the ground undulations because they give you a good quality of cut without scalping," he says. "The second would be the Sidewinder feature because it allows you to reach into places more safely and get close to obstacles without endangering the operator. The third point would be the after-cut appearance you get with the striping rear roller. Toro trim mowers provide the versatility superintendents need to create attractive playing surfaces at the desired height of cut while reducing labor and saving time."

**John Deere's 2500A offers ease of operation, service**  
Designed for ease of operation and service,

the quality of cut achieved with John Deere's 2500A triplex greens mower is enhanced by a new cutting unit suspension that carries the weight of the lift arms on the traction unit and not on the cutting units. This is critical on daily cleanup passes because the mower can move clockwise one day and counterclockwise the next, so the wheel pattern won't be in the same track. This greatly reduces the triplex ring associated with this operation.

The 22-inch cutting units are designed and manufactured by John Deere and come with 11-blade reels, 3-mm standard bedknives and a smooth or grooved front roller. The cutting units also feature a new bedknife-to-reel design.

In addition, the command arm puts the key switch, mow switch, throttle lever and raise/lower lever conveniently at the operator's fingertips. The mower also features tilt steering and a two-foot-pedal system for forward and reverse. Features of the 2500A include:

- 19.9 hp (gross) /18 hp (net), three-cylinder, liquid-cooled diesel engine;
- Patented offset cutting units and cutting-unit suspension to minimize perimeter compaction and turf wear;
- Low-profile tires with a wide footprint;
- Ergonomic control arm and operator station for operator comfort, visibility and easy operation;
- 22-inch cutting units with bedknife-to-reel design for ease of service;
- Grass catchers designed for optimum catching efficiency and improved cut quality;
- Standard hydraulic oil cooler for improved hydraulic system performance and durability;
- Sit-on-seat diagnostics to improve serviceability and diagnostics;
- Tilt-back hood and tilt-up seat platform provide good visibility to components;
- All daily service checks are made from the left side of the machine; and
- High-strength, tubular steel frame provides increased strength and improved rear cutting unit visibility.

### National Mower's 68 Deluxe has 7-mph transport speed

National Mower's 68 Deluxe triplex mower can increase productivity with its 7-mph transport speed. An out-front steering system allows the mower to go almost anywhere.

It has a 68-inch cutting width and 21-inch wing mowers that follow severe contours. The reel mower provides a cleaner cut and better appearance than a rotary mower, according to the company. The tooled-steel

reel blades and bedknife are built to last twice as long as others do on the market.

The compact and lightweight design lets the mower maneuver through tight places and allows mowing in soft areas with minimal tracking. A large reel overhang makes for better trimming capabilities.

There's no shroud over the engine, which provides good airflow to the engine and easy access for maintenance. The mower's mechanical drive requires less horsepower for operation and reduces maintenance. Parts are readily available and inexpensive to replace.

An electric starting system makes starting and stopping easier when an operator needs to pause for golfers.

The 68 Deluxe triplex mower tractor is powered by an electric start 7½ hp Briggs & Stratton four-cycle engine. It has a welded tubular steel frame; hardened steel gears and clutches for traction, and the wing and rear mowers. The differential is automotive-type. Steering is tie rod and drag link, and it features full pneumatic, power grip tires (front, 350 x 6; rear, 650 x 8).

The mowers include two 21-inch side wings and one 30-inch rear free floating for a total 68-inch width of cut. Reels feature six blades, 1¼ inches thick and 1½ inches wide. The seven-inch diameter reels adjust down to a high carbon steel bed knife with a ⅜-inch lip for longer life. Timken reel bearings disengage the mowers for transport.

### Jacobsen's Greens King VI

The Jacobsen Greens King VI is versatile,

reliable and a user-friendly triplex mower, according to the company. Whether maintaining greens, tees, approaches or fairways, the triplex mower has the ability to deliver results that meet golf course superintendents' high expectations.

The mower features a 62-inch cut. The fully floating, steerable cutting units help prevent marking and scuffing while turning. There are 11- or seven-blade reels for a high-quality finish in a variety of turf conditions. The mower has other features and benefits:

- Engine offerings include a liquid-cooled, fuel-efficient 19-hp Kubota diesel, or an 18-hp Briggs & Stratton gas engine;
- The mower offers pedal and joystick control, along with a padded, adjustable steering wheel;
- Attachments include vertical mowers, spikers, brushes greens roller and patented turf groomer. The groomer doesn't extend the roller base and that keeps the rollers closer together to minimize scalping;
- Grooved and smooth rollers;
- Backlap optional;
- A one-touch lift/lower system features an electronic solenoid valve coupled to a sophisticated electrical system. Roller sequencing is automatic, unlike other mower models that use a mechanical system;
- Motor and hydraulic fittings are mounted outside the frame, allowing easy access;
- As part of the hydraulic circuitry, steel

**"OPERATORS WHO ONLY CUT STRAIGHT LINES USE GROOVED ROLLERS. OPERATORS WHO MOW AROUND THE EDGES ON THEIR CLEANUP PASS HAVE UNITS WITH SOLID ROLLERS."**

lines have replaced rubber lines in the chassis;

- A redesigned hood opens from the back for better access; and
- Biodegradable hydraulic fluid is available.

Oakmont (Pa.) Country Club acquired a number of Greens King VI units throughout the past few years. The club's superintendent, John Zimmers, says the mowers are quite flexible.

"Our fairway mowing technique is a little different," Zimmers says. "Operators who only cut straight lines use grooved rollers. Operators who mow around the edges on their cleanup pass have units with solid rollers. With the Greens King VI and the FlashAttach system, we can swap heads quickly. Plus, if we want to use different attachments for greens, tees or other areas we can make the changes quickly and easily. We have a lot of flexibility with this mower."

Zimmers says the golf course has changed since it started using the units.

"Comments from members have been unbelievable," he says. "They say the condition of the fairways is much improved. The reasons are the quality of cut and the fact that the Greens King VI is a lightweight machine. We're able to mow more often because of its lighter weight and the three-wheel-drive feature. Before we got these units, we couldn't get out on wet days with heavier mowers."

Small features on the mower mean a lot to Zimmers.

"An adjustable steering wheel is more important than someone might think," he says. "Every operator is different, and if you want them to go out and do their best, you have to provide them with comfort features."

Zimmers says the joystick control option is a big plus.

"Some people always use their feet, while for others their hand-eye coordination is better, and they prefer the joystick," he says. "I like the flexibility of it because in summer when we bring in students and interns it's nice for them to have the option of using either their feet or hands. That may sound farfetched, but it's true." GCN



Photo: Toro

The Toro Reelmaster 3100 trim mower features cutting unit options that provide either a 72-inch or 85-inch-width cut.

### WS PRO LT weather station

- Designed to help eliminate the guesswork when determining accurate sprinkler run times
- Sensors collect weather data—temperature, relative humidity, wind speed, solar radiation and rainfall amounts—throughout a 24-hour period
- Data is used to calculate an evapotranspiration value, which determines the precise amount of water that must be replaced to maintain soil moisture at a desired level
- Central control will automatically program the sprinkler run times without overwatering or leaving areas of turf too dry
- Offers a cost-efficient option for smaller-budget golf courses
- Ability to connect as many as five weather stations to a central control system
- Allows rainfall from one day to be carried over to the following day for accurate run-time calculations

Rain Bird Corp.

Circle 200 on reader service form

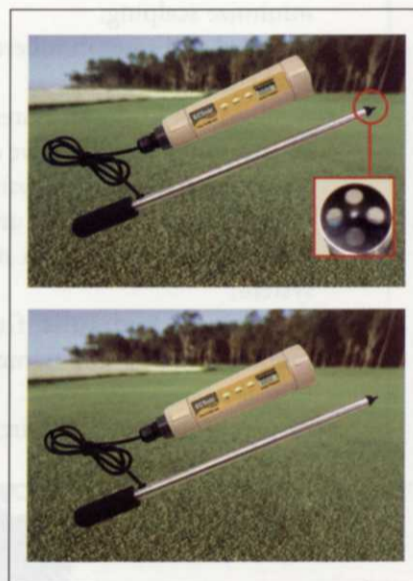


### Futerra flexible revegetation blankets

- Promotes fast vegetation growth
- Weighs 50 percent less than comparable blankets and absorbs three times the amount of water
- Features a combination of thermally processed wood fibers and crimped, interlocking synthetic fibers that provides a high seed-germination rate
- Netting degrades in three months; no messy nets remain to entangle in mowers

Profile Products LLC

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### Field scout direct soil EC probe/meter

- Portable meter permits instant, accurate measurement of nutrient salts in soil media, as well as water or nutrient solutions
- Measures soil conductivity on the spot without tedious soil sampling and preparation methods
- Resolution of 0.01 mS/cm and an accuracy reading of +/- 2 percent

Spectrum Technologies

Circle 203 on reader service form

### Electric pump driver

- Controls the rate of flow by regulating the speed of a 12-volt pump
- Replaces a electric servo valve
- Controls most 12-volt pumps as high as a maximum rating of 20 amps
- Installation is clean and simple
- Accurate and effective control of application rate
- Designed to work in conjunction with company's controllers
- Can be purchased as part of a customized kit with control console, speed sensor and flow meter, or just the EPD kit

Micro-Trak Systems

Circle 204 on reader service form



### Mete-R-Matic self-propelled top dresser

- Controls thatch layers
- Decreases compaction by improving the growing medium and leveling uneven turf
- Controls are in easy, fingertip reach of the walk-behind operator
- Easy to maneuver in tight places
- Patented chevron belt provides a uniform application regardless of moisture content or material
- Light footprint prevents turf damage.
- 31½-inch spreading width
- 11.5-cubic-foot hopper and 2.5-mph operating speed
- Available with a special patent-pending overseeder attachment
- F-15 model available for factory-direct purchase

Turfco

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# THE GLOVES ARE OFF.

Because of activists, extremists and misinformed politicians, consumers are questioning whether the products and resources (such as water) used to care for their lawns, landscapes and other green spaces are a waste—or a harm to the environment. Yes, legislation and regulations have been throwing the green industry some rough punches. And we're about to start fighting back.

Project EverGreen is an alliance of green industry associations, companies and professionals dedicated to educate the public, protect the green industry and grow our business. It was created in response to unfavorable regulations in many parts of the United States and Canada. If the services our industry professionals offer are restricted, regulated or made illegal, everyone will lose revenue and customers.

Help Project EverGreen educate consumers on the environmental, economic and lifestyle benefits of green spaces. To make a contribution, volunteer your time or find out more information, call **1-877-758-4835** or visit **[www.projectevergreen.com](http://www.projectevergreen.com)**.

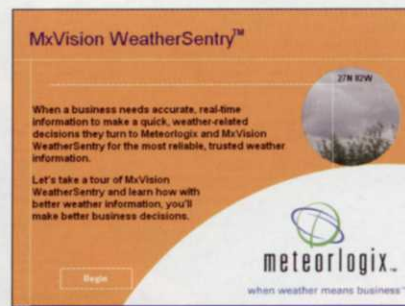


— PROJECT —  
**EverGreen**

### Ionization system and electronic descaler

- Releases a controlled amount of electrically charged copper and silver ions into water for algae and disease control
- System includes microprocessor control box and a pair of scientifically formulated electrodes composed of copper and silver
- Control box works by generating a low-voltage DC current to the electrodes
- Descaler eliminates scale formation in water lines, misters, sprinkler system nozzles without chemicals or maintenance
- Integrated circuitry system produces a modulating frequency waveform to an induction coil that's wrapped around the outside of an incoming water line; this hits the resonant frequency of the calcium carbonate molecules causing them to lose their adhesive properties

ClearWater Enviro Technologies  
Circle 206 on reader service form



### MxVision WeatherSentry Turf Edition weather service

- Designed to help superintendents make operational decisions about crew scheduling, chemical applications and course maintenance
- Provides up-to-the-minute weather information, including the ability to accurately gauge rainfall, check wind speed and heat indexes
- Allows user to look 10 days into the future and know when to expect major pattern changes
- Customized visuals show when temperatures and high dew points might encourage disease or when winds exceed spraying thresholds

Meteorlogix  
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### Premier and Medalist ball washers

- Sharp-looking design
- Easy-to-use agitator
- Durable cast aluminum case and top
- Premier model features spiral plunger for quick ball washing
- Premier model holds seven pints of washer fluid
- Drain plug flushes quickly and is tamper resistant and leak proof
- Medalist model mounts inside a 2 3/8-inch post

Standard Golf Co.  
Circle 208 on reader service form



### Verti-Drain deep-tine aerators

- 7215 model features 61-inch width and can aerate to 10-inch-deep maximum, making for greater productivity when fitted to a 23-hp tractor
- 7215 model offers reinforced front and rear rollers and a lighter frame than the 73 series, and has lower horsepower requirements
- 7416 model has a 63-inch width and weighs less than the 7516 model and can be used with smaller tractors
- Cranks of the 7416 model are supported on each end
- 7416 model can be fitted with solid and coring tines to a maximum depth of 14 inches.
- Both models are equipped with maintenance free, self-lubricated sealed bearings on all pivot points and a three-speed gearbox

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### Hydration Pellet wetting agent

- 100-percent active blend of nonionic surfactants
- For spot treatment of dry areas on greens, tees, bunker banks and fairways
- Provides consistent playing conditions by allowing even distribution of water to root zone
- Each pellet should be suitable to treat a 15,000-square-foot to 20,000-square-foot area
- Effective for three to four weeks; can be applied as often as needed
- Are non-phytotoxic

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