



# The MOWDOWN on New Technology

## Mower manufacturers seek fuel-efficient alternatives

By Larry Aylward, Editor in Chief

**G**et ready for some *big* changes in the mowing industry. The Big Three mower manufacturers — The Toro Co., Jacobsen and John Deere — are working on some *big* ideas that could impact golf course maintenance operations in a *big* way.

And soon.

"Technology-wise, there hasn't been a lot going on in this industry," says Mike Koppen, group product manager for Raleigh-based John Deere Golf & Turf One Source. "I think we're in the process of getting ready to make a huge leap."

Toro has been testing equipment powered by a fuel cell and biodiesel fuel. Dana Lonn, director of the center of advanced turf technology at Toro, says the new technology is coming sooner than later.

"It's not next year's golf show that you'll begin to see some things, but it's also not five years away," he adds.

This is good news for superintendents concerned about rising fuel prices. In the last few years, superintendents have watched their maintenance budgets run amok because they've had to spend more money to gas up equipment, not to mention delivery surcharges for topdressing and other items. Hence, Kop-

pen says elevated gas prices are surging higher on superintendents' list of concerns.

Deere recently surveyed superintendents about their top needs for mowing equipment. Fuel efficiency was high on their lists along with reduced hydraulic components, lower noise levels and better diagnostic capabilities.

Mower manufacturers continue to explore options regarding electric technology. Electric-powered equipment offers more benefits, such as better control, less noise, no hydraulic leaks and less maintenance.



Mike Koppen

Charlotte, N.C.-based Jacobsen has long championed the electric technology. It introduced the E-Plex electric triplex greens mower several years ago and the E-Walk electric greens mower three years ago. Superintendents and other users of the mowers are impressed with them because they use no hydraulic fluid and operate quietly. But the electric technology is catching more superintendents' attention these days because of the price at the pump.

Ryan Weeks, vice president of engineering and product management for Jacobsen, makes a compelling case for electric technology when he cites numbers revealing how much golf courses can save by using it. Consider a Southern-based golf course that mows greens 300 times a year with triplex mowers, Weeks says.

*Continued on page 52*





## Mower Technology

*Continued from page 51*

Each mower uses about 5 gallons a day. At \$3 a gallon (which you know prices will rise to again next summer), that course is spending \$4,500 in gas on one mower annually. A triplex mower powered by electricity, on the other hand, would use about 50 cents for four hours of power, which would cost \$150 annually.

An electric mower costs more, but "who wouldn't be willing to jump into a solution like that to save something to the tune of \$4,000 a year — per machine," Weeks asks.

The rap on electric technology has been that it can't power a mower like a gas-powered engine.

"But battery and motor technology have become a lot better and more efficient," Weeks says. "This technology is where it needs to be."

Last year John Deere introduced its 2500E Hybrid Tri-Plex Greens Mower. It operates on a traditional engine that drives an alternator, which powers electric reel mowers to drive the cutting units. Deere said the mower has 90-percent fewer likely leak points, runs more quietly and offers better fuel efficiency.

"Now we're looking to take that technology to other parts of the golf course," Koppen says.

Superintendents seem to be ready for the new technology, which is somewhat surprising because they have always been regarded as a conservative group that hesitates to try new equipment. But Koppen

understands why superintendents can't be risk takers and try something that could end up impairing their operations. "Their jobs are on the line every day," he says.

Still, Koppen says Deere's research and development efforts are not being compromised. "We're going full-speed ahead with our technology," he adds.

Weeks says superintendents' conservativeness has "caused us to be too conservative with research and development over the years, which has resulted in incremental technology advancements."

"But going forward we plan to be a lot more aggressive about R&D and introducing new technologies to the industry," he adds.

Education is also vital to follow up the introduction of new technology, Weeks stresses.

"We haven't done a good-enough job in the past of making sure customers are educated not only about the features and benefits of the product, but also the value proposition that a piece of equipment offers," he says. "We plan to be much better at that as we start to roll out some of the machines."

Interestingly, Lonon says superintendents of municipal courses are more apt to try new technology because their local governments want to make good political statements to their constituencies.

Overall, Lonon agrees that superintendents are warming up to new technology.

"It's not a groundswell, but certainly customers are much more open to it today than they were a few years ago," Lonon adds.

Lonon says Toro has tested equipment powered by 100 percent bio-diesel fuel (B100) for more than three years.

"Our only hesitation in going to B100 is that we really want the engine manufacturers to stand behind us on this because they're responsible for the warranty on engines on new machines," he says. "But we're not a big enough piece of their business to force them to do that."

Lonon says Toro is considering whether it should go it alone with the technology. "We don't think there's much risk because we've had good

luck with B100," he says.

Toro has been testing a fuel-cell-powered greens mower for a few years. "We've done quite a bit of testing of it and made some improvements to it," Lonon said. "We continue to work very hard on it."

But Lonon says the technology's cost must drop before it can have a viable impact on the industry.

Speaking of cost, pricepoint will be an issue regarding the development of more fuel-efficient equipment because of the need for custom components. Koppen says the mower industry should work with the automobile industry to keep costs down.

"We can use a lot of components the [automobile industry] has already developed," he says. "It's expensive to go out and develop those components. But if we let that trickle down ..."

As far as something like an ethanol/gas-powered engine, Weeks says Jacobsen and other mower manufacturers are at the mercy of the engine manufacturers. "If the Kubotas of the world come out with such engines, I'm sure you'll see all of us get into that relatively quickly," he adds. ■



Dana Lonon



Ryan Weeks

Minnesota, early spring

**Use GreenJacket® for patented**  
**IMPERMEABLE PROTECTION**

*Now with RIPSTOP!*

Insulated or uninsulated protection against:  
 Crown Hydration • Desiccation  
 Temperature Fluctuations

*greenjacket®*  
 The grass is always greener on the UNDERSIDE.

**www.GreenJacket.com 888-786-2683**  
*actual client photo not retouched!*



## TAS TRIMMER™

Trim around rotary sprinkler heads,  
pop-up sprinkler heads, valve covers, drain covers  
donut protectors and bunkers.

FITS ANY STRAIGHT LINE SHAFT TRIMMER.

CALL TOLL FREE: 866-231-0778

VISIT US ON THE WEB: TASTRIMMER.COM



**EAGLE GOLF & LANDSCAPE PRODUCTS, INC.**  
SERVING THE GOLF INDUSTRY WORLD WIDE

**Eagle Interface**  
A Root Zone & Moisture Barrier for Greens Construction

**DS** **GreenSP** **Nyloplast**  
**COLBOND**  
Enka Path  
Enka Shoreline  
Enka Mat

**NDS** **Futerra** **Sand dam**

**Profile** **Johns Manville**

WWW.EAGLEGOLFANDLANDSCAPE.COM  
714-524-8598 800-21-EAGLE FAX 714-524-6195

**ROCK SOLID**  
QUALITY AND PRICE

**TTG Custom Signage**  
Where legends begin.

**150 \$19.99**  
VALID WITH 6" X 10" GRAY PLATES NO LOGO

**100 200**

**We** are quality manufacturers of Granite Yardage Plates and Tee Blocks for the golf course industry. Our products are offered and can be seen beautifying golf courses throughout North America.

By going direct to us before Nov. 15th, 2006, you can save more than 20% off our regular price. Simply place your order now, pay us in the New Year.

**It's that easy.**

MENTION YOU SAW THIS AD AND WE'LL EXTEND OUR DISCOUNT OFFER UNTIL NOVEMBER 30, 2006.

**Call: 1-800-360-9959**

OR VISIT US ONLINE AT:  
**www.ttgcs.com**

**For Relief...**

Experts Recommend **SeaDwarf®** turfgrass for:

**Low Fertilization**  
**Sports-Related Wear**  
**Salt-Affected Areas**  
**Improved Playability**  
**Great Looking Turf**

For a licensed grower near you:  
(772) 460-5575 or [www.environmentalturf.com](http://www.environmentalturf.com)

**Environmental Turf, Inc.**



# The Company Line

PRODUCTS & SERVICES



## Soil amendment

**Western Pozzolan**, manufacturer of Lassenite ATS Soil Amendments, offers a larger particle size for use in native soils. The new 7 + 20 mesh sizing continues to show the positive effects of reducing compaction and increasing the amount of air available to root systems while maintaining its ability to release stored water, according to the company. The larger, more-uniform particle size is still compatible with all types of spreaders, drill and fill and hydraulic injection equipment, according to the company.

For more information, contact [www.westernpozzolan.com](http://www.westernpozzolan.com).

## Fungicide

**Prophesy** is a systemic fungicide from The Andersons that prevents and controls turf diseases, such as dollar spot (including benzimidazole tolerant strains), brown patch, anthracnose and rust. Featuring the DG Pro carrier, the product disperses upon contact with water from dew, rain or irrigation. This helps to eliminate mower pickup. Prophesy contains propiconazole as the active ingredient, which is ideal for snow mold control, according to the company. The

product is a convenient, dry-flowable formula that can be applied with a rotary or drop spreader. Its small particle size (SGN 100) is good for use on golf course greens and low-cut bentgrass fairways.

For more information, contact [www.andersonsinc.com](http://www.andersonsinc.com).

## Microbial fertilizer

**TurfVigor**, a liquid microbial fertilizer from Novozymes Biologics/ROOTS, maximizes nutrient uptake while improving turf color and quality, according to the company. It also improves plant health, accelerates recovery from physical damage and maintains root mass under high-stress conditions. Available in 2.5-, 15- and 110-gallon containers, TurfVigor should be applied with water to greens, tees and fairways and is good for spoon-feeding applications.

For more information, contact [www.rootsinc.com](http://www.rootsinc.com).

## Web site

**DuPont Professional Products** recently launched <http://proproducts.dupont.com> with a new look featuring user-friendly navigation. The redesigned site offers dedicated solutions pages for golf course superintendents. The site provides easy access to information for DuPont Advion brand products, including new products launched this year for mole cricket control, TranXit herbicide and the MetaActive compound.



## Utility vehicles

**E-Z-GO Textron** introduces a line of utility trucks: the E-Z-GO MPT (Multi-Purpose Truck) in four models. The MPT offers a rugged truck-like front cowl, redesigned and strengthened frame, a widened front axle and E-Z-GO's new E-Shield corrosion protection process.

For more information, contact [www.ezgo1.com](http://www.ezgo1.com).

# Ad Index

Advertiser	Page No.	
Aquatrols	9, 21	Oxford Gardens 36
Arysta LifeScience	cv2	PBI/Gordon 17
BASF Corp.	3, 18-19, cv3	Rain Bird 30, 32-33
Bernhard & Co.	14	Standard Golf 28, 29
Champion Turf Farms	23	Sto Cote 52
Cleary Chemical Corp.	cv4	Syngenta 12-13
Eagle Golf and Landscape Products	53	TAS Industries 4, 53
Environmental Turf	53	The Toro Co. 27
Fore Golf Direct	2	TTG Custom Signage 53
Graden USA	4, 37	West Coast Turf 17
Gro Power	2	
Jacobsen	39	
LESCO	5	
Liquid Fence	37	
Milorganite	31	
Ohio Turfgrass	40	
Oregon Fine Fescue	7	

## TURFGRASS TRENDS

Bayer ES	47
Floratone	45
John Deere and Co	43
Pursell Tech	49

This index is provided as an additional service. The publisher does not assume any liability for errors or omissions.

# Editorial Index

Company	Page No.	
A.G. Edwards	10	Los Angeles Country Club 16
American Society of Golf Course Architects	11, 26	Meadow Brook Club 15
Atlanta Athletic Club	16	National Golf Course Owners Association 25
Augusta Municipal Golf Course	6	National Golf Foundation 26
Augusta National Golf Club	6	Netflix 56
Bayer Environmental Science	16	Neuse Golf Club 16
Bethpage State Park	11, 25	North Carolina State University 16
Boston College	14	NTech Industries 16
Cantigny Golf	26	Penn State University 41
ClubCorp	10	Pinehurst Resort 10, 16
Cog Hill Golf & Country Club	26	Rain Bird 11
Elk Valley Rancheria	8	Redexim Charterhouse 8, 30
Environmental Protection Agency	11	Somerset Country Club 15
Federal Reserve	10	Sun City Tehama 8
Golf Course Builders Association of America	31	The First Tee 26
Golf Course Superintendents Association of America	11, 20	Toro Co. 51
Golf Club at Desert Mountain	11	Trump National Golf Club Los Angeles 36
Hazeltine National Golf Club	15	Tuscany Hills 8
Jacobsen	51	University of Arizona 11
John Deere	16, 51	U.S. Department of Commerce 10
KSL Capital Partners	10	U.S. Kids Golf 26
		ValleyCrest Golf Course Maintenance 28
		Yosemite Grand National Golf Course & Wetland Preserve 8



## Golfdom

Payment must be received by the classified closing date.

We accept VISA, MASTERCARD, & AMERICAN EXPRESS.

For Advertising Information, Contact Brian Olesinski: 800-669-1668 ext. 3757 or 216-706-3757;

Fax 216-706-3712, Email [bolesinski@questex.com](mailto:bolesinski@questex.com)

FOR SALE

### XTON TURF COVERS



Protect Your Greens from Frost and Freezing!

Be prepared this winter with  
XTON TURF COVERS™

Phone: (800)786 - 2091  
info@turfcovers.com

Fax: (256)767 - 3856  
www.turfcovers.com

We have  
**Awesome Green**  
Fertilizer  
Programs

Contact us about your  
**TEES, FAIRWAYS  
& GREENS**

**PLANT  
FOOD  
COMPANY, INC.**

The Liquid Fertilizer Experts  
**(800) 562-1291**  
www.plantfoodco.com

**Got Thatch?**

**Get MOL Products!**



**Controlling Thatch  
Just Got Easier!**

Contact:

John Wynne  
Phone: 860-729-7639  
or 304-624-3844

Email: [owynne@comcast.net](mailto:owynne@comcast.net)  
Visit: [www.i-mol.com](http://www.i-mol.com)  
611 Baltimore Ave  
Clarksburg, WV 26301

Don't **stress**  
about finding  
new customers.

Place a classified ad with  
Golfdom Magazine

[www.golfdom.com](http://www.golfdom.com)

**TURBO TURF  
HYDRO SEEDING SYSTEMS**

Keep your course  
in top condition.  
Prices start at  
**\$ 1295.00**

Call for FREE info & video!  
**Turbo Technologies, Inc.**  
1-800-822-3437  
[www.TurboTurf.com](http://www.TurboTurf.com)

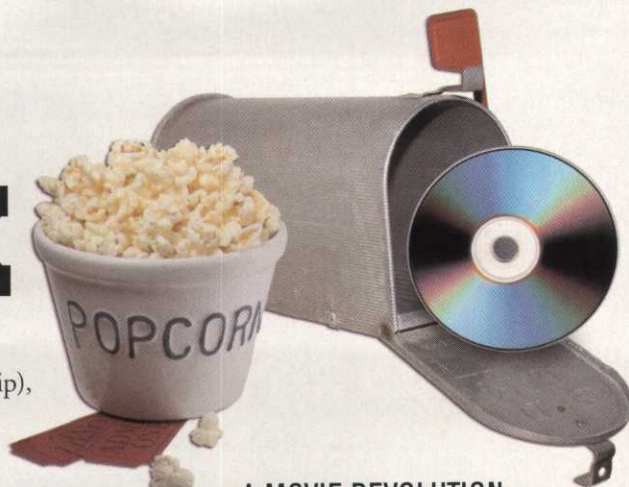
**IMAGINE  
YOUR  
AD HERE**

**Golfdom**

**enhance**  
your ad with  
color



# Netflix



**M**y better half used to send me to the video store (reluctantly, of course) to pick up movies for us.

I would wander the aisles for what seemed to be hours, unable to find that charming film for a romantic night, screwball comedy for a light-hearted evening or the gripping drama when suspense was ordered.

Without fail, I either came home with a near-worthless action movie that had one good car chase or any number of chick flicks that invariably starred Jennifer Aniston. Despite adoring the magic of the movies and even teaching a class on cinema, I became so wracked by doubt about my decisions in the video store (and my inability to return the bad movies on time) that I simply stopped going.

Thankfully, Reed Hastings is a lot smarter than me. He founded a company called Netflix in 1997 and launched its subscription service in 1999. The company now has more than 4 million clients who generate about \$829 million in revenues. His idea was simple: Rather than force customers to run an unsavory errand for their movies, find out what movies they want through an easy-to-navigate Web site and then mail them to their home. For \$17.99 a month (there are

levels of membership), customers can borrow three DVDs at a time and keep them as long as they want.

But it's not just that Netflix has about 55,000 movie, television and other entertainment titles, it also makes it darn near idiot proof. The envelopes that come to your home double as return envelopes, complete with prepaid postage. Because Netflix has 41 distribution centers in the United States, almost all of your movies arrive the day after you send one back.

The initial setup doesn't require a computer science degree, either. Once enrolled, you go to the Netflix Web site and start searching for movies you want to watch. A quick click on the "Add" button stocks your queue. The company ships the movies at the top of the queue, and voila, there's a red envelope in your mailbox in about a day.

In addition, the site has a wonderful feature called "Friends" that allows you to share your queue, ratings and mini-reviews with buddies. While it's not the same as a full-fledged discussion over a beer and peanuts, it's a way to unlock some hidden treasures.

It's those unknown cinema gems that I could never find at my local chain video store — movies like the French thriller, "The Wages of Fear," or the recent Dashiell Hammett homage,

## A MOVIE REVOLUTION THAT SHAKES THE FOUNDATION OF CONVENTIONAL BRICK-AND-MORTAR BUSINESS

BY MARK LUCE

"Brick." The service also allows me to indulge my taste for film noir and silent films (impossible to find in video stores) as well as introduce our family to the charm of Japanese director Hayao Miyazaki ("Spirited Away" and "Castle in the Sky") and let us laugh to oldies but goodies "Strange Brew" and all variations of "Looney Tunes."

Of course, similar services have popped up, including ones from your traditional brick-and-mortar stores. But for my money, any company that can defeat a year-long video-store funk has my vote of confidence.

*Mark Luce is a freelance writer based in Kansas City, Mo., where he still can't successfully navigate the DVD remote.*

**GOLFDOM** (ISSN 1526-4270) is published monthly (12 issues per year) by Questex Media Group, Inc., 306 W Michigan Street, Suite 200, Duluth, MN 55802. Corporate office: 275 Grove St., Suite 2-130, Newton, MA 02466. Accounting, Advertising, Production and Circulation offices: 306 W. Michigan St., Suite 200 Duluth, MN 55802-1610. Subscription rates: One year \$39 (U.S. and possessions), \$59 (Canada and Mexico) and \$89 (all other countries). Air expedited service is available in countries outside the U.S. and Canada for an additional \$75 per year. Current issue single copies (prepaid only) \$5 (U.S. and possessions), \$7 (Canada and Mexico) and \$8 (all other countries). Back issues (if available, prepaid only) \$10 (U.S. and possessions), \$14 (Canada and Mexico) and \$16 (all other countries); add \$6.50 per order shipping and handling for both current and back issue purchases. Periodicals postage paid at Duluth MN 55806 and additional mailing offices.



**POSTMASTER:** Please send address changes to GOLFDOM, P.O. Box 5057, Brentwood, TN 37024-5057. Canadian G.S.T. Number: 840033278RT0001, Publications Mail Agreement number 40017597. Printed in the U.S.A.  
Copyright 2006 by Questex Media Group, Inc. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the publisher. Authorization to photocopy items for internal or personal use, or the internal or personal use of specific clients, is granted by Questex Media for libraries and other users registered with the Copyright Clearance Center, 222 Rosewood Dr., Danvers, MA 01923, phone 978-750-8400, fax 978-750-4470. Call for copying beyond that permitted by Sections 107 or 108 of the U.S. Copyright Law. For those not registered with the CCC, send permission request to questexpermissions@reprintbuyer.com or 800-494-9051, ext 100.



**BASF Means Better Performance...Which Means**

**better  
TURF™**



**(And everybody loves better turf.)**

Better turf comes from better products. And better products come from a commitment to performance. At BASF, that commitment is evident in everything we do. From the 1,000 patents we apply for each year to the superintendent's council we formed to better understand your needs. We're proud of our performance. After all, it ultimately means better turf for your golfers ... and maybe even better parking for you.

**Find out more: [turffacts.com](http://turffacts.com)**

**Find a distributor: 800-545-9525**

**We Don't Make The Turf.  
We Make It Better.™**

**BASF**

The Chemical Company

Always read and follow label directions.

Better Turf and We Don't Make The Turf. We Make It Better. are trademarks of BASF. © 2006 BASF Corporation. All rights reserved. APN 06-14-002-0036