

## GREEN MAINTENANCE GUIDE

the machine down approaching the edge of the green and minimize the effect on the clip rate and make your turns under control at a much slower speed," Buchko says. "Once you're lined up again, you can accelerate through the cut."

Two other elements of the InCommand control system are upgraded handles and clutch systems. The D-handle series serves as a common operating platform for all the company's walking greens mowers while improving operator comfort. The new clutch provides a smoother, more controlled en-

# THE Green Mile

## Mower manufacturers go the extra distance to enhance product lines

By Thomas Skernivitz MANAGING EDITOR

**T**he quest to build the perfect greens mower is much like the quest to build the perfect green: It never ends.

Jacobsen and The Toro Co., two of the three major players in the equipment arena, announced upgrades in February at the annual Golf Industry Show. John Deere, meanwhile, continues to ride the year-old wave created by its release of the industry's first hybrid greens mower.

"They can get a whole lot better," Jeff Buchko, a product manager with Jacobsen, says of greens mowers. "From a cut perspective, there are lots of things we can do. But from an operator perspective,

(mower manufacturers) really have not addressed the needs of the operator for a long time."

Jacobsen intends to fulfill some of those operational needs with the addition of a speed control feature — the first of its kind, the company reports — on its PGM 22 and GK 500 greens mowers. The InCommand control system allows the operator, via a speed paddle on the handle, to increase and decrease the forward speed of the machine with minimal effect on clip rate.

"If you're cutting greens that have a very tight distance between the edge of the green and an obstruction like water or some sort of wall or tree, you can slow

gement of the cutting and traction system, the company says.

"The purpose of those three components is to give the superintendent more control of the machine as well as lending itself to make it easier to operate," Buchko says.



**Jacobsen is adding a speed control system, with a speed paddle on the handle, to its greens mowers.**

Toro has integrated the technology behind its Greensmaster Flex 21 greens mower into its Flex 18 model, available in July. A narrower 18-inch cutting unit, in combination with the Flex head technology, allows the Flex 18 to better follow contours, especially concave contours, than its predecessor.

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## The Green Mile

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In turn, the bed knife position on the Flex 18 has been made less aggressive than the Flex 21 to reduce the bruising that could occur in severe undulation conditions. However, an optional bed knife is available to customers who still prefer the aggressiveness of the Flex 21.

Thus far, superintendents privy to use of the Flex 18 "love" the concept, Toro marketing manager Greg Janey says.

"They like the fact that it cuts, feels and operates similar to the Flex 21," he says. "They have reported less marking with the Flex 18 when compared to other mowers on the same green."

Toro has also added the Dual Precision Adjustment (DPA) cutting unit technology to the Flex 18 while eliminating the rear roller leveling adjustment.

Janey says the operation, control and maintenance of the Flex 18 are the same as the Flex 21. Meanwhile, the turf will

need a minimal amount of time to be trained to the new cut.

"When mowing in severe undulations, the Flex 18 will cut in areas that have previously been uncut," Janey says. "The result is a more consistent height of cut across your green, but because these areas have in the past been maintained at a higher effective height of cut — due to the inability of traditional mowers to get into and cut undulations — it will take a week or so to train the turf."

While the Jacobsen and Toro products are just reaching market, John Deere's 2500E hybrid greens mower has already

**Toro's Flex 18 mower features a narrower cutting unit.**



won over many superintendents during the last year. Todd Kauffman, the superintendent at Bay Harbor (Mich.) Golf Club, replaced his fleet of greens mowers last summer with six new 2500E machines; three for greens and three for tees.

"They've been great.

What I really like is that they eliminate the 102 hydraulic leak points, which is a major thing you worry about," Kauffman says. "They're quieter, which is nice, too, because we have a lot of homes by our green sites. (Noise) was a big complaint we heard, but you can actually run these at half throttle and mow your greens and still have the same reel speed." ■

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**A**s much as an issue divides Republicans and Democrats, *Poa annua* divides those who try to manage it and those who try to kill it. For those trying to control it, straddling the issue may be the key.

Traditionally on warm-season turfgrasses such as bermudagrass, dinitroaniline herbicides have been used effectively for pre-emergence control of *Poa annua*, while the triazines and pronamide have been used for both pre- and postemergent control. Recently, a new class of herbicides — sulfonylurea — has been developed that is effective for *Poa annua* control on bermudagrass and other selected warm-season grasses.

Although sulfonylurea herbicides have been around since the late 1970s, the new products have high activity at low rates with extremely low environmental risk. It appears that sulfonylurea chemistry can be effectively altered to target specific weeds. The potential exists within this herbicide class for future product development.

For permanent cool-season turfgrasses such as creeping bentgrass, perennial ryegrass and Kentucky bluegrass, pre-emergent control of *Poa annua* has been marginal at best. Postemergent control for several years was limited to ethofumasate primarily used on perennial ryegrass fairways. A new herbicide, bispyribac-sodium, which is an ALS (acetolactate synthase) inhibitor similar to sulfonylurea, has come to the market showing effectiveness for controlling *Poa annua* in creeping bentgrass.

Although these new herbicides show great promise, potential variability in controlling *Poa annua* exists. One cause of variability may have to do with learning how to use them. Rate, timing, application methods and environmental conditions often influence efficacy.

However, the greatest variability in control is because of *Poa annua* itself. With repeated use of the dinitroanilines, triazines and pronamide, *Poa* resistance or tolerance has occurred. Also, a population shift from annual to more perennial species has occurred.

The effectiveness of new herbicide technology will be based on knowing why and what type of *Poa annua* is present. Globally, *Poa* is

## Attack *Poa* on All Fronts. Then What?

BY KARL DANNEBERGER



THE KEY  
TO LONG-TERM  
CONTROL  
IS REALIZING WHY  
IT'S THERE  
IN THE FIRST PLACE

### GREEN MAINTENANCE GUIDE

adapted to a range of climatic conditions. It is one of the most widely dispersed in the world, located on all seven continents. Regionally, *Poa* behaves primarily as a true annual. But a more perennial behavior occurs the farther you move into the northern United States and Canada.

On a smaller scale, variability exists on golf courses. Studies have found that *Poa annua* varies considerably from greens, fairways and roughs on a single golf course in the temperate regions of the United States. Gene flow can occur among greens but is restricted among fairways. The potential for “blending” and “isolation” increases the potential for resistance or tolerance.

*Poa annua* is a formidable opponent. If every herbicide that was labeled for *Poa annua* control in the last 70 years worked, *Poa annua* would be on the endangered species list.

The key to long-term control is realizing why it's there in the first place. Management practices targeted for making conditions less favorable for *Poa annua* will in turn make herbicide applications more efficient and effective.

I'm reminded of when World War II Japanese leaders asked Admiral Yamamoto if he could destroy the U.S. Navy's Pacific fleet at Pearl Harbor. Yamamoto said he could and added he would be able to freely sail the Pacific Ocean for six to 12 months. But then what? Yamamoto's point was, after attacking and destroying the U.S. Navy, it would eventually come back and “do what we do.”

After attacking your *Poa annua*, if you do not know why it was there in the first place, then what?

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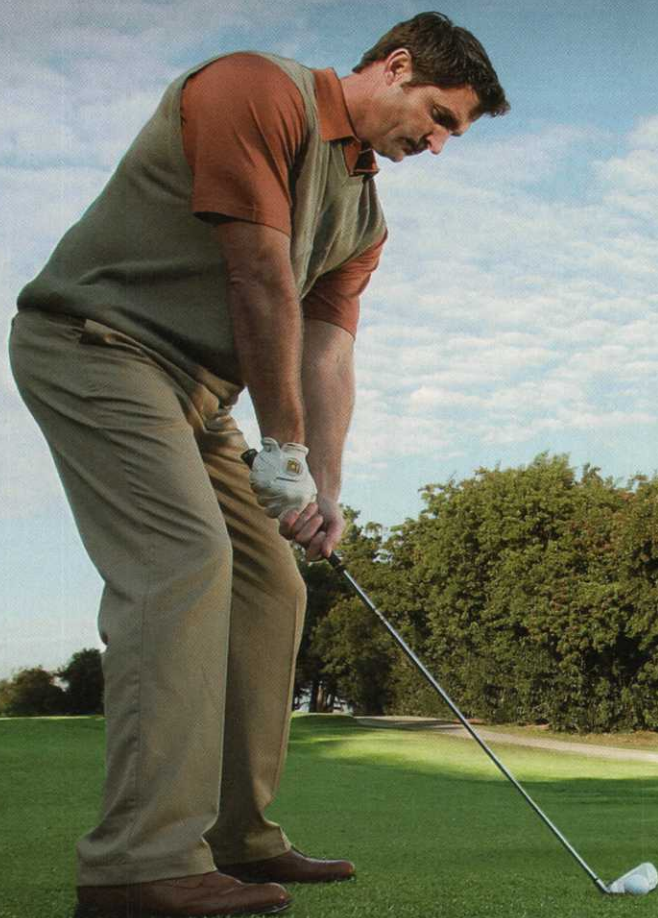


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# ON THE Verticutting Edge

**Y**ou could say that more golf course superintendents are taking the vertical leap — that is, they've turned to vertical mowing to help tend turf.

Make no mistake, though. This jump is no leap of faith. Verticutting, the thinning of turfgrass by blades or wire tines that cut perpendicular to the soil, is a proven maintenance technique used to achieve healthy turf.

There are two types of verticutting — a shallow cut and a deep cut. Both promote lateral and vertical growth by slicing stolons and rhizomes. A deeper verticut, however, removes more material, which allows for sand to fill in spaces previously taken up by organic material.

Brad Aldridge, a product manager with John Deere & Co.'s golf group, says verticutting is getting more popular across the board — from municipal to public to private courses. A big reason is the demand from golfers for improved playing conditions. That means superintendents must strive to provide tournament-like conditions, even when there are no tournaments. And they've realized that verticutting can help them do that to satisfy golfers' expectations, not to mention keep up with the competition.

There are myriad benefits to verticutting, which has also fueled its popularity.

**More superintendents add vertical mowing to their maintenance programs to improve golf course conditions**

By Larry Aylward EDITOR IN CHIEF

Jeff Buchko, a product manager for Jacobsen, says more university researchers have concluded that verticutting is a cultural practice that's critical to turf care. Turf that is verticut can withstand the threat of disease and harsh weather better. Simply put, verticutting stimulates growth.

Not only does verticutting remove thatch, which is a breeding ground for turf disease, but it also provides channels to allow moisture and oxygen to get into the rootzone, says Tony Ferguson, the senior marketing manager of Reelmaster products for The Toro Co.

Another reason for verticutting's increased popularity is that turf recovers quickly from the process, so

golf course play isn't disrupted.

"You're cutting slits in the turf, and those slits will fill in the first time you mow the turf with a greens mowers," Aldridge says. "A lot of times you can verticut and mow, and golfers won't know you've been there."

Verticutting is not just a greens thing anymore, Ferguson points out. Like many turf maintenance procedures, such as topdressing and aeration, verticutting is also performed on fairways. "That will continue to some degree as budgets and manpower allow," Ferguson adds.

Jacobsen introduced its Verticut 214 a few years ago with fairways in mind. Its

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## On the Verticutting Edge

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84-inch cutting path and 4-mph cutting speed covers more than 3 acres an hour for high productivity, the company says. It also features three cutting heads that penetrate soil up to 3 inches to quickly remove thatch and debris.

Aldridge has noticed a trend where more superintendents are getting more aggressive with their verticutting practices on newer turf varieties (which form thatch quicker) by combining them with aerification. They do this during the prime growing season when recovery is faster. They will aerify to maximum depth and then verticut immediately after to remove even more material.

Aldridge says John Deere is capitalizing on the trend and recently released a new attachment that enables both processes to be performed at the same time. Deere's Aercore 800 is equipped with the attachment. "You'll be able to finish the prac-

WHILE VERTICUTTING IS  
A SIMPLE PROCEDURE,  
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TRICKS OF THE TRADE  
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SHOULD KEEP IN MIND.

tice much quicker, and it will also save on labor to complete it," Aldridge says.

As verticutting gets more popular with superintendents, Ferguson says more suppliers are entering the verticutting arena with new products.

"It's all part of a system of turf care management that allows superintendents to maintain their turf to a higher level," he adds, noting that verticutting is also

getting more popular in sports turf care and is even gaining a presence in the lawn care industry.

While verticutting is a simple procedure, there are a few tricks of the trade that operators should keep in mind. While it may sound elementary, Buchko says it's important to keep a constant eye on the equipment and its many moving parts while it's in operation to ensure it's functioning correctly and safely.

Both the verticutter attachment and greens mower verticutters should spin in the opposite direction that a reel would, helping to bring up more material and yield a more aggressive and consistent verticut, Aldridge says.

Ferguson advises superintendents to perform verticutting on a routine basis. Don't do it when you have a problem, such as turf disease caused by too much thatch; do it preventively to avoid such problems. ■

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