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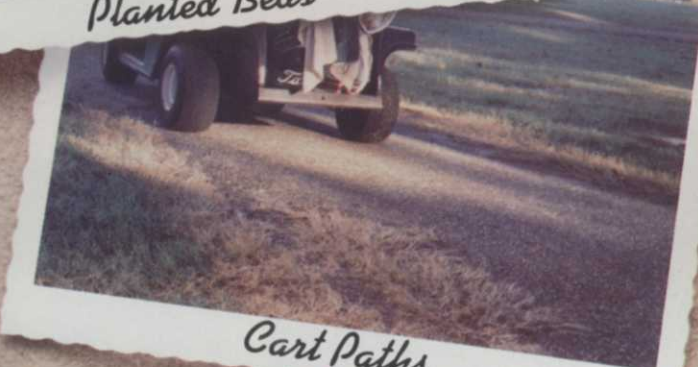
# SO MUCH WEED CONTROL NEVER COST SO LITTLE.



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All around the golf course, Roundup® herbicide is as versatile as it is affordable. Just one application can take the place of six string trimmings over the course of a season. Even turf renovation is an inexpensive project with Roundup.

**ROUNDUP WILL SAVE YOU TIME AND MONEY  
ALL AROUND THE COURSE.**

Dollar for dollar, Roundup can give you better weed control—with less labor—than time-consuming mechanical or hand weeding. In one shot, you can control over 110 broadleaf weeds and grasses, more than 35 brush and hardwood species—even poison oak

and kudzu. Roundup controls them roots and all, so they won't grow back.

This season, give Roundup more of the dirty work, wherever weeds appear. And give your men more time to keep the greens, fairways and other high-visibility areas looking their best.

\*Based on cost of one gallon of 2% spray solution of Roundup alone to treat low growing vegetation.

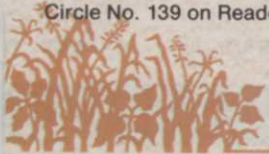
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**EFFECTIVE**

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# For the long run.



## **Introducing a powerful new force in riding rotary mowers.**

Now there's more to Cushman Front Line® Mowers than top cutting performance. More power. More operator comfort. More endurance.

Now there's the new diesel-powered Cushman model 807.

Its totally integrated power train and new hydraulically-powered steering gives you unmatched performance over the long run. The 807 dispatches thick, wet grass on

tricky maneuvers around obstacles without losing ground speed. It's factory-equipped with wide 23 x 10.50-12 tires to accommodate any accessory without major modifications.

### **Precision Performance.**

At the heart of the new, four-wheel 807 is a powerful 21.5 horsepower, 3-cylinder Kubota 950 diesel engine.



We've included a heavy-duty Donaldson air cleaner to keep performance up and maintenance down. A Stanadyne water separator fuel filter to protect injectors and injection pumps. And a new heavy-duty Cushman PTO clutch to keep your new Cushman Front Line running longer.



As with all Cushman Gas and Diesel Front Line Mowers, the 807 features a durable 60- or 72-inch side or rear discharge mower deck that leaves no grass uncut. The under-deck baffle design produces a positive lift and free flow of air for the industry's most uniform discharge of clippings.

No other rotary mower gives you a cleaner cut.

A complete family of Cushman Front Lines and a wide range of accessories are available to meet all your needs. Choose a 3 or 4 wheel design. Add the exclusive Cushman Grass Caddy™ system, which lets you cut, catch, and hydraulically dump 16 bushels of clippings without leaving the seat. Shut out the

elements with a weather-tight cab.

Or keep your Front Line working all year with a Snow Thrower, Snow Blade, Tine Rake, Flail Mower, Leaf Blower, or Rotary Broom.

In the long run the Cushman Front Line is a cut above the rest. For a convincing demonstration contact your Cushman dealer today. Or call toll-free: 1-800-228-4444.

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**BUILT TO LAST**

3261 Cushman, OMC-Lincoln, P.O. Box 82409, Lincoln, NE 68501

# 'I NEED A DRINK!'

Many superintendents could be uttering that phrase in the not-too-distant future. But it's not water they'll be drinking.

**W**ater continues to create problems in the golf course market, problems that could drive some superintendents to drink. But they won't be drinking water; that will be in too short a supply for a large portion of the country.

Some areas are facing the problem now. States on the eastern seaboard faced shortages this past summer, and New Jersey actually banned some water use. But the Southwest is where most of the trouble will hit.

Bob Randquist, superintendent at Southern Hills Country Club in Tulsa, Okla., says his course has a steady water supply. But, he adds, a number of other courses in the area could be without one soon. "Water is at a premium right now."

Like Randquist, Tom Athey does not face a problem at Fremont Country Club in Omaha, Neb. He is hooked into the municipal water system, where his water bills and supply have remained stable. But courses outside the area relying on their own wells or aquifers will soon be left high and dry.

Something, Randquist notes, must be done. He believes most clubs are

willing to spend the money to research alternative sources of water, such as effluent or recycled water. Nothing has yet been organized, though the industry has been discussing the problem for some time (see *WEEDS TREES & TURF*, Jan. 1986, p. 82).

Dennis Orsborn, a golf community developer, says water management programs will be a big part of the conservation effort in the future. His company, Sunrise of Palm Springs, has been installing computerized irrigation systems that use pumps with a variable frequency drive motor. The system is more efficient, providing the exact amount of water and pressure desired.

He says of the situation in the Southwest: "It's going to get worse, not better." Orsborn adds that parts of Arizona and Southern California are required to use effluent water.

Randquist notes there is potential for widespread use of effluent, though "we need a better understanding of its content."

Dick Herr, superintendent of Jupiter Hills Country Club in Jupiter, Fla., has been using recycled water for some time with no problems. But,

he says, his area has only a three- to four-year supply. For him, recycled water is only a stop-gap solution.

Randquist understands this problem and is calling for research to develop longer-term effluent supplies, as well as alternative sources. Some of these alternatives include hybrid turf grasses more resistant to drought conditions.

Jon Scott, golf and grounds director at Grand Traverse Resort in Michigan, expects some offerings soon—possibly a variety of bentgrass. He also notes that water management programs can take some of the heat out of the drought.

The problem is convincing golfers that the browner looking turf they're playing on is still of high quality, though maybe not as high as previously. "There could be a trade-off in quality," Scott admits.

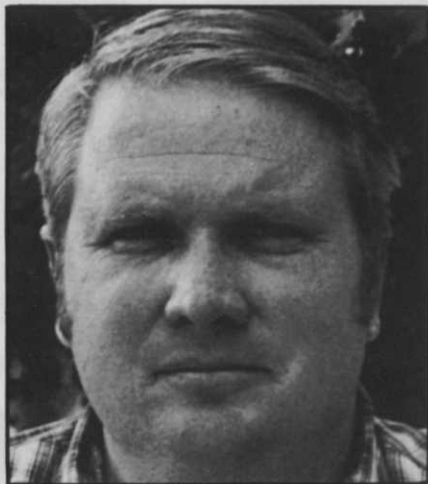
However, research costs money. Randquist hopes that a superfund can be created by the GCSAA and the USGA. But he admits that the possibility of help other than advice from courses in the North (where often the problem is too much water) is unlikely. Until the North feels the thirst, he says, the rest of the country should experience only a trickle down effect.

### The black death

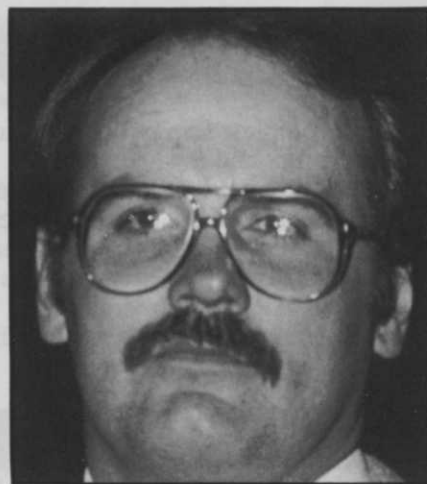
Ironically, this water shortage could save courses from another, potentially more serious problem: anaerobic black layer.

The common denominator in the problem, which is becoming more widespread nationally, is water—too much of it. Black layer has forced Scott to replace a number of greens at the Grand Traverse course.

No cure has yet been discovered. Some stop-gap solutions have been used to control and isolate (but not



Tom Harrison: spikeless shoes



Tom Athey: hooked on muny water



Bob Randquist: calling for research

## In 1986, what were your expected expenditures for:

Chemicals, supplies	% sample purchasing	Average per purchaser	Projection to WTT readership
Turfseed	82.3	\$2,590	\$20.3 million
Sod	31.6	2,010	6.1 million
Dry-applied turf fertilizer	86.1	8,480	69.6 million
Liquid applied turf fertilizer	46.8	1,490	6.7 million
Tree fertilizer	25.3	464	1.1 million
Soil Amendments	38.0	1,430	5.2 million
Adjuvant spreaders	30.4	368	1.1 million
Wetting agents	62.0	554	3.3 million
Pre-emergence herbicides	64.6	3,240	19.9 million
Post-emergence herbicides	69.6	1,770	11.7 million
Aquatic herbicides	39.2	526	2.0 million
Fungicides	83.5	6,850	54.6 million
Insecticides for turf	79.7	2,320	17.6 million
Insecticides for trees/ornamentals	32.9	612	1.9 million
Growth regulators	34.2	293	1.0 million
<b>Equipment</b>			
Golf cars/gas: # owned	49.4	26.1	123,000
expenditures	32.9	\$5,730	\$18.0 million
Golf cars/electric: # owned	45.6	31.1	135,000
expenditures	21.5	\$9,210	\$18.9 million
Utility/ATVs: # owned	78.5	4.3	32,000
expenditures	49.4	\$2,670	\$12.6 million
Sweepers: # owned	41.8	1.2	4,590
expenditures	17.7	\$334	\$201,000
Irrigation pumps: # owned	89.9	2.4	20,600
expenditures	46.8	\$1,990	\$8.9 million
Sprinklers: # owned	83.5	361	2.87 million
expenditures	57.0	\$1,940	\$10.6 million
Electronic irrigation controls: # owned	53.2	20.3	103,000
expenditures	27.8	\$1,790	\$4.74 million
Walk-behind mowers rotary: # owned	89.9	3.8	32,200
expenditures	54.4	\$336	\$1.74 million
Walk-behind mowers reel: # owned	58.2	4.3	23,300
expenditures	31.6	\$2,170	\$6.54 million
Riding mowers rotary: # owned	69.6	1.8	11,700
expenditures	34.2	\$2,870	\$9.34 million
Riding mowers reel: # owned	81.0	4.3	33,500
expenditures	51.9	\$5,890	\$29.1 million
Tractor drawn gangs: # owned	82.3	2.4	18,700
expenditures	39.2	\$2,840	\$10.6 million
Spreaders: # owned	89.9	2.6	22,400
expenditures	29.1	\$282	\$784,000
Soil aerifiers/corers: # owned	87.3	2.1	7,360
expenditures	46.8	\$1,140	\$5.1 million
Sprayers: # owned	88.6	1.8	15,600
expenditures	41.8	\$354	\$1.4 million
Line trimmers: # owned	73.4	2.8	19,300
expenditures	44.3	\$171	\$721,000
Chain saws: # owned	84.8	2.0	16,300
expenditures	43.0	\$215	\$881,000
Plant materials	59.5	\$2,070	\$11.8 million

## LANDSCAPE PROFILE

get rid of) patches of the layer, which has so far been limited to bentgrass greens. Weekly aeration and fertilizing, along with application of hydrogen sulfite, seem to somewhat contain small patches. But a cure is obviously needed before the problem becomes epidemic.

### Good and bad

Despite some problems, golf course use is still on the rise, with most private clubs having to put prospective members on a waiting list.

This has its downside. Increased traffic means more work for supers.

Spike marks on greens and tees have been a problem at some courses because of traffic. To aid the greens' recovery, Randquist has been aerifying the greens at Southern Hills more frequently.

Lower cut and slower growth have not helped the recovery process either. Tom Harrison of Maple Bluffs Country Club in Madison, Wis., has been trying to convince his members that a slightly

higher cut, slower green, would be beneficial to the course. Unfortunately, he says, golfers prefer faster greens.

Harrison hopes that the spikeless shoe market will pick up. He has been encouraging club members to purchase the less-damaging shoe, and says of the spiked variety, "I'll be tickled the day they're gone."

Jon Scott believes that many courses being built now and in the future will take on a more practical shape: adequate-sized greens, tees and fairways, but not excessive. "I see a more manageable course, less extravagant," he says. He adds, however, that there will always be a niche for the extravagant course.

Dennis Orsborn concurs. "Our heyday is over. We must become as well educated as we can, and keep up with changing technologies as best we can. This is a business, and we must treat it like a business."

### Points of interest

Increased traffic should also provide some good sales for equipment manufacturers, especially of aerifiers. Golf course managers who read *WEEDS TREES & TURF* reportedly spent more than \$5 million on them last year (see chart).

Golf courses also have provided 75 percent of all expenditures on

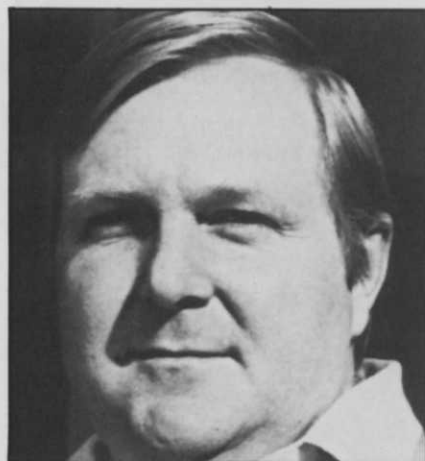
walk-behind reel mowers (\$6.5 million worth) and nearly 70 percent of riding reel mowers (\$29 million). Golf courses have provided about half of the industry's expenditures on tractor drawn gangs (more than \$10 million).

As always, fungicides occupied a good portion of golf course expenditures this year.

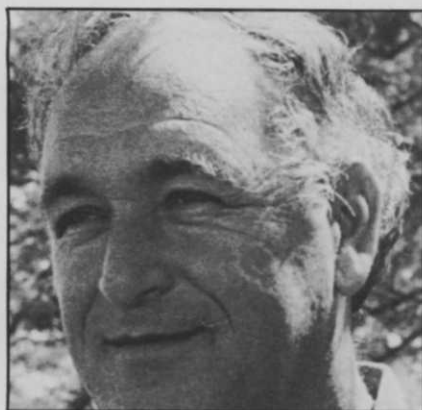
Superintendents who read *WEEDS TREES & TURF* spent around \$56.4 million on them in 1986. All other readers of *WT&T* spent \$25.2 million. Finally, supers laid out a good amount of cash for plant materials last year, nearly \$12 million worth overall. **WT&T**



Dennis Osborne: our heyday is over



Jon Scott: less extravagant courses



Dick Herr: finds stop-gap solution

## THE COMEBACK

Three years ago, cows grazed at Castlewoods Country Club in Jackson, Miss. Now the course is among the area's finest and improving quickly.

**T**hree years ago, Castlewoods Country Club resembled a cow pasture instead of a golf course. Today, it's the site of the Mississippi Golf Association four-ball state tournament.

Castlewoods, no longer ridiculed as Jackson's worst golf course, is much nearer the top of that list and continuing its climb. You can thank the new owners for deciding to put

up the money needed for nurturing a quality course.

And then there's Stanley Reedy, a soft-spoken, 26-year-old native Mississippian, who has served as superintendent since October, 1983.

He's the guy who took the beater course and shaped it into an effective advertising tool for the surrounding housing development.

No big deal, says Reedy with

Team prevents your weeds with all-season stamina. It's gentle on cool season turf grass, including bluegrass, ryegrass, bentgrass and other fairway grass species. And Team pre-emergence herbicide consistently delivers better control, longer control for your crabgrass and goosegrass.

Team spreads very easily. The clay carrier makes equipment calibration simpler and application more accurate. It also reduces dust problems.

Call time-out on crabgrass and goosegrass on your turf, for all season. With Team.

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**Put down Team™ this spring.**

**Or put up with crabgrass and goosegrass all season long.**

# Jacobsen Boldly Mows Where Others Fear to Tread.



From challenging terrain, to tender turf, our exclusive four-wheel drive, five-gang hydraulic mowing combination stands alone.

Combine the Jacobsen Hydraulic Ranger five-gang mower with one of our powerful G-4x4 tractors and you've got a quality, light-weight mowing system and the versatility of a tractor. All for about the same price as a self-contained mower.

**Light on turf, heavy on power.**

As the lightest pull-behind in its class, the Ranger mower rolls gently over delicate turf. Yet its

rugged Jacobsen design and powerful hydraulically driven reels enable the Ranger to slice through the taller, heavier grasses. And, a higher frequency provides a smoother cut at lower mowing heights. All to give you a tournament-quality cut, even in wet mowing conditions.

Plus, its compact size enables you to turn sharper, with only a four-foot diameter uncut circle. You have a choice of using all five gangs for an 11-ft. production-mowing swath, or three reels for tight areas.

Your choice of 6-blade or 10-blade

reels also allows you to match the Ranger more precisely to your particular mowing conditions.



Jacobsen's new Five-Gang Hydraulic Ranger swings up quickly to a compact 7' transport width, and large 26" high-flotation tires move softly over fine turf.





**Unmatched versatility.** The G-4x4 tractor is the ideal companion to our tough Hydraulic Ranger.

Highly maneuverable, this durable tractor features four-wheel drive, four-wheel steering, a low center of gravity and wide, hill-hugging stance to hang tough on the tricky slopes others steer clear of. While "true-track" steering and a low seven-PSI ground pressure produce a soft touch on tender turf.

Available in two models: the G-4x4 with an economical 24-hp diesel, or the new G-4x4 PLUS with a brawny

32-hp diesel and power steering, this machine has all the hill-climbing power you could ask for. Plus a whole lot more.

PTO's front and rear, each with a three-point hitch, accommodate a variety of implements. From a rotary or flail mower, to a sweeper, blower, snowblade, snowblower, aerator, seeder and spreader. You'll find the G-4x4 the most versatile tractor on the course, year round.

Backed by the proven reliability of Jacobsen and the industry's most extensive service and support net-

work, it's easy to see why the G-4x4 and the Hydraulic Ranger boldly mow where others fear to tread.

For more information, or to arrange a free demonstration, contact your Jacobsen distributor. Attractive lease and finance plans available.

Jacobsen Division of Textron Inc., Racine, WI 53403.

**JACOBSEN  
TEXTRON**

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## LANDSCAPE PROFILE

typical “aw shucks” modesty. But one senses Reedy is proud of what he’s done.

“This place was a goat ranch,” says Reedy. Castlewoods didn’t really have a superintendent; just people who mowed periodically.

“The clubhouse was a little trailer. When I first interviewed for this job I told them ‘no way.’ I was coming from a lush place with a \$400,000 budget (Belle Terre Country Club, a Pete Dye course in Laplace, a New Orleans suburb). But they promised me they were going to do everything they’ve done,” says Reedy. He’s referring to Castlewoods Land Development owners Zack Hederman and Larry Edwards.

“Now I’d match this course against any course in the state,” says Reedy. “My crew is doing a great job.”

### Disaster zone

In 1983, Castlewoods wasn’t a pretty place. “I would estimate the turf was 40 percent bermudagrass, 30 percent dirt, and 30 percent weeds,” recalls Reedy. “There were open ditches in front of the greens and the sand traps weren’t really sand,” says Reedy. Drainage was poor and the traps were essentially mud. The No. 18 green was bald.

The club owned one tractor and two greensmowers, one halfway buried in mud. (Reedy and crew unearthed the Jacobsen tractor. It still runs today.)

“The first thing we did was buy equipment,” remembers Reedy. Included was a JI Case backhoe, two Ford tractors, two 72-inch Toro mowers, two Toro greensmowers, a sprayer and a Chevy pick-up truck. They also bought a turf vacuum, blower, sand pro and two Cushman truckstors.

“The workers didn’t even know how to calibrate a sprayer. I’m not knocking the guys—they did the best they could,” says Reedy.

Next came the necessary job of upgrading and, in some cases, installing drainage systems. “We contracted out a bunch of it. Then we installed culverts and catch basins the first fall and winter,” says Reedy.

In 1984, Reedy and his reliable crew paid particular attention to upgrading the club’s poor fairways.



Castlewoods was once called Jackson’s worst golf course. Today the course is in tournament condition.



The crew at Castlewoods built several greens and changed the contour of others. Hole #1 is an example of the successful renovation.