# Disposal of clippings complicates composting plan

nterest in composting is piling up nationwide because of mandates restricting solid-waste disposal in landfills.

But until more research takes place, grass clippings should stay out of the compost pile, says a waste management specialist at Ohio State University.

'You can't just toss grass

clippings in municipal or private compost piles," says Joe Heimlich, who advises public officials on recycling and composting.

"Most bagged clippings come from chemically treated suburban lawns, he points out.

'Scientists don't know what happens to all the chemicals if the clippings



become part of compost piles. They do know that some chemicals don't break down. That makes the compost unusable for gardens."

It's difficult to successfully compost grass clippings for other reasons, Heimlich says.

Clippings have a high moisture content and they pack together tightly. This restricts airflow and growth of microorganisms, preventing the clippings from decomposing rapidly.

Strong odors result from the slow breakdown occurring under wet condi-

tions and lack of oxygen. "A good compost pile is half air," Heimlich says.

"Leaves compost quick-

See TRASH Page 26

# AKt

Serving the needs of the professional lawn care operator

**VOLUME 13 NUMBER 11** 

AN HINELL PUBLICATION

**NOVEMBER 1989** 



Hurricane havoc: Houses were destroyed and trees toppled as Hugo breezed through Charlotte, N.C. Turf areas were left with deep gouges, and fescue lawns were smothered under brush piles.

Usage tips for sphagnum peat moss are offered by Canadian firms.

Prepare your spraying equipment for winter's onslaught.

See what's for sale, miscellaneous items.

# Huge hassles, opportunities in Hurricane Hugo's wake

BY JAMES E. GUYETTE Editor

urricane Hugo's path through the Carolinas left widespread destruction, and turf managers were expecting to reap tons of work-provided their businesses could survive the immediate aftermath.

Damage was so extensive that it could take years before rebuilding is completed.

As it stands now, authorities were predicting that it will

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be Christmas before all the storm debris is removed and restoration can begin.

Numerous yards have huge gouges in them where trees, poles, cars, houses and boats were slammed to the turf.

Lawns are taking an additional beating as the various cranes, front-end loaders and utility trucks are forced to drive over them.

Grass buried in darkness under giant piles of brush continues to die.

In addition to renovation opportunities, most likely treatments will be needed to control fire ants, yellow jackets and other insects stirredup and made homeless by Hugo's wrath.

Some business operators, though, were concerned about

See HUGO Page 11

Test with backhoe shows:

# Dwarf fescues have long root systems

BY JAMES E. GUYETTE Editor

warf tall fescues have deep root systems equal in depth to traditional tall fescue varieties, according to a recent test conducted at a California sod farm.

As turfgrass breeders have worked to develop dwarf tall fescues, there has been nagging concern and controversy over the effectiveness of the root systems.

"The single biggest question that has been raised regarding the truly dwarf fescues is the depth of their roots," reports Steve Tubbs, vice president of Turf Merchants Incorporated in Tangent, Ore.

Does shortening the plant affect the depth of the root systems?

"One of the most desirable characteristics of tall fescues is drought tolerance, and this is certainly a key issue," he says.

(The definition of a dwarf tall fescue remains open for debate as well. Tubbs believes that the only varieties that exhibit "dramatically reduced vertical growth rates" are TMI's Bonsai and Pickseed's Shortstop.)

"There is no evidence to date that the true dwarf fescues have any different root systems than other tall fescues," says Tubbs.

"It's not true that reduced top growth means reduced root systems," he says, declaring that "we think they will re-define the low-maintenance market for turfgrass as we know it."

Less mowing is required because the dwarfs are genetically tuned to day length-as days get shorter they don't grow as much, which also leads to reduced clipping levels, ac-

See DWARF Page 10

# **LATE NEWS**

## Toro buys Lawn-Boy for \$85 M.

MINNEAPOLIS- The Toro Co. has agreed to buy Lawn-Boy, Inc. for about \$85 million.

The seller is Outboard Marine Corp., which earlier sold the Cushman Group to Ransomes America for \$150 million so it could concentrate on its marine products line.

By 1991 Toro expects its profits to greatly improve because it will nearly double its trim mower line without bringing on additional overhead costs.

Lawn-Boy makes its own mower engines, ending Toro's need to buy them from other manufacturers, the company said.

Toro earnings for 1990 are expected to be reduced due to the one-time cost brought on by the purchase.

For FY 1989 Toro sales were \$643.5 million, earning \$22.1 million. In 1988 Lawn-Boy had sales of \$153 million, earning \$6.2 million.

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# INDUSTRY NEWS

# Founders of PLCAA feted in Las Vegas

LAS VEGAS, NEV.—A home-coming of sorts was scheduled Nov. 6-9 in Las Vegas for industry pioneers who attended the first meeting of what became the Professional Lawn Care Association of America.

The historic meeting June 14, 1979 at the Cincinnati-South Holiday Inn in Fort Mitchell, Ky. was called by Bob Earley, then-editor of LAWN CARE INDUSTRY, recounted

James R. Brooks, PLCAA executive vice president.

Plaques were to be presented to the PLCAA founders who were able to attend the Vegas fete.

"We're going to recognize that group," Brooks said just before presstime.

Attendees at the original organizational meeting were: Paul Hairston, Pat Lore, Stan Weber, Jerry Amstutz, Dr. Paul D. Schnare, Ronald D. Baker, Doug Baker, Doug Halterman, Harry Sloan, Glenn Bostrom, Bob Kautzman, Howard L. Evers, John Hayes, Rick White, Jerry Faulring, Dave Murphy, Gor-

don L. Ober, Ron Giffen, Ronald W. Collins, Joe O'Donnell, Tom Brune, Fred Rowley, Ronnie L. Zwiebel, Jim Kelly, J. Martin Erbaugh, John Latting, Steve Derrick, Don Burton, Larry Brandt, Will Schulze, R.B. Skelton, John L. Cruse, Jr., Jim Duncan, Rick Elred, Kent Potts, Bill Fischer, Ronald A. Ahlman, Bob Earley and Dick Foster.

# OTF expects to draw crowd

columbus, ohio—More than 3,500 people are expected

to attend the Dec. 4-7 Ohio Turfgrass Foundation Conference and Show in Columbus.

A record 3,500 attendees were at last year's show in Cincinnati, and attendance should increase this year, according to Dr. John R. Street, executive secretary.

For more information, call (614) 292-2601. LCI

# N.C. exhibit is Jan. 10-12

RALEIGH, N.C.—The 28th Annual North Carolina Turfgrass Conference and Exhibit will be Jan. 10-12.

For more information contact Dr. Arthur Bruneau at (919) 737-2326.

# IPM course to be in Jan.

COLLEGE PARK, MD.— The Second Annual Advanced Turfgrass Integrated Pest Management Short Course will be Jan. 15-18 at the University of Maryland.

The cost is \$600, and enrollment is limited. For information call Dr. Lee Hellman at (301) 454-3845.

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Keep your head when devising safety rules. A company was fined \$1,500 under OSHA for an employee who didn't wear required hardhat. The firm supplied the helmets and mandated wearing of same, yet the ruling said enforcement program was remiss because no penalties were issued for disobeying—a reminder was given and that was not enough, say Feds.

Biotechnology is bigger in Texas as Zoecon Corp. unveils new \$1 million expansion at Dallas plant. Biotechnology product development will occur at state-of-the-art facility

Repeal of IRS estate freeze rules is being sought by trade organizations. Existing law (IRS Code Sec. 2036c) eliminates some of the most commonly used and legitimate methods of passing family business to next generation. Heirs face huge tax burden if parent kept interest in-or received money frombusiness.

Law said to be confusing even the experts. Urge senators to support S.849.

Fees were incorrectly collected from applicator

licensees in Empire State, says New York State Green Council.

Group wants to fight authorities in court; lawyer says \$25,000 is needed just to get started. Money sought from members, other industry organizations.

Chemical specialties industry supplies expanded information base through publication of Vendors to the Trade '90.

Guide has more than 100 categories, in depth descriptions. Order through Chemical Specialties Manufacturers LCI Association, (202) 872-8110.

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> GET MORE FACTS

# Should LCOs charge for a lawn analysis?

S hould lawn care companies charge a service call fee to do an analysis of a potential customer's lawn?

One LCO says yes.

L.V. and her husband own a smaller lawn care operation in a rural area of a Midwestern state.

"No matter which way we go it's 20 miles there and 20 miles back," says L.V., who requests anonymity.

L.V. is plum fed up with what she refers to as the "wild goose chase" call.

"A person we consider a prospect for our lawn service requests a lawn analysis; we, in good faith, travel 20 miles or more, do the analysis, make recommendations, spend much of our precious time (and gas is not cheap), only to find that the customer wanted free information so he could do the job himself."

Another annoyance is fellow LCOs who have their friends order up an analysis to check out the local competition.

Wild goose chase calls are particularly bad during the busy season in the spring.

"This is a small company. We don't have a salesperson to go out and do this type of thing. It's taking time away from work to be done," L.V. complains.

"I took a look at the Big Picture and decided, 'Why are we doing this?"

L.V.'s solution? The company now charges a \$5 consultation/service fee, which is applied toward the bill if the potential client signs up.

"With this \$5 fee, if the customer takes the service they're really not losing anything. It weeds out the ones who are just shopping around."

It can be used as a marketing technique when dealing with a legitimate prospect, she believes.

"It would really enhance their interest in using that service rather than losing \$5," she explains.

"If they're serious about getting a service they're going to think twice about calling someone else and losing that \$5. If you're serious you're not losing anything," L.V. points out.

"If these people realize they don't like your service you should be paid for your time."

L.V. got to thinking about other services that make requested house calls, such as plumbers, appliance repair people, electrical contractors and phone installers.

And when making a trip into town to visit a doctor, lawyer or other professional, "You put your hand on the door knob and it's \$25." With all these occupations, "whether they do anything or not they charge you for a service call, and it's about time that our industry does the same!"

If LCOs consider themselves professionals, then they should be charging consultation fees like other professionals, L.V. observes.

"That service fee is established, the customer is aware of it and the customer must pay it. Why should our service be any different?"

L.V. tells the people over



JAMES E. GUYETTE

the phone about the \$5 fee, and "I also tell them that it will be put toward the service if they buy the service."

Because she began her plan in the late summer season, she has little information on reactions from possible customers.

A doctor ordered an analysis and gladly paid the fee because, well, because he's a doctor and the fee sure seemed normal in his eyes. (He signed up, too.)

Everyone else also accepted the fee and became a client, except for one woman.

"She paid the \$5 but didn't take the service—but that's okay because we didn't go on a wild goose chase," L.V. recounts.

She concludes, "Maybe we're going in the right direction, maybe we're not."

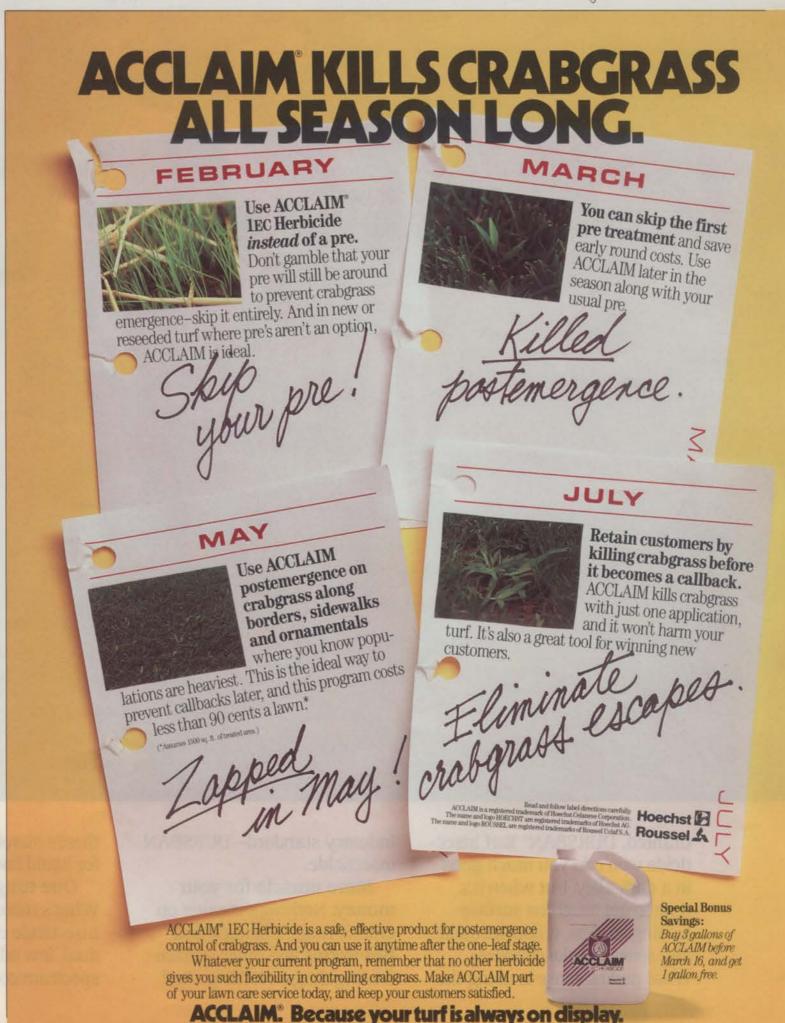
Well, readers: Is she?

L.V. wants to know what others in the industry are thinking. Please drop me a line with your opinions, and your reactions will be discussed in a later column.

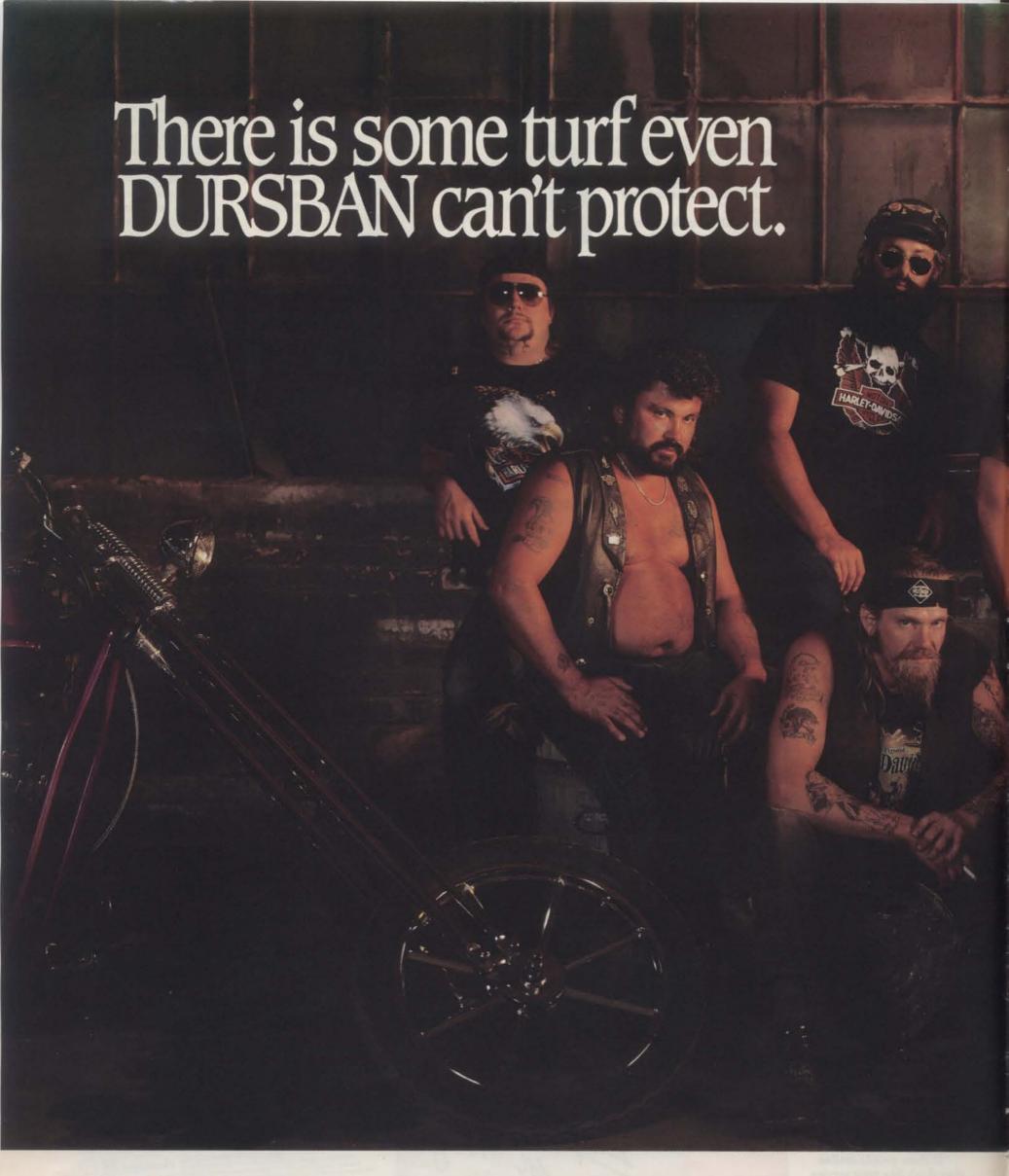
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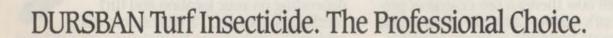
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control you've come to expect and customers demand. So arm yourself with DURSBAN Turf Insecticide. And keep surface feeders off your turf. Wearing a black leather jacket during application is, of course, not recommended.







# COVER STORY



# **DWARF**

from Page 1

cording to Tubbs, who adds that it also has decreased fossil fuel fertilizer requirements.

n August, the Pacific Sod Co. in Camarillo, Calif. decided to investigate the root length issue and perhaps put it to rest.

"They were so tired of hearing about the shallow root systems that they took a backhoe to their plots," Tubbs explains.

"We'd been hearing so much speculation and concern about root depth," recalls John Rector, a Pacific Sod agronomist.

The plots that got the backhoe treatment were planted in September of 1988.

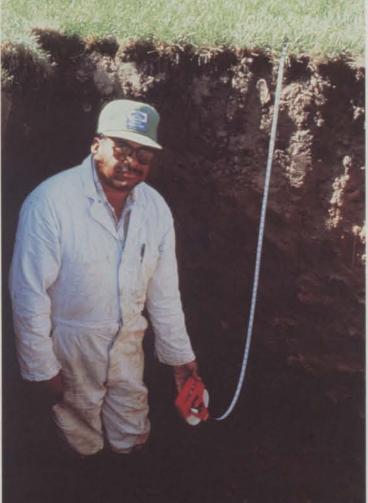
The irrigated high-maintenance area received high fertilization, no herbicides or fungicides, and it was mowed at one-and-a-fourth inches.

"We were growing it as if it's for sod," he points out.

Three varieties were planted: Bonsai; Turf Seed's Monarch, defined by Rector as a medium dwarf; and as a control, Turf Seed's Triathalawn Blend, which contains Olympic, Apache and Bonanza tall fescues.

"In all three cases the roots were all comparable," says Rector.

"When we dug down there was absolutely no difference" in the root sizes.



Down to earth: Pacific Sod's Victor Oliva monitors the deep root growth found in both the regular and dwarf fescues.

The roots were estimated to be eight feet long-deeper than the trench. "We dug the hole to six feet, but the roots kept going down there," Rector notes.

"There was a tremendous amount of root material at six feet-we're talking lots and lots of roots," he observes.

Tubbs was delighted with the results, and it was sure to be discussed at TMI's booth at the Professional Lawn Care

Association of America's November national convention in Las Vegas.

Bonsai, which was bred by Dr. Frederick B. Ledeboer, requires less mowing and looks as good as bluegrass-maybe even more so, says Tubbs.

"The turf quality is so stunning, it's better than bluegrass at this point," Tubbs main-

Tubbs notes that a draw-

back to Bonsai is that the

thickness of the turf creates a canopy that holds in moisture, leading to humidity-caused diseases in the East.

However, in arid California, "Who cares about humid-ity problems?" Tubbs queries. "West of the Mississippi

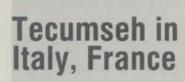
Dig deep: Bonsai roots six feet under

there's a huge market for fescues, and they don't have humidity problems," he points

The Bonsai crop was sold out way before the harvest, and TMI is now working on a dwarf suitable for markets in the eastern United States. "The advanced interest is what tells us we're on the right track," he says.

The new variety will keep the dark color and low growth habit, but the texture will display "a more open growth pattern" to eliminate the canopy problem caused by dense turf, Tubbs predicts, adding that the new grass is about two years away from seed produc-





GRAFTON, WIS .- The Tecumseh Products Co. has completed the acquisition of Tecnamotor, SPA of Torino, Italy. The purchase price was not disclosed.

Tecnamotor is Europe's leading manufacturer of lawn and garden gasoline engines. Sales in 1988 exceeded \$78 million.

The company has more than 700 employees in Italy, Great Britain, West Germany and France, and it has more than 5,00 dealers in Europe.

According to Todd W. Herrick, Tecumseh's president and CEO, the Tecnamotor purchase and last year's acquisition of L'Unite Hermetique of France establishes Tecumseh as a significant Pan-European company regarding exected growth of the the European market in the LCI



# HUGO

from Page 1

being able to stay afloat financially in the immediate weeks following Hugo's blast.

Most LCOs were wielding chain saws as dazed citizens returned to what was left of their homes.

"It's horrible," said Ellen Boutwell, office manager of Lawn-O-Green in Summerville, S.C., which is just outside of Charleston.

"I'm sitting here with no electricity," she said about a week after the big storm. "There's no area in the city that was not damaged."

She noted that "the beautification of someone's lawn is the last thing on most people's minds. I think we'll just be able to survive."

Boutwell thought that some of the impact could be long-term. "We've lost all of our Isle of Palms customers because they don't have houses."

There has long been a controversy over increased coastal development, and authorities may prohibit reconstruction of many formerly upscale properties located on dunes that were swept away by the raging sea.

In neighborhoods left intact, Boutwell said she was taking a wait-and-see attitude toward the lawns that remained under water.

Salt tolerant grass varieties are popular in the region, "but how much salt can it take?"

Renovations are in the future, but "for now we're giving people time to clean up their yards."

Lawn-O-Green employees were pitching in with chain saws to help out. Because of

personalized service providing helpful

and timely advice to maximize results.



Big wind: Timber was tortured for as far as the eye could see.

workers compensation restrictions they were sticking to cuts that can be made from the ground.

Said Boutwell, who stayed in her quaking home as Hugo hit, "I was a lucky one—no trees fell on my house. I can look out my back window and see 300 broken trees."

Although there were plenty of tree removal opportunities, a financial windfall was not likely because of government-mandated price limits designed to prevent profiteering. The going rate now is \$45 per manhour.

"We're doing everything we can for our employees—keeping them with a paycheck. It's part of our survival," Boutwell said.

harlotte, N.C. is about 190 miles from the coast, but after Hugo sacked Charleston the hurricane turned right and swept northward through the unsuspecting city.

"We were caught completely off-guard," said Mike Francisco, manager of the Charlotte ChemLawn branch.

In the days after Hugo's romp, workers from the ChemLawn in Charlotte who were not on chain saw teams began arriving in Greensboro, N.C.

"We're going to be using some of their employees at our facility," said Dana Hall, manager of the Greensboro Chem-Lawn.

After the excitement dies down in Charlotte, those staff members will return home, accompanied by Greensboro ChemLawn people (plus Greenville, N.C. ChemLawn employees), to begin work on the lawns.

After the initial cleanup is finished, fill-ins, aeration and seedings top the list of work to be done. "Some of the places will need complete renovations," Hall observed.

A ll hell broke loose in Charlotte. "The city was basically devastated," Francisco reported.

"We've quickly gotten into

a new line of work. We've gotten into the tree- and landclearing business."

Price-gougers there resulted in a government-enforced limit of \$100 an hour for a three-man crew with two chain saws. "We're basically doing only ChemLawn customers who call us," Francisco said.

The company also donated a crew to charity—aiding elderly citizens and others who can't afford professional services.

Like the Lawn-O-Green workers, the ChemLawn sawyers also were restricted to cutting trees that were on the ground.

Hospitals in the hurricaneravaged region reported a rash of chain saw accidents, but the ChemLawn operation boasted an injury-free record.

"We're not going into this half-hearted," said Matt Swindler, ChemLawn's Hugo cleanup manager.

"We went out and invested in chain saw chaps," and the saws are run only by supervisors.

According to Swindler, most of the reported chain saw injuries were suffered by overeager high school students seeking extra cash and "Joe Homeowner—who's never seen a chain saw in his life."

Swindler didn't escape completely unscathed. On the day he spoke with LAWN CARE INDUSTRY he had just suffered a painful sting from a yellow jacket.

Like many of the human citizens of Charlotte, the insect population found itself homeless as toppled trees ruined their root-located abodes.

Changes in barometric

Distributor's Own

Always Read and Follow Label Instructions. Turf Supplies

pressure and the odor of sweet green wood being ground up by chippers all over town brought the beasts down upon the workers manning those devices, Swindler said.

Huge 200-year-old trees, some as thick as a circle of three people holding hands, came crashing to the ground in seconds.

"There's 60- to 80-foot elms out there just snapped at the base," Francisco related. Many trees throughout the region were broken off about six feet above the ground.

"We've always been proud of our trees here, and most of them are laying across streets or on powerlines," he lamented.

# Tools hard to locate for cleanup

CHARLOTTE, N.C.—Finding the proper equipment was a major struggle in the days and weeks—following Hurricane Hugo's unwelcome

"You couldn't beg or borrow a chain saw in Charlotte," recounted Mike Francisco, manager of the local Chem-Lawn Services Corp. branch.

In concert with other ChemLawn operations, though, arrangements were made to obtain the needed tools elsewhere and bring them into the storm-ravaged area.

"It is great to work for a company like ChemLawn/ Ecolab because of the super cooperation and mustering of resources that I have witnessed in the past two to three weeks," Francisco commented.

Chain saws were rented in Greensboro, N.C., and chippers were soon en route from Cincinnati and Atlanta.

Throughout the region, green industry manufacturers helped out by offering their products to stricken municipalities.

Garden Way Incorporated of Troy, N.Y. donated 12 pieces of equipment to eight communities in North and South Carolina.

Six Bolens chipper/shredders and six Troy-Bilt Tomahawk chipper/shredders were contributed.

Nathanial C. Stoddard, Garden Way president, called the effort "something we wanted to do as a concerned corporate citizen."

Charlotte, plus Charleston, Darlington, Florence, Hartsville, Georgetown, Myrtle Beach and Surfside Beach, S.C. got equipment.

As for Francisco, he said he'd be happy when the initial cleanup is over and things can get back to some degree of normalcy: "I'm getting tired of playing Daniel Boone." LCI



best. So you look your best.

# Canadians making moves to spread peat moss use

ighteen of Canada's top peat moss marketers ■ have organized the Canadian Sphagnum Peat Moss Association to promote what they feel are the unique properties and uses of their country's product.

Those 18 member firms are responsible for 98 percent of Canada's total sphagnum peat moss production and for 97 percent of the sphagnum peat moss imported by the United States.

According to Gerry Hood, president of the CSPMA. Americans use 18 million sixcubic-foot bales of Canadian peat moss a year, and half of that is used by professionals in the horticultural industry.

Peat bogs cover nearly 12 percent of Canada's land surface, and in 1988 the country exported an estimated 708,000 tons of the material.

"In an age of shrinking water resources and environmental concerns, Canadian sphagnum peat's natural, organic composition; superior aeration and water retention capabilities are of particular import," Hood notes.

In general, a mix consisting of one-third peat and twothirds soil helps to replenish the soil's capability to produce healthy trees and plants for vears to come, he adds.

When used in lawn care, according to Hood, the peat can prepare a bed for seeding and supply a protective top dressing to guard against sudden temperature changes.

The CSPMA maintains that sphagnum peat helps everything grow better, including lawns, flowers, trees, shrubs, bulbs and new seed-

Sphagnum peat moss grows in the coldest reaches of Canada, in bogs that date back 7,000 to 12,000 years.

These sphagnum plants were some of the first to grow on land when the glaciers pulled away at the end of the Ice Age.

Over the ensuing centuries, sphagnum plants have grown and formed layers, creating this fibrous, organic substance, which reportedly has an enduring structure that resists decomposition for years.

When used in clay soils that tend to compact, sphagnum



Hood: It retains moisture

peat keeps the soil loose, letting in air and giving roots the room they need to develop.

Also, since Canadian sphagnum peat is highly resistant to compaction, it protects the soil from hardening, according to the CSPMA.

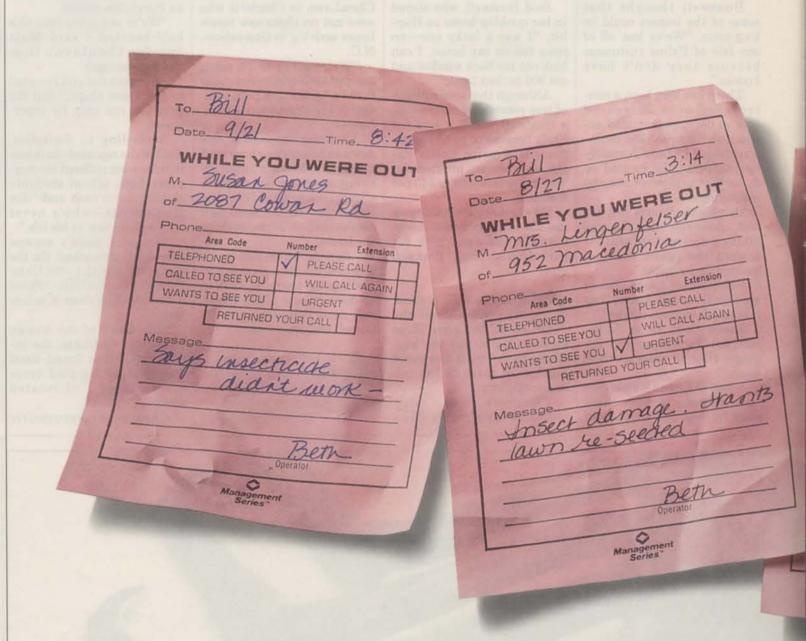
Another benefit being cited is its ability to retain water. Canadian sphagnum peat moss is so porous that it can actually hold 12 to 20 times its weight in water, the organization maintains.

When mixed with the soil, its natural composition—it reportedly contains no harmful additives, damaging insect life or weed seeds-creates an underground environment that is conducive to growing healthy plants.

Also, it has a predictable pH level within the range of 3.4 to 4.8. A soil test will indicate if lime or sulfur is required to adjust the pH to 7, the desired level for lawns, according to the CSPMA.

The organization claims that soils mixed with its peat moss are more productive than soils that are amended

Application	Area	No. of Four Cubic-Foot Bales		
Planting New Lawns	25 feet × 40 feet	23 bales		
Mix two inches of peat in top six inches of soil. Cover with grass seed and top with a 1/4" to 1/2" layer of peat	(1,000 square feet)			
Overseeding Established Lawns	25 feet × 40 feet	3 to 4 bales		
Spread a 1/4" to 1/2" layer over surface to be reseeded Bulb and Flower Beds	(1,000 square feet)  3 feet × 8 feet	1 bale		
	(24 square feet)	i bale		
Blend peat one third by volume with soil (you may prefer to use 1/3 peat, 1/3 sand, 1/3 soil).	fe i aduate tool)			
Shrub Plantings or Transplants	6 or 8 shrubs or	1 bale		
Blend peat one third by volume with soil (you may prefer to use 1/3 peat, 1/3 sand, 1/3 soil).	trees			



# Triumph gets rid of the toughe

Constant callbacks and retreatments can drive even the best lawn care business right into the ground.

But you can reduce your callbacks—and increase

your profits— simply by replacing whatever insecticide you've been using with and mole crickets. Triumph".

cide is proven more effective has been shown to deliver

at controlling problem turf pests, including white grubs

For example, in 10 years of Because no other insecti- university testing, Triumph



with products such as bark, manure or compost.

"When compared to other peats, for example, Canadian sphagnum peat is purer, lasts longer in the soil, has greater bulk, better water retentive properties and a more predictable pH," Hood says.

When used as a topdressing or as a soil conditioner, sawdust and bark waste materials-as they decomposetake up nitrogen and nutrients needed to nourish growing plants, according to Hood.

These woody products also lack sphagnum peat's ability to hold water and to prevent leaching, he points out.

While the chief function of

vermiculite and perlite is to aerate the soil, Canadian sphagnum peat performs the dual function of aeration and water conservation, the organization claims.

Vermiculite and perlite soil conditioners can be used effectively in combination with the organic Canadian sphagnum peat.

When contrasted with the use of leaf molds and other composts as soil conditioners, Canadian sphagnum peat is found to last longer and to offer greater water holding and releasing capability, according to the CSPMA.

Mixtures of leaf mold, compost and Canadian sphagnum peat are compatible and effective soil enhancers when used in combination.

Manure is also sometimes used as a soil additive. Canada's peat, by comparison, is odorless, slower to decompose and free of undesirable biological components, Hood says.

The product is available throughout the U.S. in compressed one, two-, four-, fiveand six-cubic-foot bales that double in volume when opened and loosened.

Prior to use, Canadian sphagnum peat should be premoistened to activate its sponge-like water holding capacity.

Use a hose to fill the bale with water. The water will penetrate and properly moisten the peat moss overnight.

In addition to a pH range of 3.4 to 4.8, the material has a high cation (positively charged ions) exchange capacity, which is important for the absorbation of fertilizers, according the the CSPMA.

The organization points out that the product benefits any soil type, "even in the very highest quality loam."

For example, in sandy soil-where water and materials tend to leach through too quickly, creating an unending demand for watering and feeding—the peat's fibers combine with the soil to reduce leaching and enhance moisture retention.

In clay soil—which tends to compact and harden-air, water and fertilizer cannot penetrate effectively, which in turn inhibits root growth.

Adding the Canadian peat reportedly lets turf managers achieve looser, more aerated soil, "which gives the roots the room they need to develop and permits them to retain the moisture thay need."

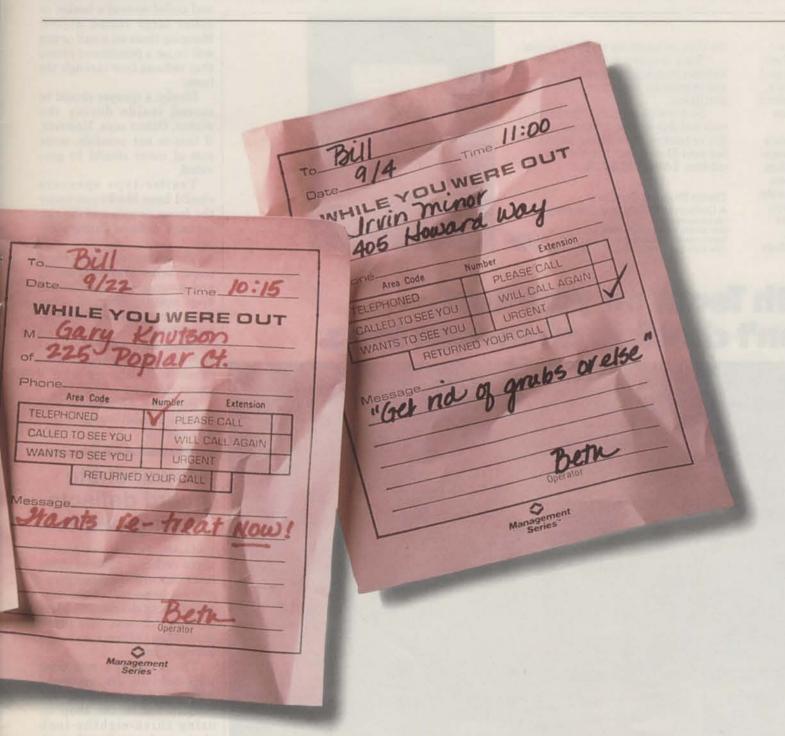
The organization also maintains that its product lasts longer than other peat materials when applied on the job.

# Study by mail at Colo. State

FORT COLLINS, COLO .-Management and Control of Turfgrass Pests is a new correspondence course offered by Colorado State University.

Topics include maintenance of turfgrass, biology and control of weeds, biology and control of insects and related pests in turfgrass, biology and control of turfgrass diseases, pesticide application equipment, calibration, integrated pest management and measurements, conversions and calculations.

Admission to the university is not required and students can study at their own pace. The instructor is Dr. Bert L. Bohmont.



# st turf pests, including these.

90 percent control of white grubs within just 2-3 days of application.

cides, Triumph consistently provides lasting control

for a full 8-10 weeks. So one late summer or early fall application is all you need And, unlike other insecti- for effective turf protection.

Which doesn't mean you won't still collect notes from tiable variety.

your clients. Just that they'll more often be the green, nego-



# Spray equipment functions better with winter care

interizing and cleaning your spraying equipment will reduce repairs and help make it last longer.

"Chemical sprayers are perhaps the most delicate equipment you have, (and they) require special treatment before storing for the winter," says Erdal Ozkan, extension agricultural engineer at Ohio State University.

"Cleaning a sprayer before storing not only increases its life but also reduces the chance of cross contamination of

chemicals next spring and prevents (plant) injury," he maintains.

"Once it's clean, it is important to protect the sprayer from the harmful effects of snow, rain, sun and strong winds."

What you clean the sprayer with depends on what pesticide you have applied with it.

Ozkan says to check chemical labels for specific cleaning instructions, but a solution of 2 pounds of detergent for every 30-40 gallons of water will re-

move most residue.

Follow these steps:

- Remember to take the appropriate safety precautions when handling pesticides and cleaning materials. Follow all the detailed instructions in your sprayer's operator's manual.
- Flush the sprayer with clean water.
- Add the proper proportion of detergent and water to the tank and agitate the cleaning solution thoroughly so it circulates throughout the system for several minutes.

Some pesticides may form a putty-type paste on the wall of the tank that detergent will not remove. Add a gallon of kerosene or diesel fuel for each 25 gallons of cleaning water, allow the paste to dissolve, then agitate and flush with the detergent solution and clean water as described earlier.

- Remove spray nozzles and flush the system twice with clean water.
- Clean the nozzle tips and screens in a strong detergent solution or kerosene using a soft brush. Dry these and store

them for the winter in a can of light oil such as diesel fuel or kerosene.

 Add 1-5 gallons of light weight oil to the rinsing water used in the final flushing to form a protective coating inside the tank, pump and other sprayer parts.

Automotive antifreeze with rust inhibitor will serve the same purpose in the pump or sprayer parts and also prevents any water that may not have been removed from the unit from freezing.

 Hoses should be removed and coiled around a basket or other large round object.
 Hanging them on a nail or peg will cause a permanent crease that reduces flow through the hose.

Ideally, a sprayer should be stored inside during the winter, Ozkan says. However, if this is not possible, some sort of cover should be provided.

Trailer-type sprayers should have blocks put under the frame or axle and the tire pressure reduced during storage.

Touching up scratched paint helps prevent rusting and covering all openings will keep insects, dirt and other foreign material out of the system, he says.

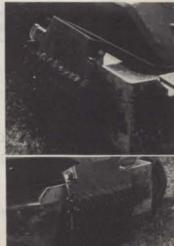
Clean the outside of the entire sprayer with a bristle brush and water or with a steam cleaner.

Be sure to check the owner's manual for more specific advice.

# Mower chute guard deflects cutting debris

DALLAS, TEXAS—A mower chute deflector made of chain links deposits clippings properly yet helps reduce the danger of flying debris, according to Stan Johnson, vice president at Las Colinas Landscape Services, Inc.

The company's mid-sized walk-behinds are equipped with the devices, which are constructed in the shop by using three-eighths-inch chain and one-fourth-inch steel plate.



Sorry, crabgrass. Sorry, goosegrass. You won't be checking in here this season. Not on turf areas treated with Team preemergence herbicide.

Only one group has reservations. Your turfgrass. Even bentgrass can relax, Team is that gentle.

That means with a split application you can take an all-season vacation from weeds. From upset golfers, callbacks and costly reapplications.

Application is easy and accurate. Team gets to the ground where you want it. It won't leach out, even in heavy rainfall. Once activated, it forms a zone of protection that shuts the door on weeds for up to 20 weeks.

Team is widely available on dry fertilizer from leading formulators, and in granular form from your distributor

So if weeds are planning to visit your turf this season, tell them sorry. You've booked Team for the season. See your Elanco distributor. Or call toll-free: **1-800-352-6776.** 

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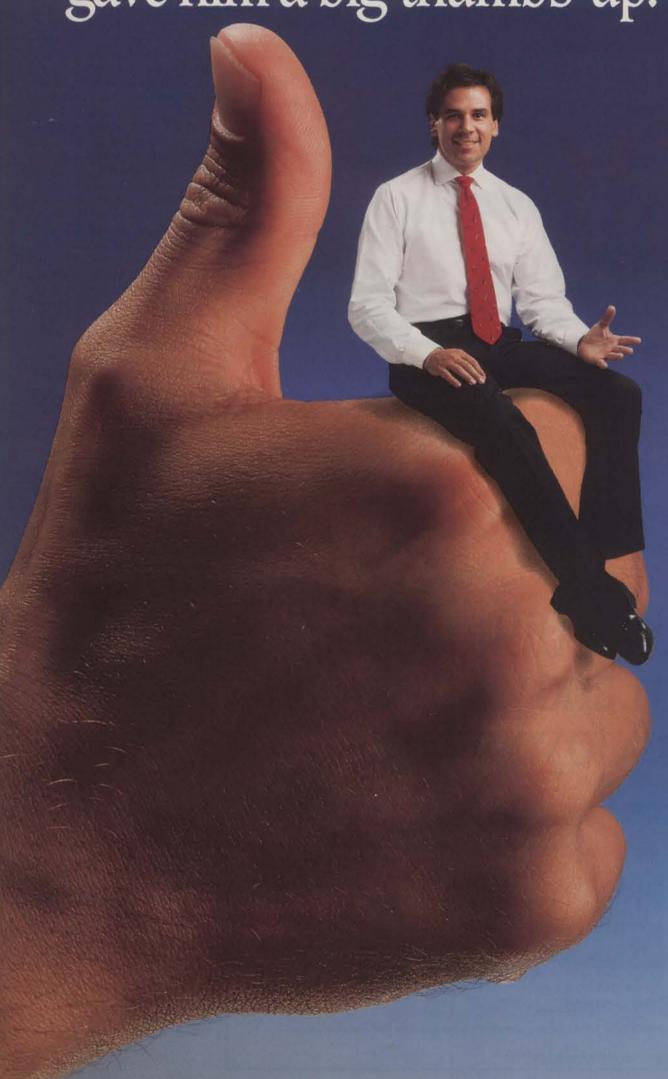




# With Team on your turf, weeds won't check in all season long.



# When Rick Steinau moved up to the performance of TURFLON, his customers gave him a big thumbs-up.



"TURFLON\* herbicides give us about 95% control of problem weeds. The standard three-way products give control in the 80-85% range."—

Rick Steinau, president Greenlon Lawn Care Services Cincinnati, OH

In the lawn care business, you know that exceptional performance reduces callbacks and cancellations—and costs less in the long run.

## Less callbacks.

"We started using TURFLON three years ago," explains Rick Steinau. "TURFLON simply does a better job on the hard-to-control weeds like spurge, oxalis, ground ivy and wild violets. These are the problem weeds that customers usually complain about most. With TURFLON, we've seen a 25% reduction in weed-related callbacks and a 15% drop in cancellations."

# More savings.

"We are definitely saving money by using a premium herbicide," continues Rick. "We know that a treatment with TURFLON costs about 50¢ more per lawn than a standard three-way herbicide, but we actually realize a 30% savings in our herbicide program." Rick Steinau knows that the performance of TURFLON herbicide has made a big, big difference in his business. Just think what it can do for yours. Call us to find out more. 1-800-373-2DOW (2369).

# Move up to TURFLON



\*Trademark of The Dow Chemical Company

Circle No. 105 on Reader Inquiry Card

# New training program fosters pesticide compliance



Jalette: A better method.

### BY MEGAN HARDING

NORTH KINGSTOWN, R.I.— Pesticide Compliance and Training Services has introduced a new program for training pesticide handlers.

It includes a series of brief, topical talks to be given each week, plus a correspondence training program for new employees.

In addition to training, PCTS performs on-site audits for compliance with more than 450 pesticide regulations. The training program consists of a series of information packets mailed each week to a supervisor or branch manager, who gives the training.

The packets include background material, which takes about 20 minutes to read, an outline for a 30- to 45-minute presentation, handouts for each person and a quiz to be taken after the talk.

Richard Jalette, who founded the company a year ago with partner Dr. James F. Wilkinson in North Kingstown, R.I., says this readymade kit minimizes the amount of in-house preparation time—eliminating even the need to make photocopies.

The talks were developed so LCOs could easily give them to their own employees.

Although many states will not accept a self-administered training program for credit towards recertification, PCTS' new program has gained approval in most of the states where they have clients, according to Jalette.

The firm acts as a third party that records employee

participation and verifies that the training has been carried out.

Jalette says he always questioned the effectiveness of holding winter training instruction in which an employee has to absorb everything in one marathon session.

While previously serving as director of marketing and sales for Old Fox Lawn Care of Rhode Island, Jalette thought there *must* be a better training method.

Regulation of the lawn care industry began in the New England states, Jalette says, "and we saw where the trend was heading.

ing.
"A lot of big companies have tons of training manuals and videotapes that are not used," Jalette says. "When a company pays money for a service, they're going to use it."

A full-year subscription to the training program includes 48 weeks of material, mailed each week, on such topics as driver safety, spreading granulars, nematodes, soil acidity and liming, photosynthesis, customer relations and seasonal concerns like spring diseases and late fall fertility.

Complex subjects, such as combating surface insects, are treated in two separate sessions.

"If we made it any longer we feel it would interfere with production time and people wouldn't use it," says Jalette, who believes training is less formidable when presented in small, digestible chunks.

"It's so easy. We don't have to do anything," says J. Martin Erbaugh, president of Lawnmark Corp, which has 200 employees and 12 branches stretching from Ohio to Maine.

Even though Lawnmark has a full-time trainer on staff, Erbaugh says PCTS' "force-feed method" makes sure that busy managers will find time to hold meetings.

He finds it especially handy to get a weekly report on training activities in all of the branches, along with individual test scores that can be used for employee recognition.

A lot of companies gain an unexpected benefit from the training: It forces them to meet each week with all of the employees.

"You're constantly talking to your people and bringing up the issues they can use that day," Jalette says.

After one year the topics begin to repeat, but are updated with information gleaned from from professional journals, OSHA, DOT and the Federal Register.

The cost of the service is based on the number of people See TRAIN Page 26



# Add Chipco 26019 to your spray program, and you may add a new truck to your fleet.

The best way to build bigger profits into your existing customer base is to add

into your existing customer base is to add CHIPCO\* brand 26019 fungicide to your regular spray program.

Here's why! CHIPCO\* 26019 provides more effective control of more damaging diseases than any other fungicide you can use. So, your customers get greener, healthier, more beautiful lawns. Second, CHIPCO\* 26019 delivers this broadspectrum control for a long time—up to a full month from a single application. That means it fits perfectly into your regular spray schedule. Third, CHIPCO\* 26019 is

dependable. Applied in a preventative program, CHIPCO\* 26019 provides the kind of reliable disease control that eliminates

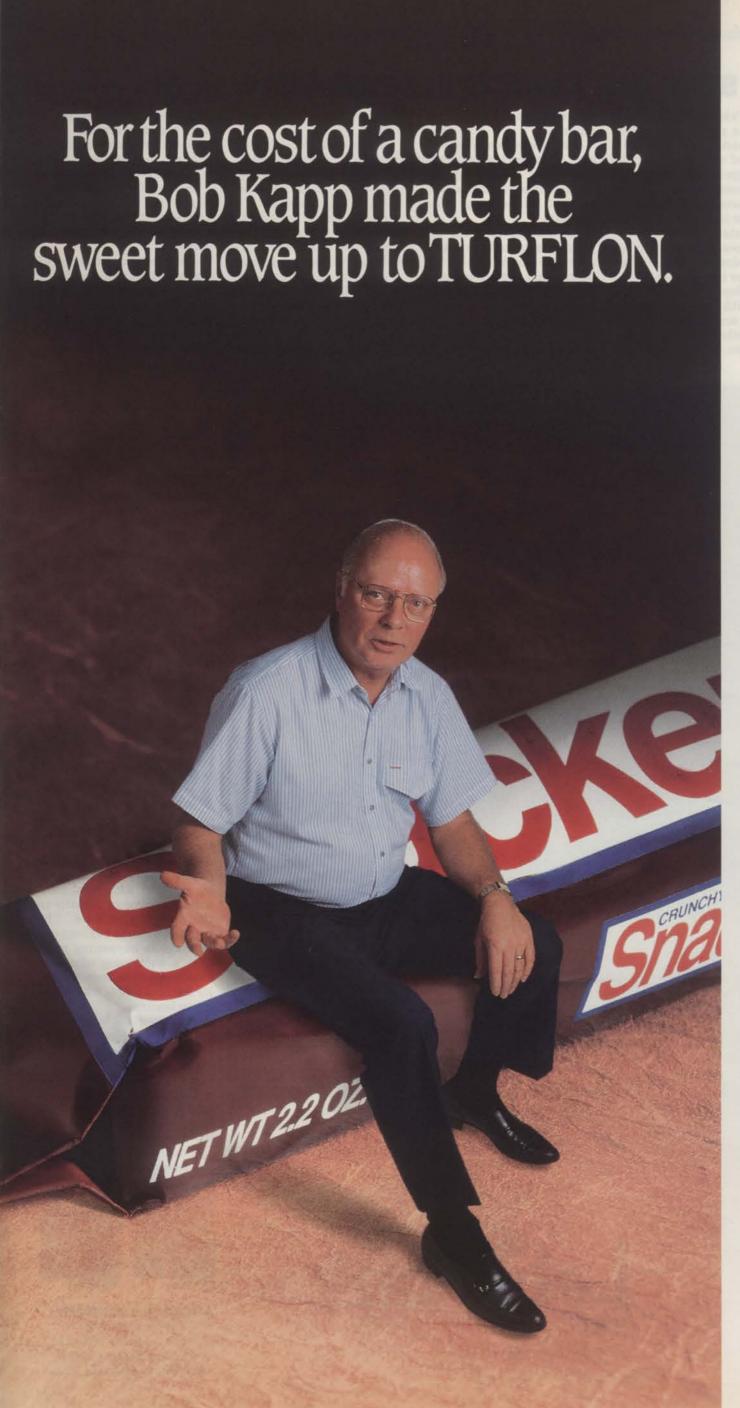
able disease control that eliminates customer complaints and costly call-backs. Best of all, by upgrading your service with CHIPCO\* 26019, you keep your current customers satisfied and build additional business through word-of-mouth. Add CHIPCO\* brand 26019 fungicide to your spray schedule today, and you may just have to make room for a new truck in your fleet.

Chipco 26019



26019 FLO

As with any crop protection chemical, always read and follow instructions on the label. CHIPCO is a registered trademark of Rhone-Poulenc. © 1990 Rhone-Poulenc Ag Company



"Our customers expect and demand quality —and we deliver. If it costs an extra 50¢ a lawn to keep customers, it's well worth it."—

Bob Kapp, President and CEO Kapp's Green Lawn Munster, IN

How much is customer satisfaction worth? For Bob Kapp of Kapp's Green Lawn, it's worth the performance difference that TURFLON\* herbicide can provide.

# What price customer satisfaction?

"We switched to TURFLON two years ago because we weren't pleased with our previous herbicide," says Bob Kapp. "Cost has never been a deciding factor in the products we use. The extra 50¢ per lawn for a treatment with TURFLON herbicide doesn't make a bit of difference. In this day and age, you simply have to retain customers—it costs too much money and time to replace them."

### Its rewards.

"TURFLON did a much better job, particularly on our problem weeds like wild violets, ground ivy and spurge," Bob continues. "Since switching to TURFLON, we've reduced our weed related callbacks and service cancellations by 50% from a year ago." With performance like that, you'll be able to add some sweetness to your bottom line. Call us to find out more. 1-800-373-2DOW (2369).

# Move up to TURFLON



\*Trademark of The Dow Chemical Company

Circle No. 106 on Reader Inquiry Card

# Past decade saw big switch in lawn care

BY ED WANDTKE AND RUDD McGARY

ach year, usually about the time of the Professional Lawn Care Association of America's national convention, questions pop up about the current state of the lawn care industry.

Most often, the answer is that it isn't too radically changed from the year previous—and this year isn't much of an exception, except... et's look at the trends for the past decade rather than simply the past year, and we think we'll find some significant changes in the industry as well as ones which have occurred over the past year itself.

The state of the industry today doesn't have much use for broadcast spraying of herbicides or insecticides.

The days of the "hose jockeys" with one tank mix walking across every lawn doing exactly the same thing are gone, at least for the strong, progressive companies.

The whole decade has been one of increased consumer awareness concerning herbicides, insecticides, and issues of groundwater management.

Because of this, the regulatory agencies have started efforts to curtail use of herbicides and pesticides, something with which the industry has dealt well.

The use of spot treatments, of more inspections and less applications, is now something found in every major market.

There were certainly some firms who feared legislation, none of the good ones worried much about it if the legislation was done even-handedly.

So, the state of the industry today is to use less and less herbicides and insecticides and to do more spot treatment.

A second major trend is one which will go into the 1990s and beyond, at least for those companies that want to continue growth.

That trend is toward multi-

ple services. The industry today is seeing more and more companies, usually small to medium-sized ones, offering more and more services.

Some are actually bright enough to offer ones that match their current offerings.

In the '70s and '80s many companies decided to offer services that didn't match the consumer buying patterns of lawn care.

An excellent example of that is carpet cleaning. Off the tops of our heads, we can think of at least 10 companies that offered carpet cleaning in the last decade.

We can also think of 10 companies that lost money doing

The key to the state of the industry now is that the companies that are offering multiple services are much more aware of what the consumer wants to buy from one source, and are now mixing services so that the consumer has a wider range of logical choices from which to choose.

nother major change in the state of the industry, and one which has not yet been implemented in all cases, is that the industry is more business-oriented.

This means that the companies, more and more of them, are becoming more intelligently run in the areas of operations, finance, administration and marketing.

While still not at levels seen in some manufacturing companies, the lawn care industry is getting stronger.

There's still quite a way to go in the area to reach the levels of sophistication of older industries, but there are leaders trying to help.

The typical lawn care company of the '70s was founded by someone with good technical background, usually in the agricultural field. The gradual switch to business orientation is happening more from a continuing education standpoint than from an major influx of people with training in business.

It's important to note that the state of the industry finds more and more opportunities for continuing education in business. The key is the willingness of the owner/operator to learn more about the business side of the lawn care industry.

A major factor in the potential growth of the industry in



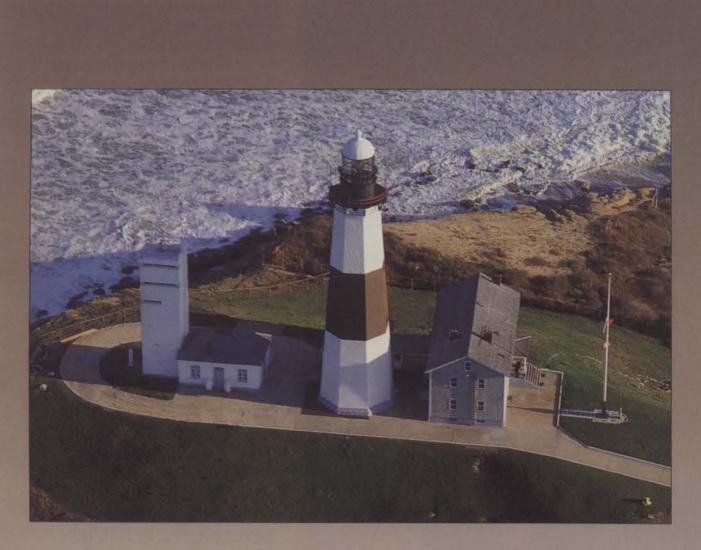




Authore

About the Authors
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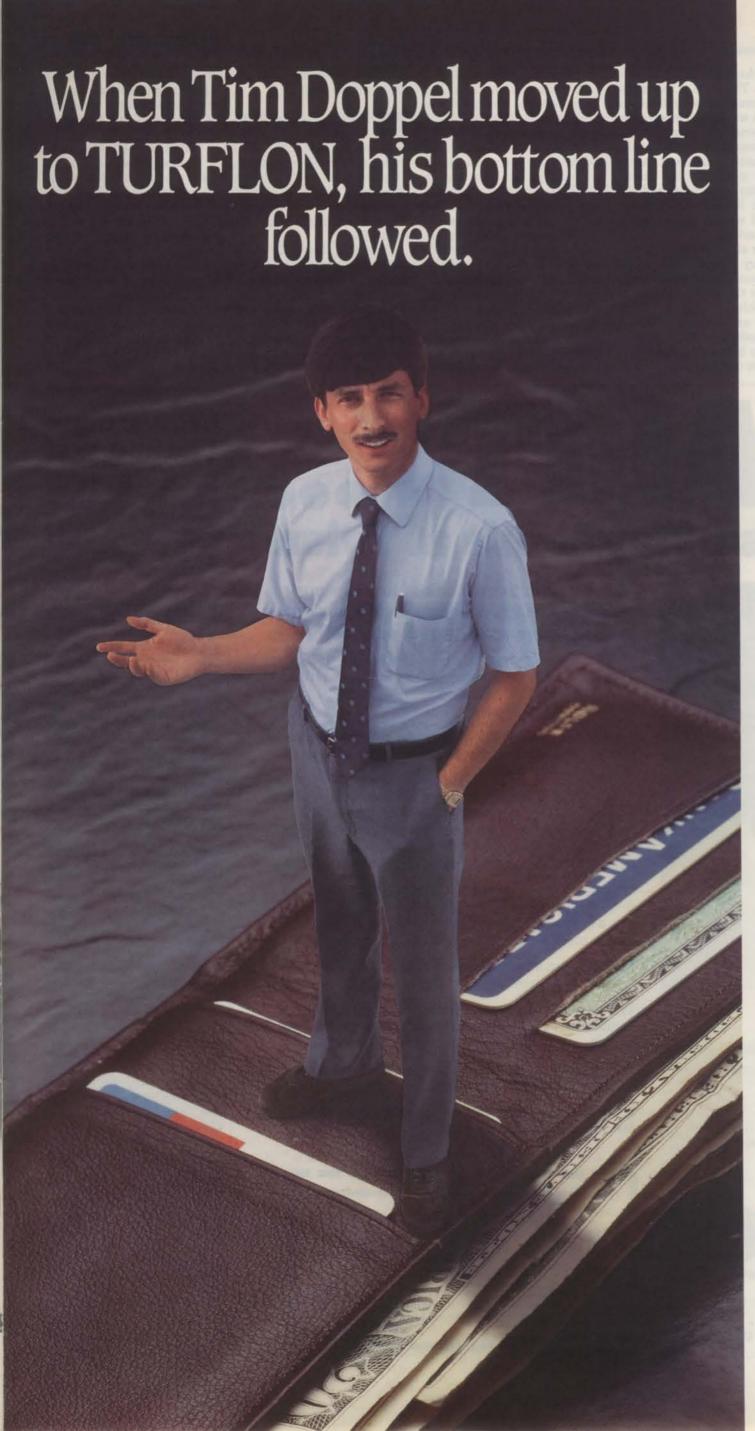


Here, nature's constantly pulling out all the stops to make life difficult. In this neighborhood, turf doesn't survive on good looks alone. What makes you think you can handle a turf test this tough?



A division of Lebanon Chemical Corporation

Circle No. 114 on Reader Inquiry Card



"The first year we used TURFLON, we realized a \$1,200 savings on service call costs."—

Tim Doppel, president Atwood Lawncare, Inc. Sterling Heights, MI

Keeping a lid on expenses becomes more and more important as your business continues to grow. Do things right, and profits will rise while the cost of servicing each new customer falls. If that's the kind of lawn care firm you want to run, maybe it's time you moved up to TURFLON\* herbicide.

# When more is less.

"Even though the product costs more, I still end up saving money by using TURFLON," explains Tim Doppel. And he has three years' worth of documented results to prove it pays to broadcast spray TURFLON at about \$9.50 per acre. "The first and foremost advantage of using TURFLON is its effectiveness. It works."

# Reducing callbacks and cancellations is the key.

"The first year we used TURFLON, we had a 20 percent reduction in callbacks and that has held steady over the years," Tim says. "We've also seen an increase in customer retention in the three years we've been using TURFLON."

And using TURFLON has one more advantage, Tim adds. It's the reason he's been able to reduce callbacks and cancellations: "My customers are happier."

Isn't it time you moved up to a better herbicide for better weed control? Call us to find out more. 1-800-373-4DOW (4369).

# Move up to TURFLON



'Trademark of The Dow Chemical Company

Circle No. 107 on Reader Inquiry Card

the '90s is the realization that the consumer will be the key to the success of a company.

This may seem a rather simple idea, in fact it is, but the lawn care industry ignored the consumer in many ways, almost from its conception.

Let's look at some of the ways in which companies can be more up-to-date in their handling of the consumer, something that will determine success in the next decade.

First, the public doesn't want Billy-Joe Bob in his pickup truck for a lawn care company.

The public has come to expect someone who not only knows what they are doing,

but who also looks professional. The state of the industry is much more professional than it was even ten years ago.

Second, the consumer expects results from the service performed. The largest growth sector in the United States' economy is service, and the public is constantly bombarded with offers to buy a wide variety.

The state of the lawn care industry is one which is just now becoming attuned to service as the major offering to the public.

We are service-oriented, not product-oriented, at least for the better and more progressive companies.

The state of the industry is tied to the consumer, and the consumer says good service is what is being bought—therefore we must be able to deliver.

Third, the consumer expects to be a part of a communication process that begins when the advertising goes out and is consumated, and the service has been performed.

The state of the industry is that companies have to be better at communicating with the consumer before the sale, during the performance of service, and after the performance of service.

It's a continuous process, going on the year around, not just a one-time communication when the company is trying to get the sale.

inally, the state of the industry is the same with respect to the No. 1 company. ChemLawn services Corp. remains the giant, but there are a number of outside forces at work in the industry that will change the landscape in the '90s.

Outside interest in lawn care will change what is happening to smaller well-run companies.

Certainly, the buying and selling of the more professional smaller companies is the state of the industry, but it's going to be interesting to see if some major international company comes into the marketplace with a great deal of money and tries to make a run at No. 1.

Will it happen? Stay tuned. Overall, the industry is more professional than it was at the beginning of the decade.

There are more million dollar companies in the industry, but many of these are being bought.

The business education level is higher. The regulatory pressures continue.

Can the industry do better? Certainly. The 1990s will reward professionalism in many forms. We're looking forward to the '90s.

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# Ciba-Geigy beefing up product line

GREENSBORO, N.C.—In an effort to increase customer service with an expanded product line, Ciba-Geigy recently added 11 new positions in its turf and ornamental products division.

"We entered the turf and ornamental market three years ago with the promise of strong support and a dedicated staff," says Bill Liles, director of turf and ornamental products.

"The people we've added to our group provide us with a leadership position for the future," he explains.

"These moves illustrate Ciba-Geigy's commitment to turf and ornamental markets," Liles adds.

Dave Warman moves to headquarters in Greensboro as area sales manager for the southern region. Jose Milan also joins the group.

Both were formerly turf and ornamental sales representatives.

Nick Angelucci, Rick Grant, Chip Houmes and Steve Rezac join the division as sales representatives, moving from similar positions with the company's crop chemicals group.

Two additional sales representatives come from other green industry firms: Don Spier, from Turf Products Ltd., and Don Wilson, from ChemLawn Services Corp.

In addition, Dr. Don Taylor signs on as senior technical support specialist in the Southeast, and Dr. Lisa Lemke becomes a technical support person for the Northeast.

Both report to Dr. Doug Houseworth, Ciba-Geigy manager of technical support. Taylor has been with Ciba-Geigy for 21 years, 13 as a senior scientist in field research with the company's crop chemicals group. Lemke joins the group from American Cyanamid, where she was a research entomologist.

# **MAINTENANCE METHODS**

# Equipment maintenance plan boosts performance

BY PHILIP D. CHRISTIAN III

quipment maintenance is one of the most talked about—but least understood—subjects in our industry.

The rapid development and availability of improved and more sophisticated tools has not changed our mindset on minimum maintenance.

What is the long-term objective of equipment maintenance?

Of course, it has to do with cost-effectiveness. Every company is in favor of a maintenance system that produces a quick and sure payback for every maintenance dollar invested.

Some would argue that the goal is reliability—to keep the equipment running all season without on-site breakdowns.

Others argue that the safe operation of the tools is the long-term goal, and that no payback is quick enough, or big enough, to replace people or equipment.

What about maintenance for the purpose of extending equipment life?

If that were the long-range goal of every maintenance program, wouldn't maintenance dollars be recouped sooner or later?

A ll these benefits are important. In fact, they are essential to a good maintenance plan. But the primary focus of a maintenance plan should be top production on a day-to-day basis.

The good news is that all the other benefits may be achieved as a side benefit to maintaining equipment for top performance.

On-site or in-service breakdowns are not compatible with high-production equipment. Our industry has been conditioned over the years to accept on-site, in-service breakdowns as a fact of life.

The focus has been on the frequency of breakdowns, and



About the Author
Philip D. Christian III of
Alpharetta, Ga. is a consultant
with All-Green Management
Associates in Columbus, Ohio.

not on the elimination of "inflight mechanical failure."

The question of who should be responsible for equipment maintenance is an essential issue.

Historically, the equipment has been maintained by the operators or a person in the organization who is thought to be mechanically inclined.

Modern high-production equipment produces best when maintained by a professional mechanic.

Many of the top producers in the field are lost because they cannot tolerate the mix of skill and temperament needed to operate the tool all day and then repair it in the late afternoon or early evening.

The equipment must be maintained, repaired and ready for action when the operators arrive at the shop Monday morning, otherwise production will suffer.

When and where should maintenace and repair take place?

Every company has access to some type of shop facility, and, obviously, these tasks should be done in a well-equipped shop with the proper tools and parts available.

Deciding when the equipment should be maintained is not so obvious. The equipment runs eight to ten hours a day, five or six days a week, leaving very little regular time available for maintenance and repair.

Some business owners defer maintenance and repair until a rainy day, or when the operators are "caught up."

The harsh reality is that rain days and periods of low production activity never seem to occur on a schedule that will work for equipment repair and maintenance.

A better method is to arrange for the mechanics and maintenance people to be available after hours or on a swing shift time frame.

After-hours maintenance will add at least an hour a day to the production of each crew. If that one hour per day is multiplied by the number of people employed, the increase in productivity is significant.

Landscape maintenance

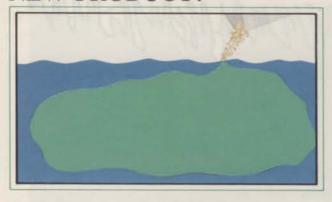


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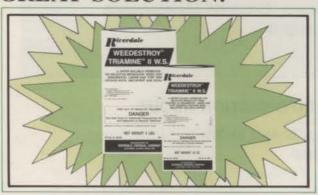
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Oil's well, ends well: Dan Dyson of Ruppert Landscape Co., Inc. in Ashton, Md. makes sure that the fluids are at proper levels.

contractors generally understand the basics of keeping the equipment running. But what must be done to increase the equipment's productivity?

The trained crews have a specific performance goal for each property every day. What can be done to the equipment to help the crew reach those numbers?

Using a standard walk-behind rotary mower that produces 25,000 square feet per hour as an example, how can that mower's productivity be increased to 30,000 square feet per hour?

That 16 percent increase in production would save one hour of production time when

mowing a four-acre property.

The first step in tuning for top production is to thoroughly clean the equipment. If there is no pressure washer at the shop, spend a few quarters at the drive-through do-ityourself car wash.

Clean equipment looks good and helps create a profesional image and attitude.

But, these are side benefits: The real reason to clean the equipment is to visually identify potential problems, and to also make the maintenance and repair of the equipment as convenient and pleasant as possible.

Now that all the parts are visible and clean, tighten and

replace loose and missing bolts and screws. Pull the wheels and make sure they are spinning freely. Inflate the tires to the specified pounds per square inch.

Disassemble the deck and check all parts for wear. Remove the blades and belts. Check each pulley, roller and idler. If they do not turn easily and quietly, replace them.

Sharpen and balance the blades, reassemble the deck with new belts and lubricate all fittings.

The motor should be tuned by a professional mechanic who has all the diagnostic equipment and tools to finetune the engine for top performance.

Make sure the mechanic adjusts the throttle linkage and control for maximum rpm. He or she should record and report the rpm at half-throttle, three-fourths-throttle and full-throttle.

Now may be a good time to have the mechanic install hour meters on each of the large motors to keep an accurate record of use time and enable maintenance chores in accordance with the manufacturer's recommendations.

Check and service the transmission, bolt it all back together, and adjust the deck suspension, the drive train and the steering assembly in accordance with the manufacturer's recommendations.

Test the equipment for blade tip speed and ground speed using the following test procedure:

For optimum cutting up to a ground speed of 5 mph, the blade tip speed of the mower should be approximately 200 mph, or between 16,000 and 17,600 feet per minute.

To calculate the blade tip speed, first check the blade shaft rpm with a strobe tachometer. To calculate feet per minute, multiply the shaft rpm by the circumference of the circle the blade makes when it is turned one revolution.

For a 20-inch blade, or one that is 1.67 feet long, the formula is C equals pi D, or C equals 3.1416 times 1.67 feet, equals a circumference of 5.25

# Rocky Mtn. show now in Denver

DENVER, COLO.—The 36th Annual Rocky Mountain Regional Turf Conference and Trade Show, set for Dec. 5-6, is moving to the Mile High City's Holiday Inn at Chambers Road and Interstate 70.

Since 1954 the event has been hosted by Fort Collins. The new site will allow the addition of a trade show, according to organizers.

For more information contact Julia Marie at (303) 688-2268 or Dorothy Borland at (303) 329-0220.



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- A. LAWN CARE COMPANY: Read each choice before answering.
- 10 

  Chemical lawn care company
- 30 Both chemical lawn care company and mowing/management lawn care company

### B. SUPPLIER

- 70 Chemical and equipment dealer and/or distributor
- C. OTHER (specify) \_

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feet multiplied times an rpm of 3,200 equals 16,800 feet per minute.

Blade tip speed is critical to high performance and high quality cut. If the blade tip speed is below the 200 mph range, ground speed must be slowed to match the maximum blade tip speed.

roduction equipment maintained and tuned for increased productivity offers an immediate payback in hours saved per week.

In an effort to extend this payback for the rest of the season or for the life of the equipment, a specified maintenance and repair procedure must be followed each day.

The following is a checklist:
1. Clean the equipment, on top and underneath, after each day's use.

Grass and dirt accumulated on the underside of the deck restricts the deck's ability to breathe or discharge grass clippings effectively. A dirty deck will slow down the blade tip speed and affect the quality of cut unless the operator reduces the ground speed.

Install sharp, balanced blades each day.

Dull blades reduce productivity of the equipment and reduce the quality of cut. Balanced blades reduce vibration in the deck and increase productivity and quality of cut.

Also, daily blade changes solve the problem of string, rope or wire being wrapped around the blade shaft. Multiple blade decks with blades turning at different speeds cause a series of problems with quality of cut, production and deck adjustment.

Visually check the equipment for loose and missing bolts and screws.

Equipment transported from property to property on trucks or trailers suffers transport wear. Keeping things tight reduces that transport wear.

4. Lubricate all fittings in accordance with the manufacturer's recommendations, but at least once a week. Some axle fittings may require daily lubrication.

5. Clean air filters should be installed on each piece of equipment each day.

Motors that cannot breathe through dirty air filters cannot perform up to speed. A reduction in air intake enriches the fuel mixture.

Sooner or later the dirt clogging the filter will be sucked into the motor, gumming up the carburetion and the combustion chamber. It will cause unnecessary wear on interal parts of the engine.

6. Check the oil at least once each day. Change it in accordance with the manufacturer's recommendations, but no less than every 40 hours or once a week.

7. Inflate the tires to the

specified psi, and repair tires that are losing air between inspections.

8. Adjust the steering mechanism so maneuverability is not sacrificed.

9. Check the throttle linkage. Make sure it is set for maximum rpm.

10. Refill the fuel tank with clean fuel. Check and replace the fuel filters as needed.

Other routine maintenance activities may be necessary on your particular pieces of equipment. The walk-behind mower has been used as an example for high-production maintenance, but the priciples apply to all production equipment.

# Talking turkey means facing food facts

lients, or their neighbors, who fear the use of lawn care chemicals may be shocked to find that there's poison everywhere—even at the Thanksgiving table!

In a typical Thanksgiving menu, the American Council on Science and Health found an array of natural chemicals which in large quantity could be toxic (poisonous), carcinogenic (cancer-causing), or mutagenic (harmful to the genetic material of a cell).

Such effects would occur only if the substances were eaten in excess, stresses ACSH Executive Director Dr. Elizabeth M. Whelan.

"Our mushroom soup, for example, contains hydrazines, which are potent animal carcinogens," she says. "The fresh vegetable tray is a display of nitrate (which can convert in the body to nitrosamines, well established animal carcinogens), goitrogens (which impede human absorption of the mineral iodine), and psoralens (human mutagens activated by sunlight on the skin).

And the main entree, roast



turkey with gravy, contains methyl glyoxal (carcinogenic in animals), myristicin (a hallucinogen), and safrole (an animal carcinogen).

"Our point here is to emphasize the toxicological adage, 'Only the dose makes the poison," Whelan points out.



A Special Program with Special Rewards

nder a bright winter sun, an icy breeze brings roses to cheeks as skiers move along a trail, some smoothly, others struggling. It could be any cross-country skiing event.

But soon differences appear. As the athletes cross the finish line, they are greeted with cheers of encouragement and congratulations—and hugs for every skier.

The contest is a winter event of the Special Olympics, patterned on the traditional Olympic games and conducted for athletes of all ages who have mental retardation. And while their movements may not be those of polished athletes, there is no mistaking the intensity of their effort, or the joy of their achievement, wherever they finish.

Dow and Industry to Sponsor. In 1989, Dow and the lawn care industry, through PLCAA and state associations, are Official Bronze Medal sponsors of the International Winter Special Olympics Games, by contributing more than \$100,000. in April 1989 at Lake Tahoe, the games will attract more than 1400 athletes from around the world. Events will include Alpine and Nordic skiing, speed skating, figure skating and floor hockey.

Special Olympics: a Special Program. The Special Olympics program, founded in the 1960s, is nan by more than 600,000 volunteers. It provides year-round sports training and athletic competition for more than one million people with mental retardation.

For many of these participants, the program is their only opportunity to take part in activities which most of us take for granted. To say that Special Olympics are a bright spot in their lives is an understatement.

Special Volunteers. All types of volunteer helpers, from coaches and managers to trainers to fund raisers, pitch in to keep the program going.

One unique group of volunteers are the "huggers." They see to it that all participants at every event get warm personal recognition—regardless of where they finish. Competition is intense, but the medals won are less important than the effort put forth. The huggers have the rewarding job of rewarding the effort. And they love it.

If you'd like to be a hugger, or help some other way, contact your nearest Special Olympics office. Or see your Dow rep for lists of Special Olympics officials in your state, and ways you can support the year-round program in your area.

The Partnership makes it possible. Dow's contribution, in the name of the lawn care industry, is made possible by a program called The Partnership, Dow's commitment to you.

The Partnership brings together all the things Dow offers you. It includes not only the products you use, but many other pluses: industry-leading research and development, training for your technicians, business management seminars, legislative lobbying and assistance at national, state and local levels, and industry-wide public relations programs.

Dow's underwriting of industry support for the 1989 International Winter Special
Olympics is one way of encouraging others to become involved in worthwhile local activities.



"Let me win, but if I cannot win, let me be brave in the attempt." —Special Olympics credo

Circle No. 108 on Reader Inquiry Card

# TRAIN

from Page 16

receiving training. For example, the annual fee would be \$4,000 for a company with ten pesticide handlers. Half subscriptions, with only 24 weekly kits, are available for half the price.

Training for new hires is included in PCTS package. A series of 15 daily self-study packets cover the basics of agronomy, cultural pratices, safety and customer relations. "It can get a new hire out of your hair," Jalette says.

There is a different packet to use each day on the road, where an experienced worker would train a new person. These include checklists to make sure all the important topics have been covered.

'If (the trainer) knows insect control, (he or she) is going to cover it upside-down and backwards. But they may not know much about turfgrasses, so they'll skip that," says Jalette.

Both people sign off on the forms so there is written proof that someone has been fully trained, which comes in handy if there's ever a lawsuit.

Training is the backbone of PCTS, which currently trains more than 500 people nation-

Auditing is another PCTS service, provided for pesticide handlers who want to check their own compliance with a growing tangle of laws and regulations.

Jalette will visit a pesticidehandling outfit to check its compliance with more than 450 government regulations.

companies, and says, "They're often amazed at what we come up with. Mostly people don't know all the regulations. The time we spend digging out all the information is tremendous."

"You have access to the most up-to-date status on regulations," says Lawnmark's Erbaugh, who used the auditing service and shared the results with his insurance company.

The audit takes about five hours, and one branch manager admittedly felt "beat up" by the time Jalette finished inspecting the operation. "It's not only laws and regulations," he says, "We also check for common-sense practices that will protect their liability down the road."

# TRASH

from Page 1

ly because they're bulky and allow air circulation. In largescale composting systems, air is either forced through or the compost piles are turned regularly," he explains.

"In the ideal leaf composting system, moisture evaporates and water doesn't leach from the bottom of the pile."

Nationwide, dozens of communities have already started or plan to start large-scale leaf composting projects. Some towns are banning the disposal of landscape materials in municipal landfills.

"Grass clippings increase the volume of residential solid waste by 20 to 25 percent from March to September," according to Dr. Bill Knoop of the Jalette has audited about 40 | Texas Agricultural Extension

Service in Dallas.

Knoop has devised a "Don't Bag It" lawn care campaign to help homeowners and professionals change their ways.

Already introduced in Fort Worth (with a similar program also in Plano, Texas), the plan recommends watering, fertilizing and mowing practices that allow people to leave the clippings on the

Harry Hoitink, plant pathologist at Ohio State's Ohio Agricultural Research and Development Center, says turf managers can immediately cut the disposal burden by not collecting and bagging their clip-

"Soon, the solid-waste crisis will raise trash removal fees and force us to pay high fees to have bagged clippings removed," Hoitink says.

"Just mow a little more often and use a mulch mower with a sharp blade to chop and spread the clippings," he ad-

Many industry professionals mow regularly and don't collect clippings, says Hoitink.

Chopping and spreading clippings can decrease fertilizer use. Because the clippings are not tightly packed, they decompose quickly, becoming nutrients, he says.

Hoitink studies composting of municipal sludge and yard waste and helps communities start and maintain composting systems.

Hoitink is currently working with state legislators and others in an effort to begin research on composting of grass clippings and other solid waste.

"The research will focus on

the fate of pesticides in various composting systems. Each system promotes different sets of microorganisms and temperatures, which influence what happens to the chemicals," Hoitink says.

Other research will look at compost produced by mixing leaves, brush and clippings, Hoitink says.

More studies are needed on whether it's best to compost each item separately or together.

Also, chemical companies should test their pesticides to insure that they break down during composting, he says.

Heimlich says state legislators have acted responsibly in banning yard waste from landfills over the next few years.

"We may not have all the answers to composting, but scientists do their best work in do-or-die situations," he says.

"It's appropriate to ban yard waste from the nation's shrinking landfills and compost it."

Industry professionals "can help a great deal by not bagging their clippings," he urges.

"Another option is to not use pesticides on lawns and promote biological control. Then it becomes a matter of dealing with the moisture and packing problems."

Several companies offer biological pest controls for lawns.

Municipal compost currently is used as soil conditioner, as fill, and as growing media for plants.

"Pennsylvania is considering using composted yard waste, which would include grass clippings, to recover strip-mined areas," Heimlich

"Composted yard waste is also being considered as a final covering for landfills."

Society hasn't thought about large-scale composting, but now it's being forced to, Hoitink says.

"I'm confident that research will answer the questions about clippings and composting," he predicts.

The only large-scale composting project currently in Ohio that concentrates on yard waste is in Cuvahoga County, which is where Cleveland is located.

Last year, it composted about 250 million tons of leaves for soil conditioner and

"Several municipal facilities in the state compost yard and park waste mixed with sewage sludge," Heimlich re-

"In Akron (located just south of Cleveland), for example, tree bark and sawdust is combined with sewage sludge. When the final product is mixed with tree bark and peat, the result is a good growing medium for ornamental plants," he explains.

"This facility is a good model for municipalities looking to adopt new ways of handling their waste," he comments.

In Fort Worth, Texas, the "Don't Bag It" waste reduction campaign is expected to be a financial plus for the taxpayers. "The city could save about \$200,000 in annual disposal costs if residents here stopped bagging their grass clippings," says Tom Davis, Ft. Worth service director. LCI

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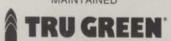
Wanted to Buy - Lawn care companies of all sizes anywhere in U.S. wanted to purchase by national corporation. If interested, please respond to LCI Box 197. Strict confidentiality maintained.

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"Consider all of your employment options in the irrigation and landscape industries. Call Florapersonnel, the international employee search firm for the ornamental horticulture industry. Completely confidential. Employer pays fee. Florapersonnel, Inc., P.O. Box 1732, 1450 S. Woodland Blvd., Suite 201, DeLand, FL 32721-1732. (904)738-5151. Jim Bambrick, Jeff Brower, David Shaw, CPC, Bob Zahra, CPC." TF

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