

It's only a matter of time

You know that good turf deserves the best forms of nitrogen. That's why you need slow-release NITROFORM® and controlled-release NUTRALENE™, two superior formulations that cater to your specific nitrogen needs.



With NITROFORM®, nitrogen is released slowly throughout the growing season and remains available to roots for one year or longer—when other nitrogen sources

have been used up. Ideal for sandy soils where low micro-organism levels and leaching are often a problem. It also works well in clay soils since it stimulates micro-organisms that decompose thatch. Available in both dry and liquid formulations and applied at recommended rates with conventional equipment, NITROFORM won't burn top-growth or roots. So treated turf is subjected to less stress. As a result, it grows stronger and needs fewer pesticide applications.

NITROFORM®

- Consistent 38% nitrogen
- Sustained, predictable nitrogen release by soil bacteria when most needed by roots and vegetation
- Keeps providing nitrogen for a year or longer (12 to 16 months)
- Some nitrogen remains in the soil for the next growing season
- Non-burning, low-salt index
- Low leaching and volatilization
- Reduced thatch build-up

IMPORTANT: Please remember always to read and follow carefully all label directions when applying any chemical.

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With dual-action NUTRALENE™ you can count on quick grass greenup in spring plus sustained release

throughout one growing season. Unlike other controlled-release nitrogens, NUTRALENE is not solely dependent upon soil temperatures, moisture, coating or particle size for its optimum release pattern. Applied in chip or granular form, the dual release of NUTRALENE encourages outstanding growth response—even in early spring or late fall. In hot weather, its reduced leaching characteristics enable uniform, sustained feeding to continue.

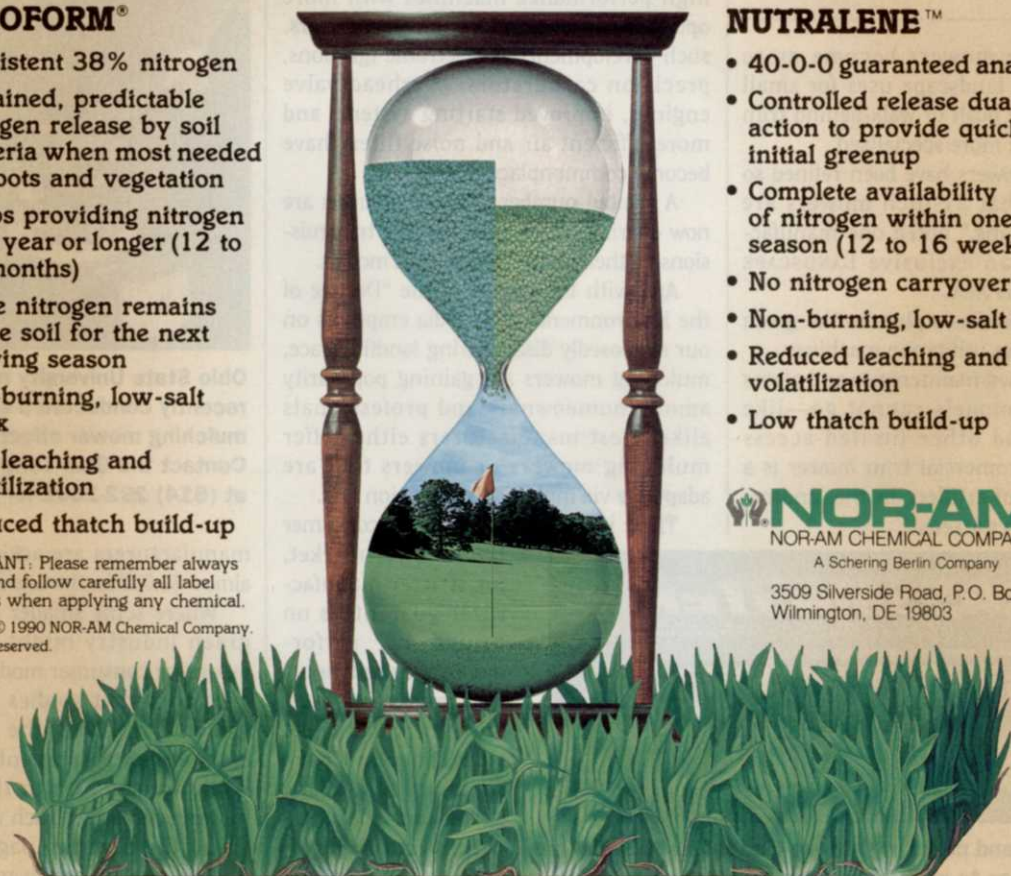
NUTRALENE™

- 40-0-0 guaranteed analysis
- Controlled release dual action to provide quick initial greenup
- Complete availability of nitrogen within one season (12 to 16 weeks)
- No nitrogen carryover
- Non-burning, low-salt index
- Reduced leaching and volatilization
- Low thatch build-up

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Now's the time to rely on NITROFORM® and NUTRALENE™ for high quality Nitrogen.

"I'm not an anti-chemical person," he adds. "I'm a pro-alternative person and maybe that's the message people who provide these types of services should be giving their lawn care customers too."

The following fertilizer definitions are, tentatively, being recognized by the Professional Lawn Care Association of America:

● **Organic fertilizer:** contains carbon and

one or more elements, other than hydrogen and oxygen, essential for plant growth.

● **Natural organic fertilizer:** derived from either plant or animal products. These materials shall not be mixed with synthetic materials.

● **Natural base fertilizer:** contains a minimum of 50 percent by weight of natural fertilizer materials.

● **Organic base fertilizer:** contains a minimum of 50 percent by weight of organic fertilizer materials.

"The biggest concern I have about the use of natural products," says Ed Dotson, O.M. Scott & Sons, "is the customers' understanding of what it all means. We definitely have an obligation to educate the customers."

LM REPORTS: TRIM MOWERS

A valuable piece of artillery in the landscaper's arsenal

Production of these handy machines exhibits a trend toward more high-performance and more options than ever before.

■ As mid-size mowers become more maneuverable, landscape uses for small (20- to 28-inch) push or walk-behind trim mowers become more specialized.

"Mid-size mowers have been refined so much lately that 21-inch mowers are becoming orphans," noted one manufacturer during an exclusive LANDSCAPE MANAGEMENT interview.

Yet, there remains a place in the green industry for these utilitarian machines.

For home lawn maintenance and places where larger models cannot go—like cemeteries and other limited-access spaces—the commercial trim mower is a valuable piece of artillery in the landscaper/groundsman's arsenal.

And for golf course maintenance crews where most mowing is done with large five-and-seven gang tractors, a need still exists for small, maneuverable machines to mow around trees and other obstacles.

A survey of major mower manufacturers seems to indicate a trend toward more high-performance machines with more options than ever before. In recent years, such developments as electronic ignitions, precision carburetors, overhead-valve engines, improved starting systems and more efficient air and noise filters have become commonplace.

A limited number of manufacturers are now offering hydrostatic, variable transmissions on their newer walk-behind models.

And with the advent of the "Decade of the Environment" and media emphasis on our supposedly disappearing landfill space, mulching mowers are gaining popularity among homeowners and professionals alike. Most manufacturers either offer mulching mowers or mowers that are adaptable via mulching conversion kits.

There is also a push, as in the consumer lawn mower market, for stricter manufacturer guarantees on equipment performance and usefulness.

It comes as no surprise, then, that prices over the years have continued to escalate. In the consumer market, it is virtually impossible to buy a decent piece of machinery for less than \$250. In the commercial market,



Ohio State University researchers recently conducted a study of mulching mower effectiveness. Contact the Ohio Turfgrass Foundation at (614) 292-2601 for the results.



Mulching kits and mulching mower blades like this one are welcome options to walk-behind and push mowers. This particular blade lifts and cuts the grass, then re-directs the clippings back into the path of the blade, creating a fine mulch. Circle No. 349 on Reader Inquiry Card.

manufacturers are asking from \$500 to almost \$1,000 for the heavier duty models.

Where some smaller operations in the green industry might opt for the less expensive consumer model, they should be cautioned that studies have proven the value of spending the extra money on commercial equipment, which is more likely to stand up to the 40+ hours of mowing demanded each week.

On the next two pages, you will find some of the major players in the commercial trim market and the types of equipment they are offering this season.

—Jerry Roche

Why The Grass Is Always Greener At ServiceMaster.

During each of the last 3 years, revenues for ServiceMaster LawnCare has grown an average of 48%!

Obviously, we must be doing something right. And we are.

For one thing, ServiceMaster is one of the few lawn care companies able to provide truly *customized* treatment to every customer.

We specially design our own truck and equipment so you can individually tailor your treatment to each lawn.

For another, we provide complete training and back-up support. Programs like discount purchasing. A 1-800 hot line for special agronomic questions. Year-round market-

ing support that will help you get business even in winter.

Over 90% of our ServiceMaster franchises are still going strong after three years. In fact, *Fortune* magazine has named us

No. 1 for return on equity in their ratings of the 500 top service companies in America.

So if you're looking for the right opportunity to start your own lawn care business, you simply can't find a company with a more consistent record for success.

If you qualify, you could get started in a ServiceMaster LawnCare franchise for as little as \$8,200 down plus additional working capital.

You can start out while still keeping your regular job if you wish.

For more information, call Bob Morris toll-free at 1-800-228-2814.



Customized treatment.



**ServiceMaster.
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




Partners in the ServiceMaster Quality Service Network.






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COMMERCIAL TRIM MOWERS

Company	Model	Cut	Ht. Adj.	Engine	Self-Propelled	Other	Sugg. Dealer Retail	Circle No.
	Ariens LM21 SP	21"	1 1/4-3 1/2"	Zenoah/Briggs 5hp	✓	Variable speed control		350
	Bunton BC21-R BC 21	21" 21"	1 1/8-3 3/4" 1 1/4-3 3/4"	Briggs Quantum 5hp 2c Briggs Quantum 5hp 4c	✓ ✓			351
	John Deere 14PZ 14SZ 12SB 14SB 14SE 14PB 12PC 14SC	21" ↓ ↓ ↓ ↓ ↓ ↓ ↓	1/2-3 1/2" ↓ ↓ ↓ ↓ ↓ ↓ ↓	Briggs 4hp 4c Briggs 4hp 4c Zenoah/Briggs 4hp Kawasaki 4.5hp OHV Kawasaki 4.5hp OHV Kawasaki 4.5hp OHV Zenoah/Briggs 5hp Kawasaki 5hp OHV	✗ ✓ ✓ ✓ ✓ ✗ ✗ ✓	{ "Tricycler" kit avail. "Tricycler" standard { "Tricycler" kit avail.	\$439.00 \$549.00 \$669.00 \$689.00 \$799.00 \$589.00 \$679.00 \$839.00	352
	Echo LM-212 LM-212P LM-212PB	21" ↓ ↓	1-3 3/4" ↓ ↓	Echo 4.1hp 2C ↓ ↓	✗ ✓ ✓	Cast aluminum deck		353
	Honda HRC 216HXA HRC 216SXA HRC 215PXA	21" ↓ ↓	1-3" ↓ ↓	Honda 5.5hp Honda 4.5hp ↓	✓ ✓ ✗	Hydrostatic transmission 2-speed transmission	\$954.95 \$894.95 \$719.95	354
	Husqvarna 56DH	22"		Briggs Quantum 5hp				355
	Jacobsen Commercial	20"	1-3"	Jacobsen 4.2hp	✗	Two-year warranty on crankshaft; Solid state ignition		356
	Kee 25 GC22	25" 25"	1/4-4" 1 1/2-3 3/4"	5.5hp Honda, 5 or 8hp Briggs 3.5hp Honda or 5hp Briggs	Kit available Kit available	20" Mag rear wheels lifetime frame & deck warranties		357

Company	Model	Cut	Ht. Adj.	Engine	Self-Propelled	Other	Sugg. Dealer Retail	Circle No.	
	Kubota	W5021-PCC	21"	1-3 1/2"	Kubota 5hp OHV	X	Mulching kit available for both models	358	
		W5021-SCC	↓	↓	↓	✓			
	Lawn-Boy	C21ZPN	21"	1-3"	Lawn-Boy 4hp	X	Mulching options available for all 4 models 3-speed transmission	\$549.95	359
		C21ZSN	↓	↓	↓	✓		\$659.95	
		C21ZPR	↓	1-3 1/2"	Lawn-Boy 5hp	X		\$669.95	
		C21ZMR	↓	↓	↓	✓		\$769.95	
	Poulan	PP850PE	22"		Briggs Quantum 5hp	X	Mulching kit available Mulching mower 16" spoke rear wheels	360	
		PP800M	20"		↓	X			
		PR750HW	22"		↓	X			
	Pro	Classic	22" 24"	1-3 1/2" ↓	Briggs 5hp or 8hp ↓	Kit available ↓	16" or 20" rear wheels ↓	361	
	Ransomes	M21-4BZIC	21"	1/2-3 1/2"	Briggs System II	X		362	
	Bobcat	M21-4SPZIC	↓	↓	1/C 4hp	✓			
	Roof	Commercial	21"	1-4"	Briggs 1/C 4hp	X	20" spoke rear wheels 20" spoke rear wheels 20" heavy-duty rear wheels	363	
		Ranger	26"	1-3"	Briggs 1/C 8hp	✓			
		VP-75	26"	1-4"	Briggs Vanguard 9hp	✓			
		400	21"	1-3"	Briggs 1/C 5hp	X			
	Toro	Commercial Recycler	21"	3/4-3"	Suzuki 4.5hp	✓	Comes with grass-catcher bag	\$819.00	364
	Snapper	C21559BV	21"	1-3"	Briggs 5.5hp OHV	X		\$575.00	365
		CAP21509R	↓	1-3 1/2"	Robins 5hp	✓		\$735.00	
		CP1409R2	↓	1-3"	Robins 4hp	✓		\$655.00	
		CP21559BV	↓	↓	Briggs 5.5hp OHV	✓		\$655.00	
		CP21509R	↓	↓	Robins 5hp	✓		\$700.00	

Lower temperatures signal increased care for equipment

by Bill A. Garratt

■ Snow, ice and subzero temperatures are no less wearing on landscaping equipment than they are on those of us who live and work with these elements for months on end. This is true for equipment in use and storage.

So when the job has to get done, whether the next frozen morning or next March, cold weather maintenance can help insure your fleets will start when the work shift does.

Most winterizing tips are applicable across product lines. With that in mind, this chart offers some guidelines that will help keep equipment productive despite the wrath of winter.

By making a conscious effort to follow these winterizing tips, your equipment will remain productive despite the threatening snow and subzero temperatures.

—The author is manager of service training at JI Case, a Tenneco Company, in Racine, Wisc.



Sufficient warm-up time prepares engine and hydraulic systems to perform properly under heavy loads.

WINTER EQUIPMENT MAINTENANCE

Proper warm-up

1. Wait until dashboard signal lights indicate machine is ready.
2. Warm up on one-half to one-quarter throttle.



Batteries

1. If possible, store batteries indoors overnight.
2. Disconnect positive terminal when machine is off.
3. Check electrolyte levels regularly.
4. Keep battery charged.
5. Electric warning pads help batteries work in the cold.



Starting aids

1. Keep cold start kits available.
2. Use ether kits and electric coolant heaters when possible.



Lubrication

1. Lubricate regularly.
2. Retract cylinder rods to circulate oil whenever possible.



Winter storage

1. Start the machine at least once a month, and run until engine reaches normal operating temperature.
2. Check cooling system and top off all fluid levels.
3. Wherever possible, position cylinder rods inside cylinders.
4. Cover all intake and exhaust ports.
5. Check tire pressures and fill to specifications.
6. Lubricate fittings and linkages per maintenance schedule.
7. Drain all water traps after last machine use.
8. Cover or remove all seats not protected by cabs.



Source: The author

Helpful hints: Dealing with your friendly bank

by Ed Wandtke

■ Financing the continued success and possible expansion of a business is becoming more challenging for most green industry companies.

Determining the amount of money needed to maintain the company during the off-season is increasingly difficult. Here are questions that need answering:

- 1) What can be done to increase its viability and secure adequate financing later?
- 2) What needs to be done to survive the

financial crisis in the banking industry today, especially in light of the industry's seasonal nature?

Winter bank loans—For years you have been able to borrow the necessary funds to weather the winter cash crunch. This year—thanks to bank failures, declining profitability and increased deposit insurance premiums—banks will examine loan applications more closely.

When you go to the bank this winter, don't be surprised at the number of questions or the amount of additional information you'll need to supply. Bankers now want to know how last

Need a loan? Don't be surprised if your banker wants to see more proof than usual of your financial stability.

year's performance compared with the budget. They may even ask for the same information for the prior year if it has not already been supplied. In addition, don't be surprised if your banker asks for financial statements prepared or reviewed by your accountant. An audit will not be needed, but be prepared to supply more detailed financial information to your banker.

1992 may be the year you will be asked to supply personal tax returns for the past three

to five years, in addition to your personal financial statement. Bankers are becoming more concerned with the ability to repay loans, and are seeking to secure loans with more collateral than before. If these conditions arise at your bank, you will need to be prepared to deal with these requests.

Preparing to borrow—Here are some helpful hints:

1. Do not pay all of your company earnings to the owner.

Having a reasonable amount of funds showing as "Retained Earnings" will indicate to your banker your willingness to risk some past earnings on the company's future performance.

2. Identify what you do better than anyone else in the market.

An asset not reflected anywhere on your financial statements is your competitive strength in the marketplace. Letters from satisfied customers, community recognition, or profitability better than the industry average are all examples of how you are better than other companies in your market.

Develop a file on your company as if you were competing with yourself. What are the specific strengths that have led to the performance of your company? How are these strengths evident or provable? How will these strengths assist you in maintaining "better than average" performance? Demonstratable answers to these questions will serve as great ammunition in presenting a favorable financial picture.

3. Identify the value of your customer list and contracts.

Generally accepted accounting principles do not require that a value be assigned to your customer list.

Do a business valuation of the company. This valuation can be used in supporting the financial statements the banker will ask to see. Having this valuation completed—independent of your accountant—by an expert in the green industry is an excellent method of demonstrating to your banker the real value of your business. Many bankers do not realize the significant value of the customer list and service contracts. Coming prepared with a valuation is another

method of putting your best foot forward.

4. Value your assets at market.

Accounts receivable are usually discounted by bankers; they assume you will collect 80 or 85 percent of them.

Presenting your bad debt write-offs for the past three years is often a revealing piece of information the banker is unfamiliar with. An appraisal made of your fixed assets also increases the value of your business.

The financial statement merely presents your fixed assets based on the depreciation allowed by the IRS. An appraisal of your assets can demonstrate that your fixed assets are worth far more than their book value. This information must be presented in compliance with generally accepted accounting standards for financial statement reporting.

Coming prepared to deal with your banker, and presenting the value of your assets is another method of improving your effectiveness in securing an operating loan.

—The author is a senior consultant with PC Systems, Inc., Columbus, Ohio.

Christmas tree recycling pays handsome dividends

■ Landscapers who offer a Christmas tree recycling program can bring in more clients, plus attract positive media coverage.

Manager Dave Millen of Olmsted Falls, Ohio, says Dugan's Garden Center's recycling program has worked out very well in the past. Millen says Dugan's Christmas tree recycling program has paid off to the tune of more customers for its full-service landscaping business.

Each person who dropped off a tree to be recycled had their name placed in Dugan's mailing file. "It increased our customer newsletter address list. We got a lot of mileage out of it in that respect," Millen reports.

About 500 trees were turned in following the 1990 winter holiday season. "That was the first year we've done it," Millen explains, adding that they could have had even more trees on hand if they had decided to accept unsold trees from large retailers. "We didn't get any chains who dropped off their trees—but we sure had a lot of them call" seeking permission to do so.

The discarded trees had a brief run-in with a chipper that quickly reduced them to mulch. "We ground them up and we used them around here" to protect and nurture the nursery stock, Millen says.

The only cost involved was the hiring of

a chipper and operator. Even that came at a good price because "we have a good working relationship with one of the local tree contractors," Millen notes.

Administration of the program was virtually free: "We just had a sign out front telling them to stop at the office."

There the customers were placed on the mailing list and sent on their way—although a number of them stayed around to shop at the garden center.

"All we ask is that the trees are tinsel-free," Millen says.

The participants in the program loved it, Millen recalls. "They were happy to see something being done as an alternative to taking it to the dump."

Ohio, like many states, has passed laws restricting the amount of trash that can be placed in landfills. Landscape waste is a prime concern of both government and taxpayers, and the Christmas tree recycling project helped reduce a portion of that problem. "We had the idea because of our concern for the community," says Millen.



Dugan's has previously donated a truck for trash recycling programs, "and that kind of led to the idea of the Christmas trees," Millen recounts. "This is one area where we were able to help."

Millen laughs as he recalls a visit by an after-hours gasoline thief: the culprit paused long enough to drop off a tree.

The success of the winter endeavor was enough to convince the company to offer a summer garden

debris program in which area residents were encouraged to drop off their landscape waste for inclusion in a compost pile.

The Dugan's Christmas tree program was written up in four newspapers and attracted a good amount of television coverage. "This is all free advertising," Millen points out. "(The press) is always looking for good stories, especially during the holiday season."

The company is also involved in other community events. At Halloween, a haunted house that is less scary for the benefit of younger children also doubles as a food-for-the-hungry drive. An Easter egg hunt and a "winter wonderland" display are other attractions.

—Jim Guyette

Liability considerations for recreational groundsmen

by Dr. Arthur H. Mittelstaedt, Jr.

■ We often hear that the public has an "assumption of risk." This term, like many legal terms, carries different definitions from state to state. Interpretations should be addressed in accordance with the laws in your state.

However, practically speaking, when a person acknowledges formal risks which have been correctly communicated to them, that person assumes the risk. If signed statements of the risks along with verbal cautions are standard procedure, the owner/operator has less liability or has reduced his or her vulnerability.

"Contributory negligence"—another legal term that varies by state—usually means that the plaintiff, by omission or commission, has been negligent to the point of injuring or in any way helping cause an injury. In cases involving "comparative negligences," any negligent action of the plaintiff or injured is weighted and the fault is shared proportionally in the judgment.

"Proximate cause"—another variable legal term—generally means that an injury was caused or aggravated by a specific act of negligence.

"Foreseeability" is a less legal term. It is often used with "reasonable." Foreseeability is when the defendant should have predicted, foreseen or anticipated the plaintiff's action that caused or resulted in the injury. Today, we must consider what could happen, recognize it and prevent it from happening. When we don't, we are negligent.

"Reasonable" is when the defendant did try to think and do all things within possibility to recognize a hazard or danger and prevent it. However, he or she just didn't plan for that one-in-a-thousand situation or condition and someone was injured.

This is why a complete safety program is necessary. That one-in-a-thousand contingency may occur. If it does, at least it can be said that all reasonable precautions were taken. Thus, the risk had been reduced, but obviously not eliminated.

Standards are a broad term that are used as the means of measurement. Standards may be formalized, such as laws, government regulations, ordinances and policies. They may be set forth by voluntary standards groups such as ASTM or

Last month, we discussed safety as it relates to maintenance of public recreational areas. This month, liability takes the focus.

ANSI. They may be set forth by trade or professional organizations. They are also established by law.

Standards, when informally established, are often called "criterion" or "guidelines;" often referred to as "accepted practice" or "learned treatise" (books, professional articles, consumer articles, speeches), and as the state of the art.

"Theories of negligence" is a broad informal term used to describe the theories which a complaint or petition stipulates as having been violated when a suit is filed. It is used throughout the litigation process. The expert and attorney often focus on such theories, whereas the law is so variable by state that it is only the attorney's domain.

Theories of negligence often specify evidence that the defendant was aware of a defect or deficiency in practice. If the defendant received prior notice, such as through an inspection or an actual notice, does nothing to correct or prevent the incident, negligence becomes obvious.

Theories of negligence include entail established principles or practices governing the activity or facility:

- Improper planning
- Improper design (surveying, architecture, landscape architecture or engineering)
- Improper construction (electrical, mechanical, structural, general contracting or building, and the manufacturing and installing of materials)
- Improper maintenance and operation
- Improper protection (securing and protecting—including containing, prohibiting and warning of hazards and dangers)
- Improper surveillance (superintending and overseeing)
- Improper instruction: (leading, teaching and counseling)
- Improper user selection (in sports): (separating age, skill level, developmental

levels, interests and needs; and assigning such individuals appropriately)

- Improper safeguards (providing guards, signs and labels, footwear, goggles, clothing, mouthwear, fences and insuring their fit and ability to withstand use and even abuse)

- Improper supervision/coaching: (providing, controlling, officiating, instructing and coaching)

- Improper or lack of warnings: (alerting and notifying through verbal and visual techniques)

- Improper administrative procedures: (conducting and administering through various recognized records like injury reports, incident reports, minutes, logs and other forms of communication)

- Improper medical attention: (notifying, replying, responding, treating, attending, removing and subsequent treatment)

An understanding of the landscape professional's role in relation to public liability and its many aspects can correct or prevent the chance of an injury or death, and control the risk and loss to the agency.

—The author is board chairman of the Recreation Safety Institute, P.O. Box 392, Ronkonkoma, NY 11779. Phone number at the institute is (516) 563-4806.



Winter golf: Can it work?

Having a golf course open for winter play in cool-season areas is not common. But it can work, as shown by this Canadian course.

■ Here's one for you: winter golf in Canada. How's it done? Can it work for your course?

Gordon Witteveen, superintendent at the Board of Trade Country Club outside of Toronto, Canada, offers year-round tee



Professional turf performers.

First-rate disease and weed control demands a professional's touch. And here are the Turf Care products that have what it takes.

Daconil 2787® The cornerstone of a professional spray program. Daconil 2787 is economical to use and the most effective, broadest-spectrum turf fungicide on the market. Controls 12 major turfgrass diseases. Available as a flowable or wettable powder formulation.

Daconil 2787® WDG. A new water-dispersible granular formulation that is virtually dust-free. Pouring and mixing are fast and easy. The 5-lb. reclosable container means better handling, storage and disposal.

Dacthal® The preemergence herbicide that consistently delivers superior broad-spectrum control of crabgrass, spurge and 22 other tough annual grasses and broadleaf weeds. Available as a flowable or wettable powder formulation.

Daconate® 6. The proven postemergent herbicide. Highly effective against pesky weeds such as crabgrass. (Sold as Bueno® 6 in western states only.)

2 Plus 2 (MCPP + 2,4-D Amine). As effective as it is economical against more than 20 hard-to-kill broadleaf weeds such as clover and dandelions. Contains no dicamba.

Frigate® adjuvant. The only product specifically formulated to enhance the performance of Roundup* for control of perennial and annual weeds. For turf renovations and non-cropland use, too.

When it comes to turf care, you'll see the difference in the professional's touch.

ISK Biotech Corporation, 5966 Heisley Road,
P.O. Box 8000, Mentor, OH 44061-8000.

The Turf Care® pros.

*Roundup is a registered trademark of Monsanto Company. Always follow label directions carefully when using turf chemicals.

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times on the club's south nine. There is rarely a shortage of "die-hards" for the extended service, he says.

Since 1981, club members have had the option to play the course throughout the winter when weather permits, although two other 18-hole courses are closed until the traditional season returns.

"It is not as cold as Americans might think," Witteveen says. (Toronto lies along the same latitude as Boston.) Witteveen adds that there are many mild winter days when a full round of golf is not only possible, but pleasant.

Witteveen keeps the tees, fairways and greens snow-free, occasionally by using snowblowers. Surface scalding damage from snowblowers is easily repaired in early spring. Beyond that, the course suffers no real damage from winter play, Witteveen says.

Tees and greens receive a heavy late-season sand topdressing which Witteveen credits as a good preventive practice. Dependable drainage also bolsters the hale

and hearty sand-based greens which make a smooth transition from winter to spring play. The greens are kept clear through the winter.

"Those greens seem to survive a lot better and are in better shape in the regular season than some of the other greens. That is an interesting by-product. We're always amazed at how beautifully the course comes out," says Witteveen.

Winter's charms do pose special challenges for golfers and superintendents alike; Witteveen responds with unique solutions.

- Four cups are pre-dug on each green in late fall. Three are plugged over with artificial turf plates until needed. This makes changing the hole placement easier when the ground is frozen. Winter cups are also located at the back of the green because approach shots in cold settings tend to bounce to that area.

- Wooden tees are not practical in winter because of the frozen ground, so Witteveen's crew fashions rubber tees from discarded irrigation piping. Colored balls

are used to stand out from the bordering white groundcover.

The short (three par-3s, six par-4s), challenging course can attract 75 to 100 golfers on a "balmy" winter day, and once played host to a 1984 tournament during a Canadian turfgrass convention. Low score that day was a respectable three-over 33.

Witteveen says holes-in-one have been recorded in December, January, February and March, and have all been dutifully reported to local newspapers.

Toronto's Board of Trade, the American equivalent of an American chamber of commerce, is likely the only one in Canada to own and operate a golf course, much less one offering tee times in November through February.

"This has not always made me popular with my colleagues in the area, who sometimes resent me for doing this. They feel it puts unfair pressure on them to do the same," says Witteveen, his voice trailing off in a low laugh.

—Jack Simonds

Mower safety reduces trips to hospital

Don't let any of your employees join the growing number of people injured while mowing a lawn.

- Last year, an estimated 77,000 persons visited hospital emergency rooms, suffering from lost fingers, toes and other extremities that were nicked, lacerated or amputated by power mowers. Thousands more were probably treated in doctors' offices for lesser injuries.

Statistics show that about 50 percent of the injuries from all mowers and 64 percent of the injuries to operators of walk-behind mowers occur from blade contact.

The Consumer Product Safety Commission (CPSC) established mower safety standards in 1982 to guide manufacturers in the production of safer equipment. However, there are things that you can do, as operators, to reduce injury potential.

The following suggestions come from "Divots," the newsletter of the Miami



Valley GCSA:

- Study your operator's manual to know the different functions of your mower.

- Make any adjustments to the mower before you begin to cut. And make sure the engine is not running.

- Remove all stones, wire and other objects from the area you plan to mow.

- Make sure children and other bystanders are away from the area you plan to mow.

- Never mow up and down a hill with a walk-behind mower. Always mow laterally to prevent slipping toward the mower.

- Never mow wet grass. It clogs up the deck and increases the chance of slipping.

- Wear sturdy leather or steel-toed shoes to protect your feet.

- When refueling, let the mower cool down first.

17 steps to course safety

- Knowing the 17 steps that you, as a golf course superintendent, can take to make your golf course safer for its players is a key to good management, said Al Zikorus at a recent Public Golf Course Management Association meeting.

There are also design considerations that can take into account player safety, Zikorus said, but maintenance suggestions he cited are:

1. Remove all dead wood in trees. Golfers don't stay out of woods on real windy days.

2. Protect all shelters with properly installed lighting rods.

3. Find and fill any potholes on the property.

4. Repair any eroded areas by grading, seeding or sodding.

5. Fill any settlement of drains after heavy rains.

6. Keep all stairs under repair. Eliminate them where possible and re-grade the slope.

7. Keep all signs serviced.

8. Keep ball washers serviced.

9. Use Turface or a similar product to