

but 24 to 36 is better for impact. In planting any of the larger bulbs, 12 is a minimal amount. Don't line them up like soldiers if you want a naturalistic effect. Plants in nature do not grow in a straight line. Plant them randomly in the design. In a woodland design, this is a given.

Things growing in a woods have to look natural. In a perennial design, plant between large perennials in the back of the border so foliage disappears. The more naturalistic the planting, over time you are less likely to have to go dig and divide.

For those of you who want to get the most out of your bulbs, plant bulbs with a bulb food, especially if soil isn't opti-

mum. Remember to topdress each year to keep your bulbs healthy, happy and to keep multiplying.

If you've noticed, I've avoided tulips and hyacinths. In most climates, these tend to last at best for three years. Many of you are better off planting in pots and removing them after flowering. In two to three years, tulips always become crowded and begin to produce smaller flowers and eventually just disappear. It may be best to treat them as annuals.

With bulbs, you get what you pay for. Larger bulbs produce larger, more vigorous plants and flowers. I always like to buy double-nosed or triple-nosed daffodils. I also like to ei-



These daffodils, when planted in groups, brighten a client's garden.

ther pick out my own firm, white bulbs or deal with a reputable wholesale bulb dealer. In buying bulbs "bigger is better".

Spring should be colorful, exciting and easy care. Many of the bulbs fit this category. Don't be afraid to experiment.

The more diversity you bring to the landscape, the more your clients will enjoy your design ideas. **LM**

The author is a horticultural consultant and teacher living in Collegeville, Pa.

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by TERRY A. TATTAR,
Ph.D., Univ. of
Massachusetts

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Why fall is a good time

Many tree health problems can be effectively treated in the fall. As trees in temperate climates and subtropical climates go into dormancy many plant pathogens and insect pests continue to be active.

In some cases, fall treatments lower pest and pathogen populations and give trees protection against health problems in the following spring. In addition, the root growth without shoot growth, that occurs in the fall, facilitates treatments of nutrient

Specific tree health problems

The following tree health problems can be treated in the fall by microinjection:

1. Leaf scorch diseases of hardwood trees—Bacteria, which live in the xylem, cause leaf scorch diseases on a number of hardwood hosts including elm, maple, mulberry, oak and sycamore. The antibiotic treatments do not eradicate the bacteria, and treatments have to be repeated within every 1 to 2 years.

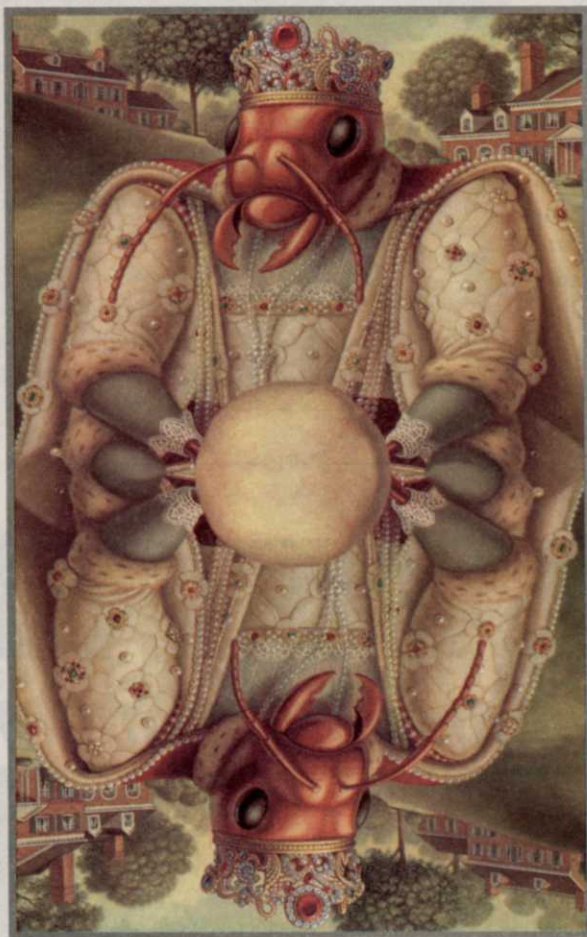
2. Adelgids on coniferous hosts—Adelgids are close cousins to aphids, but their health impact on coniferous hosts is often more severe. The hemlock woolly adelgid can kill an infested eastern hemlock (*Tsuga canadensis*) in one year. Microinjection capsules are placed onto the hemlock trees in early fall.

3. Anthracnose diseases of hardwood trees—The fungi which cause anthracnose diseases in the spring and summer on many species of trees including, ash, dogwood, maple, oak and sycamore, are also active during the warm periods in the fall. Fall microinjection of fungicides can provide protection for recently formed twigs and buds and may help to improve the overall appearance of the trees in the spring.

4. Nutrient abnormalities on all trees—Mineral nutrient deficiencies cause health problems, such as chlorosis, on many species of trees. Many of these mineral deficiencies, such as iron deficiency and manganese deficiency, can be corrected by microinjection during the fall season

T.T.

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abnormalities at this time.

Microinjection is a type of trunk injection. Small amounts (approximately 0.1 ounce) of therapeutic chemicals, contained in sealed capsules, are injected into shallow trunk wounds around the base of a tree. Injected chemicals are distributed systemically by sap movement within the tree to the branches, leaves and even roots within a few hours. Microinjection treatments can be applied to tree health problems in the fall and early winter. **LM**

The author is a professor at the Shade Tree Laboratory, Department of Microbiology, Univ. of Massachusetts, Amherst, Mass. He can be reached by phone at 413/545-2402, by fax at 413/545-5178 and by email at tat-tar@pltpath.umass.edu.

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► Mycorrhizal fungi colonize the fine absorbing roots of the plant. The fungi extend hyphal strands (feeding tubes) far into the soil, which improves absorption of water and essential elements.

► Introduced mycorrhizal fungi and soil bacteria increase water and nutrient absorption from soil; increase resistance against soil-borne root pathogenic fungi, such as *Phytophthora spp.*; and increase plant survival, particularly during drought periods and on adverse planting sites. These microorganisms do not stimulate tree growth—they eliminate inhibited growth, which makes them true preventative plant health care tools.

by Dr. Donald H. Marx, Plant Health Care, Inc.

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Autumn 1997 is not the time to coast. Put the spurs to your lawn/landscape business. You can get in weeks of production. How much depends a lot on the weather. Hopefully, you will cover expenses for the year earlier rather than later this fall so you can make the profit you'd budgeted for. If you didn't add to the worth of your business this year, consider:

- 1) fixing what's wrong within your company (Job costing? Labor costs? Quality of service?);
- 2) offering service or product that's distinguishable from competitors;
- 3) working for somebody else. This isn't a put down. If you're not making it running your own business, why put up with the stress and strain?

There's nothing wrong with drawing a pay check from somebody who can make things happen.

But, if you're an owner, today, in the fall of 1997, is when your business should be paying you back for all the 60-hour weeks. The lean times.

The sleepless nights.

The building boom that's been going on for four or five years continues. Several of you have told me that building contractors in your markets are busy and are picking and choosing their jobs.

But there's another reason why you should be optimistic, at least in the short term. It's called demographics.

Many of your best customers (and your best prospects) are Baby Boomers. They've been working for 20, 25, maybe 30 years. Both husband and wife have been working.

They have money. They may not be millionaires, but the house is paid for and so are the cars. The kids are grown. Although Boomers look toward retirement with some anxiety, they have accumulated assets like homes, properties, pensions.

Autumn '97, time to buckle on your spurs



Ron Hall

RON HALL
Managing Editor

LANDSCAPE/GROUNDS

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Installing rocks; getting paid for it

Some are discovering that they have more money than they realized. That's because their parents are dying, leaving behind homes, cars, savings accounts, insurance.

This earlier generation saved "for a rainy day." That's understandable. After all it experienced The Great Depression and a worldwide war. It treasured security. This generation is fading fast.

Boomers don't view security with the same reverence as their parents. Why should they? They spend money more freely.

Thanks to Boomers your company should be doing pretty good this year, and, if you can rev up production these final few months of '97, you can squeeze out an even better year. (Don't forget to reward your employees for their extra effort.)

If this has been a disappointing season, there's time yet to revive your business. Start this winter while the economy is still relatively strong. **LM**

Questions, comments? Call Ron at (216) 891-2636, fax at (216) 891-2675, or e-mail at rhall@advanstar.com

It's important for our industry to take a more active role in the general educational process in our own country so that we can produce a "flow" of people into the green industry.

We are no longer too small or too young an industry to simply hire someone for a job in hopes that they will like it, stay with it and progress in it.

It is now time for us to become involved in educating people for our industry and developing programs that promote a career in it.

While this is being done at the college level, more needs to be done in our vocational and technical schools where two-year or shorter programs can be created for those interested in green industry careers. At the same time, I would like to see how certain high schools would react to the introduction of industry educational efforts in their vocational programs.

There is no greater challenge facing us than both the long and short-term shortage of employees. It strangles us in terms of consistent production, professional customer service, and overall stability. Most importantly, this shortage will affect our willingness and ability to expand our operations as we move into the next millennium.

Several years ago I read that by the year 2015 there would be several million more jobs in the United States than there will be people to fill them. This hardly seemed possible at the time, but makes more sense today. When we read about three to five percent national unemployment what we're really reading is that anyone who wants a job, already has one. And probably the choice of many others. If you consider that more jobs are being produced, then even a downturn in one segment of our economy, or one part of the country, will not have more than a temporary impact.

Here are some other "employment" statistics. By 2000 a million new inhabitants will be born every

four to five days! The problem is the extreme unevenness of population growth because most of it will occur in the most underdeveloped countries. That's 90 million a year, and 95 percent of them will live in the world's poorest nations.

For example, according to United Nations figures, Lagos, capital of the African country of Nigeria, will be the world's fifth largest city by the year 2005. It will have 15 million people if the present growth trend continues. Indeed, a "youth bulge" is predicted for more than 57 countries, including three former Soviet republics, and also Egypt and Algeria.

My point here is that we may well face the next century with jobs being in one place, and the people to fill them somewhere else. As you look at the growing number of Hispanics at work in the green industry, it should be apparent that bringing the people to the jobs is a trend already well underway.

As we attempt to solve our labor shortages, we will also have to deal with the imbalance in educational skills. Today, we in the United States must stay on our toes to keep up with new technological and scientific advancements.

It seems my office is full of perfectly good computers which are outdated shortly after they are purchased.

At the same time, fully one half of the world's population (maybe three billion people) have never placed or received a telephone call!

Thus, even if we can figure out the logistics of getting the people to the jobs, we have some serious training to do once we get them here. And remember, we simply cannot move the factory overseas. Lawn care, mowing maintenance, and landscaping must be done here, not shipped out for subassembly. □

Employees come from our schools?



BOB ANDREWS
Contributing Editor



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Circle No. 117 on Reader Inquiry Card

Time to 'go native'

The landscape professional that knows about and offers native plants gives clients one more good reason to use that professional's services.

By PAUL DOWLEARN

The demand for "natural" landscapes is growing steadily if not rapidly. The concept behind a natural landscape is: the use of native or naturalized plants within a given ecological zone.

Since these plants are adapted to their specific ecological zones they almost always require less additional watering or chemicals. Over time they've developed defenses against insects and diseases.

While a natural landscape may be a novel idea in suburbia, it's certainly not new. The first European settlers to the United States, of course, had to rely on what they had. So, if a family wanted a tree to shade its porch, it simply selected a tree from the surrounding wood lot and moved it.

Natural landscaping, in fact, is evident at many of our favorite vacation spots. Notice when you visit a national park or, perhaps, a resort lodge or dude ranch. Plant material at these locations evoke a "sense of place" for their guests and customers. Whether these places are in the desert, mountains or prairies, the best way to convey this feeling is with the artful use of local vegetation.

Who needs it?

The most obvious people who could benefit from natural landscapes are those who own large properties. A trend that is



Natural landscapes seem to be catching on, particularly for customers with larger properties. Incorporating adapted plants with these boulders makes a rugged but interesting vista.

growing here in north Texas is to buy small tracts of land on which to build a home outside of the cities and towns, and gain the peace and privacy of country living. Where once a person had 5,000 to 6,000 square feet of lawn, they may find that they have 10 times that amount to mow, water and fertilize.

That's where a landscape professional that's knowledgeable about the selection and use of native and naturalized plants, including turf (in our region Buffalograss requires remarkably few inputs and makes an acceptable lawn for many home owners), can provide clients with a landscape that are both aesthetically pleasing and maintainable.

Trees are the big players in the landscape. Obviously something that gets as big as a tree had better be well adapted to local soils and climate. Check out anybody's top 10 tree list, and you'll find that at least seven will be native to the area. Trees that require a lot of care are the wrong trees for your particular area.

No "perfect" plants

This applies to shrubs and flowering plants too. The public is slowly learning that there aren't many one-size-fits-all ornamentals that can be grown over most of the country. Not without the use of extra water, fertilizer and pesticides, anyway.

Meanwhile, many good local plants are now being incorporated into landscapes,

and they're becoming available in a greater variety of color and growth characteristics.

Admittedly, not many homeowners will buy a property that has all the trees, shrubs, and flowering plants that they want already existing on the site. Most new home owners start with site that has been partially or completely cleared, perhaps bulldozed. They have to start from scratch. So how does a landscaper find the plants, or the knowledge, to advise these property owners?

Digging plants or collecting seeds from the wild is frowned on by the state. This is a job for other professionals. Fortunately, the number of native plant nurseries in many parts of the country is growing. The Native Plant Society of Texas, for example, lists 40 member nurseries, and 13 landscape architects.

Local plants are best

For a truly natural landscape, you should mainly stick with plants existing in your local area. As a rule of thumb, plants existing within a 50-mile radius of a site would be considered suitable. But, there are obvious exceptions, for instance in a mountainous area.

Because the use of natives is just now becoming popular, it is not known just how far north, south, east or west some species will go. Here in north central Texas we have listed close to 300 species from Texas, Oklahoma, New Mexico and Arizona that will naturalize and are aesthetically pleasing.

What about all those exotic plants we've been using all these years? A fair number of the popular species will naturalize. Exotic plants in a natural landscape should meet certain criteria.

First of all, you should not plant exotic species that are invasive. Check with local nursery operators about aggressive root systems and self-sowers. Also, in a natural land-

scape, all plants should be capable of sustaining themselves on the natural rainfall. Even so, some exotic plants are drought tolerant, and some native plants can stand a little extra water during droughts.

In 1993 Texas legislators passed a law encouraging the use of native plants and landscape water-saving techniques on state properties. Local water resource boards have followed suit with programs aimed at educating home owners and encouraging the use of drought-tolerant plants. This trend will continue as water resources become an even more critical issue.

Start learning

Whether you're a contractor, a landscape architect, or a nursery owner, gaining a knowledge of plants native to your area, and those that have become naturalized, will provide you with a slightly different offering for those clients that don't particularly want a "look" or a "theme" if it requires a lot of maintenance. This knowledge is becoming easier to acquire.

For instance, here in Texas, both the Texas Department of Agriculture and the

Texas A&M Extension have begun promoting native plants and landscape water-saving techniques. These organizations provide plant lists, seminars, and technical information. These services are free for the asking.

Other sources of information include The National Wildflower Research Center in Austin, TX, and the Native Plant Society of Texas, located in Georgetown. There is a small membership fee to join these groups. These two organizations are on the cutting edge, and their newsletters by themselves are worth the cost of the dues, not to mention the seminars, symposiums, field trips and other educational opportunities.

In the past 10 years, there have been a great many books written on this subject, and not just field guides. There are books that give good identification information and also suggestions on landscape use, including photographs and drawings. □

—Paul and Nila Dowlearn operate Wichita Valley, Your Natural Nursery, Wichita Falls, TX.

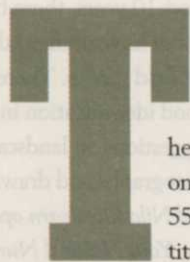


Plants adapted to a particular region of the country have a better chance to survive the stress associated with heavily-used or otherwise hard-to-landscape areas like along this commercial site.

Fields of change

More effort needs to be directed to the fact that turf is a growing plant that needs a certain amount of care to continue to grow properly.

By FLOYD PERRY



The climate for better and safer athletic facilities is changing on all levels. In my travels across the country to more than 5500 facilities, I have seen a complete metamorphosis in attitudes involving athletic/football/soccer fields:

- ▶ Gates are locked after school hours.
- ▶ Permission slips and liability waivers are required to use fields, thanks to the frequent lawsuits.
- ▶ Internal scheduling regulates the amount of weekly traffic.

For example, at a particular campus there is one field used to share football and soccer play. The football team has the field two hours each week, on Thursday before the Friday game. The band has the field for two hours a week on Wednesday. Soccer team gets two hours to work on game patterns, with no drills. And outside institutions—concerts, art shows, fairs—are not getting the fields during the season.

These procedures were not put into place overnight, but became policy after a serious injury lawsuit over a poorly maintained field.

Also, this institution had the foresight to set up enough practice areas for individual activities, including their physical edu-

▲ **With no management program, fields become better suited for parking lots.**

cation program.

Rotation or split fields

Some institutions (and this is probably directed to larger recreation departments and colleges) have established a program in which two fields a year (cool-season turf) are closed and renovated. This involves re-leveling; reseeding or spot-sodding and giving an irrigation system upgrade. This allows the community to start the Pop Warner football/youth soccer/intramurals on quality turf and creates a strong confidence factor with the parent/taxpayer.

Cross-field use

The more practical way to create safe athletic turf—field rotation is not practical in many locations—is cross-field design.

Divide your main field into two opposite length fields and avoid play in the center. Outstanding facility managers got this idea from the design of inside basketball courts with side baskets and different colored lines.

cont. on page 8L

...or fields of mud

- ▶ *As coaches, teachers and administrators we create a 365-day plan for our individual teams or students. The facility manager must begin to create his/her plan and seek the administration's support.*
- ▶ *Do we have policies in place for rainouts or cancellations?*
- ▶ *Do we have a policy providing that teams cannot practice if the moisture level is too high in heavy clay subsoils?*
- ▶ *Or do we just go ahead and destroy whatever has been achieved?*

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cont. from page 6L

If the coaches and field personnel work together to create quality turf by moving their workouts around and shifting their heavy work to the end zones or sidelines, they would have a better chance of keeping a strong bio-mass of turf for their big ball games.

The pendulum swings

Some institutions and recreation boards are creating safety committees of peers to help solve this 21st Century dilemma of not having sufficient quality turf for young people to play on. Some colleges, high schools and recreation boards have set aside funding for equipment which aids in turf protection and establishment. I tip my groundskeeping hat to those groups.

Turf grows by the inch and is killed by the foot. Truer words were never spoken. □

—The author is president of
GMS For Sports Fields, Orlando, Fla. He
has written *The Pictorial Guide to Quality*



This multi-purpose field is used for football/soccer play in fall, and lacrosse/field hockey in spring. The field manager needs the administration's support and help in scheduling.

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Circle 133

Working the contract

A look at how an Erie, Pa. company went into action to fulfill a supermarket contract through a rough winter.

by JENNIFER FAILS

In June of 1993, Allin Companies, a \$2 million landscape company based in Erie, Pa., was awarded the \$75,000 landscape construction bid for the Wegmans Food market, also in Erie.

The specs

The bid specs for the project stated that the landscaping had to be completed by the opening date of March 1, with no exceptions. Bids were due by October 18, 1996.

Allin received the project on October 25. Owner John Allin realized that bad weather was probably approaching. After a review of the blueprints, it was recommended that 44 poplar trees be substituted with maple and ash. The site was exposed to heavy northwest winds and there was some concern that the fragile poplars could possibly break off and damage customers' vehicles.

Working closely with Lake County Nursery in Madison, Ohio, the plants and trees were ordered and scheduled for delivery. Lake County supplied 90 percent of the plant material needed for the project.

Arrangements were made to dig the required material late in the season to accommodate the projected opening date. Some plants were dug "at customer risk" due to the time of year. Plant material was scheduled to arrive in early November.

Irrigation subbed

Allin Companies subbed out the irrigation portion of the project to Rain Makers, a local company that has worked with Allin before. By November 1, most of the irrigation mainlines and lateral were in. Rotor and sprinkler head pipes were stubbed out and taped off.

Allin hauled 250 cubic yards of topsoil from the site back to Allin Companies, where it was stored inside one of the warehouses. Using a bulldozer, the soil was stacked under the roof to keep it dry so that it could be used later in the winter to topdress bed areas.

Landscape installation work began on site November 4. Five days later, a tremendous snowfall hit. By November 11, the Erie lake shore had 48 inches of snow and 55 plus at the Wegmans site. Installation work was stopped till November 18, with

The Wegmans project "was a classic example of everyone working together to get the job done," says John Allin.





Allin employees found themselves planting viburnum and juniper one day, and shoveling off the planter islands the next as they worked to meet the store's grand opening date.

a foot of snow still on the ground. Snow removal work then began at the 95,000 square foot site.

In early December, Allin Companies was also awarded the turfgrass installation portion of the contract. Taken away from the site development contractor, the hydroseeding would need to be complete by the March 1997 opening. The stored topsoil back at the warehouse was definitely going to be put to good use.

Installation work progressed between snowstorms throughout the winter. Allin employees found themselves planting viburnum and juniper one day, and shoveling off the planter islands the next.

Protection for planters

Working closely with the site civil engineer from Urban Engineers of Erie and Wegmans, obstacles were met and overcome. Aside from the snow piled on the planting islands, the main planters against the building needed support and had to be prepped so that freezing temperatures would not damage the planters.

Planting areas had to be built in as soon as possible. Trees had to be planted and staked before the ground froze. Ed Kris from Lake County Nursery visited the site regularly throughout the winter to help Allin in properly protecting the plants and trees from the wind and snow.

Towards the end of the year, Wegmans requested flowers on-site for the grand

opening. A grower was called, and several hundred mums were "forced" so they would be in full bloom for the opening. Allin Companies told Wegmans that the mums would last only a few days, but the client insisted on color for the opening.

Time for the grassing

By mid-January, most available areas were planted. A significant space near the building was not ready for planting because of the building construction.

It was now time to begin the grass the areas. Crews began the long process of raking the island areas to remove the large pieces of frozen soil. At the same time, crews were back at the warehouse breaking down the stored pile of top soil. As the islands became ready the dry pulverized unfrozen top soil was hauled to the site and used to topdress the islands.

As areas became ready for seeding, a Bowie 900 gallon hydroseeder was used to seed with a bluegrass and ryegrass mixture.

The hydroseeder then had to be winterized for the cold nights and prepped again for morning.

Weather delay

The winter conditions provided hardships for the landscape contractors, and also for some of the building contractors. The grand opening date was pushed back to March 16.

This was both good and bad news. The later date gave two more weeks for installa-

tion work. However the mums were scheduled for March 1 delivery.

Crews took the mums to a vacant company office, placed them on plastic and set the room temperature at 65° F. The flowers were watered each day, and a window was left open at night to simulate normal fall conditions in the Erie area.

The weather worsened as March 16 neared. On the 14th, Allin Companies hydroseeded previously seeded areas so everything would be green. The mums were to be planted at 4 o'clock in the morning on the 16th to be in before the 7 a.m. grand opening.

On the 15th, the temperature hit 15° F, and a hard snow began to fall. At 8 p.m. on March 15th, Allin and Wegman officials decided not to plant the mums till Easter.

Instead of planting mums at 4 a.m., the Allin crews salted the lot, touched up bark mulch and removed plow stakes. Every grass area not covered by snow was hydroseeded again. All planting was complete and on time.

By mid-May, only two trees and six plants had died from the weather.

President John Allin says the Wegmans project was an exciting challenge, but he would prefer not to do many more winter projects.

"Because we could not predict the snowfalls we had to work around," says Allin. "It was nerve racking and a logistical nightmare."

Allin Companies employees were glad to be working, but conditions were certainly not what most landscape contractors are used to.

Allin credits the work of his site foreman, Jerry Kunco, and the teamwork among the Wegmans personnel for the success of the project.

"It was a classic example of everyone working together to get the job done," says Allin. The company has been asked to bid on future Wegmans construction sites in New York. □

Ride Walker ORIGINAL

THE

ORIGINAL



Prototype circa 1979

Walker 1997

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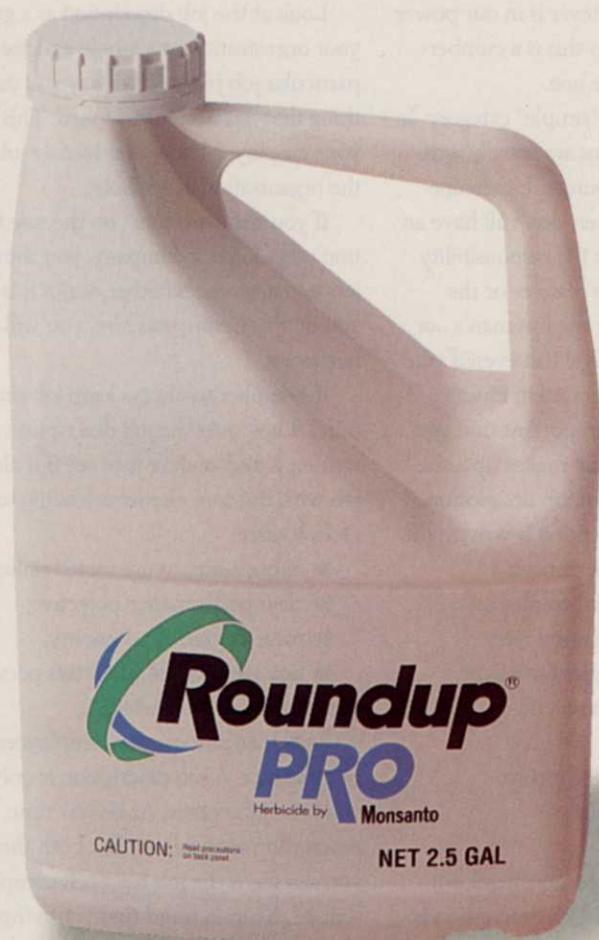


1

4

When you're thinking of ways to expand your business and boost profits, Roundup® Pro herbicide may be your most useful tool. Roundup Pro can solve almost any lawn care problem you can think of. And it can create some opportunities that may surprise you.

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What **do** you **do**?

The job description must be clear to prevent absenteeism or high turnover.

by MARLENE EICHHOLZ

Lack of job satisfaction is linked to high absenteeism and turnover. Employee productivity is linked to whether or not they are more productive when they are happy. Since our main goal as manager is to increase productivity, we should do whatever is in our power to make this happen. Sometimes this is a cumbersome task but often it is a simple one.

Job descriptions fall into the "simple" category. In larger companies, job descriptions are usually written by someone in Human Resources. Landscape management companies, however, don't all have an HR department, which may put the responsibility

on the owner's plate or on the crew chief's or the foreman's...or the receptionist's! But even if you have no background in Human Relations, it's important that you understand what makes up a successfully written job description.

A job description is written for at least three audiences:

- ▶ a potential employee;
- ▶ a present employee;
- ▶ a department manager.

It should consist of:

- ▶ job title;
- ▶ who you report to;
- ▶ date of hire;

- ▶ secondary duties;
- ▶ special requirements (license; certification);
- ▶ signature (verifying that the job description is clear and understood).

Aside from the obvious function of describing a job, a job description also acts to:

- ▶ advertise a job (a lot of organizations post them for cost-effective internal hiring or use a ver-

sion in writing classified ad copy);

- ▶ promote job satisfaction
- ▶ outline job tasks
- ▶ form part of the organizational structure
- ▶ support future strategic direction
- ▶ provide legal backing, just in case.

Look at the job description as a gap filler. View your organization as a whole and see what role this particular job plays. That way you can cover anything that has been overlooked. This also helps to let your employee know that his/her job is significant to the organization as a whole.

If you come up short on the role the job description plays in your company, you should review this job to determine whether or not it is truly needed. If you do this before you hire, you will save yourself a headache.

Remember to always keep job satisfaction in mind. Look over the job description after you have written it and analyze it to see if it clearly describes a job with the core elements leading to productivity. Does it offer:

- ▶ opportunity to use varied skills;
- ▶ clear performance objective;
- ▶ some degree of autonomy;
- ▶ task significance (does this person contribute to the company as a whole).

Lastly, encourage your employees to work outside the box. A job description is only an outline of what the job entails. At review time, have the job description available so that both the employee and you can see if the job has been completed as described. Keep in mind that your employee should also give you feedback as to whether or not the job description should be changed. □

A job description should consist of:

- 1) job title*
- 2) who to report to*
- 3) date of hire*
- 4) secondary duties*
- 5) special duties*

And the winners are!

YOU, the LM reader, as we continue to give you information you can use. And peer-group approval confirms what many of our readers are saying. *LANDSCAPE MANAGEMENT* is one of the best-written and best-designed magazines in the green industry!

AN IMPARTIAL panel of journalists, photographers and graphic designers has confirmed something we've known for some time now, and have proven over our 35 year history.

Six awards for writing and magazine design were presented to *LANDSCAPE MANAGEMENT* during the Turf and Ornamental Communicators Association (TOCA) annual meeting in May of this

year. Entries were judged on innovation and style; clarity of message and grammar/punctuation.

Our articles get to the heart of major industry trends and explore the issues that other magazine staffs prefer to just read about. We know your time is precious. You want information presented clearly, in a way that helps you find what you need today!

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1st Place to Editor-in-Chief, Terry McIver,
in the category of
"Editorial/Column/Opinion piece"

1st Place to Managing Editor, Ron Hall
in the category of
"Business Management Article"

1st Place to Graphic Designer, Lisa Bodnar,
in the category of
"Overall Magazine Design"

Merit Award to Ron Hall,
in the category of
"Product Information Article"

Merit Award to Ron Hall,
in the category of "Turf Feature Article"

Merit Award to Lisa Bodnar,
in the category of
"Multiple-page Feature Design"

The landscaping scene in El Paso, Texas, is getting rocky, and Joe Lomeli has gotten used to it. In fact, he thrives on it. He specializes in landscaping with rocks, both on large commercial jobs and small residential projects.

There are basically three types of rock jobs, says Lomeli, who is president of J & J Landscaping. There's the crushed rock lawn, rock walls and flagstone walkways. Crushed rock is by far his biggest money-maker now.

"To do a rock landscaping you can either lay down a sheet of plastic or a fabric material," he says. That creates a foundation and suppresses weeds. "You don't want water penetration."

There's also the herbicide option, and Lomeli uses Surflan for this purpose occasionally. The problem, he says, is that chemicals only last a few months at best.

Lomeli gives his customers the choice of 4mm, 6mm or 10mm black polyethylene. That gives them a price option, though he carefully points out to them that the heavier sheet is going to last longer.

"It's how you maintain the plastic," he says, though. Even 4mm poly will last for years if properly laid and covered.

J & J Landscaping does some pretty large areas with crushed rock—the new U.S. Postal Service processing and distribu-



Joe Lomeli of J & J Landscaping in El Paso shows how a rock landscaping job can be attractive and practical. His materials of choice are crushed rock and flagstones.

Rockscaping

"We're in a desert. We do the desert landscaping—very little grass, mainly rocks, and very few plants."

tion center, for example—and he tries to insist that a layer of chat, or finely pulverized rock, be laid down under the rock.

"To do a quality job you'd want to do these phases," he says. The chat provides a cushion between the rock and plastic, preventing tears or punctures from traffic.

When he excavates a job he goes down four inches, leaving enough room for the plastic, two inches of chat and two inches of crushed rock. He uses either ¾-inch or 1½-inch rock. Ninety percent of El Paso jobs are Mt. Franklin crushed rock, a local rock, though he offers a variety such as lava

rock or white crystal rock.

"The prices vary tremendously," he says. Mt. Franklin rock is \$20 per ton, while white crystal is \$38.

Lomeli is a great believer in the Bobcat loader. He owns four of them, using them

cont. on page 18L

Getting lots of really good new customers is a pain in the you-know-what, but...

Even The World's Greatest, Most Reliable, Most Attentive To Detail, Hardest Working Gardener, Lawn & Garden Service Owner or Landscape Contractor Will Starve To Death—Without A Steady Flow Of New Customers!

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Dayton, Ohio- Are you frustrated by advertising that never makes the phone ring? By being beat out of good jobs by cheap bidders? Feeling like you're starting your business all over again every season? Stuck at a certain level?

A million dollar per year "entrepreneur of the year" says that most of his peers' and competitors' marketing is anemic, me-too-istic, dull, full of costly waste, and ineffective. Arrogant? Egotistical? Marty Grunder says: "React to me any way you like—but one thing is for sure, if you are in the landscaping business or maintenance business, whether you are small or large, my marketing methods can easily double or triple your business in just one year, provide better customers, help you target and get exactly the kind of business you want, increase profitability and stability, and absolutely mystify and trump your competitors."

Big talk? Yes, it is, but this Grunder wisacre has been showing off—and blowing sceptics away—his entire life. As a freckle-faced, red headed Dennis-the-Menace type kid, he started his business with nothing more than a "push" lawn mower and chutzpah. That little business went to 75 regular customers almost overnight. As a full-time student at the University of Dayton, while his buddies drove to school in old "beater" cars and flipped burgers for pocket money, Marty arrived in his Grunder Landscaping Company truck and, at age 21, did over \$300,000.00 in business. Last year he was named Young Entrepreneur of the Year by the Small Business Administration's Midwest Region, in the 1 to 25 employees category. Currently, Marty oversees a staff of 30, 18 trucks, a backhoe, an assortment of other equipment, and a diversified business doing everything from basic residential lawn maintenance to complicated commercial landscaping projects—and, this year, breaking \$1.5 million in annual sales. He's also investing in land, lecturing from time to time, and working with other landscapers as their "marketing coach."

Million Dollar Marketing Secrets Revealed In A Free Report—If You Qualify!

Grunder DOES have "secrets" for building these types of businesses, too. Here are just a few examples:

1. How to **spark referrals**... how to turn "small accounts" into big business.
2. How to **increase Val-Pak Coupon, direct-mail and Yellow Pages advertising results by 10% to 30%**...make your advertising much more productive and be able to accurately measure its value.

3. The 5 biggest mistakes 95% of the people in this business make when advertising and how to avoid them.
4. **How to stop the "price shopper" in his tracks. How to get good business without being the lowest bidder or offering cheapest price.**



Here's the smart-aleck kid standing next to his first truck. Who'd have guessed he'd quickly create the biggest and best company in southern Ohio, confound established, entrenched competitors, and exceed \$1.5 million in annual sales? Betcha he has a marketing secret or two in his pocket that you'd love to steal, if you could!

5. How to avoid the **fatal mistake** of confusing "marketing" with "selling".
6. **Forget wasteful "name recognition" or "getting your name out there"**—learn to "target," create and deliver a "market-matched" message," and **attract exactly the type and size of clients you really want.**
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10. How to get people working for you and with you to really contribute like a championship team!
11. How to use "**automated, autopilot marketing**" to bring in new business without you or anyone else even talking with prospects on the phone!
12. Even "poor boy" **dirt cheap marketing** strategies, like what to write on a simple postcard to bring in a flood of new customers.

13. The "**4-Page**" marketing tool used 6 to 10x a year that is **guaranteed to increase your business by at least 30% year after year...automatically!**

14. How to position yourself as a "famous expert" in your area, get a ton of free advertising and "**fr**" the competition.

And there's a whole lot more. At the urging of a big-time, nationally respected direct marketing consultant and professional speaker who discovered and was "blown away" by everything Marty was doing, Marty prepared an easy-to-read but very complete, provocative Special Report—"How To Re-Invent Your Lawn-Garden/Landscaping Business With Million Dollar Marketing Secrets"—and you may be able to obtain a copy at absolutely no cost whatsoever.

Who Should Get Marty Grunder's Special Report?

Marty asks that you call for his free Report ONLY if: (1) you own your own business or are the President, CEO, manager or marketing manager for the business; (2) you make the decisions about advertising, marketing, and customer service investments; (3) you are currently unhappy with some aspect(s) of your business; (4) you recognize that in today's competitive environment, just "doing a great job" isn't enough to sustain a business; and (5) you are willing to make progressive innovative changes in your business if convinced, even reasonably assured that doing so will dramatically improve sales, profits, customer satisfaction, referrals, growth, and community prominence. (Please do NOT waste your time or Marty's money getting this Special Report if you are close-minded, change resistance, fully satisfied with your income, or just a curiosity-seeker without sincere interest in changing your business for the better.)

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Simply write "Report" on your business card or a sheet of your letterhead and FAX it to 937-847-8067 or, for even more information and to get your Report, call 1-800-399-7135, listen to a brief free recorded message, then leave your name, company name, and address as instructed. You can FAX or call anytime, 24 hours a day, 7 days a week. If you prefer having your report sent confidentially to your home address, just let us know. Incidentally, requesting your free Report does not obligate you in any way; no salesperson will call to follow-up, nothing of the sort. However, this is a limited free offer, so please take care of it right now, while it's fresh in your mind.

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SORRY, OFFER NOT AVAILABLE IN OHIO, OUR MARKET AREA.

Circle No. 107 on Reader Inquiry Card

cont. from page 16L

to spread crushed rock.

"Very little labor is involved," he says. "The Bobcat can really facilitate a job." He uses the medium-weight 843 model for spreading rock.

Little labor needed

On a job the size of the post office facility, which has two acres of crushed rock or gravel and no grass, his work crew will still consist only of six people at the most.

"You've got two guys putting plastic down, guys putting chat down, guys grading. And then you've got the plants."

Lomeli prefers to put down his plastic and cut it in place to install shrubs and trees. It is less messy than planting vegetation and doing a lot of cutting to get the plastic over it.

Lomeli points out that grading prior to plastic application is also important, especially on hills or berms. He doesn't want

drastic slopes which could cause plastic or rock to slip down the grade.

The other cover option, fiber, doesn't require chat under the rock. It's more durable, but also more expensive. The same 2,000 square foot roll of plastic and fiber can show a cost differential of some \$150.

"This will allow water penetration," he says of the fiber. That is good for trees that have fibrous root systems, because they can benefit from rainwater. The fibrous mat will still not allow weeds to emerge.

Lomeli has used fiber such as Geotextile, Typar and DeWitt, and recommends them if money is not a factor. They generally avoid disasters such as unsightly torn plastic popping through the rock.

Rock walls comprise much less of the business of the company, which restricts its work to residential ornamental and not structural walls—which are usually built by

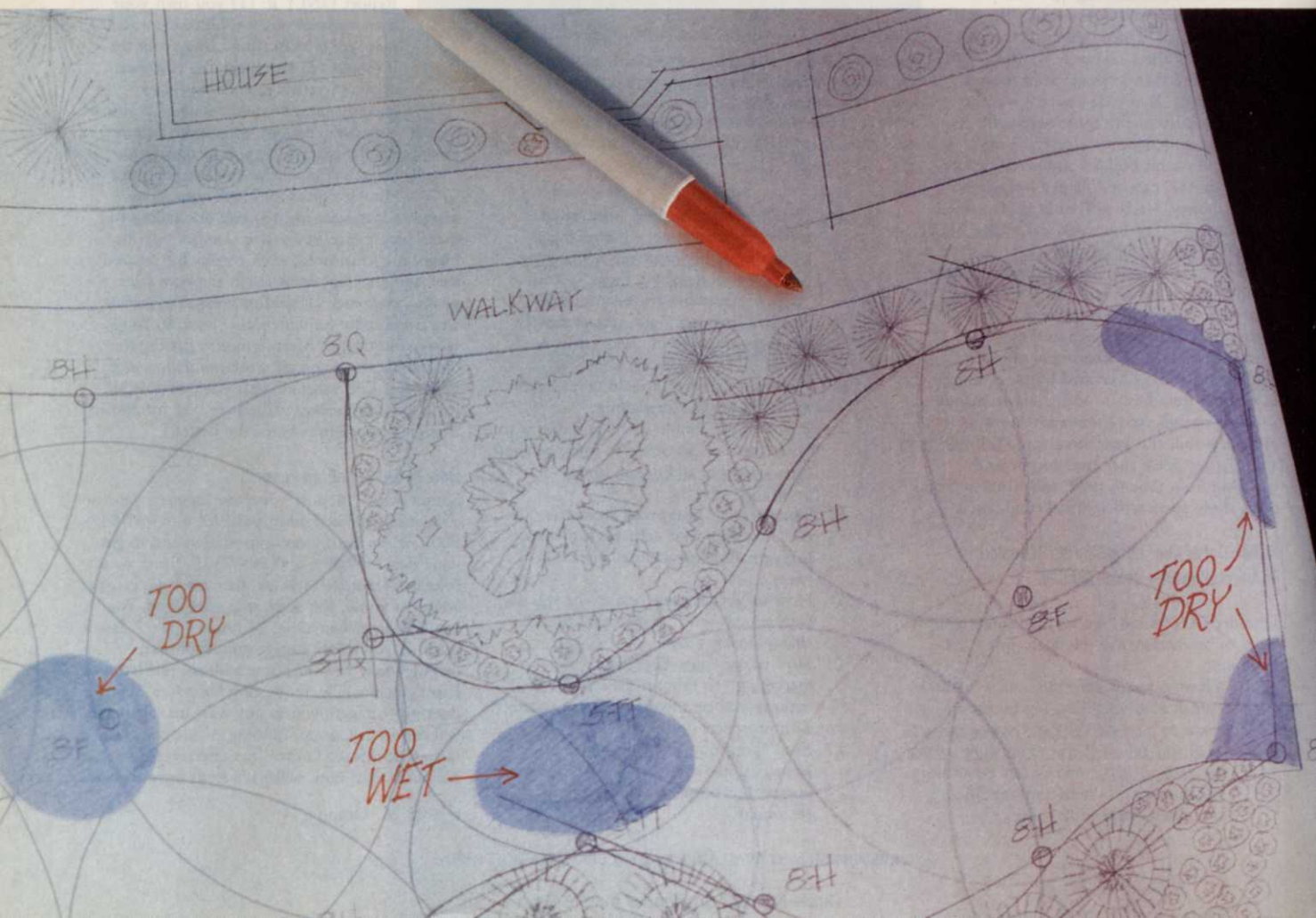
the original contractor anyway. He doesn't need to get a permit to build an ornamental wall less than two feet high.

"You need good masons for that," he says. "I've got a mason on every crew."

J & J's first mason was George Muniz, who still works for the company, and he has taught the other four masons the craft. He utilizes a system of mortaring the interior of the wall so the mortar doesn't show much. Mortar is also colored with concrete pigment to match the rocks.

"You can do a six-inch footing and lay your rock wall," Lomeli says. He also does a lot of work adding short ornamental walls to the tops of structural walls, and caps that with brick. The typical rock wall has no rebar support, though columns require rebar because of their height.

The company also lays a lot of brick borders around planters, walkways and other ornamental features.





Lomeli shows where the underlayer of chat gives way to the surface layer of gravel at the U.S. Postal Service distribution center.

Flagstone walkways are done in the traditional manner, placing stone over a bed of sand and filling in the niches with grout. No foundation is necessary on solid soil, and an inch of sand is usually plenty to allow leveling of the stones.

Boulders popular

"We use a lot of boulders," Lomeli adds. Accenting boulders, from hand-carried to forklift size, round out his repertoire of rock construction.

Lomeli, who hires 32 employees and does \$1.75 million in business every year, says that rocks have become the in-thing with both residential and commercial designers in El Paso. And in all desert areas of the U.S.

Some of his jobs feature all three types of rock construction, plus boulders. Many older El Paso neighborhoods have more rock lawns than turf lawns now, and more homeowners are converting every day.

"Rock landscaping goes real quick," he points out, making it advantageous to the contractor. "We can hop to another job and don't have to come back."

Lomeli, who designs most of his own rock jobs, estimates that rocks represent 90 percent of his work now, and that is climbing. The huge new Post Office facility, for example, has no grass and only a few shrubs out front.

Thus, irrigation systems are generally minimal under rock, and most irrigation installed is drip. Any desert plants that are installed are generally expected to survive on native rainfall. **LM**

—Story and photos by Don Dale

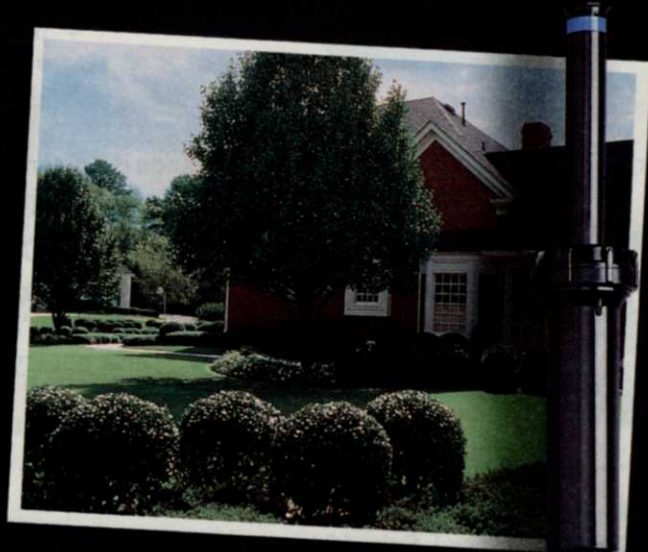
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Circle No. 131 on Reader Inquiry Card

Questions!! Questions!!



**FACT: There is no status quo in grounds management.
You either move ahead or fall behind.**

Question No. 1: What is your profession, and what should you do about it?

Answer: If you are an institutional grounds professional or independent landscape contractor, you belong with the *full range* of your fellow professionals, as represented by the Professional Grounds Management Society, where you are an *individual*, not just part of a member organization. (PGMS is the oldest, most fully inclusive organization of grounds professionals.)

Question No. 2: So, what are the steps to getting ahead?

Answer: Join *and participate* in YOUR professional society
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PGMS Membership Benefits (partial list):



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*Conferred by PGMS, grounds manager certification is a program of developing and administering a program of voluntary peer review to establish acceptable competence levels, and to help the grounds professional attain his personal goals.



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It's the middle of July and it's been hot and humid for about six weeks now, and I can't wait for August!

The golf course members are wondering what happened to the beautiful grass in the fairways (*Poa annua*) and, is that an irrigation leak on number two, or an underground spring...?

It's that time of year when the stress level is at its highest and when we all can be thankful for the people who are near to us.

There's no question of the importance of our families. I know that my family understands how important they are to me and how much I love them and appreciate their patience when dad can't come home soon enough.

There's another family that is also close to me, and they are my fellow golf course superintendents, co-workers and friends in this business. With all of our busy schedules, it's sometimes difficult to stay in touch,

but when we can visit it's great to know that I may have made someone's day a little brighter or that I am not alone in my own challenges.

A good example of superintendents helping each other occurred in the spring of 1996, after several area courses experienced winter kill. The Nebraska Superintendents Association called a meeting in Lincoln. There was an excellent exchange of ideas and possible solutions. The Beatrice Country Club also had some degree of winter kill that spring, and it was a good feeling to know that I could call on other supers and experts for help.

Have you ever wondered why you are a golf course superintendent or, what keeps you in the work you do? A very few may say the money, and some may say, "I love working outdoors with

GOLF

PAGE 2 G ►
Reunion at the '97 U.S. Open

PAGE 6 G ►
Cart path considerations

PAGE 10 G ►
Improving on an historic course

PAGE 12 G ►
What golfers want

Be a friend, love your family, learn to laugh



CASEY CRITTENDEN,
CGCS
Guest Columnist

nature."

While all of these things and more are all part of the big picture of why you do what you do, for me as a golf course superintendent for more than 15 years, it's the people.

I have been privileged enough to meet and become personal friends with some of the greatest people a guy could ever hope to know, and I would bet that most of you feel the same about the people that are near to your heart.

Remember to laugh every day. Don't take yourself too seriously. And remember, you're never alone during the rough times. Help is always a phone call away! Keep the faith! **LM**

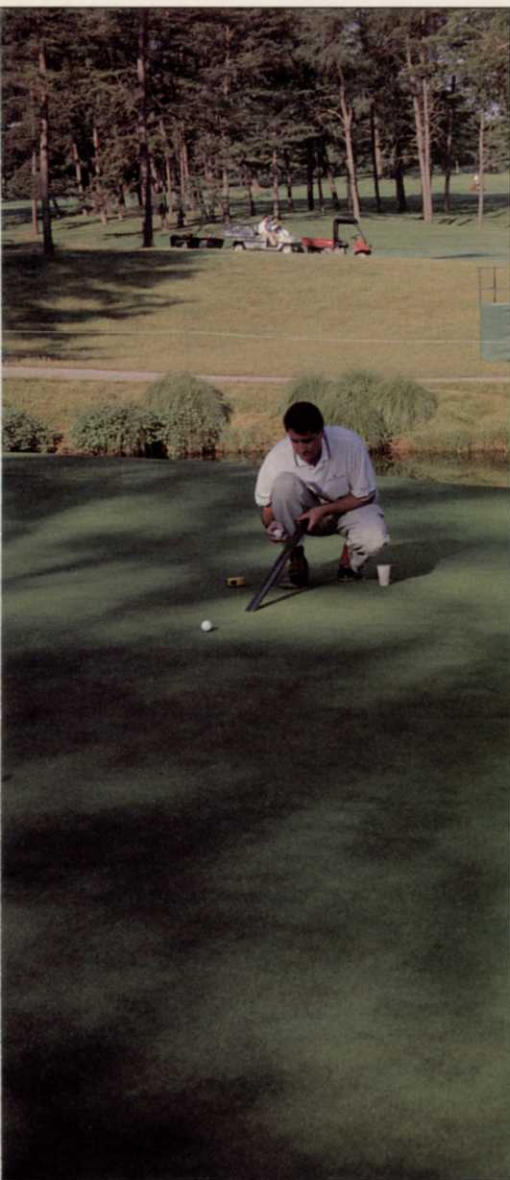
The author is superintendent of the Beatrice Country Club, Beatrice, Neb.

*You're never
alone during
the rough
times. Help is
always a
phone call
away!*

Reunion at Paul's

When Paul Latshaw, Sr. needed a crew for the U.S. Open, he recruited some past employees to help him out.

by TERRY McIVER, Editor-in-Chief



The green speed goal was to keep stimpmeter readings within six inches of each other. "We hit a few low 13s," says Darren Davis.

As is the tradition in the ranks of U.S. Open superintendents, the man in charge gets to bring in whatever help he needs to prepare for and get through the most rigorous four days of golf course maintenance.

This year Paul Latshaw, Sr., combined a little nostalgia with a lot of the work, by having a number of his past assistants join him for the long days at Congressional.

Latshaw's help for the 1997 U.S. Open Championship came from far and wide. Some were sales reps from green industry suppliers. Others were superintendents and their assistants. Mechanics got into the act too. Four friends flew in from Australia, one from Thailand.

Lots of courses were represented. Augusta National. Pebble Beach. Olde Florida. Caves Valley. The Farm of Georgia. The Country Club of Cleveland.

There were 72 helpers in all, estimates wife Phyllis. Those who used to work alongside Latshaw were happy to lend a hand to a man who is a role model for many of today's best superintendents.

Steve Glossinger brought his entire bunker crew down from Caves Valley Golf Club, Owings Mills, Md., located about an hour's drive from Congressional.

"Of course, at 3:30 in the morning, the traffic's not too bad," laughs Glossinger, who has known Latshaw for quite a few years.

The Open's great bunkers

"He's kind of responsible for me moving out here," says Glossinger, who managed Oakland Hills before moving to Caves Valley, and hosting the Open there in 1996.

"Paul came out to Oakland Hills last year and liked what he saw. He was impressed with the way we manage our bunkers."

Glossinger and 12 crewmen began their daily treks to Congressional a week prior to the four-day event, to groom and prep the brand new course bunkers. They continued on for the week of the championship.

"Being the host of a major tournament myself, I knew Paul would be looking for help," says Glossinger, who has managed to keep in his employ a solid nucleus of bunker specialists.

"I've had a group of fellows with me now for almost 10 years, when I was the superintendent of Point of Woods," he explains. "There, we hosted the Western Amateur every year. I took them to Oakland Hills, and when I left Oakland Hills, I brought them here.

"We put bunker maintenance at the same level of green maintenance," says Glossinger. "My guys are very detailed, very proud of what they do. Members and guests from all over the country, at every course I've worked, have always complimented our bunkers.

"Bunkers are a work of art. To keep them maintained properly is



Paul Latshaw: his course management initiatives include really short greens and walk-behind mowers on fairways.

very important to us. We worked on Robert Trent Jones bunkers at Point of Woods; Robert Trent Jones and Donald Ross bunkers at Oakland Hills, and now we're working on Tom Fazio bunkers at Caves Valley. We always keep the [architect's design] in mind. The architects want nothing better than to keep these things picture perfect. We take it to the next level."

Green speed a blur

Darren Davis, of Olde Florida Golf Club in Naples, was in charge of stimpmeter readings.

"I really enjoyed it," says Davis, who went to Penn State turf school with Paul Latshaw, Jr., who manages Merion.

"Since then, Junior and I have stayed good friends, but I got to know his father a lot better."

Davis took stimp readings on each Congressional green, after the morning and afternoon cuts.

"We based our decision for the next morning's cut on the afternoon stimpmeter reading," explains Davis. "From Thursday on, the greens were never [stimping] less than 12 feet. The average was about 12.5 We hit a 13.1 and 13.2."

Davis says he's got some great assistants at Olde Florida, which meant he could be away for 11 days with no worry about how things were going back at his home course.

"I run three interns through Olde Florida every year," says Davis, "and I always hire my assistants from the ranks of former interns. In five years, I've had six guys that have come through who are now superintendents. We turn out some pretty good guys here."

Water management

Matt Shaffer worked under Latshaw for two years at Augusta National. He now manages the Country Club of Cleveland, Pepper Pike, Ohio, but came down to help out with greens and water management.

"He taught me a lot, and we created a lifetime friendship, which is more valuable for me than the things he's taught me," says Shaffer. "Paul is always



Steve Glossinger hosted the Open at Oakland Hills in '96. He knew what Latshaw wanted out of his bunker crew.

leading edge. He was the first person to cut fairways by hand, the first person to probably aerify fairways with walk-behind aerifiers at Oakmont, and I'm sure he was one of the first people to really cut greens to low heights.

"So you would think he would be set in his ways, but he's not," says Shaffer. "His staff is second to none. It's like a dream come true to have that many qualified people working as one unit."

Revived course

Shaffer was most impressed by the change Latshaw has brought about at Congressional, a course that had some serious problems five years ago.

"You had to see have seen the place when Paul inherited it," Shaffer recalls.

"They had some nasty soil origin problems. They had done a lot of reconstruction there, and they took a lot of the topsoil off the fairways to build mounds, and left a lot of the subsoil there to grow fine turf on. And there was some herbicide residue in the fairways. Seed would establish, but a couple weeks into maturity, as soon as the root would get into the herbicide, it would die off.

"Regardless of the phenomenal job they did for preparation of the Open, the biggest accomplishment took place five years prior, getting a thick grass stand to the point where it would tolerate the beating you need to give it to get it into condition for the tournament," says Shaffer.

"Paul's a great leader," says Kevin Crowe, assistant superintendent in training at Augusta National.

"Everybody was more than happy to be there as early as he wanted us, and stay as late as needed."

In the morning, Crowe helped out with fairway mowing, which began at 5:45 a.m. Five-man teams were responsible for three fairways each. Crowe then pitched in on a variety of tasks, from moving fans, to rolling greens, to filling fairway divots. □



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CART PATH

considerations

Veteran Superintendent Jeff Broadbelt shares his thoughts (and some tips) about the importance of cart paths.

By JOHN B. CALSIN, JR.

The cart paths, or anything that looked like a path, was just worn dirt, rutted and bumpy. Terrible. And, they were in the wrong spots," said Jeff Broadbelt, manager of Downingtown Country Club and former superintendent at Chester Valley Country Club.

Downingtown CC, now a daily fee course near Philadelphia, was built as a resort course about 30 years ago. It was designed by George Fazio.

Under Broadbelt's guidance, the course is returning to excellence, and the cart path work has helped to make it that way.

Through the years, at both Chester Valley and Downingtown, Broadbelt has either designed, routed or constructed over seven miles of paths. He has some suggestions for others either laying out a new course or upgrading an existing one.

To begin with, he said about path layout, "if you don't feel comfortable with routing and



design, consult with a golf course architect.

"He believes most architects do not feel that this type of design work is beneath them. They can help.

One philosophy, of replacement is that of looking where the carts are creating new paths and then paving those dirt areas. He believes this works only about 30 percent of the time. One reason for this is the golfers themselves.

While golfers are not the enemy, they're the challenging part of the equation, often times, even more so than the topography of the course. If you let them, Broadbelt said, "golfers will drive right up on the green. You'll have to pave right on top of the green."

He said that by managing the placement of the paths, this says to the golfer: this is where we will maintain perfectly, and that is where the carts belong—on the path.

He has removed and then replaced "a ton of paths," he said they were in the wrong

place because they were either straight lines or they did not flow.

"There was one par three that was paved right down the center, so all you saw when you were standing on the tee was the path, instead of taking it down the left and then crossing over."

No straight lines

Broadbelt calls straight lines "a big distraction," unless they can be hidden by trees, for example.

The look of the placement is important too. He believes that the paths should "move". As fairways have contours that give them a softer feel and a flow, so too should cart paths.

"There should be some meandering to it," he said. "The more it resembles a creek, the more it is going to seem natural."

Take the high road

He suggests favoring the high side of a hilly fairway. While it might mean a little extra walking, putting it on the high side helps the golfers "see where they are driving."

Slicer-friendly

Nobody likes cart paths. But it is my feeling that if you have to have them, they ought to be where they can be easily used by the golfers. I do not like to be confined to a cart path that is placed so far from the fairway that it is a hike just to get there and a trip if you have to go into the far rough. The paths at the Country Club of Colorado have been placed very close to the fairways and tees, but are kept away from the greens. Generally, they are on the right side of the fairway to accommodate the slicers, who are in the majority. They were all constructed eight feet wide, but sometimes the grass encroaches. At the tees, they are wider.

It is my belief that by having a continuous path system, there is a great deal less wear on the course, even though we normally do not confine the carts to the paths except on par three holes and on a few holes that simply cannot take cart traffic. When we had paths only at the greens and tees, there was always a great deal of wear at the beginning and end of each one. That wear is spread much better with the continuous path, but perhaps the greatest benefit is to prevent the compaction during wet weather when carts are confined to the paths. □

Stan Metsker, CGCS, from "On the Course: The Life and Times of a Golf Course Superintendent," Metsker Publishing, Colorado Springs, Co. Used by permission.

Another question to ask is how is the hole usually played? For example, if players usually hit left on a certain hole, and there is a major hazard—deep woods—he suggests putting the path on the other side of the fairway so it is not in the way.

Another area to be aware of are the landing zones. While those are not etched in stone due to the differing skill levels of golfers, there are areas where balls usually land.

He suggests on a par five, for example, to keep the path wide on the drive up to the landing zone. "Keep it out of view if possible, and then come closer

so the golfer doesn't have to walk as far to the ball. Then curve it back out again." At the next zone, curve it back in. Then out and in at the green.

Wide paths better

How about the path's width? Golfers either like to drive next to each other and talk back and forth, or they like to zoom around a slower cart. That is why Broadbelt thinks eight- or nine-foot-wide paths are more realistic.

Often, paths are made narrower due more to the dimensions of the carts, which are about four feet. Then only a foot is added on each side.



Cart path placement says to the golfer: this is where we will maintain perfectly, and that is where the carts belong.

Consequently, because of the way golfers handle the carts, the grass is destroyed on either side of the path and just will not grow back.

Wider is better

A wider path helps maintenance crews move equipment on the course faster and with less wear and tear.

If there is not enough room near a tee or green to widen the path by paving it, try creating a type of curb using blocks with holes in them. Dirt can be put in the holes and grass planted in them. But the block, or paver, has the strength to stand up to carts being driven

over them.

Cost? Broadbelt's experience has them coming in at between \$14 and \$18 per square yard. He uses two inches of asphalt, compacted to 1½ inch over, usually, 6 inches of modified, compacted. If corners absolutely must be cut, don't scrimp on the asphalt. He suggests going with less modified.

Because golfers want carts, and carts generate revenue for golf courses, spend a little time on your cart paths. They can lead to positive word of mouth advertising your course. That means more income. □

Asphalt at \$5/ton!

Scott Gobel, Deer Track Golf Club, Crawfordsville, Ind., is looking forward to the deal he's getting on crushed asphalt, for his five-mile cart path project.

"We're having crushed asphalt brought in from one of the local interstate construction projects," says Scott Gobel of his good deal. At \$5 per ton (delivered!) Gobel knows he's going to save some serious cash. It's being trucked in from the road by the interstate contractor. All Gobel had to supply was the dump site. We have a pretty good path for them to follow. We've got a smaller dump truck owned by one of the course owners. We put some reducers in the back of the bed to narrow it, so it matches the width of the.

"The existing gravel paths are just kicking up too much dust," says Gobel. "I thought crushed asphalt would be bad material, but if you get it rolled out properly, it's not going to come back up. Very little prep work is required. Just put it down on a rolled surface. It seizes back up, so you have to make sure the surface is well-prepared. It's like a gravel. The bonding agent's been broken on it, but it's still in the mix. When we roll it, the bonding agent releases a little bit, so we get a little bit more of a bond."

Gobel has been at Deer Track for one year. He has worked both private and public courses. Deer Track is daily fee. □

Contractor rubble trouble

New cart paths were constructed at our course a couple of years ago. I was not there at the time, but can make a couple of comments, using hindsight.


▶ First, the cart paths are 4 feet wide, and that has proven to be a bit narrow, especially in the curves, for players and maintenance crew. Some courses solve the problem of driving off the path by installing curbs, but that would drive the cost up.

▶ We had a problem getting turf to grow along the paths in certain places, and are currently making repairs. It seems that the contractor backfilled with whatever could be found, as we are finding chunks of cement, pine cones, branches, decomposed granite (probably from a past repair effort) and more.

▶ As we excavated we also found that the forms used were about 3 inches, so at that depth is where the slag oozed under the form and now creates a barrier to roots. It might be best if the contract specified straight sides to about 6-inches, and require backfill with material consistent with surrounding soil (clean dirt).

▶ When the repairs are complete, we are going to try top-dressing the cart path approaches with crumb rubber (ground up rubber). We hope it will help reduce the wear that occurs in those areas. □

Ben Fish



This path at Hinckley Hills in Ohio was reinforced with landscape timbers, for stability and safety.

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Minnesota course improves on history

Superintendent Doug Mahal tackles the challenge of working within the historic designs of a century-old course while improving drainage and practicing environmental stewardship.

By BRIDGET FALBO

About 100 years ago two bicyclists toured the countryside of the then outskirts of Minneapolis. Sitting atop a hill overlooking the shores of Lake Calhoun, they had the idea that the place would make a great golf course. And so it did.

Now enveloped by a posh south Minneapolis residential neighborhood and bordered on one side by a busy thoroughfare, the 154-acre Minikahda Club celebrates its centennial in 1998. Already one special event is in the works: Minikahda will host the 1998 Curtis Cup, a USGA women's championship matching U.S. amateurs with the best of Britain and Ireland.

"1998 will be pretty big year for us," says Superintendent Doug Mahal who, keeps the course in shape with the help of 24 fulltime employees and six seasonal workers.

Mahal says that part of the reason he applied for the superintendent position at Minikahda in 1990 was that it was a family oriented club. Mahal's experience includes

10 years as superintendent at Interlachen, another prestigious Minnesota course. He is a graduate of the University of Minnesota.

First for many tourneys

According to Mahal, every major USGA championship held west of the Mississippi, was held at Minikahda first. The course features design work by Donald Ross, and Mahal tries to manage the course within the designs established by Ross, since "his designs have withstood the test of time from a golfer's standpoint."

The greens are small, and protected by many bunkers.

The course stretches 6700 yards in length over rolling terrain, with fairways bordered by mature elms, linden, pine and spruce. With the trees to factor in, Mahal says the challenge to the golfer is in accuracy not distance.

The older design, with inherent drainage problems, causes many maintenance issues that new courses would not run into. Consequently, it requires more labor to maintain. Steep hills slope away

▲ The course at Minikahda has 'no mow' areas that save time and money.

from many of the fairways, greens and tees. "We don't want to change a lot of the contours because he (Ross) did them for a purpose," says Mahal. But some hills are so steep that they must be hand mowed with a floating mower.

Years ago, before today's sophisticated irrigation systems, courses were planned, with the placement of clay soils, to hold water to a certain extent, says Mahal. Sometimes not much emphasis was placed on drainage. Minikahda, in fact, contained several low spots that drained poorly. Heavy rain caused water to stand on several fairways. Because of this, these areas were particularly susceptible to Pythium and other diseases.

"That's the best \$5,000 I've ever spent," says Mahal of the 1500 feet of drain tile that he installed on two fairways.

Also, a county drainage ditch runs through the course, resulting in flooding on the 11th hole and then the 9th hole in

heavy rain storms. Mahal and his crew built three drainage ponds within the confines of the drainage ditch. When the rains fall—as they did this July with rainfall three times the average—the ponds slow down the water and retain it so it doesn't spill out onto the fairways.

The crew also created natural buffers along the waterway, a band of long growth consisting of naturalized prairie and wetlands plants like blackeyed Susan and bee balm. This buffer soaks up extra moisture, traps sediment and also prevents fertilizer runoff from entering the waterway which eventually drains into Lake Calhoun.

The natural buffer zone is an example of the way Mahal sometimes breaks with tradition when it means doing things a better way. Mahal was recognized by Links Magazine with an Environmental Stewardship Merit Award based on his work with wildlife and water quality enhancement, water conservation, pesticide handling and use of organic fertilizers. He also received a Merit Award from GCSAA's Environmental Steward Award program.

Organic base to fertilizers

Mahal has worked out some environmental strategies that include using fertilizers with an organic base for 90 percent of his applications, and cutting down his pesticide and herbicide use to 25 percent of what it used to be. Mahal bases his practices on the research into the microenvironment of the turfgrasses. He explains that when pesticides are used indiscriminately, much of the beneficial fungi which actually help prevent disease are killed along with the harmful fungi. With that in mind, Mahal treats only when a disease like *Pythium* has been identified.

"It used to be that by this time in July I

would have treated three or four times with a fungicide. Now, and mostly because of all the extra moisture we've had, I've only made one fungicide application of

Banner to our 25 acres of fairway," says Mahal.

How's \$30,000 sound?

Mahal believes that these practices have saved him about \$30,000 a year, and the savings more than pay for the extra expense incurred by using the more costly organic fertilizers. He uses Ringer natural organic fertilizers, with a base of blood meal and feather meal as the primary N sources, at a rate of a half pound/month of N. Organic fertilizers help build the population of micro organisms, helping reduce disease pressure, believes Mahal.

"We've also been working to reduce our maintainable acres," says Mahal, letting areas outside of the fairways and roughs grow long with native grasses. This new course management practice reduces manhours and water, herbicide and fertilizer use.

Minikahda has a seven acre wooded area that members call the bird sanctuary for obvious reasons. "No mow" areas border the out-of-play side of a newly renovated pond on the sixth hole, throughout the wooded strips that separate the holes and near the drainage areas.

More golfers, more demands

Although a private club, Minikahda is feeling the pressure of being only 10 minutes from downtown Minneapolis. Mahal explains that the course was designed to handle 5,000 rounds of golf each season, but now sees at least 25,000 rounds.

Today's players also expect more out of their tees, fairways and greens. "Greens used to be 1/4-inch long; now they want them at 1/2-inch; fairways were one inch, now they're at 1/2-inch."



Donald Ross designs have withstood the test of time from a golfer's standpoint, says Doug Mahal.

Mahal says it's a balancing act to keep the course smooth and quick, but alive. For special events he can increase the speed of the green by double cutting and rolling for several days prior to the event.

"That kind of abuse will take its toll on a green so we have to back off," says Mahal. The greens are top-dressed with silica sand every four weeks to help with compaction and to control thatch.

Mahal doesn't see any special treatment to prepare Minikahda for next year's Curtis Cup.

"I think our fine turf systems will be good. We'll slick up the greens to make them smooth and fast. I don't see any changes for the tees and fairways," explains Mahal. "They might want to increase the rough heights, depending on how dense it is." □

Wages based on length of work

Doug Mahal bases wages on experience, merit and compliance with a length-of-work agreement.

▶ A first year, inexperienced employee starts at \$7 per hour, which includes lunch. If the employee opts out of the lunch perk, he or she gets \$7.40/hour.

▶ Getting employees to stay the season was a problem, until they added a bonus of up to 60 cents/hour for every straight time hour worked during the period agreed to work, when the person was hired.

▶ If an employee stays for the whole season, there's a bonus at the end of the season of 20, 40 or 60 cents, depending on work performance during the season. That inexperienced employee could ultimately make \$8/hour.

▶ Base pay for experienced employees ranges up to \$7.75/hour. *BF*

What golfers want, reports California group

The GCSA of Southern California recently asked the Pacific Northwest Golf Association Boards of Directors, volunteers and other association members, "What expectations do you have?" when it comes to playing conditions and maintenance on the golf course. The top answers:

- 1) Smooth greens/adequate pace.
- 2) Notice of aeration dates.
- 3) Open-minded superintendent.
- 4) Proper course setup.
- 5) Good bunker maintenance.
- 6) Firm (dry) conditions.
- 7) Protect the environment.
- 8) Level tees.
- 9) Green grass.
- 10) Variety in course setup.

"The fact that many golfers in the survey believe superinten-

dents are close-minded points out the need to work on communication skills," writes Keith Ihms, CGCS, writing in the CGCSSA newsletter.

"Even if a question or comment from a player appears trivial or is based on emotion, the way we as superintendents respond will create the perception of open- or closed-mindedness," says Ihms. "If we are perceived as closed-minded, even logical explanations to suggestions or requests may be considered excuses, and will hurt our credibility."

Course construction rolls

Golf course construction keeps rolling along. The National Golf Foundation (NGF) reports that 144 courses opened the first six months of 1997, 111 in April through June.

New courses opened, or existing courses received major additions and reopened, in 34 different states. Michigan boasted the most activity with 13 openings. Nearby Indiana had 8.

Here's a breakdown of the 144 course openings:

- ▶ 64 new daily fee courses, 8 municipal, and 6 private;
- ▶ additions to 48 daily fee courses, 7 municipal and 7 private;
- ▶ reconstructions to 3 daily fee and 1 municipal course.

The NGF reports that 586 golf courses are under construction. This includes 472 18-hole courses and 114 9-hole courses. Again, most (440) are daily fee.

Another 253 courses are being enlarged, while 10 are under reconstruction. In all, construction is underway on a total of 849 golf courses. NGF says it gets its information from architects and other sources.

Legislative alerts from GCSAA

The latest edition of GCSAA's Briefax reports the following development in California:

The California EPA Dept. of Pesticide Regulations will spend the next six months monitoring methyl bromide fumigations, including applications made near homes. To protect workers and others who may be near fumigation sites, the state has adopted safety measures that far exceed national standards. DPR will use findings to see if more restrictions on methyl bromide are needed.

NGF improves directory

The National Golf Foundation offers a bigger edition of the Directory of Golf, available in September.

"Every entry...has been verified to provide the most complete and accurate information available," says the NGF's Barry Frank. Cost is \$60 each. (Free to NFG members. Contact NGF: (800) 733-6006; fax (561) 774-9085.



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Snow removal: brisk, always profitable

By Sharon Conners, Contributing Editor

Snowplowing represents more than a change in work environment. It's not easy, but there's money to be made for the dedicated, well-equipped contractor. You not only expand into a year-round business, you can keep people on the payroll.

It's -30° F and the brutal winds blow and drift snow across the roadways, making many streets impassable. The only people who are likely to be on the road are in the business of snow removal.

At the first sign of snowflakes, snow plow teams begin to gear up for their mission to clear roads, parking lots and driveways.

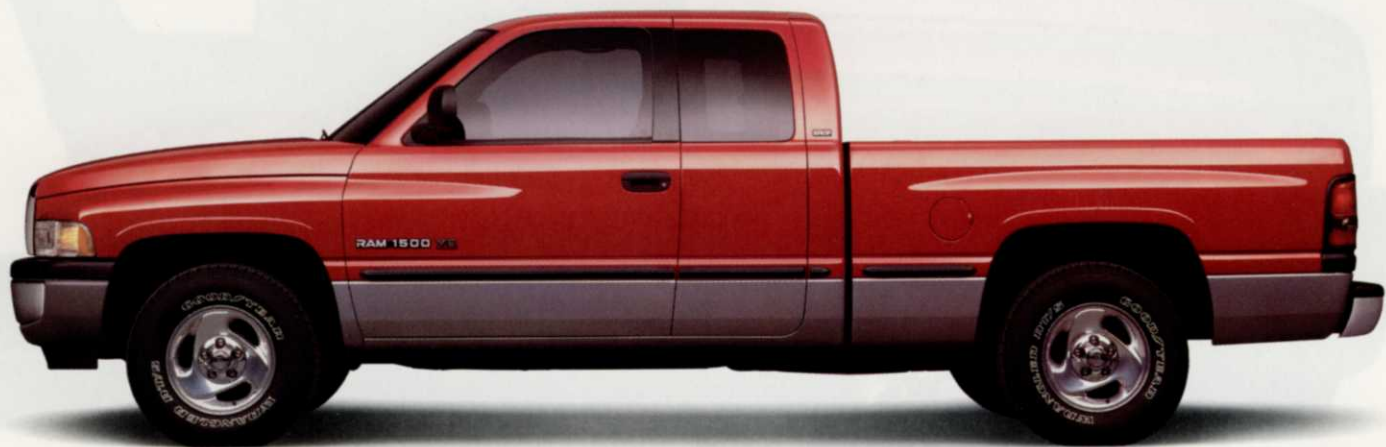
It doesn't matter that it's three a.m. Sunday. There's work to be done and it has to be done now, not later when churchgoers can't make it into the church parking lot.

Tremendous opportunity

Contractors that spoke with *LANDSCAPE MANAGEMENT* report being in the snow business anywhere from five to 20 years. During that time, they experienced growth from 100 to 1,000 percent.

Chris James, president of Chris James Landscaping Inc., Midland Park, NJ, says since the late '80s the company has consistently been over \$100,000 in sales in snow/ice services. An average winter can bring somewhere between \$125,000 and \$150,000 to as much as \$280,000.

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¹Excludes Crew Cabs.
²Winner of Strategic Vision's 1995, 1996 and 1997 Total Quality Award™ for "Best Ownership Experience" in the Full-Size Pickup class, based on its 1995, 1996 and 1997 Vehicle Experience Studies™ of 31,440 ('95), 35,652 ('96) and 31,521 ('97) Oct.-Nov. new vehicle buyers of 170+ ('95) and 200+ ('96 and '97) models after the first 90 days of ownership.
Always use seat belts. Remember a backseat is the safest place for children.
All comparisons based on data available at time of printing.



Ram  The New Dodge



Glossop: It's more than pushing snow around.

James is frank about his pricing strategy: it's based on his experience, and his experience alone.

"I don't believe in letting the industry set my pricing. I set my pricing on what I know it takes to be profitable," James says. "In the corporate areas I work in right now, I have several very good competitors. They're true professionals and we're all in the same pricing realm. I also have a dozen other companies in that same area that are completely unrealistic with their pricing. The same is true in residential."

In Erie, PA, where it snows an average of 150 to 300 inches each year, **John Allin**, of Allin Companies, started out in 1978 as a one-man operation. In 1986 the company grew to the point where it moved out of the house and garage. It has year-round, 40 employees and 45 subcontracts for winter. Sales from snow services this year are expected to be about \$700,000.

Rick Kier, owner of Proscapes Inc., Jamesville, NY, started out at about age 10 with his father's snow blower doing the neighbor's driveway and hasn't stopped since. He bought his first truck one month before he turned 16.

"It is very important that a contractor understand the requirement and the dedication that is involved. All the contractors that I know that are

involved both in our organization and without in snow and ice management are people that understand they have to be on call 7 days per week, 24 hours a day," says Kier.

William Pullin of Environmental Maintenance, Baltimore, Md., says snow work "is a very grueling operation. It requires extremely long hours, a lot of stamina and the ability to stay focused for long periods of time. I'm talking about 30 hours a shot."

Joe Drake, president of JFD Landscapes, Inc., Chagrin Falls, OH, started in '79-80 with just one truck right out of high school and now plows with 11 trucks. He says he probably made more money when he was just doing the driving versus what they're doing now, but snowplowing is necessary in the business. "There's no set schedule. Employees don't like this. They could be out there from a couple hours to two or three straight days plowing snow," says Drake.

Watching weather is easy

Don Wilmes, director of sales for the public sector at DTN Weathercenter (Data Transmission Network), says his company provides a system to contractors via satellite that has the most recent next generation radar images. They are able to track the intensity and movement of storm systems with a 48-color palette. Images are updated every 15 minutes, 24 hours per day. It provides the ability to look at short range forecasts: 12-hour, 24-hour, 36-hour and 48-hour forecast maps. They are updated four times per day.

The company has an arrangement where it leases equipment. It provides the satellite dish, monitor screen, data box and all the cabling. There is a one time, \$318 start-up fee. The flat monthly subscription rates are \$72 per month if billed on a quarterly basis and \$68 per month if the first year is pre-paid. DTN maintains the equipment for them.

According to Wilmes, there are three main areas where the systems can benefit contractors:

1. **Operations planning** will assist them in staffing their crews, scheduling projects and determining where and when they can get work done.
2. **Cost.** There are savings as far as materials, time and equipment is concerned.
3. **Document.** "Our system does allow you to archive or you can print out weather information which can be used to document the actual weather conditions at the time that they send their people out." •

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In Syracuse where it snows an average of 160 inches per year, **David Venditti**, vice president of Clifton Property Services, says, "It takes a special breed of person to plow snow. It's very demanding. You almost have to write the winter off for

now, it's more of a question of managing a snow and ice on sidewalks and parking lots."

Outfitting for winter

Once a contractor has decided that snow removal is for him, there's equipment to buy and deicers to stock up on.

The amount a contractor can expect to pay for snow equipment depends on the investment they wish to make. Contractors place the range for a truck with a plow between \$25,000 to \$72,000 depending on the type of truck and whether it is new or used and what kind of plow is used. Plows alone range from \$2,500 to \$4,000. Most use the same equipment in summer as in winter with the exception of one or two vehicles.

Glossop says that he would not use a ½-ton pick up truck in the winter unless it was for hauling snow blowing equipment and shovels, otherwise the warranty on it will be voided. He recommends buying a ¾-ton or larger truck.

Rock salt is one of the cheapest deicers contractors use. Regular rock salt ranges in price from \$30-\$60 per ton.

Another common deicer calcium chloride can cost around \$13-\$20 per 80 lb. bag. Magnesium chloride sells for \$18 per 50 lb. bag. Rock salt is generally used for

"The key to successful snow removal is being prepared. Whether it be having enough supply on hand or the way you maintain your equipment. That's kept us going when a lot of our competitors have failed."

— *Wayne VenHuiren, Koala Landscapes*

personal or social activities."

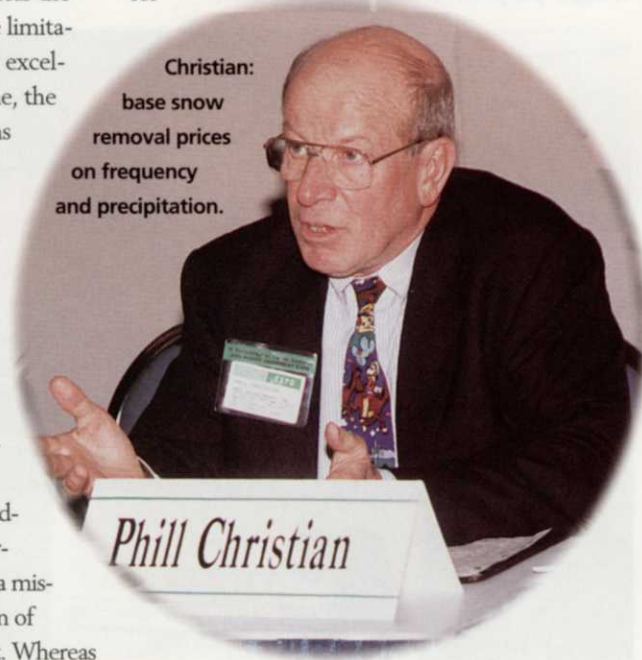
"[The snow contractor] is opening up the door to another kind of liability, which is 'slip and fall' related lawsuits, of which today there seems to be an exceptional amount," says **Michael Frank**, VP/Operations of David J. Frank Landscape Contracting Inc., Germantown, WI.

"The best way to protect yourself against a lawsuit," advises Frank, "is to make sure that your contracts with your clients are very clear as far as you agreed to make a prudent effort to clear the snow and the ice in conjunction with the limitations [caused by the weather]. Also keep excellent paperwork of the work that was done, the time it was done, and what the conditions were so that when you are in a court of law, you have a very good record that you did make a prudent effort. That you did follow the duty of the contractor."

Some mistakes that contractors say they made early on were lack of planning and underestimating the amount of equipment and personnel. Trying to do too many small jobs was another mistake.

Charles Glossop, owner of British Landscapes Ltd., Roseville, MN, says not understanding what the customers wanted was a mistake. "Ten or 12 years ago it was a question of pushing the snow in the pile and leaving it. Whereas

Christian:
base snow
removal prices
on frequency
and precipitation.



Snow & Ice Removal Guide

roads and parking lots; calcium and magnesium chlorides for sidewalks. Often times buying in bulk helps to defray cost.

Many find it advantageous to stock up. Sometimes it involves preparing for the whole season or a snow storm and a half.

Contractors use anywhere from 50-1,000 tons of deicer per year depending on the volume of their business.

"The key to successful snow removal is being prepared. Whether it's having enough supply on hand or the way you maintain your equipment. That's kept us going when a lot of our competitors have failed," says **Wayne VenHuijzen**, owner and president of Koala Landscapes, London, Ontario.

Bound by snow

Some common types of contracts are seasonal, hourly or per push (event).

Pullin of Environmental Maintenance, uses two kinds of contracts.

"I have 'per storm,' which includes plowing sidewalks and salting. They usually break from zero to six inches and six to 12. Above 12 inches is typically time and materials.

"The second contract is hourly and usually has a four-hour minimum. It costs anywhere from \$70 to \$125 per hour. "I would never write a straight 'per plow' contract," insists Pullin.

"You have to go by the hour or the inches," says **Richard Lauger**, owner of Lauger's Good Lawn, Youngsville, PA. "Because you can get three or four inches of snow to plow, but what happens when you get 16 inches of wet heavy snow? That has to be figured into the contract."

Many have stipulations in their contracts that if

Plowing is only the beginning of a contractor's duty. Next, he needs to be concerned with which deicer will get the job done the best and quickest.

there is snow above a minimum amount they can charge more.

David George, exterior division manager, Engledow Group, Carmel, IN, says, "Our contracts are based on minimums with a declining rate the more it snows. The minimum covers the initial purchase of the equipment that I have to make whether or not it snows. If we go out and buy the equipment and it doesn't snow, the return on our investment is pretty poor. The minimum protects against that."

"The reason why we graduated rather quickly

from the residential market to corporate condominium snow removal was that it was like feast or famine," says James.

"When it snowed 10 or 12 times, and I had a couple plow trucks doing residential, it was profitable. But during winters that we only had a couple of snowstorms, it wasn't. There wasn't consistency.

"With the corporate property management, all-inclusive snow and landscape contracts assures us our equipment and manpower were more than



Allin: no interest in residential competition.

So the price is right...

With so many different ways to calculate what they'll charge, a weary contractor can call on the expertise of a consultant to find out the best way is to bill a customer for his services. Phil Christian, president of PDC Associates Inc., Marble Hill, GA, is one consultant who helps contractors. He has a formula for figuring price:

- measure the area to be removed in square feet
- divide by production factor—the number of square feet we can plow per hour
- equals the number of hours required
- multiply number of hours required
- times hourly rate
- times the number of frequencies you expect that year.

Most contractors plow by the hour, which Christian thinks is the most fair, but not the most professional. "Selling your time by the hour is kind of a low end of the business. I would much prefer to have an annual contract based on frequency and precipitation rate. Selling your time by the hour is pretty tough because it may or may not snow in some markets."

Prices range from \$50-\$60 per hour all the way to \$110. Usually the more snow you have the lower the hourly rates.

Christian says one common mistake is "copy cat" pricing—trying to get all the market will bear based on someone else's calculations. Also, not taking into account "snow removal" as opposed to snow plowing. "After the first two or three storms there might not be anywhere to put the snow and you have to hire big tandem trucks and loaders, and sometimes they don't take that into account." ●

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paid for throughout the winter months."

Most snow removal contractors' clients are existing landscape clients. Very few of them advertise their services.

Tom Yackley, president of Yackley All Weather Service Ltd., Oswego, IL, says writing a contract, "should be based on what your client needs. A lot of times it's based on what the contractor thinks he needs. It's got to be an educated guess, not gambling when you price the work out."

"You grow some years a little bit and then there's other years, because of the weather, that you make a big jump and then the next year, you make another big jump. We have never leveled off, we have always grown. In the last five years I would say our business has doubled maybe three times."

"You have to take the time to assess your abilities, your employee's abilities, your client's expectations and are they compatible," says Yackley. "Where a lot of contractors fall down on the job is that they fail in the preparatory stage. They lack experience and education."

Flurry of competition

While residential snowplowing is profitable when it snows a lot, there are some drawbacks. There is a lot of competition, especially from the guy who just happens to own a plow.

Pullin says, "The only time there is any money to be made in residential is in blizzard conditions. It's unfortunate but the prices will triple when demand is high."

Adds Frank, "for a smaller contractor it would be in his best interest to do residential work because it is very profitable. You can make more per hour doing residential than you can doing commercial."

"Every Tom, Dick and Harry that has a truck is out beating the bushes to plow residential. I've got 'competitors', one truck operators that are willing to plow driveways for less than half of what I'll plow them for. We can't compete with them, nor do we want to," says Allin.

Most competition comes from the guy with a pick-up and a plow scooping driveways. Competitors are most likely to take a bite out of a contractor in the residential market where small-time contractors are predominant. There is some competition in the commercial market, however, most contractors enjoy a comfortable niche.

"The problem with a one or two-truck opera-

Contractors say a truck and plow outfit ranges between \$25,000 to \$72,000.

tor," says Allin, "is that if he's servicing a plaza and he has a truck go down he has lost 50 or 100 percent of his workforce. I've got 75 to 85 units out moving snow. If I lose one or two trucks, it doesn't affect the overall operation of the business that much. We can still service the customer."

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"In the landscape industry," says Kier, "if you have a lawnmower breakdown, you can call a customer up and say we're coming back tomorrow and they're just fine with it. In the snow removal business if the customer opens up their garage door at 7:05 and you were supposed to have the driveway plowed at 7:00, your name is mud."

Glossop is not concerned about the guys with pick up trucks.

"I would much rather hire some of those people and put them out in the field as a good subcontractor and probably pay him a little more than what he would be making if he was out there bidding it on his own. It comes down to a liability and an insurance issue more than anything else," says Glossop.

Gearing up

The number of people that contractors use to staff their snowplow operations varied according to how many customers they served. Some contractors use as few as two and others as many as 400 during a blizzard.

Yackley says his company determines how many hours it needs to cover the work. Then, he figures out how many people he needs.

"This year I know we're expanding and I'm going to need 1800 hours," he predicts. "I've got to come up with more equipment and more people I feel are qualified to do the job so I have 1800 hours I can use a day."

In Baltimore, where the snowfall is an average 21 inches per year, if snow is six inches or less, Pullin needs 75 to 100 people. "In situations like we had in

'96 where we had 30 inches of snow in one week, I had 400 people working around the clock."

Starting out: be ready

The reality of snow removal is this:

"A landscape contractor has to look at whether or

"With corporate property management, all-inclusive snow and landscape contracts assures us our equipment and manpower were more than paid for throughout the winter months." —Chris James, Chris James Landscaping, Inc.

not he wants to allot five months of his winter dedicating 24 hours a day, seven days a week to be on call and to be able to provide snow-related services," says Michael Frank. It does take a lot of dedication and time. It's days on end a lot of times and 24-hours in a row. It also places exceptional wear and tear on the equipment that he uses during the summer months."

As a snow removal professional, it's often hard to predict what kind of weather the winter will bring. It's also a risky business venture that a contractor has to decide whether or not they are willing to take. Whatever the outcome, a contractor's first responsibility is to make sure his company is geared up for winter.

Profits will hopefully come later. ●



Frank: know the importance of 'prudent effort,' and what the job requires.

As we were going to press, it was learned that Phil Christian, mentioned in this article, died of a heart attack on September 1.

LANDSCAPE MANAGEMENT extends condolences to Mr. Christian's family, friends and business associates.

Versatile equipment helps plow in profit

John Gerosa, president of ProLawn, Inc., Elmgrove, WI, has been profiting from snow removal since 1990.

A lawn care professional for 25 years, Gerosa found he could use existing equipment to plow in some extra cash from snow removal.

“Since we were using Grasshopper zero radius turn mowers, in 1990 we put a new snowthrower on a five year-old 1985 model Grasshopper and it was a perfect fit, mechanically and operationally,” says Gerosa. That kind of year-round versatility is the answer.

Gerosa uses the models 721, 721D and 720K to remove snow on sidewalks. All are equipped for year-round operations with interchangeable attachments. Each unit uses a Combo Mulching Deck which can quickly reconfigure for side-dis-



Grasshopper units have heated cabs that enable crews to stay on the job even in the most severe weather conditions.

charge, collection or mulching during the spring, summer and fall and for winter operations, each unit's Quick-D-Tatch Mounting System allows the operator to easily switch attachments to the 48-inch Snowthrower or Rotary Broom.

The team at Greenlawn Landscaping Maintenance of Farmington Hills, MI, uses four Grasshopper Model 721D diesel units, all equipped with 60-inch Combo Mulching Decks which are interchangeable with three 48-inch Grasshopper Snowthrowers and four 48-inch dozer blades.

Each unit is also equipped with heated cabs that enable the crews to stay in operation even in the most severe weather conditions.

“We handle 22 apartment complexes and several other commercial properties on a year-round

Snow removal services help contractor stay productive year round.

"Being able to clear snow is a real added value I offer my clients. I have a snowthrower, dozer blade and rotary broom, and my system lets me change attachments fast, without tools. I'm a real believer in zero-radius maneuverability. It lets me get into spots other guys just can't reach with bigger or less maneuverable equipment. And it is a lot faster than the smaller hand-pushed snow blowers."

— Mark Moyer, Kirksville, MO



PTO-driven snowthrower delivers no-clog performance, moves snow 20 to 30 feet away.

Let it Snow. Let it Throw.

When it snows . . .



PTO-driven rotary brooms leave a clean, dry path. Shown with winter enclosure and optional heater.



Multipurpose dozer blades remove heavy snow, slush or sleet.



V-snow plow clears walkways.

Call or write for the name of your nearest dealer and a "hands on" demonstration.

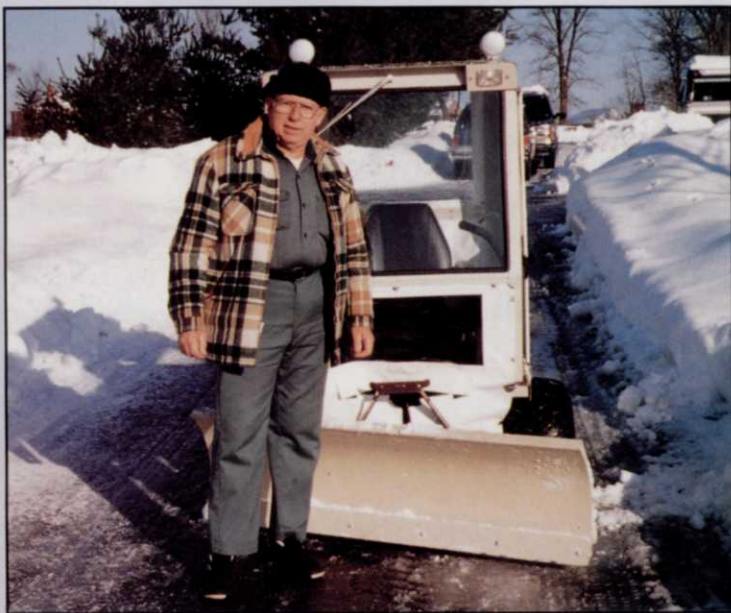
First to Finish...Built to Last

GRASS HOPPER
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Grasshopper passes the test in the worst storm of the decade.

"More than 25 inches of snow fell. Even though 1-2 inches fell each hour, we were able to keep the driveways in our area clear with our Grasshopper. The cab enclosure allowed us to stay warm for long periods of time – even with a minus 20° F wind chill index."

— Charles McIntire, Elkton, MD



Let it Mow.

When it shines . . .

Your Grasshopper turns into a high-efficiency zero-radius mower that lets you trim while you mow. Built for comfort, productivity and endurance, your Grasshopper will give you dependable service all year long, season after season.

Switch attachments in minutes without tools.

Grasshopper's Quik-D-Tatch® mounting system* easily connects a deck or attachment to the power unit and eliminates the alignment hassles often associated with switching attachments and deck sizes.

Other productivity tools include:

- Quik-D-Tatch Vac® Collection Systems
- Dethatcher • AERA-vator™ • Wand Vac™
- ROPS • Sunshade Canopy

Let it pick up leaves, mulch and aerate. Grasshopper lets you handle more jobs with the same machine.



GRASSHOPPER is number one in productivity. The exclusive Combo Mulching™ Deck* with full-flotation option, lets you mulch, discharge or bag with the same deck for superior results in varying conditions.

*patent pending

contract basis," says Brian Fraser, owner of Greenlawn. "When it snows, we have about eight hours to have it completely cleared. Without our zero-radius units, we wouldn't be able to pull it off. They give us the maneuverability and snow-clearing power to stay on schedule."

Fraser teams up the Grasshoppers with nine or 10 trucks with plows and about 30 men with shovels.

"We have rigged a calcium chloride spreader on a couple of the Grasshopper units and that allows the operator to clear the snow and drop deicer as he goes," explains Fraser. "That has worked out amazingly well and saves a lot of time. It's safer too; there is no chance for ice to form after the majority of the snow has been moved. Zero-radius units and shovel crews is very efficient." •

—by Sharon Connors

Are you ready for winter?

Western Products advises contractors go through this checklist to make sure their plow is ready for the winter time challenge:

Blade Assembly

- If disc shoes are being used, adjust shoe to attain a 1/8-inch to 1/4-inch air gap between road surface and cutting edge.
- Inspect the cutting edge and tighten carriage bolts. If material is unevenly worn, remove carriage bolts and reverse cutting edge end for end.
- Tighten trip springs until coils just begin to separate. Over tightening will damage the spring.
- If blade is equipped with shock absorber (pro plow), detach shock at blade and manually extend and collapse shock assembly. If shock easily collapses, assembly should be replaced.
- Inspect all welds and material for cracks and yielding. Reweld if necessary.

A-Frame, Quadrant & Lift Frame

- Inspect pivot bolt at the A-frame to quadrant connection. Bolt should be tight but allow the components to swing freely.
- Check to see if angle stops on quadrant are making contact when plow is fully angled in both directions. Rebuild angle stops with extra material if contact is not being made.
- Lubricate all the pivot points. This will reduce wear and extend the life of the components.
- Check the lift chain bolt on the A-frame for tightness. Replace bolt if bent or cracked. Replace the lift chain if wear is apparent.
- Thoroughly check all fasteners for tightness and wear.
- Inspect all welds and materials for cracks and yielding. Repair or replace if necessary.

Hydraulics

- Drain, flush and add new oil in the hydraulic system. Recommend (ATF) Dextron III. *Helpful Hint: To remove all hydraulic fluid, position blade to full angle right and collapse lift ram. Drain oil out of reservoir by removing drain plug. Reinstall drain plug and refill reservoir with fresh hydraulic fluid. Disconnect left cylinder hose*

and direct to drain pan. Power angle left to remove oil from left cylinder. Reconnect hose and top off reservoir with hydraulic fluid.

- Check lift ram and angle ram packing nuts for tightness. Packing nuts are to be adjusted 1/4 turn beyond hand tight. *Loose packing nut will cause oil leakage, over tightening will cause premature wear and high electrical AMP draw.*
- Lubricate the chrome rod plunger on the lift ram and angle rams with oil.
- Inspect hydraulic hoses for leaks, chaffing and cracked or worn surfaces.

Electrical

- Inspect, clean and tighten all electrical connections.
- Apply dielectric grease to all electrical connections paying special attention to:
 - motor connections (positive and negative)
 - light relay terminals
 - park/turn bullet connectors
 - coil/cartridge terminals
 - 9 and 12 pin grill connectors
 - cable assembly connectors
- Inspect all headlights for proper functioning (high-low beams, park/turn signal)

Vehicle inspection

- Inspect and test your battery. Recharge or replace as needed. (Recommended vehicle electrical system: 700 CCA battery and 70 AMP alternator.)
- Check windshield wipers and fluid, heater/defrost operation, radiator coolant, vehicle headlights and appropriate fuses feeding plow accessories.
- Inspect tires for tread condition.
- Consult the current Western Products Selection List for the specific vehicle ballast requirements. Ballast should be secured behind rear wheels. •

Deicer

options

Deicers serve as important components to getting rid of unwanted ice and slippery areas. By understanding how they work and what the proper application is, you'll be able to serve your customers better.

There are four common halide salts used as deicers: magnesium chloride, calcium chloride, sodium chloride (rock salt) and potassium chloride. They each have a different melting rate, related to the chemical activity of the individual salts.

►Magnesium chloride provides a very fast melting action and high penetration rate, however, the melting action does not last very long. Magnesium chloride will drain moisture from air until it dilutes itself so much that the water could freeze again.

►Calcium chloride also has a fast melting action. It too, however, draws moisture from the air in a manner similar to magnesium chloride, but at a lesser rate.

►Sodium chloride provides a long-lasting melting action as a result of the product's chemistry and mixture of fine and coarse crystals.

►Potassium chloride's melting action is quite slow and therefore may have limited applications for deicing.

►Salt is the most common melter used. While other melters have different performance characteristics, salt melts the most ice and snow per dollar. A cost comparison of the four deicing products reveals that potassium, calcium and magnesium chlorides are four, seven and 14 times costlier than sodium chloride.

Time/right amount

The keys to the effective use of any deicer, including salt, are to apply the proper amount of material based on the weather conditions and allow sufficient time for the melter to work. This is particularly important at lower temperatures.

If landscapers plan ahead, healthy vegetation can be maintained throughout the deicing season by strategic planting of vegetation bordering roadways or walkways that are salt tolerant and efficient application of deicing materials. Most major salt manufacturers offer a variety of blended deicing salt products that help protect delicate vegetation. These products generally are available in bulk and a variety of packaged sizes and are specifically designed to address the salt/vegetation issue. •

SIMA for snow pros

In 1996, in order to place a more professional image on the snow and ice removal industry, the Snow & Ice Management Association Inc. (SIMA) was formed. SIMA currently has about 100 members and is growing by 3 to 4 members every week.

SIMA president **John Allin** says the mission is to "provide a network of resources of information to our members in the snow and ice industry and to promote ethical, efficient and environmentally sound risk management."

"We're all concerned about slip and fall lawsuits. We don't want our customers to be hurt. The property manager wants to make sure that their customers, whether they are tenants in a residential facility or whether they're shoppers at a large grocery store, those people want to make sure that those people can get in and out of their places of business and they want to make sure that they can do it safely," comments Allin. •



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Snow equipment smarts

There are so many different types of equipment for snow and ice removal that a contractor may feel like he's skidding into an icy slick zone coated with choices none of which he can quite get a grip on.

Rick Coolman, advertising and communications manager for Douglas Dynamics, Milwaukee, parent company of Western Products, Milwaukee and Fisher Engineering, Rockland, Maine, says the potential plow buyer needs to ask himself several questions:

1. What type of plowing will he be doing?
2. What kind of a truck does he have or is he looking to buy?
3. What kind of a plow does he need?



Dan Bousman, product manager with Western Products, says, "In the buying process, too many times, the contractor will buy his truck knowing that he wants to plow with it, but he doesn't get the truck specked out properly. In other words he'll buy the truck thinking he can put an eight-foot plow on. What he finds when he gets to the distributor to have this plow installed is that his truck can't handle the plow that he wants."

Both Western and Fisher offer plows ranging from 6 1/2 feet to 10 feet. The size of the plow a customer needs depends on whether it is to be mounted on a vehicle such as a sport utility vehicle or a heavy duty truck.

There are several different types of plows:

- most common is a reversible plow-operator can angle right, left or straight;
- adjustable V-plow, -hinged in the middle and can go from a V-position to a scoop position and anything in between;
- plows with polyethylene blade—the snow doesn't stick to that surface.

Adjustable V-plows such as Western's MVP Multi-position plow, page SR 17, and Fisher's EZ-V, left, are hinged in the middle and can go from a V-position to a scoop position and anything in between.

What the customer wants

A customer/service provider relationship can dissolve almost as quickly as snow and ice during a spring thaw.

Kevin Richardson, superintendent/facilities-central region, of Niagara Mohawk Power Corp., Syracuse, has direct responsibility for 54 facilities in the central New York area. The electric and gas utility in New York state incorporates some 24,000 square miles. He oversees 25 service centers which are anywhere from 3 to 50 acres and 75 substations which are anywhere from 1/3 of acre to 1 or 2 acres.

Richardson does not want "trouble calls. The contractor gets there and the job is completed. In the spring there is no damage that has to be repaired because of the snow removal operation. As we get more and more competitive in our industry we expect the more service for the same kind of money or if not less money," Richardson says. "Not only do we expect them to plow the driveways and parking lots we expect them to sand, shovel sidewalks and open doors to the building." •

SC

"Another common mistake they may make is most trucks require ballast in their rear end which many times is not used to counterbalance the weight of the snowplow that's added to the vehicle. . . Sometimes equipment that you put on the back of the truck helps to counterbalance," says Ben Stenman, product service manager for Western.

Both Western and Fisher have insert hopper type spreaders that can be put in the bed of pick-up trucks. They also offer a line of tailgate spreaders that can hang off the back of a truck to spread salt or similar materials.

One manufacturer offers a multi-purpose unit that's effective in numerous applications. Grasshopper, Moundridge, KS, offers a 48-inch and 68-inch dozer blade. It also offers the 48" snow thrower for its 600, 700 and 900 series of

Grasshoppers and a 60" snow thrower for its 700 and 900 series.

"(Snow throwers) are very useful because you



Snow throwers are very useful because you can preset the height adjustment by hand easily. And, the discharge shoot is mechanically controlled from the operator's seat.



can preset the height adjustment by hand easily. And, the discharge shoot is mechanically controlled from the operator's seat. It can throw the snow anywhere in 180-degree arc. It can be drawn to the left or right.. That's one of the good things about a Grasshopper is that it has a lot of attachments that make it a year-round machine—from de-thatching in the spring to leaf disposal in the fall and mowing in the summer and in November the combo mulching pack which is very easy to change from vacuum to side discharge to mulching," says Ruth Anne Stucky, marketing director for Grasshopper.

Grasshopper's rotary broom is used in the Midwestern states for small amounts of snow. "The Sweepster Rotary Broom comes in 48" that angles up to 25 degrees and clears the debris to the right, and 60" inch that angles up to 25 degrees and clears to left or right. •

Best service you can buy

Not all parking lots can get the same treatment. The type of facility will dictate how often and quickly the parking lot needs to be plowed. For instance, a busy shopping mall is a challenge due to the high amount of traffic. For example, the Christmas season presents a challenge because of the longer shopping hours.

David Venditti, vice president of Clifton Property Services, Syracuse, NY, does nothing but shopping centers and says the biggest challenges are the sidewalks and the large parking areas.

"We're always working around obstacles in shopping centers. Safety is obviously a number one concern especially with the size of equipment we have. It's easy to do a lot of damage to people or property. Workers have to slow down and take their time. You can't rush through it."

Lawsuits for slip and fall cases are always a risk in snowplowing. Venditti says, "We try to limit our exposure as much as possible but in reality you are always subject to the shotgun approach of lawsuits. Nowadays everyone is sued whether you're responsible or not. You're always sued for slips and falls."

"Vendetti recommends not signing a hold harmless clause meaning that you are responsible and that you're going to defend the property owner from slips and falls. His company carries a \$3-5 million policy. •



Calcium chloride and urea combined

Dow Chemical Co. and Ossian, Inc. introduced a new product on the market this year called LANDSCAPE Ice Melter, a combination of calcium chloride and urea developed specifically for the landscape market. The manufacturer claims that the combination of the two is safer for plants. The result being healthier plant life in the spring.

Rick May, marketing manager, of the dry calcium chloride group Dow Chemical Co., Luddington, MI, says the company produces calcium chloride in flakes and pellets.

There are five common types of deicers, according to May: the four halides mentioned above and urea.

"For an ice melter to work it has to undercut the ice, turn into a solution and lower the freezing point of water. Once it has undercut the ice, it spans out over the surface of the pavement. It breaks the bond between the pavement and the ice, and then it should be removed from the sidewalk through me-

chanical means. In other words, you get your snow shovel out and scrape off the slush," says May.

Another salt application procedure that is in use is called presalting or anti-icing. The idea is to apply deicing salt to the surface prior to the storm. An application of deicing salt 20 minutes before a snowfall replaces the initial application of salt during the snowfall and can ultimately eliminate the final application of salt, thereby reducing product and labor costs.

Circle No. 101

Two-stage tailgate spreader from Western

The new Western PRO-FLO 2 Two-Stage Tailgate Spreader spreads all types of material to remove snow, including wet sand. The two-stage design features a belt conveyor to assure positive feed with all types of materials. The hopper assembly is easily removed from the vehicle without the use of tools.

Features include :

► **high strength poly hopper with 1200 lbs. capacity.**

- ▶ adjustable spreader height, deflectors and feed gate
- ▶ 1/3 hp, 12V DC motor
- ▶ center high-mounted stop lamp CHMSL is standard
- ▶ in-bed truss mount or under-bed frame mount
- ▶ choice of on-off blast toggle switch or solid state variable speed control.

For more information, write to Western Products, 7777 N. 73rd ST., Milwaukee, WI 53223 or visit the website: <http://www.westemplows.com>, or check your local yellow pages for nearest Western distributor. Circle No. 102

Three plows in one from Fisher Engineering

As a trail breaking 'V' blade, the EZ-V plow from Fisher is perfect for punching through drifts and snowbanks to get you started on those big jobs.

In the 'Scoop' position, the plow cradles and controls the snow in crowded locations, like tight parking lots, where you can't cast it to the side.

When a Straight or angled blade is needed for windrowing, the 8-1/2 feet EZ-V plow adjusts



quickly and easily.

The best part about this new snowplow from Fisher that sets it apart from the competition is the convenient, easy-to-use hand-held Fish-Stik control. All functions—raise, lower, moving the wings in or out either simultaneously or separately—are right in the palm of your hand. The Fish-Stik puts the easy in EZ-V plow!

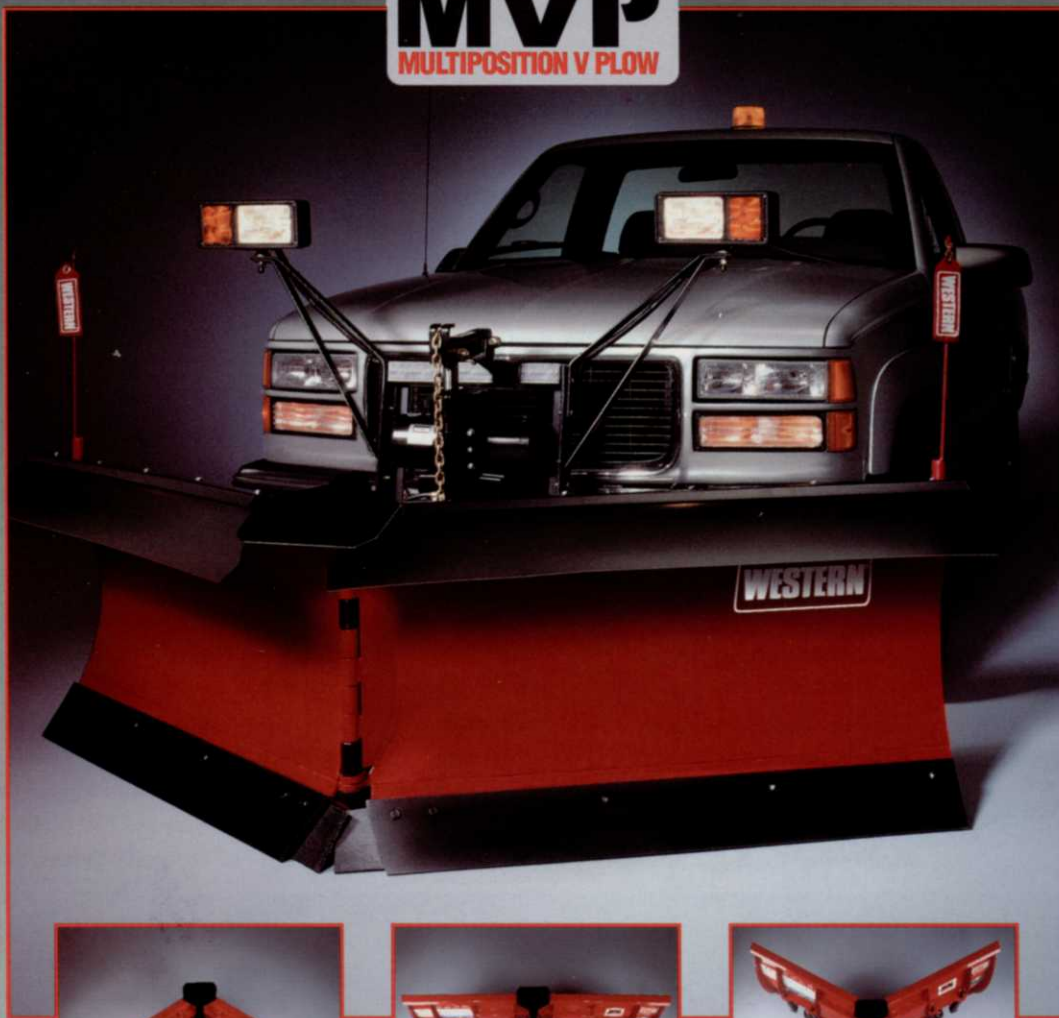
The Insta-Act Hydraulic System gives state-of-

the-art power source that allows you to hydraulically lock the blade wings to act as one.

As with all Fisher plows, the EZ-V plow incorporates the well known, Fisher trip-edge design to keep plowed snow out in front of the blade and make stacking easier.

For more information, write to Fisher Engineering, 12 Water St., Rockland, ME 04841, or visit the website at <http://www.fisher-plows.com> or check your local yellow pages. Circle No. 103





ONE SNOWPLOW DOES IT ALL!

The versatile 8½' MVP™ snowplow from WESTERN® adapts to any plowing situation because it's hinged in the center to allow plowing in the scoop, "V" or straight blade position.

The feature that separates this plow from the rest is the exclusive, hand-held CABCOMMAND control. Now all blade functions – including moving the two wings in or out either simultaneously or separately – are right in the palm of your hand.

Add trip-edge blade technology, double acting cylinders and the patented Uni-Mount® System for easy on/off, and it's easy to see why the MVP snowplow provides the professional with the ultimate in plowing efficiency.



WESTERN PRODUCTS 7777 N. 73rd Street Milwaukee, WI 53223
World Wide Web: <http://www.westernplows.com>

Circle No. 136 on Reader Inquiry Card

Events

SEPTEMBER

- 16-18: Virginia Turf and Landscape Field Days**, Virginia Tech Campus, Blacksburg, VA; contact David McKissack (540) 231-5897 or turf1@vt.edu.
- 17: LCA SuperShow**, Howard County (Maryland) Fairgrounds; LCA; (301) 948-0810.
- 18: Mid-Atlantic Athletic Field Managers Field Day**, MacGruder High School, Rockville, MD; (410) 290-5652.
- 23: Ornamental Horticulture Open House (U. of**

- GA)**, State Botanical Garden of Georgia, Athens; (706) 542-2861.
- 24: Va. Tech. Hampton Roads Ag Research Field Day**, Extension Center, Virginia Beach, VA; Dr. Bonnie Appleton, (757) 363-3906.
- 26: International Warm Season Turfgrass Research Tour**, Seeds West Arizona Research Facility, Sheraton San Marcos Golf Course Resort, Chandler, AZ; (520) 785-9605.
- OCTOBER**
- 1-2: Turfgrass Landscape & Equipment Expo**, Orange County Fair, Costa

- Mesa, CA; (800) 650-9595.
- 6: Ohio Turfgrass Foundation Golf Tournament**, Jefferson Golf and Country Club, Blacklick, Ohio; OTF (614) 760-5442.
- 6-8: West Texas Turfgrass Training Seminar**, Holiday Inn Lubbock Plaza, Lubbock, TX; WTGCSA (806) 354-8447.
- 12-15: Southwest Turfgrass Conference**, Ruidoso, NM; (505) 275-2576.
- 15-18: Interstate Professional Applicators Association Convention**, Resort at the Mountain, Welches, OR; (503) 363-7205.
- 15-18: American Society of Consulting Arborists**

- Conference**, Walt Disney World's Coronado Resort, Orlando, FL; (301) 947-0483.
- 19-24: Second International Congress of Vector Ecology**, Holiday Inn International Drive Resort, Orlando, FL; (714) 971-2421.
- 21: Addressing Idiopathic Environmental Intolerances: A Concerned Approach**, Radisson Hotel, Santa Fe, NM; (sponsored by RISE and NPCA), call RISE at (202) 872-3860. **LM**
- 22-25: Southern Crop Protection Assc. Convention**, Hyatt Regency on the Riverwalk, San Antonio, TX; (912) 995-2125.
- LM**



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SUPPLIERS CORNER

Advanta Seeds West, Inc. has changed its name to **Advanta Seeds Pacific, Inc.** The company was formed 18 years ago as VanderHave of Oregon. General Manager David Holman says ASP seeks to expand export markets into the Pacific rim.

Harold Boyanovsky was recently named senior vice president and general manager, North American Construction Equipment Business Unit and North American Parts Operations, for the **Case Corporation**. In June the company announced a new organizational structure aimed at providing greater customer focus. Boyanovsky has overall responsibility for engineering, manufacturing, sales and marketing of all Case construction equipment products and services in North America.

John Deere Lawn and Grounds Care Division is now known as the **Worldwide Commercial & Consumer Equipment Division** (www.deere.com). The division's business units have also been renamed to reflect more accurately each group's customer focus and area of responsibility. There are seven division business units: Consumer Products, Lawn & Garden Products, Commercial Grounds Care Products, Commercial Worksite Products, Overseas Operations, Horicon Manufacturing & Products Development Services, and Division Support. Fred Korndorf is president of the Division. Mark Rostvold is senior vice president.

Fine Lawn Research can now be reached on-line at www.finelawn.com. The site features company information,

seed product listings and information on how to order products, regional maps, distributor locales, and technical tips from Dr. Karl Danneberger of Ohio State University.

Jason Stoddard and Sean Billante are new California district sales managers for **Hunter Industries**. Stoddard covers northern and central California. Billante manages sales in nine south-central counties. Brian Vinchesi has received the company's Edwin J. Hunter Industry Achievement Award. Vinchesi has been involved in many significant irrigation design projects across the country and has been an industry leader in education and training, says Charles Huston, vice president of sales.

IMC Vigoro restructured its operations to eliminate all direct sales and unprofitable,

slow-moving products. The move was made to keep up with the competition, says Frank Wilson, company president. "The changes ...will make the Professional Products organization more efficient, effective and strongly focused on our network of distributor partners. There will be increased emphasis on new product development and a continued investment in product quality improvements," says Wilson.

Frans Jager is new vice president of Supply Chain Management for **LESCO**. He will establish a management process and order that deals with internal and external product flow issues. The goal is to make it "seamless," says the company. He will choose and manage LESCO's strategic supply partners to achieve "least total cost" and plan merchandising and inventory management.

Don Shor, owner of **Redwood Barn Nursery**, Davis, CA, is chairman for the Landscape & Nursery Expo 1998, Sacramento, CA. The Landscape & Nursery Expo is jointly owned by the California Landscape Contractors Association/Sacramento Chapter and the California Association of Nurserymen/Superior Chapter. For more info call 916/442-4470.

Kelly Shuck is a new turfseed specialist in **Seed Research of Oregon's** Phoenix office. Her territory is Arizona and the Southwest. She helps market Primavera and Primo blend bermudagrasses and common bermuda. **LM**

Info center

VIDEOS AND LITERATURE FOR THE GREEN INDUSTRY

BERMUDAGRASS BARGAIN... *Designing and Maintaining Bermudagrass Sports Fields in the United States* is a must-have book for sports turf managers, or anybody involved in athletic field scheduling or maintenance on bermudagrass sports fields. Written by Bert McCarty and Landon Miller, Clemson University and Jeff Higgins, Auburn University. Lots of great, practical info. \$7.50 per copy (tax is included). Order from: Clemson University Cooperative Extension Service, Bulletin Room 82, Poole Agricultural Center, Clemson, SC 29634-0311. (864) 656-3261.

EFFICIENT LAWNMOWING... 40 minute VHS video (English and Spanish versions) demonstrates the safest, most efficient ways to mow a lawn. Train yourself and your employees in the safe operation of intermediate mowers, trimmers, and edgers. Easy finish up techniques to impress clients. Free handout with test and answers included. Tape is \$59.95 plus \$5.00 S&H. For more information contact Progress Products, 5074 Masheena Lane, Colorado Springs, CO 80917-2675. (719) 637-0811.

CRITTENDEN GOLFINC ONLINE... has launched Crittenden GolfInc Online Magazine: www.crittendengolfinc.com. The site includes news on the golf industry helpful to golf course owners, developers and others.

Huskie vehicle made tougher

The Huskie HD from Haul Master, Inc., offers new heavy duty features. Like the original Huskie, the HD features a 1,000 lb. dump box capacity, largest in its class yet small enough to fit in a standard pickup bed for transport to job sites. A short turning radius (11.5 feet) and a four-cycle, air-cooled, 16-hp B&S engine hauls heavy-duty loads over almost any terrain. Transaxle drive, differential lock and 9/8-inch ground clearance improve operation in muddy fields or rocky terrain.

The Huskie HD also offers rack and pinion steering with adjustable tie rods and rugged A-frames. The front suspension features independent coil springs over heavy duty hydraulic shock absorbers, as well as five-position spring force adjustment.

Optional features include front carrier, snow blade, canopy, hydraulic front disc brakes, turning signals and bedliner. Call Haul Master at (815) 539-9371, and tell them you read about the Huskie in LANDSCAPE MANAGEMENT, or



Circle No. 258

Diesel engine added to Dig-It

HCC Inc. now offers Dig-It with diesel engines. The Dig-It is a self-propelled, hydraulic, towable backhoe. "Many of our existing and potential customers have large investments in diesel engine products. They already know how to operate and maintain diesel engines. Now these customers can have the durability of a diesel and the convenience, light-weight maneuverability and compact size of our Dig-It Towables," says Tim Meranda of HCC. For more information on the entire Dig-It product line dial (800) 330-0530, and tell them you saw it here, or

Circle No. 260

General-purpose work gloves

Direct Safety offers general-purpose work gloves in a variety of materials and styles for protection, durability, comfort and safety on any landscape job. It has five distribution centers for quick delivery throughout the USA. Over 6000 items in stock at most locations. For further information, contact Direct Safety at (800) 528-7405, and mention LM, or

Circle No. 259



Sostram's new chlorothalonil formulation

Sostram Corporation offers Echo 75 WDG formulated with Echo Stick which provides maximum weatherability for excellent residual control. Echo 75 WDG provides excellent disease control with rapid dispersibility, long-lasting suspension and easy mixing, says Art Assad, business manager for Turf, Ornamental and Speciality Products.

Echo 75 WDG (water dispersible granules) Turf and Ornamental Fungicide contains 75 percent chlorothalonil and is labeled for the control of dollar spot, large brown patch, Helminthosporium melting out and leafspot, red thread, fusarium, anthracnose, copper spot, Curvularia leafspot, gray leafspot, stem rust of bluegrass and pink and gray snow mold, plus a wide variety of ornamental diseases.

Sostram's Echo Turf and Ornamental Fungicides, including Echo 720 and Echo 75 WDG, are registered for use on golf course tees, greens and fairways, ornamental turfgrasses, ornamental plantings and nursery stock for the control of a wide variety of diseases.

To learn more about Echo 75 WDG, contact Sostram at (800) 295-0733, and mention LANDSCAPE MANAGEMENT, or

Circle No. 261



The best turf and ornamentals

You've known for quite a few years that CHIPCO® RONSTAR® herbicide is the most valuable tool you have for keeping tough broadleaf and grassy weeds out of the turf and ornamentals you care for. But, did you know that this proven performer is now available as a sprayable formulation in two convenient sizes that are ideal for big or small jobs? It's true. CHIPCO® RONSTAR® is now available in both one and one-half ounce and one -pound water soluble packages. That means that you can keep crabgrass, goosegrass and more than 20 other broadleaf and grassy weeds out of sight