

drive battery now provides 160 minutes of talk time on a full charge. A Rapid Travel Charger will recharge a standard battery to 90% capacity in just 75 minutes. A hands-free car kit allows for convenience and safety. For you construction/installation crews, don't forget about Motorola's noise-canceling headsets. Available in headband or hard hat mount styles, the headsets offer noise reduction quality of 22 dBA. Harmful sounds are suppressed to a safe level and low sounds are amplified up to five times original level, but never more than 82 dBA. Headsets are available with boom microphone and compatible with Motorola in-line adapter cables for workers who need to transmit and receive communication often.

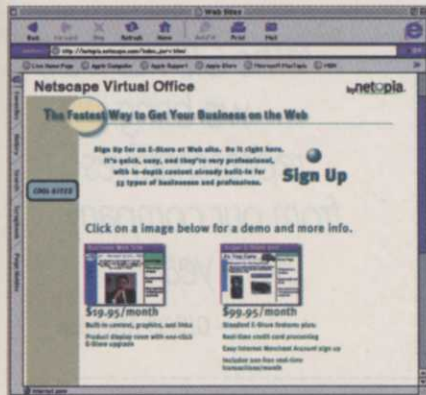
Circle #256

NETOPIA, INC.

510/814-5100

www.nvo.com

Netopia Virtual Office (NVO) eliminates the need for hiring expensive Web site developers



and paying huge monthly maintenance and web-hosting fees. By using NVO, landscape professionals can create a Web site that includes full capabilities needed to describe their services, a virtual calendar listing company hours of operation, holidays, etc., Web-initiated conference calling, an online brochure, frequently asked questions posted on their site, and a directory of Web site links to landscape design-related services.

Circle #257

SUPERIOR SIGNALS, INC.

800/447-3693

The new SuperSight collision avoidance system allows the driver of a vehicle to view objects

that are behind him and out of sight from the vehicle's rear view mirror. A camera is mounted on the back of the vehicle and sends images to a monitor positioned in the cab. The models include either a standard black and white monitor or deluxe color LCD monitor.

Circle #258

MILLENIUM SOLUTIONS

317/585-6100

www.milleniums.com

A new software package combining Millenium Solutions' software for Green Industry contractors and Lavelle Engineering Technologies' On-Site Dispatch software promises to give companies 20% to 30% productivity gains. Job information taken at the central office can be transferred into the Millenium software at the contractor's office, then sent to the field over the Internet and wireless networks. From the field, the job's status and completion can be directly entered to update the central office.

Circle #259

FLEETBOSS

407/265-9559

www.fleetboss.com

The Boss™ fleet management system, introduced by Fleetboss™, uses individual vehicle units, precision mapping programs and computer software to track vehicle data, including start and stop times, number of stops by address per day, vehicle speed, service equipment used and exact routes traveled. Reusable memory chips and simple antennas in each vehicle are linked to a Global Positioning Solutions



(GPS) satellite, which tracks the vehicle's progress. The chips can then be downloaded to a company's own master database, providing a permanent history of the entire fleet operation.

Circle #260

J AND J TRUCK BODIES AND TRAILERS

814/443-1691

www.jjbodies.com

J and J Truck Bodies and Trailers has integrated Action Trakker™ software into its DynaCon-



trol® Central Hydraulics System™. Available in J and J's line of snow and ice control equipment, the Action Trakker lets the driver control all auxiliary functions from within the cab. The Action Trakker also collects operational and incident data for communication and tracking purposes as well as for the reduction of liability.

Circle #261

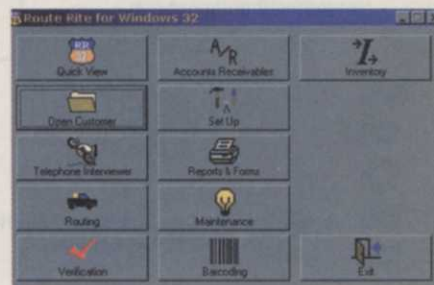
PERFORMANCE SOFTWARE

TECHNOLOGIES, INC.

800/788-0788

www.gopst.com

Performance Software Technologies' new 32-bit Windows offering, Route Rite 32®, allows landscape managers to keep tabs on inventory,



sales, vehicle maintenance, inspection, accounting, payroll and time and material job costing. A handheld "Pen Writer™" accepts the two-way synchronized route and customer data with Route Rite 32 via direct RS232 connection or modem. The route person completes his normal route tasks. Instead of writing on paper and then paying someone to retype the activity in the office, the recording is on Pen Writer by

continued on page 53

GREEN INDUSTRY EXPO/2000

THE NATIONAL EXPO FOR LAWN & LANDSCAPE PROFESSIONALS

YOU'RE INVITED TO THE 11TH ANNUAL GIE

November 4 - 7, 2000

Indiana Convention Center ♦ Indianapolis, Indiana



What Exhibitors Said About GIE/99:

- ♦ "The GIE has quickly become our most productive show."
- ♦ "When I come to the GIE, I know what to expect. The conferences attract the type of customer that we want to get in front of."



TRAVEL WORLDWIDE NETWORK FOR HOUSING AND TRAVEL INFORMATION
Call Travel Worldwide Network at (800) 631-9675 or e-mail them at travworldnet@mindspring.com



- ♦ 12 Exclusive Trade Show Hours
- ♦ Outdoor Equipment Demonstration
- ♦ 3 Educational Conferences
- ♦ 300 Exhibiting Companies
- ♦ 6,000 plus Industry Professionals

Show Schedule

CONFERENCES

November 4 - 7, 2000

OUTDOOR EQUIPMENT DEMONSTRATION

November 5, 2000

TRADE SHOW

November 6 - 7, 2000

"The GIE has it all, we bring representatives from our company every year."

— GIE/99 Attendee

GIE SPONSORS



PLCAA

Professional Lawn Care Association of America
(800) 458-3466 • www.plcaa.org



Professional Grounds Management Society
(800) 609-7467 • www.pgms.org



Associated Landscape Contractors of America
(800) 395-2522 • www.alca.org

YES! I want to know more about GIE/2000.

- Send me information on exhibiting my products!
- Send me information on attending conferences & show!

Contact: _____

Title: _____

Company: _____

Address: _____

City/State/Zip: _____

Phone: (____) _____ Fax: (____) _____

Clip and send to:
GIE, 1000 Johnson Ferry Rd., NE, Suite C-135, Marietta, GA 30068-2112
Fax: 770/578-6071 Phone: 770/973-2019

LM

Visit GIE at www.gieonline.com

lm reports

HIGH-TECH WONDERS

continued from page 51

the route person touching the hand held screen. The customer then signs on the screen of Pen Writer and now the invoice, complete with customer signature, can be printed in the field or synchronized back to the office.

Circle #262

TELERADIO COMPANY

888/744-6560

www.teleradiocompany.com

TeleRadio's line of industrial grade radio remote control systems function in all environments from simple to complex applications. Every system is self-contained with integrated relays and features that include 12/24VDC/AC or 115VAC standard control voltages or 230VAC and 48VAC optional voltages and integrated relays operable in latched, momentary or combination modes. Handheld transmitter types offer from one to 16 functions with a rechargeable

or 9-volt battery version. Additional choices offer 2-step/2-speed buttons on transmitters with security key lock and selectable automatic shutoff and control of up to 10 different receivers from one hand held transmitter. Accessories include a standard belt clip and optional leather carry case, vehicle mounting bracket and user selected function identification faceplates.

Circle #263

CAD EASY CORPORATION

800/627-3279

www.cadeasy.com

EasySite, a site modeling and visualization application for AutoCAD Release 14 from CAD Easy Corporation®, brings site modeling to AutoCAD users with little knowledge or experience in 3D CAD or digital terrain models. It gives the user the ability to create a true site model by drawing 2D entities. For example, if the user draws a line and defines it as a road, the line turns into a full

3D road with sidewalks, side ditches, etc. Landscape professionals can create anything they would find on a site, including a wide range of landscape features (trees, plants, etc.)

Circle #264

VISTA PROFESSIONAL

OUTDOOR LIGHTING

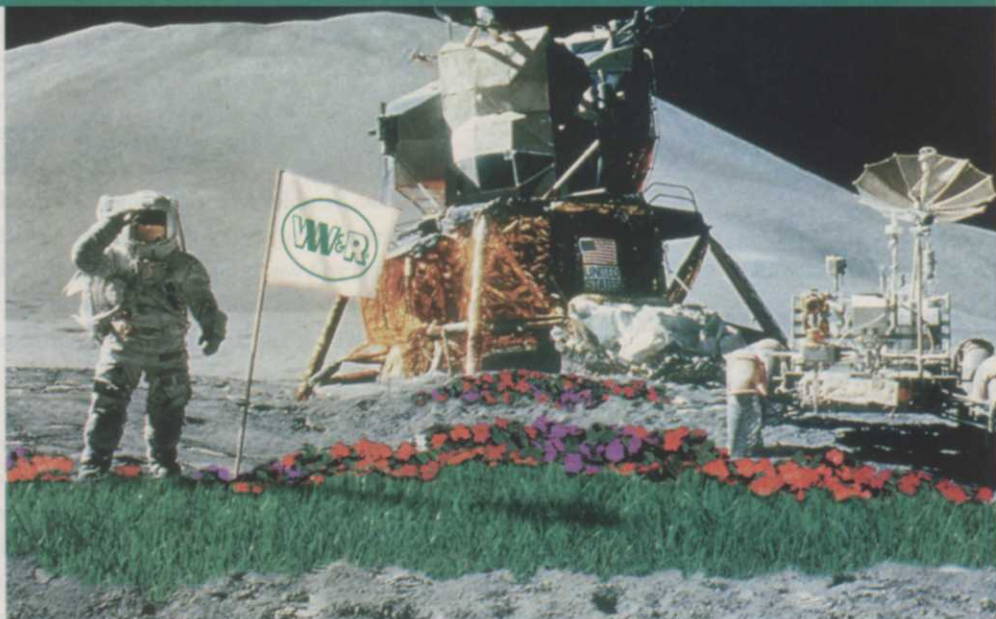
800/766-8478

Vista Professional Outdoor Lighting's Vista Night Vision CD-ROM allows viewers to see landscape projects under different light conditions. The user can add Vista Lighting fixtures models to light up landscape areas on the screen. For a lighting crew, the program prints out a blueprint of the work to be done. Also, a material list of fixture models and transformers can be printed. Users can also access a catalogue of fixture models and information on lighting applications.

Circle #265

VW&R Will Be There with The Supplies and Expertise You Need— No Matter How Difficult Your Growing Conditions!

- Growing a team of expert professionals who understand your green industry and pest control needs.
- VW&R is a full-service distributor for the green industry.
- Supplying the products that you need for weeds, diseases and insects.
- Over 65 U.S. locations.



Van Waters & Rogers Inc.

A ROYAL VOPAK COMPANY

Call Your Local
VW&R Office at...

1-800-888-4VWR

We understand that failure is not an option for our customers

Circle 126



Tree treatment goes bio

A treatment program consisting primarily of bio-stimulants was the knockout punch for verticillium wilt

of vascular disease. Samples were taken and forwarded to the plant lab at The Ohio State University, where positive results came back for verticillium wilt.

The verticillium wilt was brought about by one of the following things (or possibly a combination of all): improper installation; disease was already at the site and the stressed trees couldn't resist it; or contaminated trees were brought to the site.

Seeking a solution

Webber felt there were a few options available to solve the problem. They were:

- **Removal of the trees** — Verticillium wilt is a highly infectious, soil borne disease. Root grafting, mechanical transfer and other means can transmit it. If this option was used, another species not susceptible to the disease, such as oak, would be planted as a replacement.
- **Health treatments** — Many species of trees, including the genus *Acer*, can section off infected tissue by compartmentalization. But for this process to work, the plant should be in good vigor and be conducting all plant processes at optimum perfection prior to an infection.
- **Bark injections** — One means of controlling verticillium wilt is the Mauget fungicide microinjection system. When applied correctly, it controls the active verticillium pathogen in

continued on page 56

In September of 1997, a client of Mark Webber's Landscaping Company was concerned that 49 Norway Maples (*Acer platanoides*) lining his driveway had verticillium wilt.

When Mark Webber arrived at the property with the intention of gathering information for field analysis and laboratory testing, he saw that the long, tree-lined driveway led to a home built back into the woods. When the trees were installed four years ago, they were 3-in. caliper. Now, they were 18 to 19-ft. tall.

Many of the trees exhibited complete branch die back and cankers with a blackish brown substance oozing out and running down the stem tissue. Closer inspection showed a pattern of heavy decline in certain portions of the plantings, while other areas appeared to have lesser degrees of decline. Significant decline seemed to be in trees located nearest the roadway entrance and wooded entry of the drive.

To inspect the branches and stems, Webber made longitudinal cuts along the plant stems and discovered varying degrees of discoloration that appeared to be a form

So Good...

People are putting
chewings fescue
back into
turf mixes.

BENEFITS OF INTRIGUE CHEWINGS FESCUE

- ✓ Dark Green Blends Better With Today's Perennial Ryegrasses
- ✓ Endophyte Protected
- ✓ Low Maintenance Requirements

INTRIGUE CHEWINGS FESCUE is leading the re-birth of low maintenance grasses for multiple use areas.

Chewings Fescues have long been known for their fine leaf texture and to be among the most shade and drought tolerant of the cool season grasses. Chewings Fescues require less frequent mowing than ryegrass, tall fescue or Kentucky bluegrass, and perform well in low fertility areas such as golf course roughs.

Intrigue is highly endophytic for improved performance under stressful conditions. This advanced generation synthetic cultivar has maintained the benefits of chewings fescue while making many improvements, resulting in a top ten NTEP performance under sun, shade, and drought! And, Intrigue's Mean Turfgrass Quality Rating was not significantly different than the #1 ranked variety.

It's very dark green color allows mixing with today's generation of dark green perennial ryegrasses and bluegrasses. Intrigue's dark winter color and fast spring greenup are among the best available.

Intrigue is extremely well adapted to low maintenance conditions where fertilizer and supplemental irrigation may not be feasible.

Because of its Top Ten NTEP ranking, Intrigue Qualifies for the "Higher Ground" Performance tag!



1999 Data-1998 National Fineleaf Fescue Test

	MEAN TURFGRASS QUALITY (NO IRRIGATION) RALEIGH NC.	GENETIC COLOR	WINTER COLOR	SPRING GREENUP
Intrigue	5.8	6.7	6.3	6.4
Tiffany	5.4	6.3	5.9	6.0
Longfellow II	5.3	6.7	5.7	6.3
Shadow II	5.0	6.5	6.0	6.4
Banner III	4.9	6.6	5.9	6.1
Jamestown II	4.7	5.9	4.9	6.0
LSD Value	1.3	0.2	0.5	0.3

For complete trial data go to www.ntep.org

Perfecting Turfgrass Performance®



33390 Tangent Loop / Tangent, Oregon 97389 - 9703 / Phone (541) 926-8649 / Fax (541) 926-4435 / 800-421-1735 / www.turfmerchants.com

Circle No. 127 on Reader Inquiry Card

The treatment schedule

- ▶ **October 1997** — Vertimulching started with Webster® vertimulcher.
- ▶ **November 1997**— Mulch rings increased from 2' radius to 4.5' radius with 2-2.5" of double process mulch applied to the beds.
- ▶ **March 1998** — Dormant oil applied to trees to reduce overwintering pests.
- ▶ **March-December 1998** — System of scouting started.
- ▶ **June 1998** — Trees showing significant loss of limbs and infection selectively pruned. Pruning equipment was sterilized between each cut with 1 part bleach to 8 parts water. All pruning was then burned.
- ▶ **July-August 1998** — Trees watered due to drought conditions.
- ▶ **November 1998** — Trees vertimulched. Webber uses the ROOTSinc® product, mycorrhizaROOTS™, which provides much needed cold tolerant endomycorrhiza and provides a quality biostimulant.
- ▶ **November 1998** — Maples not responding to the treatments were removed. Swamp white oaks (*Quercus bicolor*) were installed. Fifteen trees were replaced. Transplant 1-Step™ was used to help the trees establish themselves.
- ▶ **Summer 1999** — Another round of deep-root feeding using mycorrhiza-ROOTS®. "Maples are big endo-users," Webber said, "and the Oaks use ecto- . Supplying both kinds of mycorrhiza in a quality biostimulant will lead to an increase in water and nutrient uptake."
- ▶ **Fall 1999** — Vertimulching with the Webster deep root feeder. This time, the amendment used was the newly introduced M-ROOTS™ — a combination of dryROOTS® and affordable mycorrhiza.
- ▶ **Spring 2000** — Dormant oil and deep root feeding applied, using mycorrhiza-ROOTS®. Each time the feeding extended beyond the current drip line. Root primodial, measured on every visit, showed that this pro-health approach has progressively payed off. Shoot growth has been consistent, showing another 4-5" over last year. Scouting, as recent as May, has shown a 10-13" average shooting longation.

Webber began his attack on verticillium wilt with a vertimulcher.



By using a caliper, Webber found the trees had grown greatly since they were first installed.

continued from page 54

plants' vascular systems. A concern with this approach is that the injections could cause further wounds, offering pathogens an entry point to attack the plant.

• **Leave the trees alone** — The last option would be to let nature run its course, then install resistant cultivars to replace the dead trees as time passes.

After meeting with the client to discuss these options, Webber decided to pursue a combination of the first three options with an emphasis on corrective measures to better the trees' health. Part of the reasoning behind this approach was because the trees were still relatively young.

He decided that the "below ground" landscape issues could be corrected by an aggressive program that consisted of vertical mulching, deep root feeding, IPM monitoring, selective pruning, bark injections with fungisol and corrective mulching and bed practices.

Webber's program (see sidebar) is still ongoing, but the verticillium wilt has gone away. "There has not been any wilt since the first year," Webber said. "Fungisol injection killed it off. Keeping trees and roots young and vigorous will keep the wilt at bay." **LJM**

— *Mark Webber is a certified arborist and owner of Mark Webber's Landscaping Company, Dayton, OH. In business for over four years, Webber's company has 11 employees, three of whom are ISA certified arborists.*

Receive **FREE** information on products and services advertised in this issue.

Landscape MANAGEMENT

August 2000

This card is void after October 15, 2000

I would like to receive (continue receiving)
LANDSCAPE MANAGEMENT free each month:
 Yes no

NAME (please print) _____
 TITLE _____
 FIRM _____
 ADDRESS* _____
 CITY _____ STATE _____ ZIP _____
 *Is this your home address? Yes No
 PHONE (____) _____ FAX (____) _____
 E-MAIL ADDRESS _____
 Signature: _____ Date: _____

1. My primary business at this location is: (fill in ONE only)

CONTRACTORS/SERVICE COMPANIES

- 255 Landscape Contractors (Installation & Maintenance)
- 260 Lawn Care Service Companies & Custom Chemical Applicators (ground & air)
- 285 Irrigation Contractors & Consultants
- Other Contractors/Service Companies (please specify) _____

LANDSCAPING/GROUNDS CARE FACILITIES

- 290 Sports Complexes
- 295 Parks
- 305 Schools, Colleges & Universities
- Other Grounds Care Facilities (specify) _____

SUPPLIERS AND CONSULTANTS

- 355 Extension Agents/Consultants for Horticulture
- 360 Sod Growers, Turf Seed Growers & Nurseries
- 365 Dealers, Distributors, Formulators & Brokers
- 370 Manufacturers
- Other (please specify) _____

2. Which of the following best describes your title? (fill in ONE only)

- 10 **Executive/Administrator** - President, Owner, Partner, Director, General Manager, Chairman of the Board, Purchasing Agent, Director of Physical Plant
- 20 **Manager/Supervisor** - Arborist, Architect, Landscape/Grounds Manager, Superintendent, Foreman, Supervisor
- 30 **Government Official** - Government Commissioner, Agent, Other Government Official
- 40 **Specialist** - Forester, Consultant, Agronomist, Pilot, Instructor, Researcher, Horticulturist, Certified Specialist
- 50 **Other Titled and Non-Titled Personnel** (please specify) _____

3. SERVICES PERFORMED (fill in ALL that apply)

- | | | |
|--|---|--|
| A <input type="checkbox"/> Mowing | F <input type="checkbox"/> Turf Fertilization | K <input type="checkbox"/> Paving, Deck & Patio Installation |
| B <input type="checkbox"/> Turf Insect Control | G <input type="checkbox"/> Turf Disease Control | L <input type="checkbox"/> Pond/Lake Care |
| C <input type="checkbox"/> Tree Care | H <input type="checkbox"/> Ornamental Care | M <input type="checkbox"/> Landscape Installation |
| D <input type="checkbox"/> Turf Aeration | I <input type="checkbox"/> Landscape Design | N <input type="checkbox"/> Snow Removal |
| E <input type="checkbox"/> Irrigation Services | J <input type="checkbox"/> Turf Weed Control | O <input type="checkbox"/> Other (please specify) _____ |

4a. Do you specify, purchase or influence the selection of landscape products?
 Yes No

4b. If yes, indicate which products you buy or specify: (fill in ALL that apply)

- | | | |
|--|--|--|
| 1 <input type="checkbox"/> Aerators | 8 <input type="checkbox"/> Herbicides | 15 <input type="checkbox"/> Sweepers |
| 2 <input type="checkbox"/> Blowers | 9 <input type="checkbox"/> Insecticides | 16 <input type="checkbox"/> Tractors |
| 3 <input type="checkbox"/> Chain Saws | 10 <input type="checkbox"/> Line Trimmers | 17 <input type="checkbox"/> Truck Trailers/Attachments |
| 4 <input type="checkbox"/> Chipper-Shredders | 11 <input type="checkbox"/> Mowers | 18 <input type="checkbox"/> Trucks |
| 5 <input type="checkbox"/> De-icers | 12 <input type="checkbox"/> Snow Removal Equipment | 19 <input type="checkbox"/> Turfseed |
| 6 <input type="checkbox"/> Fertilizers | 13 <input type="checkbox"/> Sprayers | 20 <input type="checkbox"/> Utility Vehicles |
| 7 <input type="checkbox"/> Fungicides | 14 <input type="checkbox"/> Spreaders | |

5. Do you have Internet access? A Yes B No

5A. If so, how often do you use it?
 A Daily B Weekly C Monthly D Occasionally

101	113	125	137	149	161	173	185	197	209	221	233	245	257	269	281	293	305
102	114	126	138	150	162	174	186	198	210	222	234	246	258	270	282	294	306
103	115	127	139	151	163	175	187	199	211	223	235	247	259	271	283	295	307
104	116	128	140	152	164	176	188	200	212	224	236	248	260	272	284	296	308
105	117	129	141	153	165	177	189	201	213	225	237	249	261	273	285	297	309
106	118	130	142	154	166	178	190	202	214	226	238	250	262	274	286	298	310
107	119	131	143	155	167	179	191	203	215	227	239	251	263	275	287	299	311
108	120	132	144	156	168	180	192	204	216	228	240	252	264	276	288	300	312
109	121	133	145	157	169	181	193	205	217	229	241	253	265	277	289	301	313
110	122	134	146	158	170	182	194	206	218	230	242	254	266	278	290	302	314
111	123	135	147	159	171	183	195	207	219	231	243	255	267	279	291	303	315
112	124	136	148	160	172	184	196	208	220	232	244	256	268	280	292	304	316

Save TIME and fax it:
4 1 3 - 6 3 7 - 4 3 4 3

AN **ADVANSTAR** PUBLICATION
 ©2000 Advanstar Communications Inc. All rights reserved.

BUSINESS REPLY MAIL
 FIRST-CLASS MAIL PERMIT NO 950 PITTSFIELD MA

POSTAGE WILL BE PAID BY ADDRESSEE

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

Landscape MANAGEMENT

ADVANSTAR COMMUNICATIONS INC
 PO BOX 5054
 PITTSFIELD MA 01203-9697



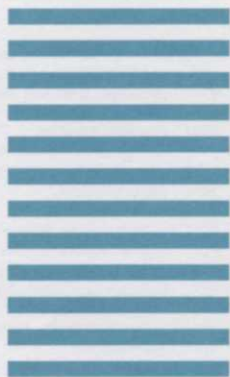


NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO 950 PITTSFIELD MA

POSTAGE WILL BE PAID BY ADDRESSEE



**Landscape
MANAGEMENT**

ADVANSTAR COMMUNICATIONS INC
PO BOX 5054
PITTSFIELD MA 01203-9697



**Landscape
MANAGEMENT**

August 2000

This card is void after October 15, 2000

I would like to receive (continue receiving)
LANDSCAPE MANAGEMENT free each month:

Yes no

1. My primary business at this location is: (fill in ONE only)

CONTRACTORS/SERVICE COMPANIES

- 255 Landscape Contractors (Installation & Maintenance)
- 260 Lawn Care Service Companies & Custom Chemical Applicators (ground & air)
- 285 Irrigation Contractors & Consultants
- Other Contractors/Service Companies (please specify) _____

LANDSCAPING/GROUNDS CARE FACILITIES

- 290 Sports Complexes
- 295 Parks
- 305 Schools, Colleges & Universities
- Other Grounds Care Facilities (specify) _____

SUPPLIERS AND CONSULTANTS

- 355 Extension Agents/Consultants for Horticulture
- 360 Sod Growers, Turf Seed Growers & Nurseries
- 365 Dealers, Distributors, Formulators & Brokers
- 370 Manufacturers
- Other (please specify) _____

2. Which of the following best describes your title? (fill in ONE only)

- 10 **Executive/Administrator** - President, Owner, Partner, Director, General Manager, Chairman of the Board, Purchasing Agent, Director of Physical Plant
- 20 **Manager/Superintendent** - Arborist, Architect, Landscape/Grounds Manager, Superintendent, Foreman, Supervisor
- 30 **Government Official** - Government Commissioner, Agent, Other Government Official
- 40 **Specialist** - Forester, Consultant, Agronomist, Pilot, Instructor, Researcher, Horticulturist, Certified Specialist
- 50 **Other Titled and Non-Titled Personnel** (please specify) _____

NAME (please print) _____
 TITLE _____
 FIRM _____
 ADDRESS* _____
 CITY _____ STATE _____ ZIP _____
 *Is this your home address? Yes No
 PHONE (____) _____ FAX (____) _____
 E-MAIL ADDRESS _____
 Signature: _____ Date: _____

3. SERVICES PERFORMED (fill in ALL that apply)

- | | | |
|---|--|---|
| A <input type="radio"/> Mowing | F <input type="radio"/> Turf Fertilization | K <input type="radio"/> Paving, Deck & Patio Installation |
| B <input type="radio"/> Turf Insect Control | G <input type="radio"/> Turf Disease Control | L <input type="radio"/> Pond/Lake Care |
| C <input type="radio"/> Tree Care | H <input type="radio"/> Ornamental Care | M <input type="radio"/> Landscape Installation |
| D <input type="radio"/> Turf Aeration | I <input type="radio"/> Landscape Design | N <input type="radio"/> Snow Removal |
| E <input type="radio"/> Irrigation Services | J <input type="radio"/> Turf Weed Control | O <input type="radio"/> Other (please specify) _____ |

4a. Do you specify, purchase or influence the selection of landscape products?

Yes No

4b. If yes, indicate which products you buy or specify:

- (fill in ALL that apply)
- | | | |
|---|---|---|
| 1 <input type="radio"/> Aerators | 8 <input type="radio"/> Herbicides | 15 <input type="radio"/> Sweepers |
| 2 <input type="radio"/> Blowers | 9 <input type="radio"/> Insecticides | 16 <input type="radio"/> Tractors |
| 3 <input type="radio"/> Chain Saws | 10 <input type="radio"/> Line Trimmers | 17 <input type="radio"/> Truck Trailers/Attachments |
| 4 <input type="radio"/> Chipper-Shredders | 11 <input type="radio"/> Mowers | 18 <input type="radio"/> Trucks |
| 5 <input type="radio"/> De-icers | 12 <input type="radio"/> Snow Removal Equipment | 19 <input type="radio"/> Turfseed |
| 6 <input type="radio"/> Fertilizers | 13 <input type="radio"/> Sprayers | 20 <input type="radio"/> Utility Vehicles |
| 7 <input type="radio"/> Fungicides | 14 <input type="radio"/> Spreaders | |

5. Do you have Internet access? A Yes B No

5A. If so, how often do you use it?

A Daily B Weekly C Monthly D Occasionally

101	113	125	137	149	161	173	185	197	209	221	233	245	257	269	281	293	305
102	114	126	138	150	162	174	186	198	210	222	234	246	258	270	282	294	306
103	115	127	139	151	163	175	187	199	211	223	235	247	259	271	283	295	307
104	116	128	140	152	164	176	188	200	212	224	236	248	260	272	284	296	308
105	117	129	141	153	165	177	189	201	213	225	237	249	261	273	285	297	309
106	118	130	142	154	166	178	190	202	214	226	238	250	262	274	286	298	310
107	119	131	143	155	167	179	191	203	215	227	239	251	263	275	287	299	311
108	120	132	144	156	168	180	192	204	216	228	240	252	264	276	288	300	312
109	121	133	145	157	169	181	193	205	217	229	241	253	265	277	289	301	313
110	122	134	146	158	170	182	194	206	218	230	242	254	266	278	290	302	314
111	123	135	147	159	171	183	195	207	219	231	243	255	267	279	291	303	315
112	124	136	148	160	172	184	196	208	220	232	244	256	268	280	292	304	316

Save TIME and fax it:
413-637-4343

ask the expert

BY BALAKRISHNA RAO, PH.D.

Magnolia scale

We have a problem with magnolia scale. Our local nursery person told our client to spray with Cygon. Instead, we applied oil once in early summer and again in late summer. We found a few dead scales but a number of scales are still juicy and fleshy. What should we do?

— MISSOURI

Magnolia scale is a serious pest on magnolia in many locations in the United States. The label that I have doesn't recommend using Cygon spray as you may experience some phytotoxicity.

The oil treatment you provided may not be effective for a couple reasons. We don't recommend oil treatment in summer months to manage the large mature scales. Also, the rate you have used (1%) is too low. I prefer 2% oil applied at different timings.

The 2% oil treatment should be targeted towards young second instar crawlers (nymphs). These young crawlers should be active on leaves around late August through September. By November through December, they will move from leaves to twigs. Therefore, an application of 2% oil during late September/October, and again during February/March, will help manage them. Oil doesn't have residual, so good coverage is important. In addition, if the problem is severe, you can use insecticides such as Dursban (the one you mentioned) during late August through early September (at least for the next season).

Cytospora canker

On a large estate property, several spruce trees' lower branches show

extensive needle drop and some of the needles have purplish discoloration. The branches' inside canopy has some whitish resin. The trees are 35 ft. tall and growing in sandy soil. No nylon thread at the base of the stems was found; however, on many trees there are no root flares. What might be the cause?

— MICHIGAN

Based on the symptom pattern, the problem is most likely related to Cytospora canker. This fungus establishes on stressed and weakened trees, particularly as they age.

You mentioned that the trees are growing in a sandy soil. This may contribute to moisture deficiency at different times, particularly during drought conditions. Also, evergreens can become injured during winter due to insufficient moisture for uptake. Even though moisture may be in soil, it may be frozen during winter.

However, on sunny and windy days, exposed plant parts may lose a lot of water. Since the moisture is frozen, it will cause an imbalance in water uptake, resulting in winter drying and subsequent injury. Some of the injury may not be evident the following spring. This year I have seen a number of evergreens showing the adverse effect of drought. Therefore, consider exposure to extremes in moisture and/or temperature contributing to the decline.

There is no fungicidal recommendation for cytospora canker disease management. Reduce stress and provide good growing conditions and water as needed during dry periods. Improve plant health through proper mulching, watering and fertilizing as needed.

Regarding the lack of root flare, check out the possibility of fill around trunks that

would contribute to stress. Some trees may not demonstrate a pronounced root flare, particularly when they are younger.

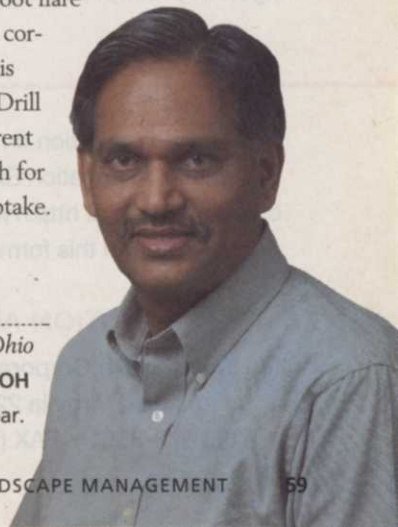
Dutch elm disease

One of our representatives sold Dutch elm disease management using Arbotect. It has been sold as treating once every two years. When I reviewed the label, it says one-year preventive or three-year therapeutic rates. What would be the best approach?

— ILLINOIS

Arbotect can be used preventively or therapeutically depending upon the disease activity and need basis. The Dutch elm disease should be managed preventively where feasible. An alternative option is to treat therapeutically. In this situation, reports indicate that success depends upon the severity of the disease in the tree. If the tree has less than 5% crown infection (flagging symptoms), there's a chance of recovery. If there is more than 5% crown infection and dieback, the tree may not respond well.

Make sure the injections are made on root flare as close to the ground as possible. It may be necessary to remove soil from root flare and then inject. Also, make sure that the injection "Ts" are not placed in the "valleys" of root flare and that the correct drill bit is being used. Drill into the current year's growth for optimum uptake.



Manager of Research and Technical Development for the Davey Tree Expert Co., Kent, Ohio

SEND YOUR QUESTIONS TO: "Ask the Expert" Landscape Management; 7500 Old Oak Blvd.; Cleveland, OH 44130, or email: sgibson@advanstar.com. Please allow two to three months for an answer to appear.

21st Annual International Irrigation Show

November 12 - 14, 2000

Phoenix Civic Plaza
Phoenix, Arizona, USA

Why Attend the International Irrigation Show?

1. World's Largest Irrigation Exposition
2. Education Courses
3. Certification Exams
4. Business Seminars
5. Committee and Common Interest Group Meetings
6. Back-to-Back Conferences - ASAE Technical Conference to follow the International Irrigation Show
7. Networking Opportunities
8. Annual Meeting and Keynote Breakfast
9. Golf Tournament
10. Guest Tours

WINGS
OF CHANGE



THE IRRIGATION ASSOCIATION

Professional development training is no longer a luxury. Whether you're a contractor, designer, installer, counterman, customer service representative, technician or administrator, the International Irrigation Show has something to benefit you. The IA offers 24 top notch agriculture, landscape and professional educational courses, six in Spanish; four esteemed certification programs; powerful business seminars; the keynote breakfast and annual meeting; a golf tournament; tours of local sites for guests and attendees; and unlimited networking opportunities to benefit you. The Irrigation Association and the American Society of Agricultural Engineers (ASAE) will join forces to present the IA Exposition enhanced by ASAE's three-day Symposium - featuring technical sessions and one-on-one direct-interaction sessions. The dimension of these events surpasses in size and vision any irrigation event ever presented. Learn about new products, services and technologies available to you!

PLEASE CLIP HERE BEFORE FAXING TO EXPEDITE TRANSMISSION

For more information on our 21st Annual International Irrigation Show, please visit our home page at <http://www.irrigation.org> or return this form to the IA.

NAME _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

COUNTRY _____ E-mail _____

PHONE _____ FAX _____

THE IRRIGATION ASSOCIATION

8260 Willow Oaks Corporate Drive, Suite 120
Fairfax, Virginia 22031 USA
(703) 573-3551 • FAX (703) 573-1913

Circle No. 128 on Reader Inquiry Card