

## "Hydroseeding is more successful in New England than in the mid-Atlantic."

— Childs

Gaussoin, turfgrass specialist at the University of Nebraska, Lincoln, says he has seen no difference.

"We tend to recommend newspaper fiber. It is cheap, readily available and decomposes more quickly than the wood-based product," Gaussoin says. Like many others, he has heard the concerns about wood chip-based materials tying up nitrogen.

"The theory is that the excess wood messes up the carbon-to-nitrogen ratio," he explains. However, he downplays the possibility. "Bark and wood-based carriers are not a problem. I personally don't think it is a concern. No research that I've seen points one way or the other."

At Twin Rivers Lawncare & Landscaping, Lexington, SC, owner Harold A. Wiggins, Jr. uses three or four different brands of wood-fiber carrier, depending on the job requirements. Their work is split about 50-50 between commercial and residential all around the state. However, most are upscale homes and developments, not highway work.

"We use some materials with dye built in and some that you can add on your own," Wiggins says.

Because his two Turbo Turf

hydroseeding systems do not have big internal agitators, he feels most comfortable with bagged material that comes loose. "That way you don't have to break it up," he notes.

"I like to use a combination of wood and paper," Childs says. "The wood fiber is good for erosion control, but too much wood can cause a problem. I like to see a 40-60 wood to paper mix." He uses a turf fiber mulch that is combined with a park and athletic seed mix, including bluegrass, fescue and rye. "It's designed so the bluegrass becomes the predominant variety."

"We recommend Jet Spray for all seed types," says Fesler. The material is a wood/cellulose/paper mix that meets all specifications for most cities and states. Fesler's company used to recommend mulch pellets. "They are compressed way too tight," he adds. "It's a good material designed for dry spread, not for hydroseeding."

The spray is more of a flake. "It has a good dye in it and you can get it mixed with starter fertilizer," Fesler adds.

Gaussoin says the "stickers" may be the more important concern. "It boils down to the emulsifiers used to get the uniform distribution required for the seed," he says.



Rob Childs moved to New Hampshire to start Outside Unlimited, a \$3- to \$4-million business offering hydroseeding for new residential properties and shopping centers.

### Doesn't need straw

At Outside Unlimited, Childs finds that his crew rarely has to use straw mulch. This is different from his experiences farther south. For 25 years, Childs worked in a family business in Annapolis, MD. About four years ago, he moved to New Hampshire to start Outside Unlimited, which now grosses \$3 to \$4 million a year.

"Hydroseeding is more successful in New England than in the mid-Atlantic," he says. "We rarely have to use straw mulch unless we're on a steep slope where erosion is a problem. And, germination rates are much higher."

He credits that to the cooler New England nights. "Also, we can use bluegrass here, not improved fescues. We get a better response with the bluegrass," he says. The firm uses an 1,100-gallon hydroseeding unit from Bowie Industries, Bowie, TX.

Goode says that hydroseed-

ing will be simpler in almost every case. The only time he recommends using straw is for jobs done at the end of the year. "Straw is a better insulator," he notes. "I'd hydroseed and then place some straw over it."

It was a run-in with straw that got Goode into hydroseeding in the first place. He had just finished seeding a new lawn and covering it with straw when a storm came and sent the straw onto nearby properties throughout the neighborhood. It took five men one day to rake the neighborhood; he had to put a mesh net down over the lawn and deal with the neighbors' complaints. He picked up the cost of the cleanup.

"I just got tired of messing with straw," he concludes. "For the amount of money I wasted on that job alone, I could have made a nice down payment on a hydroseeder."

Gaussoin maintains that hy-

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"We tend to recommend newspaper fiber. It is cheap, readily available and decomposes more quickly than the wood-based product."

— Gaussoin





HydroTurf's hydroseeder has a new inductor system for agitation, offering an alternative to mechanical agitation. Various models on the market accommodate large and small seeding jobs.

*continued from page 61*  
dromulching can also be the difference between success and failure on any sloped or nonirrigated field. "In addition to the seed being wet, that extra bit of moisture can be the difference between success and failure," Gaussoin says.

He adds that the mulch crust helps stabilize sloped fields, preventing erosion where a mesh is not used.

### Sizing units

If you are considering a hydroseeder, size the equipment to the workload. A landscaper who is doing one home a day or a couple a week probably can get by with a 300-gal. unit.

"However, I've seen many come back and say they wish they'd gotten a 500-gal. unit," Fesler says.

If you do a lot of restoration work, big lawns, or the equivalent of 5,000 to 10,000 sq. ft. a day, look at 500 gallons or larger. A 750 will probably be suited to such an operation, Fesler says.

Goode's rule of thumb is that anyone doing 10 acres or more should go with a 900-gal. unit. A unit with a 900- to 1,000-gal. capacity will do about 10,000 to 12,000 sq. ft. per tankful.

He figures the cost of hydroseeding — including the materials, cost of labor, gasoline and equipment depreciation — in the area of 1.5 to two cents per sq. ft.

Wiggins is happy with his 500-gal. units. "Most of our jobs are two or three acres," he explains. "We keep a 500-gal. unit busy. If we need to run two

units, we call in another."

Much of the work Wiggins does is between fancy homes and around tight spots. He is proud of the custom-designed and custom-built trailers made in his own shop.

"The trailers were custom made to fit the hydroseeders so the unit does not hang out over the side. Those trailers are really versatile and mobile when we have to run them between buildings," he notes.

A typical seeding mix is centipede mixed with carpetgrass. "The centipede takes a long time to germinate. The carpetgrass provides quick cover and the centipede takes over," Wiggins explains.

They also are one of the few companies to hydroseed zoysia-grass. They use Zenith zoysia-grass and have been successful

pumping it onto landscapes.

Gaussoin says the size of the seed used (such as fescue versus bluegrass) is not a factor in choosing a carrier. "As long as the carrier lends itself to even distribution, it is not an issue," he says.

Battles over the benefits of jet or mechanical agitation continue to rage. Manufacturers of each have a litany of arguments why their process is better than others'.

Goode opted for jet agitation over paddles because he preferred a poly tank over steel and wanted to keep the mechanics and maintenance as simple as possible.

"Both systems work," Goode says. "It depends more on the individual manufacturer and the model of the machine."

"The price is not that much more than standard seeding," Gaussoin says, "but the better chance of success alone justifies the extra cost of hydroseeding."

— The author is a contributing editor of *Landscape Management* and managing editor of *TurfGrass Trends*.

"You've got 500 gallons of solution in your tank and a 20-minute drive between jobs. In 90-degree weather, that's all it takes for the hose to get plugged."

— Fesler



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## A sprinkling of great products

BY CURT HARLER / CONTRIBUTING EDITOR

While there is great care to avoid system failures when installing sprinkler heads and emitters, Norm Mueller of I.S.A., Inc. finds that not cleaning out irrigation lines is the biggest problem. "It's more an issue with PVC than poly," he says.

Mueller, of Phoenix, AZ, is the Southwest representative for Bowsmith. Bowsmith's emitters are widely used in government and commercial applications. Much of the water in the Southwest is either reclaimed or loaded with calcium. Either the system has to be filtered or it must use emitters which can handle "thick" water.

"We see about 70% of our commercial applications using threaded emitters with PVC pipe," he says. Most of the residential applications are done with smaller emitters on poly.

It's not unusual to see some leakage when a system is first turned up. Mueller says it's not usually a continual problem in systems with barbed emitters. "Pressure from the line will push the barb up against the inside of the tubing wall," he says, which seals the leak. With

threaded systems, the seal is more positive and there should be less leakage.

To minimize damage or vandalism, Mueller likes to see as little of the emitter poking up as possible. "Run the spaghetti right up to the base of the plant and only have two or three inches sticking up," he advises.

Whether the application calls for emitters or sprinkler heads, there are many good choices available from various vendors.

### **BOWSMITH** **800/BOWSMITH**

[mail@bowsmith.com](mailto:mail@bowsmith.com)

The Fan-Jet Microsprinkler from Bowsmith, Exeter, CA, provides high spray trajectories, consistent and larger wetting patterns and low cost in a water-saving, low-flow device. Heads are available in 18 wetting patterns. Color-coded nozzles in seven sizes offer wide customization possibilities. The company also makes nonstop drip emitters with continuous flushing action to get rid of slime and small particles. Emitters are available in 0.6, 1.0 and 2.0 gallon/hour models.

Circle no. 258



◀ Bowsmith's microsprinkler

### Irrigation tips

- ▶ Look for water-saving heads
- ▶ Keep sprinkler lines clean
- ▶ Reset controllers monthly during summer
- ▶ Reset controllers quarterly other times



#### FLOPPY SPRINKLER

27/13752-4252

[www.floppysprinkler.com](http://www.floppysprinkler.com)

The Floppy Sprinkler, from Floppy Sprinkler Ltd., Nelspruit, South Africa, has a plastic nipple on which a flexible silicone tube is mounted. When water passes through the tube, it snakes to and fro, rotating 360 degrees, forming even droplets. Circle no. 259

#### HUNTER INDUSTRIES

800/733-2823

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Simplify installation of poly pipe irrigation systems with the new male x barb fitting for the Hunter PGV Valve. It slips directly onto poly pipe for faster installation, eliminating the need for additional fittings. Depending on the model, PGV flow rates can be varied from 1 gpm to 120 gpm. All units are pressure-rated to 150 psi, with high-grade construction. Circle no. 260



#### K-RAIN MANUFACTURING

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The Dial-A-Nozzle from K-Rain Manufacturing Corp., Riviera Beach, FL, has four 26-degree standard and four 12-degree low-angle nozzles on the same 5-in. pop-up riser. Flow rates range from 1 gpm to 4 gpm on low-angles, and 1.5 gpm to 6 gpm on standard nozzles. Units have 3/4-in. threaded NPT inlets, arc adjustment from 35-360 degrees, and are pressure rated from 7 to 60 psi. Circle no. 261

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The 8600 EZ Command Remote Programmer from L.R. Nelson Corp. is a full-function programming and operation control unit



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#### ORBIT IRRIGATION

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North Salt Lake, UT-based Orbit's new Control Center handles 6, 9 or 12 stations, with water budgeting, system diagnostics and programmable rain delay. In a power outage, the non-volatile program memory saves the schedule, which can range from 1 to 28 days. Four-cycle start times for each program add versatility. Circle no. 263

#### RAIN BIRD

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The latest addition to the Rain Bird Xerigation Control Zones is the XCZ-100 COM. This 1-in. control zone for commercial applications has a PEB valve, RBY-C in-line



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#### RAINDRIP

800/544-3747

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Raindrip, Simi Valley, CA, can convert existing 1/2-in. underground sprinkler systems to low-flow. Screw off the sprinkler head, screw on a swivel elbow to a 1/2-in. sprinkler riser and attach a 1/2-in. poly hose for slow, even watering. Raindrip says the conversion reduces weed growth, evaporation and saves up to 70% on water. Circle no. 265

#### SIGNATURE CONTROL SYSTEMS

949/580-3640

[www.signaturecontrolsyste.ms.com](http://www.signaturecontrolsyste.ms.com)

The 286/287 commercial rotor from Signature Control Systems, Irvine, CA, offers better performance and is less expensive than the old Thompson 186/187 line. Its plastic rotor provides more water distribution at a higher pop-up to clear taller grasses. Its design eliminates blow-by and has an adjustable arc nozzle — one of five. Circle no. 266

#### TRANSITIONAL SYSTEMS MFG.

530/751-2610

[www.transitionalsystems.com](http://www.transitionalsystems.com)

When two or more controllers are connected to a master valve or pump circuit, adding a pump relay to each controller solves some problems, but the Isolator from Transitional Systems, Yuba City, CA, protects by locking out all controllers except one. It handles feedback and phasing problems that arise when controllers are on different "legs" of a 240-volt service. Circle no. 267



# ask the expert

BY BALAKRISHNA RAO

## Spider mites

**Some Norway spruces on our clients' properties have dull, green needles. Some needles have yellowish flecking, discoloration and some browning. In a few cases, we found a small number of spider mites, which we treated with miticides. The results were marginal. Is there a different problem here?**

— MI

The yellowish flecking and browning appear to be related to spider mite feeding activity. The treatment you provided should have helped manage the problem. However, spider mite management success depends on several factors, such as choosing the right miticide and applying it at the proper rate and proper timing with thorough coverage.

Another important aspect of mite problem management is rotating miticides. If you use the same miticide over and over again, the mites may become immune to it. You also may be killing off the beneficial predatory mites. This makes the problem worse.

To avoid creating a population of resistant mites, use different miticides at different application periods. Even with rotation, there may still be a problem with resistance. Therefore, review your entire pest management program. Where feasible, reduce the use of multiple pesticides on a given host plant. Consider using a product that is environmentally friendly and ecologically sound with multiple target pest management capabilities.

Also, check for the eriophyid mite, which has four legs and a slightly longer body (unlike the spider mites which have

eight legs and round or oval bodies). Eriophyid mite damage can go unnoticed, and often is mistaken for other biotic or abiotic stresses. Products such as Avid or horticultural oil should help manage the eriophyid mite. Again, remember to rotate the treatments.

Needles damaged by mites won't recover. They will gradually defoliate. However, if the buds aren't dead, the plant may produce new needles. Water, mulch and fertilize the spruces to improve plant health.

## Winter weed woes

**We take care of several lawns that have winter annual weed problems. We're thinking of using herbicides in the fall to manage these weeds next spring. Will this herbicide application control weeds in spring? When would be the ideal time to apply herbicides? If we offer this in the fall, do we need to reapply in spring?**

— MI

Winter annuals are weeds that germinate as temperatures begin to cool, usually in early September in many places in the United States. Little germination will occur during December, January, and February when temperatures are close to or below freezing. Winter annuals appear again during March and April as the temperatures warm up. Winter annuals flower in spring and die when hot, dry weather prevails. Common winter annuals include: speedwell, common chickweed, henbit, bittercress. Often, perennial weeds such as dandelion and buckhorn plantain also

germinate in fall or early spring.

Preemergent herbicides such as Benefin, Benefin + Trifluralin, Prodiamine, Pendimethalin and Oxyzin, Bensulide, Oxadiazon, Dithiopyr and DCPA applied in fall will help manage winter annuals. Fall application can also manage early season control of annual bluegrass in turf as well as certain broadleaf weeds from seeds if the proper herbicide is applied before the weed seed germinates. Applications of preemergent in late August or early summer should control weeds during winter; applications in September through November help control weeds in spring and early summer. Determine more specific dates for germination and active growth in your immediate area to maximize your control.

In addition to a fall application, a spring application of preemergent herbicides may be necessary, depending upon the weed pressure in a specific lawn. If broadleaf weeds are a problem, consider using Isoxaben (Gallery), which can manage winter annual weeds as well as perennial weeds such as dandelion, buckhorn plantain and white clover. Another option is to apply a postemergent such as 2,4-D to take care of existing weeds, and use Gallery for residual preemergent control.

*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](mailto:sgibson@advanstar.com). Please allow two to three months for an answer to appear.





# Royal treatment

**When it came to defending majestic royal palms from royal palm bugs, the right insecticide saved time and trouble**

**W**hen royal palm trees started looking like the victims of bad haircuts a few years ago, Rick Wilson sought a solution.

As president of Summer Rain Fertilization Company, Margate, FL, which provides landscape care for commercial and residential customers in three South Florida counties, Wilson knew his customers wouldn't stand for unsightly royal palms. The trees line the streets and boulevards of many affluent communities, and, at 50 to 100 ft. tall, provide great visual appeal.

"We started noticing royal palm trees with brown, frizzled fronds about three years ago," says Wilson. "Though the symptoms looked similar to a manganese deficiency, we wanted to make sure before treating. With the help of our local extension service, we learned that the problem was caused by the royal palm bug, a tiny insect that sucks juices from the new fronds as they unfurl, giving the palm tree a withered, shabby look."

## An harrowing task

The next dilemma became how to treat the pest. Because the insect lives in the crown of the palm, Wilson had to rent high lifts to carry workers with spray equipment to the tops of the trees. They sprayed the crown, returned to the ground, moved the equipment and repeated the process on the next tree.

"Not only did this procedure take a tremendous amount of time, it also turned into a safety issue," Wilson says. "In certain cases, I had to block off a lane of Interstate 75 so we could move the device from tree to tree, treating each one. I was never comfortable with my guys dangling 60 feet over a busy highway."

In addition, Wilson knew the insecticide he used would only provide control for 90 to 120 days, at which point he would have to retreat. The royal palm bug starts causing problems in late spring but can reinfest trees at any point during the year.

"I can tell when it's May by looking at the royal palm trees," says Wilson. "Discoloration of the center frond is the first sign of royal palm bug activity."

## An easier way

When Merit® insecticide by Bayer Corporation received registration for control of royal palm bug, Wilson tried it immediately. He had successfully used the product for control of scales, aphids and other pests. He soon realized the advantages it had in controlling royal palm bugs.

"First, it can be applied to the root zone



A Summer Rain employee applies insecticide to the root base of a royal palm tree.

as a soil drench so we don't have to rent high lifts," Wilson says, referring to the product's systemic properties which allow it to be taken up by the root and translocated through the tree to the crown. "Second, it provides excellent, long-term control of the royal palm bug, which means we don't have to make so many repeat treatments, and we don't have the safety issues or the hassles of the extra equipment."

Summer Rain crews apply Merit at 0.5 to 1.0 oz. per five gallons of water per tree where the insects live. Wilson's team makes

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preventive treatments any time between October and February so the material has time to work its way through the tree by spring, when the insect is most active.

### Total care program

Based on his experiences with royal palm bug and other tree problems, Wilson stresses a total tree care program. "We don't take contracts unless the whole package is included," he says. "If a tree isn't fed properly, it will be much more susceptible to insects and stress. We advocate a minimum of four applications a year with proper palm fertilizer and micronutrients."

As his business grows, Wilson accepts new properties with existing problems, such as royal palm bug infestations. Recently, he took on an exclusive housing development where the royal palms were visibly harmed. His crews applied Merit and initiated fertility treatments. Wilson told the client to have patience because a complete turnaround could take up to a year. But it didn't take quite that long.

"We did a drive-through about 60 days later and could already see improvement," he noted. "The outside fronds still show injury, but the center frond is healthier and greener. The bad crewcut is no longer there, and my client has hope!"

## A royal pain

Royal palm bugs were menacing majestic royal palm trees on affluent South Florida properties managed by Rick Wilson and his company, Summer Rain.

### His dilemma:

- ▶ Royal palms range from 55 to 100 feet tall
- ▶ Royal palm bugs feed on the crown at the top of the trees
- ▶ High lifts were needed so crew members could spray trees individually
- ▶ Retreatment was necessary within 90 to 120 days

### His solution:

- ▶ Merit insecticide to control royal palm bugs up to one year because it requires no special equipment, and can be applied as a soil drench and can be used as a preventive fall treatment before bugs strike in spring

### Key client:

- ▶ City of Weston, developed on muckland soil
- ▶ Encompasses 575 acres and 800 royal palm trees
- ▶ Royal palm bugs infested trees, causing brown, frizzled fronds
- ▶ Wilson turned around royal palm bug problem using treatments and proper fertilization



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- 12 ☐ 10 Executive/Administrator - President, Owner, Partner, Director, General Manager, Chairman of the Board, Purchasing Agent, Director of Physical Plant  
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14 ☐ 30 Government Official - Government Commissioner, Agent, Other Government Official  
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16 ☐ 50 Other Titled and Non-Titled Personnel (please specify) \_\_\_\_\_

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- 17 ☐ A Mowing 22 ☐ F Turf Fertilization 27 ☐ K Paving, Deck & Patio Installation  
18 ☐ B Turf Insect Control 23 ☐ G Turf Disease Control 28 ☐ L Pond/Lake Care  
19 ☐ C Tree Care 24 ☐ H Ornamental Care 29 ☐ M Landscape Installation  
20 ☐ D Turf Aeration 25 ☐ I Landscape Design 30 ☐ N Snow Removal  
21 ☐ E Irrigation Services 26 ☐ J Turf Weed Control 31 ☐ O Other (please specify) \_\_\_\_\_

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

58 ☐ Yes 59 ☐ No

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

- 32 ☐ 1 Aerators 39 ☐ 8 Herbicides 46 ☐ 15 Sweepers  
33 ☐ 2 Blowers 40 ☐ 9 Insecticides 47 ☐ 16 Tractors  
34 ☐ 3 Chain Saws 41 ☐ 10 Line Trimmers 48 ☐ 17 Truck Trailers/Attachments  
35 ☐ 4 Chipper-Shredders 42 ☐ 11 Mowers 49 ☐ 18 Trucks  
36 ☐ 5 De-icers 43 ☐ 12 Snow Removal Equipment 50 ☐ 19 Turfseed  
37 ☐ 6 Fertilizers 44 ☐ 13 Sprayers 51 ☐ 20 Utility Vehicles  
38 ☐ 7 Fungicides 45 ☐ 14 Spreaders

## 5. Do you have Internet access? 52 ☐ A Yes 53 ☐ B No

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

54 ☐ A Daily 55 ☐ B Weekly 56 ☐ C Monthly 57 ☐ 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  
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03 ☐ 260 Lawn Care Service Companies & Custom Chemical Applicators (ground & air)  
04 ☐ 285 Irrigation Contractors & Consultants  
☐ Other Contractors/Service Companies (please specify) \_\_\_\_\_

### LANDSCAPING/GROUNDS CARE FACILITIES

- 05 ☐ 290 Sports Complexes  
06 ☐ 295 Parks  
07 ☐ 305 Schools, Colleges & Universities  
☐ Other Grounds Care Facilities (specify) \_\_\_\_\_

### SUPPLIERS AND CONSULTANTS

- 08 ☐ 355 Extension Agents/Consultants for Horticulture  
09 ☐ 360 Sod Growers, Turf Seed Growers & Nurseries  
10 ☐ 365 Dealers, Distributors, Formulators & Brokers  
11 ☐ 370 Manufacturers  
☐ Other (please specify) \_\_\_\_\_

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

- 12 ☐ 10 **Executive/Administrator** - President, Owner, Partner, Director, General Manager, Chairman of the Board, Purchasing Agent, Director of Physical Plant  
13 ☐ 20 **Manager/Superintendent** - Arborist, Architect, Landscape/Grounds Manager, Superintendent, Foreman, Supervisor  
14 ☐ 30 **Government Official** - Government Commissioner, Agent, Other Government Official  
15 ☐ 40 **Specialist** - Forester, Consultant, Agronomist, Pilot, Instructor, Researcher, Horticulturist, Certified Specialist  
16 ☐ 50 **Other Titled and Non-Titled Personnel** (please specify) \_\_\_\_\_

3. SERVICES PERFORMED (fill in ALL that apply)

- 17 ☐ A Mowing 22 ☐ F Turf Fertilization 27 ☐ K Paving, Deck & Patio Installation  
18 ☐ B Turf Insect Control 23 ☐ G Turf Disease Control 28 ☐ L Pond/Lake Care  
19 ☐ C Tree Care 24 ☐ H Ornamental Care 29 ☐ M Landscape Installation  
20 ☐ D Turf Aeration 25 ☐ I Landscape Design 30 ☐ N Snow Removal  
21 ☐ E Irrigation Services 26 ☐ J Turf Weed Control 31 ☐ O Other (please specify) \_\_\_\_\_

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

58 ☐ Yes 59 ☐ No

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

- 32 ☐ 1 Aerators 39 ☐ 8 Herbicides 46 ☐ 15 Sweepers  
33 ☐ 2 Blowers 40 ☐ 9 Insecticides 47 ☐ 16 Tractors  
34 ☐ 3 Chain Saws 41 ☐ 10 Line Trimmers 48 ☐ 17 Truck Trailers/Attachments  
35 ☐ 4 Chipper-Shredders 42 ☐ 11 Mowers 49 ☐ 18 Trucks  
36 ☐ 5 De-icers 43 ☐ 12 Snow Removal Equipment 50 ☐ 19 Turfseed  
37 ☐ 6 Fertilizers 44 ☐ 13 Sprayers 51 ☐ 20 Utility Vehicles  
38 ☐ 7 Fungicides 45 ☐ 14 Spreaders

5. Do you have Internet access? 52 ☐ A Yes 53 ☐ B No

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

54 ☐ A Daily 55 ☐ B Weekly 56 ☐ C Monthly 57 ☐ 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:  
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