Two years after the Salt Creek flood, Butler's fairways look terrific!

Oscar Miles, CGCS
Butler National GC
Oak Brook, Illinois

Seventh fairway during the Western Open, 1989.

Penneagle and Oscar Miles make Butler National GC 'picture perfect' again!

"Before the 1987 Western Open, Butler National was primped and trimmed to perfection for its date with the pros and television cameras" says Oscar Miles, "then 9½ inches of rain drenched the course. The resulting flood deposited tons of silt that dried and destroyed the grass beneath.

"After the cleanup that required thousands of manhours, high pressure hoses, squeegees and helicopters for drying; the process of reseeding began.

"Based on Penneagle's excellent performance before the flood, I chose to reseed with this bentgrass. After two years, the new stand appears better than before. With our time-proven maintenance program, we mow our fairways at 7/16" and have a good working layer of Penneagle with virtually no thatch.

"In preparing for the 1989 Western Open, we compared the course to a Van Gogh painting, and the crew's efforts were to enhance the work of art by meticulous touchup on the frame. The result was a 'picture perfect' course that caused the players and announcers to rave.

"Now if I could only get the announcers and writers to call 'Penneagle' by name ... you can't plant just any bentgrass and expect it to perform like Penneagle."

Seventh fairway before the rain delayed 1987 Western Open.

Oregon Certified PVP 7900008
Penneagle is one of the 'Penn Pals'

After two years, Penneagle produces a good working layer with no thatch buildup.
OCTOBER 1989, VOLUME 30, NUMBER 10

LANDSCAPE MANAGEMENT

On the cover: Where to search for people to fill the boots? by Larry Kassell

COVER STORY: WHITHER COMEST THE PEOPLE? by Jerry Roche. Look at work force projections for the 1990s. What do you see? A lack of line-level employees, the green industry’s bread-and-butter.

OPEN HEAVENS CAN’T CLOSE OPEN COURSE by Ann Reilly. Superintendent Joe Hahn faced the challenge of his life when rain pelted his course for 12 days before the U.S. Open Championship.

THE HARVEST IS IN by Terry McIver. Seed producers’ hopes for a harvest of plenty were altered by weather, lower production and strong demand.

CHEMICAL POCKET GUIDE
Look for a special, pocket-sized supplement in this issue for those of you who are planning on a complete chemical program for your lawn areas next spring. Compiled from our popular “Guide to Landscape Management” series, this is a keeper for months to come.

LANDSCAPE MANAGEMENT

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LANDSCAPE MANAGEMENT (ISSN 0894-1254) is published monthly by Edgell Communications, Inc. Corporate and Editorial offices: 7500 Old Oak Boulevard, Cleveland, Ohio 44130. Advertising Offices: 7500 Old Oak Boulevard, Cleveland, Ohio 44130, 111 East Wacker Drive, Chicago, Illinois 60601 and 3475 Lenox Road, N.E., Suite 665, Atlanta, Georgia 30326. Accounting, Advertising Production and Circulation offices: 1 East First Street, Duluth, Minnesota 55802. Subscription rates: $25 per year in the United States: $50 per year in Canada. All other countries: $100 per year. Single copies (pre-paid only): $2.50 in the U.S.; $5.00 in Canada; elsewhere $10; add $3.50 per order for shipping and handling. Back issues, if available, $10; add $3.50 per order for shipping and handling (pre-paid orders only). Office of Publication: Edgell Communications, Inc., 1 East First Street, Duluth, Minnesota 55802. Second class postage paid at Duluth, Minnesota 55806 and additional mailing offices. Copyright © 1988 by Edgell Communications, Inc. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical including photocopy, recording, or any information storage and retrieval system, without permission in writing from the publisher.

POSTMASTER: Send address changes to LANDSCAPE MANAGEMENT, P.O. Box 6198, Duluth, Minnesota

OCTOBER 1989/LANDSCAPE MANAGEMENT 1
How to survive in the desert on only 5 reels a day

The desert is a pretty forbidding place for golf. But thanks to irrigation and the work of knowledgeable superintendents like Robert Stuczynski the desert area around Palm Springs, California, has become one of the country’s golf meccas.

Stuczynski supervises maintenance at the 36-hole Ironwood Country Club in Palm Desert, California. And, for the last seven months, he's been using a 5-reel John Deere 3325 Professional Turf Mower on all 36 of his fairways.

“Equipment has to be tough to survive out here,” says Stuczynski. “The temperatures, the terrain, the rocks—they're all hard on it.

“Our 3325 works 10 hours a day, seven days a week mowing all our fairways. We've had it for about seven months now and it's held up very well. The quality of cut has been excellent. In fact, it's doing such a good job we'd like to get another one.

“I went out and talked to other people who already owned John Deere equipment before I bought my 3325. People who make their living with equipment just like I do. I heard a lot of good things about equipment quality, durability and parts support. And, after the test we've given it here, the 3325 has certainly lived up to that reputation.”

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On keeping your business up to date

Once upon a time, it was good enough to keep up with the Joneses. As long as one yard looked as good as the next, the owners were pleased.

But that's not the case in this competitive world today. Homeowners now want more.

The same holds true with your lawn or landscape business, with your campus or athletic field. And, beginning with this issue, Landscape Management hopes to provide you with information designed to keep you ahead of your competitors, no matter who they are.

By now, you've seen the "Toward 2000" banner on our cover. Get used to it; it'll be there quite a few times in the coming years. Its purpose is to alert you to an article that could provide you with the competitive edge to prosper in this dynamic industry.

As we head into the 1990s, new chemicals, innovative equipment and unheard-of business techniques will take the forefront—and readers of Landscape Management will be the first to hear about them, on our pages.

Over the years, LM's reputation as being first with the news-that-counts has grown among readers. According to readership studies, when you want to know what's going on in the green industry, you come to us. With this new series—the first and only one of its kind among industry trade publications—we are hoping you continue to "open us first."

We're starting the "Toward 2000" series off with a bang. In this issue, you can read about the impending personnel crunch facing the landscape and other labor-intensive industries in the next few years.

We'll attack other current topics in the months ahead, ranging from water conservation techniques to the threat of government legislation. Along with alerting you to problems your business might encounter, we hope to offer possible solutions. In short, we'll continue doing what we've done best in the past.

Staff members—managing editor Will Perry, associate editor Terry McIver and myself—begin this project with unbridled enthusiasm. We hope you enjoy reading LM in the coming months as much as we look forward to writing it. And we also hope that, when called upon by us, you can help find solutions to the problems that the industry will face in the coming decade, and on...Toward 2000.
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ASSOCIATIONS

Research a key to keeping the green industry green

NATIONAL REPORT — Major organizations within the green industry are realizing how important research money has become.

On one hand, the Golf Course Superintendents Association of America (GCSAA) recently contributed $25,000 to the USGA/GCSAA Turfgrass Research Committee. On the other hand, the American Society of Nurserymen (AAN) has told the House and Senate Appropriations Committee that more money must be made available for agricultural research programs.

The GCSAA's money will support ongoing scientific work on new turfgrass varieties that would require less water and be more disease resistant.

GCSAA President Dennis D. Lyon made this observation at the annual USGA/Golf Writers Association banquet held during the U.S. Open in Rochester, N.Y.

William H. Bengeyfield, national director of the USGA Green Section, noted that more than $2.8 million has been distributed by the committee since 1983. "We thank GCSAA for the research funding they provide, and we appreciate the time people like (GCSAA vice president) Jerry Faubel, Lyon and (executive director) John Schilling contribute to the committee."

"GCSAA sincerely supports the USGA turfgrass research project," said Lyon. "We look forward to working together with the USGA on other projects in the future."


"Due in part to this continuing rate of growth," said Duane Jelinek, AAN director of horticultural research, "tremendous potential exists for increased job opportunities as well as positive impacts on the environment."

However, the AAN said it is aware of federal deficit woes, and insisted it doesn't want a handout.

"We have restricted our recommendation to maintaining the integrity of research programs which are absolutely vital to the nursery industry," said Ben Bolusky, AAN's director of government affairs.

Of greatest concern to the association is continued funding for its plant science research programs, the cooperative state research service and extension services.

GOLF

Designers should respect nature, Dye says

CHICAGO — Today's golf course designers face many new challenges, thanks to heightened concerns about environmental preservation, says Pete Dye, president of the American Society of Golf Course Architects (ASGCA).

Dye says designers must comply more with standards relative to wetland preservation, use of freshwater supplies and the impact of pesticides on groundwater. And while he supports such standards, he believes approval of the ASGCA Foundation, for instance, recently continued on page 11
DESIGN from page 8

commissioned a study by Dr. Martin Petrovic of Cornell University on the effects of nitrates on groundwater.” That report was to be available in May.

Dye believes more concrete data is required to support the idea that properly maintained facilities embellish, rather than destroy, the environment.

“No issue has raised the level of consciousness higher than the subject of wetland and marshland boundaries,” says Dye. “Thus, integrating wetlands into the framework of a Master Plan without jeopardizing the natural habitat or course playability has become a major challenge to golf course architects.”

Dye says wetlands have become a high priority of regulatory agencies. That concern and subsequent public hearings have resulted in a slower permit procurement process.

“Wetlands have been reduced to less than 99 million acres from the 215 that existed in 17th century America,” says Dye. “So it is imperative we protect a valuable natural resource.”

NEXT MONTH:
Bio-control of turf pests

TREES

Universal Studios gets a giant

ORLANDO, Fla. — An extraordinary project came Ed Yates’s way recently: uproot, transport and replant a 38-foot Phoenix reclinata palm tree.

Yates’s Lakeshore Tree Moving was contracted by Universal Studios to move the tree from an area nursery to the movie company’s soon-to-be-completed Orlando lot. Developer Marshall Cohn had purchased the nursery land, and was looking for ways to clear it for a condominium complex.

Moving the 43-year-old tree 13 miles required a lot of planning. “We had some small problems, but we solved them as they came up,” says Yates. “We started by going up into the tree with a sky reach to clean it. We then dug a 12-inch trench around the ball, and filled the trench with sawdust. We cut the ball in two halves with chain saws and cross-cut saws.”

The police escort would not be available for two days, during which time the tree ball was insulated and received constant watering. Yates says replanting the two halves exactly as they had originally been took about two hours.

Universal Studios/Florida opens in May, 1990.

INDUSTRY

Ransomes consummates Cushman buy; also purchases Salsco line of products

JOHNSON CREEK, Wis. — Landscape managers will still be able to purchase Cushman equipment from their usual distributors despite a major deal in which product lines changed hands last month.

Ransomes PLC added to its influence on the turf equipment market by first purchasing products previously marketed by Salsco Inc. Then, it purchased Cushman from OMC Lincoln for a reported $150 million.

The Cushman group includes Cushman turf vehicles and mowers, Ryan aerators and sod cutters, and Brouwer mowers, vacuums and sod harvesting equipment. The group will be run as an independent entity under the Ransomes America umbrella.

“Cushman will operate as before,” says Helmut Adam, president of Ransomes America. “It is a well-run company with a good name. We are not going to change something
RANSOMES from page 11

Cushman."

Manufacturing and marketing of Cushman products will continue to operate out of Lincoln, Neb. Stuart Rafos, president of Cushman, says the sale aligns Cushman with a business partner that is close to its core business. Rafos also notes that Ransomes has the international marketing expertise and organization to substantially extend Cushman's growing international business and enhance its position in the domestic market. Rafos believes Cushman's annual sales of $100 million will double in the near future. The company is already making plans for increased production facilities.

Under the agreement, Cushman's management team and dealer network in the U.S. and Canada will retain the status quo.

It's not the same with Ransomes' "Turf Renovation" line of equipment, purchased from Salasco Inc. for a reported $2 million.

Those products—which include walk-behind, tow and riding core aerators; a slicer/seeder; a walk-behind dethatcher; self-propelled drop spreaders; tailgate and towed truck loaders and a walk-behind leaf blower—will now be marketed through Ransomes dealers.

Despite the sale, Salasco plans to remain in the turf field. President Sal Rizzo says the company will introduce new products at the upcoming PLCAA show next month.

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Circle No. 136 on Reader Inquiry Card

TURFGRASS

Pre-grown grass to enter the U.S.

ESSONE, France — A new pre-grown grass said to be weed- and disease-resistant is being marketed in the U.S. by France's Darbonne Corp.

According to press reports, Minute Grass is more flexible and durable than sod grown in soil, and is said to remain green year-round.

Minute Grass uses a technology that involves mixing a customer's choice of grass seed with bark containing natural resins. The mix is then spread mechanically over a perforated micro-plastic film. Because Minute Grass is grown densely above the surface, it is impervious to weed and other impurities, according to Darbonne Corp. Minute Grass can be grown on tile, concrete, sloped hillsides, balconies and patios. Darbonne reports that it is three times lighter than sod, three times more prolific in growing season and can be stored under 29°F refrigeration for up to six months.

For more information on Minute Grass, contact Darbonne Corp. at 6, BD Joffry, Milly La Foret, Essonne, France 91490.

TREES

NAA is set to battle OSHA's regulation in Washington soon

Members urged to support NAA

AMHERST, N.H. — The National Arborist Association is preparing to meet with representatives of the Occupational Safety and Health Administration in Washington next month to challenge OSHA's proposed Vertical Standard regulation.

The NAA will give testimony at public hearings in Washington on Nov. 28 and in California Dec. 12.

By late August, more than 75 firms had expressed dissatisfaction to the regulation with OSHA, according to NAA executive vice president Bob Felix.

The regulation, OSHA Proposed Sec. 1910.269 Electric Power Generation, Transmission and Distribution Standard, "is a very important matter for the entire tree care industry," says Felix.

According to the NAA, undesirable aspects of the regulation include:

• barring line clearance tree trimmers to do work on a tree that has a branch within 10 feet of a conductor;

• requiring all tree trimmers working trees proximate to overhead conductors to be tied into the tree once they reached four feet above ground; and

• requiring a chipper to be treated as energized if "it is possible" that the truck boom can be brought within 10 feet of an overhead line.

NAA members are urged to support the organization in its upcoming efforts. Write to the NAA at The Meeting Place Mall, Route 101, P.O. Box 1094, Amherst, NH 03031-1094; (603) 673-3311.
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Circle No. 122 on Reader Inquiry Card
Those Darn Lawyers... may be standing in the way of research to determine athletic field hardness, says Dr. Bob Carrow of the University of Georgia. Carrow told attendees at the Sixth International Turfgrass Research Conference that research is stalled because no one wants to stick their necks out by saying a field is safe, then be called into court as an "expert witness" if and when an athlete is injured.

Looking for Alternatives... in available grass species was the goal of a recent study at Ohio State University. The North Central Regional Turfgrass Research Group—led by Jill Taylor, Jim Simmons and Karl Dannenberger—initiated a study and evaluated the use of alternative grass species for use in the Midwest. The group believes some of the species would do well in low maintenance areas. Sixteen species were evaluated on a scale of 1 to 9, with 9 being the best score. Best color (all readings are at a height of 2 inches) was recorded by Alta tall fescue, 6.8. Highest density grass was Colt rough bluegrass, 7.5; best in the quality category was again Alta tall fescue, 6.3. Alta recorded the best total score at the two-inch height, with 19.4 out of a total 27 points.

More Research... Other recent OSU experiments included an attempt at tall fescue control in Kentucky bluegrass turf beyond the usual spot treatments. Drs. John Street, Bill Pound and Jim Simmons applied two formulations of Lesco TFC to an established tall fescue stand on April 25 and June 1. Applications of 2 oz. and 4 oz. of active ingredient were made to an established Kentucky bluegrass cultivar on May 1. In general, the 2 oz. rate provided 90 percent control, and the 2 oz. + 2 oz. and 4 oz. rates provide control at 95 percent. There was no difference in percent control between the two TFC formulations. Kill of tall fescue required six to eight weeks. Discoloration of tall fescue began 10 days after treatment.

Turf for Peace... "Today, the more civil- ized and peaceful a country is, the more [formal] turf is used," says Dr. Fumio Kitamura, organizing committee chairman of the Sixth International Turfgrass Research Conference. He adds, "When our lives become more comfortable, the importance of grass increases as a place where we can get close to it, enjoy it, play and relax on it. Turf is now a symbol of civilization, peace and affluence."
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Circle No. 261 on Reader Inquiry Card
A real ‘Easy Rider’

MILWAUKEE — Bill Smithyman, landscape operations supervisor for the City of Milwaukee (Wisc.), is the original “Easy Rider.” He spends more time touring the streets than Peter Fonda and Dennis Hopper did in the 1969 motion picture.

Milwaukee, you see, has more than 119 miles of highway medians, most about 20 yards wide, 95 percent of which are irrigated. That’s more than 450 acres, and it’s Smithyman’s responsibility to keep all those shrubs, trees and grass plants green.

He assigns one person to every two miles of boulevard. That person is in charge of weeding, edging, cultivating, picking up debris and manually turning irrigation on and off. Thirteen mowing crews of two to three persons each supplement the one-person maintenance crews.

“Milwaukee’s had this system for eons,” the veteran landscaper explains.

In 1988, Smithyman’s 160 summer employees planted 424 trees, 6,375 shrubs and evergreens, more than 180,000 annuals and almost 6,000 perennials and bulbs.

“If you look at a landscape and you just have turf that is well maintained, it looks great,” Smithyman philosophizes. “But trees are a major-profile plant material. They are also the easiest and least costly to add. Then, too, shrubs are another element in your profile.”

Smithyman has found that pinching a penny here and there pays off with the city administration when a special project is requested. “We have been very fortunate,” he notes. “That’s not to say there aren’t programs that couldn’t use more money. But we operate on a first-class basis and it’s paid off when it comes to bottom-of-the-line budget. I believe it’s a result of our professionalism.”

Plenty of chances to save money exist within the confines of the government structure. For instance, a shredder was borrowed from Milwaukee County last year to shred leaves for composting. “We’ve got some pretty good stuff,” Smithyman notes, saving the city money it would’ve spent on both debris disposal and buying mulch.

Fifteen miles of drainage slopes are mowed by the department’s Hustler 602 mowers. Time and labor are...
Forging a country club image

NORTH OLMSTED, Ohio — Bill Prest’s current mission in life is a worthy one: to create a country club image while charging a public golf course price.

Prest is the superintendent of Springvale Country Club in this Cleveland suburb. He wants to give the club a distinctly professional look, regardless of the number of Sunday golfers who walk his fairways.

Part of the image upgrade has been accomplished by gradually adding sand traps. “There aren’t many public courses with extensive sand,” explains Prest. He is placing the traps in such a way that they don’t slow down play. “There’s nothing worse than a four-hour round of golf that turns into six hours,” says Prest. “We’ve placed these fairway traps so that 90 percent of the play doesn’t hit them. They’re more cosmetic. At the same time, traps will be in play for lower handicapped golfers.”

Prest installed nine traps this past summer, which will bring the course total to 40. The course had 18 when he became superintendent 23 years ago.

Prest has done more than just add sand to the course. He began an overall renovation program five years ago which included an aggressive schedule: “300 new trees, 15 traps and four or five new tees,” says Prest. “We’ve also started renovating the irrigation system and have done some mound building.” Dirt for the mounds came from a company working on a housing project next door to the club. The developer gladly supplied Springvale with 100,000 yards of topsoil rather than pay for hauling it away.

Prest, a graduate of the University of Massachusetts, says all renovations are in line with presenting a

continued on page 18
Reader disputes architect's rule

To the editor:

In the July 1989 issue under your column "As I See It," you seem to draw the conclusion that the landscape architect is the project leader as it relates to landscaping and irrigation.

It is my experience in doing major landscape contracting that the landscape architect's roles are limited.

In theory, his work is completed (early on), unless he has a per diem contract with the builder.

I consider the contractor to be the key in completing a job in a fast, efficient and practical way to insure the builder's advertisement specials and certificates of occupancy.

We never install materials that are not specified by the builder. But to get hold of a landscape architect (since they consider us to be beneath them) is like getting hold of the president. Some architects set themselves up on a pedestal. Because they wear a suit and tie and sit in an air-conditioned office, they have no concept of the 32°F in the freezing rain or 95°F without the wind blowing.

I would suggest that architects do not take an active part in projects, and force contractors to make their decisions on the spot in order to satisfy their customers who are paying them. We are being paid by the customer and not by the architect; therein lies the key! If the landscape architect wanted to stop a project, the contractor would be blamed.

James H. Taylor
Taylor Made Landscaping
Farmingdale
New Jersey

Wildflowers work in shade

To the editor:

In the July "Problem Management," Dr. Rao was not correct when he agreed that wildflower seedlings or sod cannot survive in the filtered sunlight of a forest. He accepted the Montana reader's comment that "wildflowers won't work" without questioning the statement.

Wildflower germination in filtered sunlight will occur, assuring reasonable soil conditions and some level of moisture.

Columbine, ox-eye, coreopsis and corn poppy are among those which can survive in less-than-ideal (but not impossible) low level sunlight.

We can offer Dr. Rao a few jobs, some recent, where success on a scale of 1 to 10 has been a 6 or 7. This is not out of the range of acceptability, since turf (or ground cover), in many cases, does not reach this level under more ideal conditions than those described.

We, however, have always appreciated the good doctor's sensible and knowledgable comments in the past and always look forward to his management page.

Norm Krisburg
Agro Dynamics
Plainfield
New Jersey

Correcting desert plant references

To the editor:

Thank you for the beautiful two-page spread on the landscape project at Sun Valley, Ariz. in the June issue. The photo on page 34 really shows off the Sonoran Desert in all its beauty, and one can envision the highway (shown on page 35) transformed into a setting of equal splendor.

Our desert plants are indeed exotic. So exotic, in fact, that your copy editor, in condensing a few paragraphs from my original story, combined my descriptions of the yucca and ocotillo. Many of your readers who know the desert will catch the error.

The plant you have described as a yucca is the ocotillo pictured on page 34 to the right of the photo; it's the spiny upright plant in the foreground with orange plumes. A yucca, on the other hand, is the type of plant you may recognize as "Spanish bayonet," which is one of its commonly-distributed varieties.

Thank you for the opportunity to write for your magazine.

Joan C. Risley
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PREST from page 17

country club image. "We were a flat, wide open, boring golf course," he remembers. "A lot of young public golf courses in this area are like that." Prest has installed wall-to-wall cart paths, connecting all but two holes. A great advantage in wet weather, the paths enable Springvale to run carts on wet days when other courses dare not tear up the fairways with tire tracks. And carts are mandatory on weekends.

"That has allowed us to get more players on the course at one time and get more players through."

In parts of the course, Prest has gone to low maintenance flower beds, longer grass reminiscent of the Scottish courses, and mulch. Low maintenance areas also serve to divide the course into playable and out-of-play areas.

He's even started a small tree farm in a low maintenance, out-of-play area.

How's that for initiative?

—Terry McIver
The term “labor-saving device” might have been coined to apply to the Polaris Big Boss. It's your worker of choice when human hands, arms and backs aren’t quite enough, but a pickup or dump truck is too much. And it's a terrific recreational vehicle as well, able to haul an entire campsite in a single trip, or supply a remote hunting cabin with food and equipment for a week. For farms, construction sites, back yards, or the back woods, a Big Boss gives you the extra strength you need to do what needs to be done.

Warning: ATV's can be hazardous to operate. For your safety: Never carry passengers, avoid excessive speeds, and be particularly careful on difficult terrain. Polaris ATV's may not be ridden by people under 18 years of age. Polaris recommends that all ATV riders take a training course. For safety and training information, see your dealer or call Polaris at 1(800)328-9975. (In MN, 1(800)247-6670).
Look at workforce projections for the 1990s. What do you see? A lack of line-level employees, the green industry’s bread-and-butter.

Rosabeth Moss Kanter of the Harvard University Business School has issued a stern warning to American business via Business Month magazine:

"Companies will have to figure out how to make work better. They will have to think of ways to give people careers they can be proud of."

This is the problem confronting the green industry as it heads into the 1990s. Why? Consider these facts, so boldly suggested by Fortune magazine:

- "The employment rate in the ’90s will be lower than in the ’70s and ’80s.
- "As baby-boomers age, they will leave a demographic vacuum in their wake, confronting managers with a scarcity of entry-level job seekers.
- "Growth of the workforce will slow from 2.4% per year in the ’80s to 1.2% in the ’90s.
- "The Hispanic population will grow by 33%, the U.S. population by less than 10%.
- "U.S.-born white males will make up only about 15% of the net increase in the labor force.
- "Companies that can’t learn to attract women, blacks, Hispanics or Asian men will face a shrinking pool of desirable employees."

The pendulum shifts

During the last 10 years, the green industry used much of its resources to address legislation affecting pesticide use and workers’ rights. (Rightfully so.) But the 1990s bring new problems.

"It’s a social issue, not a governmental one," says Alan Shulder, executive director of the Professional Grounds Management Society (PGMS). "How do we get the young people? They can work at McDonald’s for $4.50 an hour; they’re in an air-conditioned setting with flexible hours. In the green industry, they would be working in the summer heat at $4.00 an hour and they’d have to be to work at 6 or 6:30 a.m.

"The industry is just beginning to realize it’s got to be competitive. Did you know that in some parts of the country, you have to pay $7.50 an hour just to hire a body?"

Shulder’s key point: green industry businesses compete not only with their kin for good workers, but also with other labor-intensive industries.

According to Business Week magazine, the National Restaurant Association (McDonalds and others) and the National Retail Merchants Association (Kmart and others) both predict radical employee shortages in the
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next decade.

"I've talked to four other associations," notes Terry Peters, formerly of the Associated Landscape Contractors of America (ALCA), "Everybody sees labor force-related problems, and they've been exacerbated by the new immigration laws."

Peters says that ALCA will attack the lack of career-oriented landscape workers. The organization hopes to establish a national certification program which can be transferred between states. "It certifies demonstratable skills that can be used as a career base," Peters notes. "We're at the point of having a proposal ready, and we could have it up and running in the next year or so."

The Professional Lawn Care Association of America (PLCAA) will deal with the predicted labor shortage in great detail at its annual convention Nov. 4-7 in Las Vegas. Almost six hours of educational sessions will be devoted to the subject, including part of a two-hour panel discussion, "Issues of the '90s," on Nov. 7.

**The trained**

ALCA, which cooperates with 18 colleges and universities, notes a significant decline in horticulturally-oriented students. The organization's annual field day—a two-day series of landscape-related tests given graduating seniors—is becoming what Peters calls "horrendous competition" for the services of able students. According to Clarence Davids of Clarence Davids & Sons, Blue Island, Ill., "Many universities estimate that a student has an average of seven job offers upon graduation."

So, more and more, the professional organizations are realizing that young people must be called upon at the junior and senior high school levels. They've recently received help from the Future Farmers of America (FFA).

"We have had insufficient emphasis in the turf/landscape area," says Dr. Alan R. McDaniel of Virginia Tech, FFA contest supervisor. A new contest, beginning in 1991, "represents an introduction to horticulture, landscaping and turf at the high school level."

"We must introduce more students to the personal and career rewards in landscape horticulture," McDaniel observes. "But we really need to 'turn on' these students (to horticultural careers) before they start college."

The untrained

Unskilled, untrained labor could be in even shorter supply than trained people. Business Week says that the number of 18- to 24-year-olds will fall nearly 10 percent by 1995 while jobs available will increase by more than 10 percent. Few occupations will be unaffected, it says. "In suburbs across the country, gas stations, fast-food outlets and retailers are already offering up to $6.50 an hour for jobs that elsewhere pay the $3.35 minimum wage."

Peter F. Drucker, a noted author of books on business management, has his own concerns:

"In all developed societies, the able, intelligent and ambitious members of the working class stay in school beyond the point at which they are eligible for manual work. Young manual workers of today start out with a feeling of failure, a conviction of being second-class citizens. They need responsibility to overcome their feelings of insuperiority."

"To make a living is no longer enough. Work also has to make a life (career)."

There is an additional factor, according to Jim Brooks, the PLCAA's executive vice-president. "The people aren't coming from the farm any more," he observes. "One of the comments that I've heard is that, because (potential workers) are not coming from the farm, what they know about pesticides is what they've been reading. There could be some that choose not to even apply."

"I've heard of companies in the Northeast, where unemployment is at four percent, not getting any applicants after running newspaper ads."

**Hands-on help**

For individual green industry operations, the three keys are recruiting, selecting and retaining (see related article). Technology, too, will make a
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SOLUTIONS TO THE WORKER SHORTAGE

Improving the American workforce during the next 15 years is critical to economic growth. In fact, to the extent that economic growth depends on an educated workforce, it is estimated that we must upgrade the skills of some 25 million American workers by 40 percent by the end of the century if we are to maintain a growth rate of even three percent.

As it is, there promises to be a shortage of skilled workers and high unemployment in many categories. White males will make up only 15 percent of the additions to the labor force between now and the year 2000. The rest will be women, minorities and immigrants.

The result could be a workforce desperately in need of education to meet the demands of higher skilled jobs and a significant population of inadequately educated employees for even entry level jobs.

A system
U.S. Lawns Inc. franchises landscape maintenance companies. When the company began three years ago, the greatest concern of our franchisees was in estimating and sales help. We provided heavy support in this area. As they matured and grew, we provided help with bookkeeping, cash flow, customer service and technical problems. Now, however, the major concern for our franchisees (and the area in which we are trying to provide the greatest level of assistance) is people. How to find people, how to select the right people and how to train people efficiently are all major issues with our franchisees. We at U.S. Lawns try to solve these very different problems in three very different ways.

Recruiting
The first and most obvious problem is recruitment. Some companies import workers from areas where there is a surplus, like Texas. Workers can also be imported from South America or Mexico under temporary work permits.

Another source of help, especially in the summer, is the school system. Coaches and guidance counselors are very helpful in supplying names of interested students, particularly those coaches who wish to keep their players in shape over the summer. Landscape maintenance is a wonderful way to keep athletes "fine-tuned" over a summer vacation.

Work study programs are also appropriate, especially when hours are flexible. Our largest franchise is experimenting with working at night on commercial properties with high-powered lights. It is cooler; some individuals like to work the evening or night shift; and—with the exception of weeding—activities can be carried on with high-powered lights. This is opening up a new possible market for employees.

Many cities have youth programs which provide a source of potential employees.

For many people in drug rehabilitation and offender programs, work is a wonderful opportunity to deal with their problems in a positive way and develop job skills.

Boys' and girls' clubs also provide a source of good potential workers who are interested in learning workable skills.

Perhaps the most exciting and innovative approach so far has been our "High Potential Franchise Program" in which talented high school, college or vocational school graduates are assigned to work for an existing franchise for two years. Money is withheld from their salaries and placed in an account for them. U.S. Lawns matches the amount withheld; at the end of the two years, they purchase a franchise themselves. (If they withdraw from the program before the two years is up, their money is returned with interest.)

Obviously, there are many other ways to source a good workforce for the industry. Speaking at schools, participating in career days, getting involved in community activities—all open up potential sources of workers.

Selecting
After you find workers, the next step is selecting the ones who are likely to be successful. This is especially important at the foreman or supervisor level as these people significantly influence the turnover rate. U.S. Lawns applies this same philosophy when selecting franchisees.

A good selection test to determine people most likely to be good supervisors will go a long way in decreasing turnover. We recommend to our franchisees that they check references, interview applicants carefully and use tests we supply them to help select good supervisors.

Retaining
Once you select a potentially good person, offer ongoing support to help him or her do the job better. What we recommend is ongoing supervisory training in how to coach and counsel employees, how to discipline employees and how to make sure employees' problems are dealt with fairly and quickly.

When we are competing with fast food companies, service companies and so many others, the importance of reducing turnover is great. We try to create a feeling among our workers that they can move up in the organization and become supervisors themselves.

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ing or other types of incentive plans help retain workers. These plans make them feel as if they are contributing to the overall success of the company and are being rewarded for it. The keys to retaining employees are good supervisors—and good supervisors come from selecting people with good skills and training them as much as possible.

A lesson of the '80s that will only grow in importance is that

People, rather than machines or capital, are the critical factors in the service economy.

...people rather than machines or capital are the critical factors in fueling this needed growth in the service economy. It is also clear that education relates very strongly to individual opportunity. People who receive job training earn 25 percent more than individuals who do not.

This is the message we must give to our employees. We will help teach them valuable skills, we will offer them career opportunities and perhaps, most importantly, we will treat them in a way which makes them feel rewarded by what they do.

So, what appeared to be a simple and straightforward problem is really not. It's not just a problem of finding people. It's a problem of selecting and developing good supervisors in order to cut down on turnover and therefore create less need to find new people. It's also a problem of what each organization must do to create feelings of career opportunities among all employees—which will also cut down on turnover.

No one part can totally solve the problem. There will be shortages of employees. Innovative approaches will be necessary. But the successful organizations will be the ones that do the best job of keeping their people.

—Cabot L. Jaffee, Ph.D.
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If you’re about to commit your company’s resources to building a truck fleet, you’ve probably looked at Ford Ranger, Chevrolet S-10, Toyota and Nissan. But your shopping list isn’t complete until you’ve taken a good look at Mazda. Because Mazda trucks offer some very important advantages over the competition.

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Mazda trucks: Offer a 36-month/50,000-mile “bumper-to-bumper” warranty—The best in the truck business.*

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<th>Ford Ranger “S”</th>
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++Comparisons with other makes based upon available competitive data.
Superintendent Joe Hahn faced the challenge of his life when rain pelted his course for 12 days before the U.S. Open championship.

by Ann Reilly

Players took to the practice green after play was suspended Friday because of excess water.

The 1989 U.S. Open golf championship will not be remembered by Oak Hill Country Club superintendent Joe Hahn for Curtis Strange’s second straight Open victory. It’ll be remembered for the rain.

“That was the worst it’s ever been for me,” Hahn observes now. “The challenge was there, as I imagine it was for a lot of superintendents at major events last summer.”

Nothing short of a miracle kept the Open on schedule through that Sunday afternoon. Before practice rounds started in Rochester, N.Y. that week, six inches of rain had already fallen during the first 12 days of June. Almost one-half inch of rain fell that Tuesday morning, and the skies burst open again on Wednesday morning.

By then, the decision had already been made not to allow automobile parking on the West Course in fear of seriously damaging it, leaving 6,500 drivers scrambling to find alternative places to park. On Wednesday afternoon, a line of spectators had to wait for more than an hour to catch shuttle busses to nearby and not-so-nearby parking facilities.

On Friday, play was suspended for 45 minutes while the crew squeegeed the greens. Leaves that had fallen during the rain also had to be blown away (although the crew was not drying the greens with blow dryers as a television reporter suggested).

If things weren’t already bad enough, so much rain fell on Friday night that a creek on the sixth hole overflowed. The sixth hole, the main entry road and parts of the fifth, seventh and eighth fairways were left underwater.

USGA officials were ready to suspend play on Saturday and revert to their contingency plan: play 36 holes on Sunday. But Hahn convinced them that the course could be readied.

Local fire trucks were brought in to pump 1,000 gallons of water a minute off the course. Squeegees, which were a common sight all week, were manned by other local superintendents to remove water. After being given two more hours by the USGA to cut the greens, the crew had the course ready.

Play started at noon Saturday on both nines. Some of the fairways were completely cut; others were cut around wet spots.

“ABC-TV said the golfers thought the course was very playable,” Hahn notes. “But I don’t think a person would want to go through that every year. It’s a lot of fun to meet the challenge, but if you had the adverse conditions and you had to do it every year, it’d get old quick.”

continued on page 32
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THE CLEAN-UP JOB: A MONTH-LONG PROJECT

After the U.S. Open finished and a light drizzle fell during the awards ceremony, Oak Hill's superintendent, Joe Hahn, was faced with the challenge of putting the course back in shape—no small task.

The stakes and ropes were taken down within the first two days. Outside contractors had the tents down after a few days, and in two to three weeks the bleachers disappeared. The ropes, screening cloth and the wood used in the scoreboards will be sold to the Medinah Country Club, site of the 1990 Open, in the same manner they were acquired from The Country Club in Brookline, Mass., where the Open was held last year. Member play was scheduled to resume the day after the Open—it was a day of sunshine so desired the week before. Guests returned on June 27.

After the Open, the playing areas of the course were not the parts that needed the most attention. What did were the muddy grassless areas, the result of the thousands who had fought the elements for a glimpse of Strange, Kite, Beck, Woosnam and McCumber.

Hundreds of yards of wood chips had to be removed, along with many sheets of plywood that had been placed around the course to make the steep hills maneuverable and to protect the ground. The bare areas were aerified and overseeded; it took several weeks of cooperative weather for the areas under irrigation to get back in shape.

—Ann Reilly

US OPEN from page 28

On May 1 of this year, an outside contractor began putting up grandstands and tents. Hahn held his breath as the last bleacher was finished on Monday, the day before the first practice round. ABC started building its television towers on May 17.

An early start
Membership priorities were certainly infringed upon during the get-ready stages, but members actually missed only one day of play before the Open. The maintenance crew, which totals 32 for the two courses at Oak Hill in normal years, was increased to 40 this year. An additional five-man swamper crew was hired to put up and take down ropes and stakes and to build scoreboards.

Eleven of Hahn's employees have or are working toward advanced degrees in turfgrass management. Rusty Madden is the assistant supervising the East Course, and assistant Joe Frank heads up the West Course.

Crunch time
A month before the Open, some members of the crew voluntarily began working 80-hour weeks. "We let them decide," Hahn notes. "It wasn't mandatory." Their days started at 6 or 7 a.m., 4:30 a.m. during the Open. Because of the weather problems during the Open, work often wasn't done until 10 p.m. The crew's available time to work was naturally limited, because once the crowds arrived and play started, there wasn't much they could do.

USGA tour agronomist Tim Morgahan began visiting Oak Hill monthly during the summer of 1988. This year, he arrived on May 26 and, working with Hahn, had a daily goal of insuring that the course was firm and fast.

Their game plan was to take Stimp-meter readings each morning after the greens were double-moved and groomed, and from that determine what activities would take place in the afternoon: double-rolling for firmness or grooming for speed. Naturally, the schedule changed.

The plan was to cut fairways, approaches and tees every morning to 5/8-inch, cut the greens every morning to 7/8-inch and cut the intermediate rough every afternoon to two inches. Because of water on the course, the fairways were cut in the afternoon rather than in the morning. Fairways and greens were rolled more often than originally planned. The primary rough was cut on Monday before the practice rounds to a height of four inches and was not re-cut during the Open.

Players in the 1985 Senior Open had expressed concern over the severity of the slope leading to a pond on the 15th green. Therefore, a retaining wall was built and the area leveled to make an unfair situation manageable. An improved tee was built on the fifth hole to lengthen the hole. The seventh tee was enlarged and the sixth tee leveled. The bunkers on No.5 were reconstructed; one was eliminated and the remaining two were converted to splash bunkers. Throughout the course, all of the bunker edges were restored.

Making it MEM
For the past three years, fairways were aerified five or six times each year, and lime was applied to reduce thatch. Two years ago, the crew began triplex mowing the fairways. Perennial ryegrass was introduced to the roughs, which were primarily bentgrass and Poa annua (a result of previously narrowed fairways). One objective over the past two years was to make the course firmer than for normal membership play.

Hahn, father of seven and a new grandfather, is in his seventh year as superintendent at Oak Hill. In all, he has 34 years of experience in golf course management. Surprisingly, he remained very calm and cool during the unexpected turn of events.

"You do everything you can," he explains. "I feel bad for my crew, which worked so hard to prepare the course and then had the weather turn that way."

Ann Reilly is a long-time contributor to Landscape Management. She is a freelance writer/photographer specializing in plant and wildlife topics with residence in Massapequa Park, N.Y.
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Circle No. 139 on Reader Inquiry Card
THE HARVEST IS IN
( ...and pert' near gone!)

Seed producers' hopes for a harvest of plenty were altered by weather, lower production and strong demand.

by Terry McLver, associate editor

A Boy Scout would have a field day as a grass seed grower or marketer. He'd always have to "be prepared."

Heavy demand and fickle weather conditions contributed to a less-than-anticipated 1989 harvest for many seed varieties, most notably tall fescues.

Last year it was the drought. This year rain was plentiful, but at the wrong times.

"All the fescues are low," says Doug Toews of International Seeds. "The weather did it. We had the cold spell in December, then little rain, then lots of rain, and some more rain at harvest time. It was six of one, half-a-dozen of another."

'The demand for tall fescue is as hot as ever! Industry-wide, it's been... spotty, production, increased demand and weather.'

—Joe Churchill
Northrup King

Also, field burning was interrupted for several days in 1988 after the I-5 accident, and some think the interruption ultimately caught up with production.

Tall fescues hardest hit

Turf-type tall fescues took a real beating this time around.

"We think it was a number of weather-related factors," says Mike Robinson, president of Seed Research of Oregon. "There was late rain in November, a late green-up, and then the cold weather in February. And after the cold spell, wet weather held up fertilizing in February."

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Turf Type Tall Fescue

Robinson says those who were able to fertilize well in February had the best yields. “We expect the 1989 tall fescue crop to fall short of the demand, a demand that is constantly increasing as users realize the advantage of turf-types over the older, forage-type tall fescues,” says Art Wick, director of research and development for Lesco. Wick says grower costs have increased more than costs for the 1988 crop, which should reflect in somewhat higher professional user prices this fall. According to Wick, future turf-type tall fescue demand is difficult to measure, but Lesco expects to see a growing demand for several years.

The demand for tall fescues has been “as hot as ever,” says Joe Churchill of Northrup King. “Some (of our) varieties in some areas have had winter damage in February. Galway was effected, but Arid is okay. Industry-wide, it’s been a combination of spotty production, increased demand and weather.”

“Turf-type tall fescue supplies are adequate, but adequate isn’t good enough,” remarks Gary Parker, general manager of Lofts. Our older stands were primarily weak. It’s weather related, fertilizer related . . . we don’t have the answer.”

On the plus side, Parker says new fields planted a year ago should help ease any pending shortages next year.

Gayle Ward of Jacklin Seed Co. finds the tall fescues very disappointing, with a 50 percent yield reduction. And Tom Stanley of Turf Seed sees many tall fescue yields as 30 to 50 percent short. The especially cold winter was something Stanley and others think may have been another negative factor.

Add to that a heavy demand. “There are more certified production acres of tall fescue than perennial ryegrass in Oregon,” says Steve Tubbs, vice president and general manager of Turf Merchants, Inc. However, demand for tall fescue is keeping supplies tight. “All tall fescues are yielding poorly due to reproductive tillers turning vegetative rather than producing seed heads,” continues Tubbs, “and clean-outs are higher than expected due to empty florets.

Regardless of demand, there is a virtual sell-out of all varieties at prices comparable to last year. In fact, it’s the first time in history that the turf types have raised the price of Kentucky-31 as opposed to Kentucky-31 pulling the price of turf types down,” says Tubbs.

Due to excellent demand for pe-
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**KENTUCKY BLUEGRASS**

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Availabilty Key: A-surplus B-adequate C-limited T-testing only S-sold out

Rennial ryegrass, supplies this year of Pennant, Belle and Competitor will be limited, says Shari Burlingham of E.F. Burlingham & Sons. "Competitor, our new variety, will be included in our mixtures this year. We'll custom blend it to meet individual needs and requirements."

Tubbs said most of TMI's proprietary perennial ryegrasses will be in adequate supply, although the crop isn't nearly as good as 1988's—increased acreage should offset decreased yields.

This harvest yielded the first crop of Bonsai dwarf fescue, a specie that has been sparking interest throughout the industry. According to Tubbs, recent excavation of a 10-month-old Bonsai sod plot in southern California proved conclusively that Bonsai's roots extended a full six feet below the surface. "So there is no truth to the speculation that the dwarfs have shallow root systems," says Tubbs, who believes Bonsai and similar varieties will take over the turf market west of the Mississippi due to their attractiveness as turf with drastically reduced maintenance requirements.

**Bring on the blues**

"The yields for proprietary bluegrasses were nothing to write home about," says Tubbs. "Most are based on the price of common bluegrass, which is cheaper than it has been for several years and awfully strong. Fall demand will be required to keep the proprietaries from slipping. There will be some shortage of older, lower yielding varieties, but more than ample supplies overall."

Fine Lawn Research's Bill Junk says the Chateau Kentucky bluegrass crop will be adequate. Midnight fans will be glad to hear from Turf Seed's Stanley that recent acreage increases for Midnight should result in adequate supplies by crop year 1990.

**Harry Butler**, Jacklin's vice president of marketing, says there will be selected shortages on some of the lower seed-yielding varieties of proprietary Kentucky bluegrass. "There is a slight increase in acres over last year," says Butler, "however, we still do not have sufficient producing acres to meet demand. New acres have become difficult to place due to other competing commodities, such as wheat, corn and other grain products."

Says Northrup King's Churchill: "Our bluegrass yields are coming in very well at press time. We anticipate a good supply of most varieties throughout the year."

Churchill also reports adequate supplies of the "Penn Pals" bengrasses.

Sources say most of the proprietary fine fescues grown in Oregon are disappointing contractors with both yields and clean-outs, and there is a great disparity between the common

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Canadian red fescue crop and the Oregon fine fescue crop. Chewings and hard fescues could be in short supply, especially if strong demand for certified varieties from Europe continues.

"Many factors limit successful increase in production acres," says John Zajac of Zajac Performance Seeds.

"Demand in most segments remains good. Therefore, I expect the higher quality, better marketed varieties to remain in a 'no surplus' condition for some time." LM

---

**Canadians still enjoy '88 crop**

Though the United States is a net exporter of turfsutseed, some of what New Zealand and Canada exports may find its way here.

From New Zealand comes perennial ryegrasses Nui and Ruanui, which are harvested in January. Usually pegged for forage use, they may have lawn applications.

Estimates are that New Zealand will import as much as 20 million pounds of seed this year, according to Dave Nelson, director of the Oregon Fine Fescue Commission.

Rain has kept Canada's harvest of fescue and forage seed down significantly from last year, according to Al Dooley, a special commodity analyst with Alberta Agriculture. Canada exports about 20 million pounds of fescue annually, some of which finds its way into bluegrass mixtures.

"The United States is our most important market by a long shot," says Dooley. "You guys take 70 to 90 percent of our export."

Canada's principal turfgrass is the creeping red fescue Boreal, used primarily as a filler in Kentucky bluegrass mixtures.

"We feel it's a good variety because of its shade tolerance, hardiness, and the fact that it's a creeper that fills in bare spots well," says Marvin Nakonetchny, secretary master of Canada's Forage Seed Council. The exportability of Boreal depends on U.S. demand, says Nakonetchny, and the current market price of 25 cents/lb. is likely to send most of it into storage.

"The fact that it's sold as a no-name variety in the U.S. is a problem we should address," he adds.

Canadian seed comes from the prairie provinces: the Peace River region of Alberta, Saskatchewan and Manitoba. Last year Canada enjoyed an exceptional crop, says Dooley. That resulted in the export of approximately 18.5 million pounds of fescue, 13.6 million pounds of red clover, 8.0 million pounds of sweet clover, 5.25 pounds of alsike clover and 1.5 million pounds of bromegrass clover.

Because of the region's climate, storing the seed for several years is not a problem. As a result, last year's bumper crop is still on hand should America's bluegrass market take off this fall.

A very limited amount of Canada's acreage does consist of bluegrasses. Canadians are also looking at turf-type fescues and ryegrasses, "... but so far it's insignificant," adds Nakonetchny.

—Will Perry

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**COMMON BLUEGRASS**

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<tr>
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**WINTER OVERSEEDING BLENDS**

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**ROUGH BLUEGRASS**

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40 LANDSCAPE MANAGEMENT/OCTOBER 1989
Years of trials and research are necessary to develop new turf and forage varieties which keep pace with the ever-changing needs of the consuming public.

That is why TMI is developing Today varieties that will carry us into the 1990's. As varieties like Pennfine, Manhattan II, Barry Perennial Ryegrasses, Rugby and Gnome Kentucky Bluegrass have shown, there is always a home for high quality, top-performing varieties. From international sources and from some of the nation's finest universities, TMI is constantly searching for improvements to our proprietary program with varieties like Aquarius, Wrangler and Bonsai. These new varieties will prove beneficial to all, long into the next century.
### PERENNIAL RYEGRASS

<table>
<thead>
<tr>
<th>VARIETY</th>
<th>MARKETER</th>
<th>AVAILABILITY</th>
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<tbody>
<tr>
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<td>Daehnfeldt B</td>
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<tr>
<td>Quartet (blend)</td>
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<tr>
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<td>2H7</td>
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### SEED COUNTRY INSIGHTS

- Lofts' new Rebel Jr. turf-type tall fescue is doing okay its first time out, says Gary Parker. It yielded well, and the company is excited about Jr.'s prospects. Lofts is marketing five new varieties: the fescues include Rebel Jr., Bar-None and Tribute; bluegrasses 1757 and Suffolk, a joint venture with Jacklin Seed Co. Lofts' research director, Richard Hurley, thinks there's "real trouble ahead" for bluegrasses in the Northwest because "the turf-type tall fescue varieties are so good and they're going to be moving north . . ."  
- Jacklin is moving ahead with its development of a turf-type redtop grass plant. Dr. Doug Brede has polycrossed and harvested several types of the redtop. "We will plant out the progeny from this cross in 1989 to further refine a potential variety," says Brede. Redtop is a low maintenance variety that does well in adverse soil conditions . . .
- Demand for Longfellow chewings fescue grows each year, says Doug Toews of International Seeds . . .
- Northrup King is releasing a new Kentucky bluegrass variety, called Kelly. Good heat and drought tolerance, according to Northrup's Joe Churchill . . .
- Churchill also reports that Northrup will get an exclusive in 1990 on Pure Seed Testing's newest tall fescue, 5DM. To be renamed later . . .
- Maverick II is now available. Pickseed West calls it an improved turf-type tall fescue that is slower growing than the original Maverick, and has performed well in national tests . . .
- Charger is a new perennial ryegrass from Turf Seed, Inc. Tom Stanley reports it demonstrates dark green color, high density, lower growth habit and very good disease resistance . . .
- Mondial is an advanced synthetic turf-type perennial ryegrass cultivar developed by Mommersteeg. Van Der Have Oregon has it in adequate supply, and reports quick establishment as a benefit . . .
- Avanti is a new semi-dwarf turf-type tall fescue from Warren's Turf Nursery. High shade tolerance and low growth habit are two benefits. Limited in 1989; full production expected in 1990 . . .
- From Hubbard Seed & Supply: Hubbard 87 is a new dwarf turf-type tall fescue variety developed with Dr. C. Reed Funk of Rutgers University. Production will be controlled by Hubbard to meet the sod quality market needs; limited through 1991 crop year. Sod-Gem Turf-Type featuring Hubbard 87 also is limited through 1991 . . .

—Terry McIver

### CREEPING RED FESCUE

<table>
<thead>
<tr>
<th>VARIETY</th>
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<th>AVAILABILITY</th>
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<tr>
<td>Dawson</td>
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<td>Ruby</td>
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<td>Salem</td>
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<tr>
<td>Virtus</td>
<td>Turf Merchants C</td>
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<tr>
<td>Vista</td>
<td>Zajac Performance Seeds C</td>
<td></td>
</tr>
</tbody>
</table>
Ryan brings quality aeration from golf greens to green lawns.

Introducing the new Ryan Lawnaire® 28.

The revolutionary Lawnaire 28 combines the technology and precision of golf course aeration with the demands of lawn maintenance. Its reciprocating, crank mounted tine arms feature a vertical coring action similar to larger Ryan aeration. Tines penetrate straight in to a depth of 2½ inches, and come straight out. The results are a more professional-looking job, better root development, greener lawns, and more satisfied customers.

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Check out Ryan's reliability in your own backyard. Contact your Ryan dealer and ask for a free demonstration today. Or call toll free: 1-800-228-4444.
<table>
<thead>
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<th>CHEWINGS FESCUE</th>
<th>HARD FESCUE</th>
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</tbody>
</table>

Key: A-surplus B-adequate C-limited
T-testing only S-sold out

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Lebanon
TOTAL TURF CARE
A division of Lebanon Chemical Corporation
### BENTGRASS

<table>
<thead>
<tr>
<th>VARIETY</th>
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<tr>
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**Key:** A = surplus, B = adequate, C = limited, T = testing only, S = sold out

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The unit operates directly from the mower deck drive, and can be removed or installed without tools in seconds, by simply pulling one pin. An optional air/full signal indicator automatically sounds an intermittent signal when the hopper is full or when airflow through the rear screen is restricted.

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The filters are designed to minimize pressure loss, with internal flow direction along the longitudinal axis of the cylinder. This direct flow principle causes the filtered particles to collect at the end of the cylinder where they can easily be flushed out through a 3/4-flushing ball valve. The filters are designed to work with water pressure to 100 PSI.

The filter achieves a high degree of filtration through the use of a polyester weave screen in a molded cylinder. O-rings insure perfect sealing, and the filter can be dismantled with a hand turn of the cylinder housing. Pepco has a complete line of water conservation products.

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The improvements begin up front. The exclusive front roller has a larger diameter for reduced rolling resistance, higher side frame clearance and improved durability. It works even better to "pucker up" horizontal runners and plant leaves, readying them for clipping.

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OCTOBER 1989/LANDSCAPE MANAGEMENT 53
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Identifying mildew disease

Problem: Every year on oak trees we see whitish powdery growth on the lower surface of the leaves. We also see a number of small, black specks present in this area. Is this caused by mites? What can be sprayed to control this? (Ohio)

Solution: From your description of the symptoms, the problem you are dealing with appears to be caused by a fungus that causes powdery mildew disease. The black structures you have been seeing are probably not mites, but are the fruiting bodies of the fungus that contain fungal spores. Several different powdery mildew fungi attack oak. These include Sphaerotheca lanestris, the most troublesome mildew producer. Others include Erisiphe trina, Microsphaeria alni and Phyllactinia corylea.

An application of fungicides like Acti-done PM, Benlate or Karathane is recommended to manage the powdery mildew disease problems.

It is possible that mites may also be present on the same plant. For detecting mites, shake the leaves over some white paper or cloth. If there are many mites, they will fall and begin to crawl on the white surface. Mites have eight legs while insects have six legs. Mites leave a staining mark on the white surface when crushed. Verify this possibility just to be sure.

If the problem is identified to be due to mites, an application of dormant oil during early spring or an application of miticides such as Kelthane in mid-June and again two to three weeks later should help minimize the problem.

Controlling poison ivy

Problem: We have a major problem with poison ivy plants in some of our clients' properties. What is the best way to control these. Can we use Roundup? (New York)

Solution: Treatments with amitrol (Amizole, Aminotriazol or Weedazol), a post-emergence herbicide, reportedly provides excellent control of poison ivy. It is a non-selective herbicide designed to be applied onto the foliage of perennial broadleaf weeds like poison ivy. It will be absorbed by the leaves and translocated to the stems and roots. It is very effective against poison ivy. Avoid contacting desirable, non-target plants because it will turn the leaves yellow, white and then brown.

Use amitrol as a spot treatment for perennial weeds like poison ivy in or near nursery crops or landscaping. For best results, treat weeds at full leaf, about four to six feet high, and before blooming.

Check with your county extension agent for clearance to use this product in your area. All registrations for the use of amitrol on food crops, including pastures, have been cancelled. Avoid using it in an area where there is a chance of food or feed contamination. A waiting period of six to eight weeks is required before planting any plant material.

Roundup is also registered for managing poison ivy plants. For managing these apply four to five quarts of Roundup per acre as a broadcast spray or as a 2 percent solution with hand-held equipment. Remember that Roundup will be absorbed through actively growing green leaves. Therefore, thorough coverage is necessary. Repeat applications may be needed for good results. Fall treatments should be made prior to leaves losing green color.

Why power rake?

Problem: Why power rake, since power raking does little to reduce thatch? (Colorado)

Solution: You are right: power raking does little, if anything, to reduce thatch. I don't believe that any professional turfgrass manager or lawn care professional would be recommending power raking to reduce thatch, except under certain situations.

Those who believe in the misconception that the clippings can contribute to thatch development may perform this. However, power raking might be useful in removing excess dead blades or plants that are present, often due to infrequent mowing. This can occur if the turf is allowed to grow tall before mowing, which deposits excessively long clippings. In this situation, blades will decompose slower than if they are mowed frequently.

Ideally, turfgrass should be mowed whenever growth is 1/2 inch taller than the recommended cutting height for a particular cultivar. A good mowing schedule and practice will eliminate the need for removing long clippings.

The areas damaged by insect and disease or abiotic stress factors may also be benefited by power raking to remove the dead or matted blades.

---

Balakrishna Rao is Manager of Technical Resources for the Davey Tree Co., Kent, Ohio.

Questions should be mailed to Problem Management, LANDSCAPE MANAGEMENT, 7500 Old Oak Boulevard, Cleveland, OH 44130. Please allow 2-3 months for an answer to appear in the magazine.
If your work includes a wide variety of tasks, you need a service line trencher with a new dimension. The fully hydrostatic drive Bobcat 3020 Series trenchers are the world's first true multiple attachment trenchers, featuring Bobcatch™, a revolutionary quick-attach system.

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- No thatch buildup
- Adaptability to sun or shade
- Less maintenance than bluegrasses or ryegrasses

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