NORTHWEST TURFGRASS TOPICS

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1993/94 Board Director Nominations and Elections

The terms of two NTA Board Directors, **Randy H. White**, Superintendent, Everett Golf and Country Club, and **James W. Dusin**, Greenkeeper, Apple Tree Golf Course in Yakima, expire this year. Both individuals were elected last year to serve out the last year of three year terms and both will be eligible for nomination for reelection.

The NTA Nominations Committee, chaired by Immediate Past President **Tom Wolff**, is in the process of determining the slate of nominees for NTA board director positions for election by the members during the 1993 Annual Membership Meeting scheduled to be held October 12, 1993 during the 47th Northwest Turfgrass Conference scheduled for Yakima, Washington. Director terms of office are 3 years with one-third of the board retiring each year. Newly elected directors assume their position on the NTA board immediately following the close of the annual conference.

Director candidates may be nominated by either of two ways: 1) nominations committee nomination, or 2) written petition nomination endorsed by not less than fifteen (15) active members of the association.

Individuals interested in submitting their own name or the name of someone else for consideration by the nominating committee should send such nominations to Tom Wolff care of the NTA office as soon as possible. The deadline for submittal of written petition nominations to the NTA office is September 17, 1992—at least twenty-five (25) days before the annual membership meeting.

47th Northwest Turfgrass Conference Takes On a Brand-new Look

Those attending the NTA 47th Northwest Turfgrass Conference scheduled for October 11-13, 1993 in Yakima, Washington, will notice a number of major changes from past conferences as the NTA board tries to respond to member and exhibitor recommendations. Scheduling changes will be the a part of the new look. First the conference has been moved to later in the year-from September to October-in response to member desires. Next, the conference has been shortened by half a day ending Wednesday afternoon rather than Thursday at noon to accommodate the requests to eliminate the need for the Wednesday night lodging.

Major programming changes have also been incorporated into this conference in the effort to reflect the desires of members and suppliers. The traditional hosted "Get Acquainted Reception" held Monday evening will no longer include table-top exhibits. At the request of a conference exhibit advisory group, supplier involvement will be in the form of "event sponsorships" rather than exhibiting.

A major addition to the conference professional development (education) program is an all-day, preconference seminar. For 1993, the program will be tailored to sports turf management. With the addition of the seminar, Monday's preconference program will include three options: 1) the **R.L. Goss Golf Tournament for Research**, 2) the **Turfgrass Facilities Tour** and the 3) **Sports Turf Managers Seminar and Sports Complex Tour**.

The schedule of events for the conference is set, except for some last minute fine-tuning.

An overview of the conference program is as follows:

Monday- October 11, 1993 (Preconference events)
Sports Turf Managers Seminar & Sports Complex Tour
Turfgrass Facilities Tour
R.L. Goss Golf Tournament for Research
Get Acquainted Reception (hosted)

Tuesday- October 12, 1993 (Conference events)
Kick-off Continental Breakfast (hosted) & Annual Meeting
General Sessions (morning)
Companions Luncheon Tour
Turfgrass and Ornamental Sessions (afternoon)
Annual Banquet (with International flavor entertainment)

Wednesday- October 13, 1993 (Conference events)
Turfgrass and Ornamental Sessions (morning)
Companions Tour

President's Message

I'm sitting at my desk watching the rain drip off the gutter, waiting for the clouds to disperse so I can see if Mt. Rainier is still there or if it has washed away. I guess we have returned to the typical NW weather, dry Februarys and wet Aprils.

The season is in full swing and it is great to be into spring. The biggest complaint I've heard, from nursery people, retail and wholesale companies and everyone else, is rain, rain, rain! I keep repeating, we need the water, we need the water, we need...

There was a good representation of NTA members at the Western Canada Turf Association Conference. A quick question for anyone who was there at the end – who was the murderer and who solved it?

Our last board meeting was the first of March. Plans for the 1993 Conference in Yakima are shaping up nicely. The line up of speakers will be covering a wide range of topics. At the next Board meeting we will be finalizing the speakers, the entertainment and the activities. This year we are offering a preconference seminar for sports turf managers. Now on Monday you'll have the choice of the turf tour, the golf tournament, or the sports turf seminar.

We as a board have been investigating ways to increase our Research and Scholarship Fund. We would like to be able to fund many of both the ongoing and new research projects and to be able to give more scholarships to deserving students. Supporting OSU and WSU students and research programs is one way to help the turf industry in the Pacific Northwest. To accomplish this, the board invited the executive director of the Make-A-Wish Foundation of Washington to meet with them and discuss fund raising ideas. The foundation is a non-profit organization which provides wishes to children with life threatening illnesses. He gave us a variety of ideas on suggested methods to raise funds for research and scholarships. It was a very informative and productive workshop. The main reason for people **not** to give to a cause is that they have never been asked.

The International Turfgrass Society, Pacific Northwest Tour which was to have taken place this summer has been cancelled. It seems it was too expensive a side tour for many of the attendees.

The Pacific Northwest is becoming a popular place for industry-related association conferences. Oregon State University will be the site, August 7-11, 1993, for the American Society of Horticulture Sciences meeting. In November of 1994, the Seattle Convention Center will be the site for the American Society of Agronomists. Then, in January of 1995, the Weed Science Society will hold their national meeting in Seattle.

Have a great summer.

47th Northwest Turfgrass Conference Presenters Come from Throughout the US

The program committee has gone the extra mile to get a balance of outstanding internationally, nationally and locally recognized presenters for the 1993 conference. The list of presenters, which looks like a "Who's Who" of the green industry, includes the following:

- **Dr. Donald V. Waddington**, Professor Emeritus, Department of Agronomy, Pennsylvania State University. Dr. Waddington is known internationally and nationally for his contributions to the surface characteristics of sports fields. He will be making presentations during both the preconference Sports Turf Managers Seminar and Sports Complex Tour the conference.

- **Dr. Nick Christians**, Professor, Department of Horticulture, Iowa State University. Dr. Christians will be making presentations on biological herbicides and another topic to be determined.

- **Attorney W.O. Robinson**, partner in Polsky, Robinson & Jones, Attorneys at Law, and **Mr. Ted Stamen**, Urban Horticulture Advisor, University of California Cooperative Extension. Mr. Robinson and Mr. Stamen will present information on how to stay out of costly lawsuits via an audio-visual presentation reviewing 14 common horticultural lawsuits followed by a question and answer session.

- **Dr. Douglas Brede**, Research Director, Jacklin Seed Company. Dr. Brede, drawing upon Jacklin experience in the international market, will provide a presentation on "prospecting for native grasses in the Pacific Rim countries"

- **Mr. Brad White** and **Mr. Mike Johnson**, Research Assistants, University of Washington. These gentlemen will discuss, respectively, hazard tree evaluation and IPM maintenance of ornamentals.

- **Mr. Jerry Bushree**, owner of Hydro-Alternatives, will be discussing irrigation water auditing.

- **Mr. Larry Gilhuly**, Western Region Director, US Golf Association, Green Section, will be speaking on the environmental implications of wash racks.

In addition, information will be provided by "our own folks" on research progress. Presentations will be made by **Dr. William J. Johnston**, Washington State University, Crops & Soils Department, **Dr. Stan E. Brauen**, Washington State University Research and Extension Center, **Dr. Gwen Stahnke**, Washington State University Research and Extension Center, and **Mr. Eric Chapman**, Washington State University, Crops & Soils Department.

Other turfgrass and ornamental related presenters will include **Mr. Jon Hooper**, Grounds Manager, University of

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Conference Presenters *(continued from page 2)*

Washington, **Ms. Crystal Fricker**, Plant Breeder, Pure Seed Testing, Inc., **Mr. Ken Longman**, Park Maintenance Supervisor, Seattle Center, and **Mr. John Monson**, Facilities Manager, Seattle Seahawks.

This group of presenters—and more—offer such an impressive collection of national and local turfgrass and ornamental experts with such an array of comprehensive information, you can't afford to miss any of it.

1993 Membership Certificates

Membership certificates for 1993 have been mailed to all NTA members who paid their membership dues as of May 1, 1993. Members receiving certificates include: regular, student and honorary members. If you have not received a certificate and think you should have, contact the NTA office.

Northwest Region University Field Days

OSU Horticulture Department Turfgrass Field Day

Tom Cook has announced that this year's OSU Horticulture Department turfgrass field day is scheduled for 1:30 p.m., Tuesday, May 18, 1993 at the Lewis Brown Horticulture Farm. Contact Tom Cook at (503) 737-5449 for further details.

WSU (Puyallup) Research & Extension Center Turfgrass Field Day

Dr. Stan Brauen has announced that this year's WSU (Puyallup) Research & Extension Center Turfgrass Field Day is schedule for 9:30 a.m., Tuesday, June 8, 1993 at the Farm 5 Turfgrass Field Laboratory located east of Puyallup. Contact Stan Brauen at (206) 840-4511 for further details.

High Cedars Golf Club owner **Wally Staatz** has indicated that he intends to continue to offer the no-host picnic lunch and golf at his course following the field day.

WSU (Pullman) Crops & Soils Department Turfgrass Field Day

Dr. William Johnston has announced that this year's WSU (Pullman) Crops & Soils Department Turfgrass Field Day, normally held on the odd years, will not be held due to scheduling conflicts. Contact Dr. William Johnston at (509) 335-3620 for further details.

1993/94 Annual Directory Advertisers Sought

Advertising is currently being sought to help underwrite the cost of publishing the **Directory of the Northwest Turfgrass Association for 1993/94**, scheduled for distribution in the Fall. The cost of publishing the directory is covered by advertising, so membership dues can be used for information, research and scholarship activities rather than publication of this directory. The annual directory is one of the membership services that comes with belonging to the the NTA.

Planning for the directory has begun and any suggestions members may have concerning its content or scheduling would be genuinely appreciated by the NTA staff. Past annual directories have included an alphabetical listing of active members by name with a cross reference by company. Other information that has been included in the directory in past issues are listings of: NTA Research and Scholarship Fund contributors; officers and committee chairs for the association; cooperative extension offices in the region; and, greens industry publications and associations. Also included has been a guide to sources for turf grass related technical assistance.

Potential advertisers wanting information on advertising should contact the NTA staff at the NTA office- (206) 754-0825.

Conference Table-top Exhibits Eliminated and Replaced by Sponsorships

Turf grounds maintenance and irrigation suppliers are cordially invited to become a **Sponsor** of the **1993 Northwest Turfgrass Conference** being held Monday Monday October 11-13, 1993 at the Holiday Inn in Yakima, Washington. We are anticipating a turnout of 300-400 golf course, parks, sports facility, grounds, lawns and ornamentals professionals interested in the latest research and developments. The NTA Board of Directors, based on the recommendations of long-time supplier participants in past NTA conferences, decided to eliminate the table-top exhibit usually held in conjunction with the conference get acquainted reception the first evening of the conference. Suppliers felt the table-top exhibits were not particularly productive and that they distracted from the main purpose of the reception—conference registrants getting acquainted and/or reacquainted as a kick-off of the conference.

In place of the table-top exhibit, suppliers (and anyone else interested) will be asked to become a conference **Sponsor**. The objective of the sponsor program is to cover as many of the conference-related expenses as possible with sponsorships thus freeing up registration receipts for the NTA Research and Scholarship Fund. Sponsors will have a variety of conference-related activities and events to choose from including: golf tournament (tees and greens); beverage services; receptions; meal functions; table decorations; dinner wine; entertainment; presenter honoraria and, others.

Four types of sponsors will be recognized: **Bronze Sponsors**, those providing a $250 sponsorship; **Silver Sponsors**, those providing a $500 sponsorship; **Gold Sponsors**, those providing a $750 sponsorship; and, finally the **Platinum Sponsors**, for those providing a $1,000 sponsorship. Depending upon the type of sponsor, there will be varying degrees of recognition ranging from signage at an event to special recognition at the convention and throughout the year in the Northwest Turfgrass Topics newsletter. Sponsor invitation and registration packets will be in the mail to suppliers in the near future.

Semi-ah-moo Golf & Country Club Recognized with Best of the West Award

Semi-ah-moo Golf & Country Club, located in Blaine Washington, has been recognized with a **Best of the West** award in the category of **Course Conditioning and Presentation** in the March 1993 issue of Western Links Magazine. Quoting Western Links Magazine, "along with the natural attributes of the land and the creativity of the design, course conditioning and presentation are the primary factors that determine the quality of a golf experience." Congratulations to **Gordon Kiyokawa**, Golf Course Superintendent, and his crew!

Christy Gets GCSAA Environmental Steward Merit Award

Tom Christy, CGCS, Riverside Golf & Country Club Superintendent, has been selected as one of six merit winners for the first annual GCSAA Environmental Steward Award. Congratulations Tom!

WSNLA Members Prioritize Research Needs

Which research projects are important, and which are not. These were the questions posed to the members of the **Washington State Nursery & Landscape Association** (WSNLA) in a survey the association conducted of its members late in 1992. The event leading to the survey was the passage of WSNLA-backed legislation establishing a "research surcharge" on nursery dealers' licenses. It is estimated that the surcharge will generate around $70,000 in new research funding to address the needs of the nursery and related industries in the state of Washington.

The survey results showed that the members most commonly selected **research category** was "disease prevention & control" followed by "insect prevention & control," "natural resource conservation," "plant culture practices," "weed control," and, "new plant development & evaluation."

As for **research projects**, 55 were identified with the most often cited being "IPM for insect control" and "IPM for disease control."

International Seeds, Inc.Appoints Crampton Research Agronomist

Chuck Crampton has been appointed research agronomist with International Seeds, Inc. of Halsey, Oregon. Crampton will be conducting turf quality and seed yield trials along with data collection and analysis.

Fushtey Unexpectedly Passes Away

We are sad to report the unexpected passing away of **Dr. Steve Fushtey** on March 11, 1993. He was a Western Canada Turfgrass Association Research Scientist at the time of his death. Helping others was one of the distinctive attributes of Dr. Fushtey, whether it was professionally in turfgrass, or an acquaintance with lawn problems or just someone needing a helping hand. He has often been a valuable contributor to NTA conferences over the years. We extend our sincere condolences to his family.

Wing Gets International Marketing Excellence Award

Seed Research of Oregon presented its "International Marketing Excellence Award" to Gordon Wing of Agrico Sales, Ltd. in Delta, British Columbia. The award recognizes "innovative sales and marketing strategies, unsurpassed customer service and a commitment to professional excellence." Congratulations Gordon.

State of Oregon Accident Reporting Rules

Employers need to report injuries resulting in hospitalization to the OR-OSHA field office for their area:

Portland	229-5910
Salem	378-3274
Eugene	686-7562
Bend	388-6066
Medford	776-6030

Or call OR-OSHA's Central Office at 378-3272 to determine which office should be contacted.

When reporting an accident, the following information will be requested:

- Date and time of injury
- Hospital name, address and phone number
- Employer name, address and phone number
- Description of accident
- Location of accident
- Injured worker's name, address, Social Security number, date of birth and occupation

In addition to the reporting regulations, a new rule requires preserving the scene of a fatality or catastrophe. It states: "Employers, their representatives, or others shall not disturb the scene of a fatality or catastrophe other than to conduct the rescue of injured persons, until authorized by the Administration (or designee), or directed by a recognized law enforcement agency." (OAR 437-01-052)

For more information concerning these new requirements, call any OR-OSHA office.

State of Washington Delays Effective Date of New Child Labor Rules

The effective dates for new child labor rules have been delayed so employers will have additional time to learn about the new regulations and to coordinate implementation with the school calendar.

Under the new dates, the child labor rules--including prohibited duty regulations--will take effect **MARCH 1, 1993,** except for hour regulations which are effective July 1.

The rules originally were scheduled to take effect in early February.

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Child Labor Rules *(continued from page 5)*

"We extended the dates to allow more time for educating employers and to coordinate implementation with the school calendar," said Joe Dear, director of Labor and Industries.

The new child labor rule limit 16- and 17-year-olds to four hours of work a day and 20 hours a week during the school year.

The rules also provide a special variance that allows 16- and 17-year-olds to work up to six hours a day, 28 hours a week during the school year.

"Studies conclude that students working in excess of 15 or 20 hours weekly during school are absent more from school, spend less time on homework and have lower grades" Dear said.

"This is your future workforce. Education is the first job of our state's teenagers, and it is the only job that will ensure successful employment in the future."

During school vacations, 16- and 17- year olds can work up to 48 hours per week. Different rules apply to 14- and 15-year-olds.

Prohibited-duty regulations, which take effect March 1, 1993, outline restricted employment to minors.

Some of the work prohibited for working minors under the new rules include:

• Flagging or being an outside helper on any public road, work which involves directing moving motor vehicles in or around warehouses or loading/unloading areas.

• Occupations requiring personal protective equipment.

• Occupations where there is risk of exposure to bodily fluids or transmission of bloodborne infectious agents.

• Occupations involving fire-fighting and fire-suppression duties.

• Occupations involving potential exposure to hazardous substances that are considered carcinogenic, corrosive, highly toxic, toxic sensitizers or that have been determined to affect reproductive health.

• Selling candy, flowers or other merchandise to passing motorists on the public right of way. Selling to motorists from a window counter is not prohibited.

• Working in or about boiler or engine rooms.

• All work performed more than 10 feet above ground or floor level. Minors under the age of 16 may not work above ground or floor level at all.

• Occupations where work is performed in freezers, meat coolers and all work in preparing meats for sale. Wrapping, sealing, labeling, weighing, pricing and stocking are permitted if work is performed away from meat cutting and preparation areas. Occasional entry into freezers or coolers for obtaining stock or placing stock is not prohibited.

Further prohibited duty restrictions apply to minors under the age of 16.

For more information or to receive a copy of the rules, call toll-free at 1-800-547-8367.

How to Prepare for a Job Interview

The golf course industry at present is experiencing some recovery from the slowdown of the past few years. Golf course superintendent job openings are scarce but when they occur, there is a flurry for a short time. Being prepared when the time arises will help in securing an interview.

If you are an assistant going for your first superintendent interview, you've already rewritten your resume, applied to the courses that may suit your values and goals, networked with salesmen and other superintendents (hopefully the outgoing superintendent can help you), and it has finally paid off—you've landed an interview. But so have a half-dozen other hopeful applicants. There are no guarantees, but following basic interviewing guidelines can give you an advantage.

One key to a good interview is to focus on the needs of the golf course doing the hiring. The golf course should share what they need from a new superintendent. Then you should share your background with them. You want to help the Green Committee/General Manager see how you can help get them from Point A to Point B.

If you don't have certain experiences they are looking for, be honest, but let them know you have the training to find the answers. Not all superintendents have built greens, but we all know who has. State confidently that through your involvement with the golf course superintendents association you have developed a rapport with superintendents of many courses experiences similar directives.

Listen carefully and when speaking find out what the course needs and be prepared to demonstrate how you

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NORTHWEST TURFGRASS ASSOCIATION

1992-1993 Directory Supplement No. 3

New Members

Feb 1, 1993 - April 30,1993

BEVENS, BRENT J.
OREGON STATE UNIVERSITY
Department of Horticulture
Corvallis OR 97331
503-363-1289 Fax #

BRANHAM, DAN
Superintendent
FOREST LAWN CEMETERY
319 4th Ave SE
Auburn WA 98047
206-735-3697 Fax #

CAMPBELL, DENNIS S.
Golf Course Superintendent
TWIN LAKES GOLF & COUNTRY CLUB
3583 SW 320th St
Federal Way WA 98023
206-838-2325 Fax #

CHAVARRIA, JOE N.
Sales representative
VIRGORO INDUSTRIES
8762 SW Illahee #504
Wilsonville OR 97070
503-694-2624 Fax # 503-694-2624

GREGORY, GEORGE
Landscape/Grounds Manager
HEWLETT-PACKARD COMPANY
PO Box 15
Boise ID 83704
208-323-2651 Fax # 208-323-5003

GRIMES, RICK
Sales representative
THE BENTLEY COMPANY
4109 Airport Hwy S
Seattle WA 98108
206-622-8262 Fax # 206-622-1736

HAUSMAN, STEVE W.
WASHINGTON STATE UNIVERSITY
234 NW Sunrise Dr
Pullman WA 99163
509-332-2597 Fax #

HELDEROP, JOHN
Operations Manager
KAWASAKI MOTORS CORP.
5080 36th St SE
Grand Rapids MI 46546
616-949-6500 Fax # 616-954-3031

KAMA, J. W.
General Manager
BLUE MT. SEEDS, INC.
PO Box 185
Imbler OR 97841
503-534-2221 Fax # 503-534-4775

KENDALL, RUD
Editor
TURF & RECREATION MAGAZINE
19469 92nd Ave
Surrey BC V4N 4G6 CANADA
604-888-8843 Fax # 604-888-8734

KERNS, BEN
Golf Course Greenkeeper
BROADMOOR GOLF CLUB
2340 Broadmoor Dr E
Seattle WA 98112
206-325-6482 Fax #

LEOPOLD, JOE
Manager
ISLAND SAND SALES
900 N Tomahawk Is Dr #150
Portland OR 97217
503-240-0446 Fax # 503-285-5282

Welcome Aboard !

NORTHWEST TURFGRASS ASSOCIATION

1992-1993 Directory Supplement No. 3

New Members

Feb 1, 1993 - April 30,1993

MOORE, MARKY A.
CLOVER PARK TECHNICAL COLLEGE
2804 C Garden Ct
Steilacoom WA 98388
206-584-7535 Fax #

O'LAREY, TIM
Asst. Golf Course Superintendent
OVERLAKE GOLF AND COUNTRY CLUB
PO Box 97
Medina WA 98039
206-454-1841 Fax # 206-451-3598

PAPAZIAN, DAVID
General Manager
GEOQUIP, INC.
PO Box 32
North Plains OR 97133
503-591-9507 Fax # 503-591-5847

POLLET, JOHN M.
Owner
GRASS MASTER
2433 233rd Ave NE
Redmond WA 98053
206-868-3619 Fax #

RILEY, SHANE O.
Sales representative
JR SIMPLOT CO.
16419 28th Dr SE
Bothell WA 98012
206-483-0640 Fax #

SCHOESSLER, BOB
Golf Course Superintendent
DUNGENESS TURF FARM
126 Dickinson Road
Sequim WA 98382
206-683-6725 Fax #

SCHRODER, JENNIFER L.
Landscape/Grounds Manager
CITY OF FEDERAL WAY
33530 1st Way S
Federal Way WA 98003
206-661-4042 Fax # 206-661-4024

SWEENEY, ROBERT E.
Assistant Superintendent
LAKE CHELAN GOLF COURSE CITY OF
PO Box 1669
Chelan WA 98816
509-682-3165 Fax # 509-682-3173

THOMSON, W. T.
Partner
MONTEREY CHEMICAL COMPANY
PO Box 5317
Fresno CA 93755
209-225-4770 Fax #

WENGER, KIM R.
Golf Course Superintendent
FIDDLERS GREEN GOLF COURSE
91292 Hwy 99 N
Eugene OR 97402
503-689-8464 Fax #

WILKINSON, MATT B.
OREGON STATE UNIVERSITY
741 NW 29th St
Corvallis OR 97330
503-754-4927 Fax #

Welcome Aboard !

Job Interview *(continued from page 6)*

can fill those needs. Most of the time courses hire a superintendent, not because of their skills, but because of the personality of the applicant. Your values and theirs must be a perfect match. Emphasize the teamwork ethic you will bring with you toward the golf professional and the clubhouse staff. An interview is really a conversation about whether there is going to be a perfect match all the way around. Learn how to market yourself so as to help the officials conducting the interview.

Make a list and be able to say you are creative, intelligent, organized, etc. Offer proof by example, give a good picture of yourself, allow your strengths to shine through.

Ask questions about the important issues, budget, equipment, irrigation system direction the club is going. Do they realize the cost involved, does the budget reflect their expectations? Remember, Rome wasn't built in a day. Stress that careful planning and goal setting should be prime objectives before jumping into a major project.

Do a dry run. Make sure your clothing is neat, clean and professional. Be sure you know where you are going even if you must drive out the day before. Review your resume, be as prepared as you can so nothing stresses you out. Always leave the interview on a positive note. If you don't get the job, your name could be passed on to other clubs in the area. If possible, leave with a clear-cut idea about a follow-up interview or an appraisal if you've been turned down. The appraisal will help you in your next job search.

It's important to communicate well with the committee since they will be assessing how well you get along with others. Maintain eye contact, listen carefully, and respond appropriately. Be positive. Don't bad-mouth a former employer. It's a small world in the golf business.

Source: MAAGCS Newsletter, May 1993

Job Listing Service for NTA Members

The NTA office is now providing members a **Job Listing Service** which will include information on current job openings around the region for green industry personnel. Information included in the job listing service will be the name and phone number of a contact announcing the position along with the position title and the closing date. Application procedures and other job related information will have to be obtained through the party making the announcement.

Members wanting to announce position openings through the Job Listing Service need only provide the NTA office with a copy of their announcement or, in the absence of an announcement, provide the NTA office, in writing, with the following information-job title; jurisdiction contact name, address and telephone number; and, the job closing date.

Members wanting to access the Job Listing Service may do so by requesting a print-out of the current listings. A print-out may either be mailed or FAXed dependent upon the volume.

Where Did That Grass Come From?

Almost all of the major turfgrasses in our country are immigrants. Seed from European grasses is through to have come to America during colonization in hay used for packing and for livestock.

The soil in the northern United States and Canada was suitable for growth and the grasses quickly spread as trees were removed. Some of the pesky turf weeds of today, like crabgrass, were also imported in this way.

The most popular cool season turfgrasses include: blue grasses (Poa spp), bentgrasses (Agrostis spp), fescues (Festuca spp), and ryegrass (Lolium spp).

The main warm season grasses are also immigrants: bermudagrass (Cynodon dactylon) - introduced from Africa in 1751; centipedegrass (Eremochloa ophiuroides) - from China in 1918; St. Augustinegrass (Stenotaphrum secundatum) - from West Indies in 1880; bahaigrass (Paspalum notatum) - from Central and South America in 1895; and zoysiagrass (Zoysia spp) from Southeast Asia in 1895.

Turfgrasses indigenous to North America are: buffalograss (Buchloe dactyloides) in areas of low rainfall and carpetgrass which is native in the southeastern United States (but may have been imported from the West Indies).

Methanol (Wood Alcohol) Spray Improves Crop Yields and Water Use Efficiency

Findings recently published in the prestigious *Proceedings of the National Academy of Sciences* have the potential to impact agricultural production worldwide. This research suggests significant improvements in yields and water use efficiency may be obtained by virtually all crops grown in the Northwest, with the exception of corn. Dr. Andrew Benson, a world renowned photosynthesis scientist, and Dr. A. Nonomura, have found that spraying crops with methanol increases production by as much as 100%, reduces water use by 50%, and substantially shortens the growing season. Methanol, also known as wood alcohol, is a natural by-product of plant metabolism. In the form sprayed on crops, it is relatively inexpensive and poses no danger to humans. The researchers report 1 to 3 foliar applications of methanol seem to allow plants to divert more solar energy into growth. In the process there is less water demand. The effect is seen most readily in regions with high light intensity. Benson stated this new approach, which has been partially replicated by other researchers, has the potential to revolutionize agriculture in arid regions of the world.

Dr. Beard Outlines '9 Vital Trends'

Dr. James Beard recently outlined 10 trends he felt vital during a presentation at the Michigan Turfgrass Conference, just a few miles from Michigan State University where he taught from 1961 to 1975.

"Some of the things I say will probably be wrong but the challenge is to think of the future," said Beard, who was visiting from Texas A&M University.

1. More computer use in turfgrass management. "You're going to come in and turn that computer on and you're going to get a series of readouts, that there is a high probability of this disease in the next four days, or the prime time for winter overseeding is coming up, or a period of root stress is approaching," he notes. Computers, networked to libraries, will provide an immediate source of information for turfgrass managers.

2. Reduced pesticide use. More corrective and fewer preventive applications. More pesticide applications will be target-specific.

3. More emphasis on pest management approaches. The key to solid turfgrass management? "Understanding and manipulating the environment in favor of the growth of the turfgrass plant, and minimizing the chances of stress," says Beard.

4. Water conservation. Expect less water available for turfgrass use, higher water costs, increased use of effluent water, government control or allocation, says Beard, noting that the industry has had a hard time convincing the public that turfgrass is actually vital in preserving and protecting groundwater.

5. More uses of controlled-disease fertilizer products. The presence of nitrates in groundwater will continue to be an issue. He asks for improvements in slow-release fertilizer carriers.

6. Less energy waste. Expect steadily rising costs for petroleum-based products and internal combustion machinery, causing turfgrass managers to plan their programs with energy savings in mind.

7. Improved stress tolerance in turfgrass cultivars. Plant breeders will accelerate their efforts to develop grasses that provide quality turf while requiring less energy, water, fertilizer and pesticides.

8. Innovative rootzones for turfgrass getting lots of traffic. Beard refers to a mesh element system in place in the upper six inches of turfgrass rootzone at the 14-acre Santa Anita (Calif.) Race Track. He said it significantly reduced divoting and improved turf at the track. Systems based on similar principles might be developed for golf tees/greens and sports fields.

9. More education needed to keep abreast of technological advances. Turfgrass managers will have to be well-versed in turfgrass, and also in cost control, system organizations, personnel management, budgeting, etc.

The heart of his message? "Efficiency through better management of water use, pesticide use, energy use, equipment use, labor use and fertilizer use," says Beard.

A Review of Irrigation Water Quality

by M. Ali Harivandi, Ph.D.

Irrigation water quality plays a major role in the successful management of turfgrasses. Of prime importance are the effects of irrigation water on turf-soil-water relations and on the soil's chemical and physical properties, particularly as these factors relate to turfgrass quality. Therefore, assuming proper irrigation practices, the concept of irrigation water quality for turfgrass is generally based on interpretations of the chemical analysis of a given water.

All irrigation waters contain appreciable quantities of soluble salts and traces of other materials. These may include sodium, potassium, calcium, magnesium, chloride, bicarbonate, sulfate, nitrate, borate, fluoride, iron, silica, aluminum and other elements. Because these elements may accumulate in the soil in quantities which are injurious to turfgrasses, potential problems from the use of irrigation water can sometimes be anticipated by a laboratory chemical analysis. The most important of the items determined in the analysis for judging water quality are:

1. total salt content
2. sodium hazard (permeability)
3. toxic iron levels
4. bicarbonate
5. pH

Salinity problems, most pronounced on heavy soils, occur when the salts dissolved in irrigation water accumulate in the grass root zone to levels intolerable to

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the species being grown. A high salt level in the soil may affect turfgrasses by increasing osmotic pressure of the soil solution, thus making water less available to the plants. Where salinity is very high, grass roots wilt and plants may eventually die. Nutritional imbalances and mineral toxicities may also occur at high salinity levels.

Sodium concentration is also a very important criterion of irrigation water quality. Although high levels of sodium may accumulate in grasses and become toxic, it is sodium's indirect effect on turfgrass growth via its deteriorating effect on soil structure which is of concern to the turf manager.

High irrigation water sodium content causes deflocculation of the soil colloids which in turn severely reduces both soil aeration and water infiltration into and through the soil. In other words, soil permeability is reduced when waters containing high levels of sodium are used for irrigation. Relative permeability is often expressed as SAR (sodium absorption ratio), the ratio of sodium ion concentration to that of calcium plus magnesium.

Irrigation water usually contains a wide variety of elements in small concentrations. Problems can occur if certain trace elements accumulate in the soil to levels toxic to turfgrasses and other plants. For example, although chloride is not particularly toxic to turfgrasses, most trees and shrubs are quite sensitive to a chloride content of 10 meg/(355 ppm).

Boron on the other hand, is a more likely cause of toxicity in turfgrasses. The major symptom of this toxicity is necrosis at leaf tips, where the highest boron concentration occurs. Since turfgrasses are mowed regularly and accumulated boron is thus continuously removed from the leaves, most regularly mowed turfgrass can tolerate high concentrations of boron in irrigation water. However, this high boron content of poor quality irrigation water poses a greater toxicity problem for non-turf plants, e.g., trees, shrubs, ground covers, etc. Most landscape plants show injury when irrigated with water containing more than 1.0 mg/(ppm) of boron.

An irrigation water's bicarbonate content can also affect soil permeability and must be evaluated along with the sodium, calcium and magnesium content of both soil and water. The bicarbonate ion may combine with calcium and/or magnesium and precipitate as calcium and/or magnesium carbonate. As calcium and magnesium precipitate out of the soil solution, the SAR of that solution, and consequently the exchangeable sodium percentage (ESP) of the soil, increases. (When dealing with poor water quality irrigation water, many analytical laboratories adjust the calculated SAR to include a more correct estimate of the calcium that can be expected to remain in the soil water after an irrigation. This adjusted SAR - expressed as Adj. SAR - reflects the water content of calcium, magnesium, sodium, and bicarbonate, as well as its total salinity.)

The pH of irrigation water is seldom a direct problem by itself, but a pH outside the normal range is a good indicator of an abnormal water situation. Very high or very low pHs are warnings that the water needs further evaluation for other constituents. (The use of pH in evaluating water quality is analogous to the use of body

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temperature when diagnosing an ill individual; just as abnormal temperatures indicate an illness but do not specify its nature, abnormal pHs indicate a problem of some kind exists.) The desirable soil pH range for turfgrasses is 5.5 to 6.5. The desirable irrigation water pH, however, ranges from 6.5 to 8.4.

Turfgrasses grow in a very complex turf-soil-water system and not in soil or irrigation water alone. Turfgrass problems associated with the use of poor quality irrigation water require consideration of many factors including water chemistry, soil chemistry, soil physical properties, irrigation practices and the turfgrass species grown. Only by evaluating them can turfgrass be managed effectively.

Problem Solving on Sports Fields

by S. T. Cockerham, University of California, Riverside

The successful management of turf subjected to high traffic requires the application of certain fundamental cultural practices. As the demand for facility quality goes up, the respective demand for turf quality also increases requiring cultural practices and resource input beyond the basics.

Good management will allow the maximum number of games on a sports field, but a heavily used turf will eventually wear out. The number of games a given field can take before the turf is gone and the footing becomes marginal is somewhat predictable based upon the history of the field and its care.

TRAFFIC

Sports traffic consists of three components. They are compaction, wear and shear. The compaction is from the weight and down pressure of the athletic activity. Wear is the tissue injury from pressure, tearing and scuffing. Shear results from the movement of the cleated in the turf and soil. Shear causes soil and root displacement, tissue tearing and the dislodging of the verdure.

Compaction is a subtle effect of traffic. Traffic causes an increase in soil bulk density, soil lateral strength, total water holding, and lateral rooting. It causes a decrease in soil aeration, infiltration, soil temperature (compacted soils are cold and wet), root depth, and total turf roots.

A cleated football shoe has an area of 4.5 cm^2, while a street shoe has 109 cm^2. If a player weights 90 kg there would be 20 kg/cm2 on the football shoe and 0.8 kg/cm^2 on the street shoe. They player running increases the pressure approximately 38 times.

PLAYABILITY

Sports traffic reduces turf cover. Once this happens playability is reduced with a decrease in traction or footing, erratic ball bounce and roll, faster speed of the ball, and poor uniformity of playing characteristics.

FIELD SAFETY

In the effect of reducing turf cover, sports traffic decreases impact absorption and footing, while creating a non-uniform surface. In 1984, there were over 98,000 football injuries reported by hospital emergency rooms. No one knows how many could have been prevented by a good playing field, but there certainly were many that could be blamed on a poor one.

SPECIES SELECTION

Traffic tolerance of turfgrass species varies a great deal including often wide variability within species. Where adapted, the new perennial ryegrasses have superior durability and the Kentucky bluegrasses have good ability to recover from injury. The elite tall fescues are still considered to have a coarse texture, but have proved to be the more durable species in selected climates.

FERTILIZERS

Traffic, durability, playability, aesthetics, recovery ability, and field safety require high vigor in turf. To get that vigor, plant nutrient requirements are high. A common recommendation for nitrogen is 1.0 lb of actual N per 1000 square feet per month of growing season. This is probably the highest practical rate for most fine turfs. The other nutrients most needed on turf are phosphorous, potassium and iron. Potassium has shown to be important on sports turf, particularly on sand and modified rootzones. Potassium applications equal to the rate and frequency of N are usually recommended. On well drained (e.g. sandy) soils the sports turf will require as much potassium as nitrogen.

When the soil temperature is high enough for root and rhizome growth, the total nutrition available to the plant should be high. The recommended soil pH for high traffic turf is about 6.5. At that pH level most nutrients present in the soil will be available to the turf. If pH is too high or too low the appropriate adjustments should be made to the soil.

IRRIGATION

As "quality demands" of high traffic turf increase, more attention is given to irrigation. Water stress from drought, summer heat, or wind can be devastating to this kind of turf. Even in areas where irrigation is not common, an irrigation system will be necessary to produce a sports field capable of supporting high traffic.

AERATION

High traffic turf soils are subject to severe compaction. Hollow tine coring is the most effective technique for

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compaction relief of sports fields. Solid tine aeration and water jetting are used.

Because core aeration is slow, labor intensive, and messy there are practical limits as to the frequency. On loams or heavier soil, coring should be done after every fourth or fifth football game or eight baseball or soccer game. In youth soccer where they may be eight games per day it may only be practical to aerate once per month. Sandy soils need aeration to keep the surface from sealing.

TOPDRESSING

If the field is to be topdressed it is usually done after aerating with the hollow tines. This has the effect of adding a loose soil to the effective rootzone. Topdressing also helps keep a true playing surface.

MOWING

Mowing is the most common practice and must be done on nearly all turf installations. The frequency of mowing is determined by removing less than one-third of the blade length at any one time. For example, if the mower is set to 1.0 inches, the grass should be mowed before it is 1.5 inches tall. If that takes a week, that is the proper frequency. Mower height should be measured from a hard level surface to the top of the bedknife on a reel mower and to the bottom of the blade of a rotary.

Patterns of lines, squares and cross-hatching can be made with skilled use of the mowers. When well done, patterning leaves a good impression with players and spectators and helps instill pride in the facility. It is pretty inexpensive P.R.

THATCH

Thatch is a layer of undecomposed organic matter developed from clippings and the natural accumulation of plant leaves and roots. Thatch can prevent water and fertilizer from going into the soil and may also stop oxygen exchange in the rootzone resulting in shallow roots and weak turf.

Thatch on high traffic turf is a valuable impact absorbing safety pad, and mass for wear resistance. Undesirable on most turf thatch is an asset to be nurtured on high traffic turf. The players do a more than adequate job of preventing the thatch from becoming excessive.

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Calendar of Events

May 16 - 17 **NTA Board of Directors Meeting**
Contact: NTA Office (206) 754-0825

May 18 **OSU Turfgrass Field Day**
Contact: Tom Cook (503) 737-5449

June 8 **WSU Field Day/Puyallup**
Contact: Stan Brauen (206) 840-4511

June 15-16 **Jacklin's 1992 Discovery Tour**
Contact: Jacklin Seed Company (208) 773-7581

June 17 **Turf-Seed's 10th Annual Field Day**
Contact: Turf-Seed (503) 651-2130

August 9 **NTA Board of Directors Meeting**
Contact: NTA Office (206) 754-0825

October 10 **NTA Board of Directors Meeting**
Contact: NTA Office (206) 754-0825

October 11-13 **NTA 47th Northwest Turfgrass Conference**
Contact: NTA Office (206) 754-0825

October 12 **NTA Annual Membership Meeting**
Contact: NTA Office (206) 754-0825

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