



## 1988 Northwest Turfgrass Conference Program Set

The Board of Directors would like to extend a cordial invitation to the members and non-members of the Northwest Turfgrass Association, along with their colleagues, employees, spouses, and friends, to attend and participate in the 1988 42nd Northwest Turfgrass Conference and Exhibition, September 19 - 22, 1988 in Spokane, Washington.

Research information, education, equipment displays and demonstrations, the annual turfgrass men's and women's golf tournaments and a first-time turfgrass facilities tour will highlight the Conference and Exhibition. Also on the schedule of events are the annual business meeting of the NTA members; an excellent program for spouses and friends; and a number of social activities designed for everyone.

### REGISTRATION MATERIALS:

The conference **Registration and Program Packet** was mailed to members and non-members during the week of June 20-24, 1988. If you have not received the material and would like copies, contact the NTA office at (206) 754-0825.

### ACCOMMODATIONS:

#### Host City

Spokane is the heart of the Pacific Northwest Inland Empire, 280 miles east of Seattle, 390 miles northeast of Portland, 380 miles north of Boise and 500 miles southeast of Vancouver (Canada).

#### Housing

The NTA has selected the Sheraton-Spokane as the headquarters hotel for the conference. Special conference room rates will be \$58 single or \$64 double per night.

The Sheraton-Spokane offers 15 floors of splendid accommodations, superb restaurants and lounges, and outstanding meeting facilities all located in the center of Spokane. Each of the 380 rooms and suites is designed to be your private world of comfort. You can count on the gracious hospitality of the Sheraton to make your stay a memorable one.

The hotel is only a few minutes walk from popular shopping and entertainment areas, key government and business offices. It is adjacent to Riverfront Park, the Convention Center and the city's performing arts center, the Opera House.

*(Continued on page 4)*

## Bylaws Revision Proposed

The NTA Board of Directors, after a review of the association's bylaws this past year, has concluded they could use some major remodeling. Accordingly, they have adopted a proposed revision of bylaws for a vote of the members at the NTA member Annual Business Meeting to be held Wednesday, September 21, 1988 during the Northwest Turfgrass Conference and Exhibition in Spokane, Washington.

The bylaws may be amended at an annual meeting of the association members by a majority vote of those (voting members) present. The proposed new bylaws change provisions in the old bylaws and add a number of new provisions. A few of the major changes included in the revised bylaws proposal are:

- reduction of the number of officers in the association from 5 to 4
- reduction of the number of board directors from 9 to 6
- revision of the officer and director nomination and election process and timeframe
- revision of the bylaws amending process

Due to the size of the proposed bylaws document, we are not sending it out on a membership-wide basis. However, copies of the proposal are available to any member who requests it by contacting the NTA office.

## First Annual NTA Golf Tournament for Research

The Tacoma Country and Golf Club will host the Northwest Turfgrass Association's **First Annual NTA Golf Tournament for Research**. Friday, October 7, 1988. The tournament is being organized by Norm Whitworth, NTA Public Relations Committee Chairperson in cooperation with John Ford, Tacoma Country and Golf Club Superintendent. The cost will be \$50/person with most of that fee going to the NTA Research and Scholarship Fund. Norm promises more information and details in the near future.

## Seed Research Markets Turfgrasses in Japan

Seed Research of Oregon has granted marketing rights on their line of turfgrasses to Kenko Commerce and Company, Ltd. of Tokyo. Kenko has extensive experience in the turfgrass industry with distribution throughout Japan. They also are distributors for Georgia Pacific horticultural lines.

## President's Corner

### Grassland Football

by James R. Chapman



Listen to the roar of the sideline crowd

As there bursts the halfback out of a crowd;  
Dodging and squirming, twisting and turning,  
Cutting and slicing and mashing and churning.

It's late in November and the center of the field  
Is only a mud bath, slightly congealed.

A few lonely clumps of tired turf  
Are all that remain on the trampled earth.

'Tis all nothing new to the maintenance crew,  
Again and again they must start anew;  
Cultivating, fertilizing and seeding the grass  
With hope against hope the new field will last.

How many of us wish to be back on the farm  
When springtime comes and temperatures warm?  
For there at least we had enough sense  
To save our grass with some sort of fence.

Oh how we've tried so hard in the past  
To find the superlative – the "miracle" grass,  
That would withstand the meanest wear and tear  
With only a minimum – if any – care.

The Barkers swarm 'round and spiel their tale  
About Hocum Pocus, just offered for sale;  
A fancy new plant food for use once a year. . .  
Grass grows, weeds go, no troubles. . . sign here!

The seedsmen now come with their fancy mixtures,  
Big claims for success and beautiful pictures;  
Grass grows so high, just right and then quits,  
No mowing, no problems, just pure benefits.

Lots of great new equipment that saves labor too,  
And what about Abra Cadabra Special Formula 2?  
But somehow or other the stuff seems the same  
As something else last year, what was its name?

Now spring comes along and the grass starts to grow,  
Its time once again to get ready to mow.  
Another new year and the mudhole is gone,  
For sure, this time, the turf will be strong.

But wait! Hidden deep in that new sea of green  
Is the pesky *Poa Annuua*, growing unseen.  
It won't be long before this pest

Shows its true colors and crowds out the rest.

The practice fields are neglected, of course,  
So weeds come, spread and take over in force.  
They lose their appeal and the coaches see  
The fine stadium turf, available for free.

The Band must also toot up a storm,  
And its no fun at all on pavement so warm.  
So off they go to strut their best  
On the stadium turf that needs a rest.  
Ah, here comes the football season again.  
The goalposts are up and the cheerleaders spin.  
"Try to keep it in shape for football, will you?  
Oh, by the way, there's a new soccer league too."  
And now its November and the scene is the same,  
The turf disappeared with the second or third rain.  
Rough schedule this year and just look at the field!  
A mudhole again, slightly congealed.

This tale has no end, there seems no relief  
For the maintenance crew and their hard working chief.

Though turf is the safest and cheapest ground cover,  
It does need a rest, some time or other.

The Wheelers and Dealers will promote artificial,  
synthetic or plastic as so very beneficial;  
Ignoring the damage to young footballers knees,  
Disregarding professional football players pleas.

How surprising the money for such a project  
Exceeds several millions, and no one will object.  
What about a new turf field for a similar endeavor?  
The interest alone would keep it in shape forever.

Maybe **two** new fields and some practice areas too,  
Constructed and maintained with a long term view.  
Some scheduling discipline would spread the abuse  
That results from constant every day use.

Well built natural turf fields can withstand lots of wear,  
And recover quickly with proper care;  
Providing a cushion where players bounce free,  
Without damaging collar bone, shoulder and knee.

Whatever the choice, it is going to cost money;  
The old field, the old mudhole, is no longer funny.  
The need from now on is for something to last  
and provide safer play than the field of the past.

Although artificial turf looks "neat" from the stand,  
Real grass is a much softer place to land.  
Believe me, my friends, natural grass is better  
Than plastic that succumbs too soon to the weather.

## Underground Storage Tanks

Congress has amended the Resource Conservation and Recovery Act to provide for comprehensive regulation of underground storage tanks ("USTs") that store petroleum, including gasoline and crude oil, and hazardous substances.

A UST is defined as any tank, including any underground piping connected to the tank, that has at least 10% of its volume below ground with certain exemptions, including farm and residential, heating oil and septic tanks. The UST regulations require tank owners to provide notification of the existence of their tanks, whether operational or not, to a designated agency. In Washington all UST owners were to have notified DOE by May 8, 1986. Owners of newly installed USTs must notify DOE within 30 days after bringing the tank into use. The law carries a penalty of up to \$10,000 per tank, per day, for failure to notify.

# Golfplan

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## The OSHA Hazard Communication Standard

The OSHA Hazard Communication Standard (HSC) became effective May 23, 1988. All nursery farms, landscape firms and garden centers must be in compliance with this new federal law.

Previously limited only to manufacturing industries, the HSC objective is to reduce work-related illnesses and injuries caused by chemicals. This is intended to be accomplished by communicating the hazards of chemical use to employees.

How will this be done? Chemical manufacturers, distributors and importers must provide hazardous substance information by labeling containers and distributing Material Safety Data Sheets (MSDS).

MSDS's must be obtained for all chemical substances present at a nursery, garden center or landscape operation, and all chemical containers must be labeled properly.

Through training programs employers must establish under the HSC, all workers must be educated and informed how to use the products along with information on emergency and safe handling.

Businesses who do not implement a HSC program are subject to federal civic penalties. Failure to comply could result in liability suits directed at your firm or toward individual company managers. Compliance with this program will help to ensure that your employees work in a safe and healthy environment.

Please be advised that the HSC is wholly separate from any community or state right-to-know laws, the High Risk Notification legislation currently being debated in Congress, and any other similar federal regulations. Although there is bound to be some overlapping, the entire nursery/garden center/landscape industry must comply with this new federal regulation.

## How To Get The Most Out of a Conference

Whether you are a convention veteran or a first timer, planning ahead will help you get the most out of conventions, trade shows and association meetings.

Once you have decided which shows to attend, make reservations well in advance so you get the hotel, flight and discounts you want.

Pack professional-looking clothes that you will feel comfortable walking in all day. Men generally wear anything from business suits to knit shirts and slacks, but formal dinners and many restaurants require a suit and coat. Women's dress standards are similar to men's; a dressy outfit is also suitable for evening.

Don't forget your business cards, a notebook, pens and pencils, paper clips and copies of your business brochure, if you have one. You will want to take full advantage of the chance to talk with fellow professionals.

### At the meeting

When you arrive, pick up your official credentials, which should include a trade show floor map and current schedule. Make notes of the times and locations of seminars, exhibits and presentations you want to hear.

At seminars, listen actively. As the speaker talks about problems and solutions, consider how they apply to your site. Don't be shy during the question period because if you're curious, chances are others are also.

Taking notes will help you remember important points, and you can share handouts with your employees.

### Visiting exhibits

Start by visiting the exhibits you circled so you will be sure to see the ones that interest you most. Ask the exhibitor to clarify anything you don't understand. If you use the product being exhibited, share your experiences because companies attend trade shows in part to hear from customers. Often exhibitors can help solve problems with their products.

A trade show is the ideal place to conduct initial product research and find out what your fellow conventioners are using. Pick up information and determine the local distributor for products you intend to purchase.

After you've viewed all the exhibits you circled, browse through the show because something you overlooked before might catch your eye.

### After you return home

Organize the receipts and information you collected at the convention and schedule a meeting with your key employees at which you can share what you learned. This is a good time to distribute copies of the collected material and discuss how to use the information in your operation.

If you enjoyed certain programs or wished other subjects were covered, contact the association that put on the show. Also, consider volunteering for association duties, which will give you a chance to win recognition for yourself and learn more about your industry.

Source: *Grounds Maintenance*, January 1988

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## Conference Program . . .

(Continued from page 1)

To make room reservations, complete and return the enclosed reservation card or call the Sheraton reservations number 800-848-9600. Reservation requests must be received by August 28, 1988. After that date, reservations will be accepted on a space available basis only.

For your convenience the best arrival time is after 3:00 p.m. Early arrivals will be accommodated as rooms become available. If you're arriving later than 4:00 p.m. refer to the requirements specified in the registration card to guarantee your room reservation.

For further information regarding the headquarters hotel, contact:

Sheraton-Spokane Hotel  
N. 322 Spokane Falls Court  
Spokane, WA 99201  
(509) 455-9600 (Information)  
800-848-9600 (Reservations)

Alternative housing in the immediate area (walkable distance from the headquarters hotel and Convention Center would include: Cavanaugh's Inn at the Park — 800-843-4667; Cavanaugh's Riverside Inn — 800-843-4667; or the Sun Tree Inn — 800-888-6630.

### TRANSPORTATION:

Spokane International Airport is served by Alaska, Northwest, Delta and United Airlines. At the airport you'll find Hertz, Thrifty, Avis and Dollar car rental services. The airport is seven miles or a ten minute ride from the city center with cab fares ranging from \$11.00 to \$13.00.

Spokane is also served by railroad with its depot in the center of town.

### TOURIST INFORMATION:

Information about tourist opportunities and events calendars can be obtained by contacting the Spokane Area Convention and Visitor Information Center, W. 926 Sprague, Spokane, WA 99204, or by telephoning 1-800-248-3230.

### EDUCATION PROGRAM:

#### Speakers

The education program will focus on information pertinent to all aspects of turfgrass management and the turfgrass industry. A partial list of conference presenters includes: Dr. James B. Beard of Texas A&M University; Mr. Gordon Witteveen of the Board of Trade Country Club (Woodbridge, Ontario, Canada); Mr. Larry Gilhuly of the United States Golf Association; Dr. Douglas Brede of the Jacklin Seed Company; Dr. Walter Gardner of Vermont; Robert Staib of NOR-AM Chemical Company; Dr. William Johnston and others from Washington State University; Dr. Stan Brauen and others from the Western Washington Research and Extension Center; Mr. Tom Cook from Oregon State University and other industry-related professionals from throughout the Pacific Northwest.

#### Education Topics

A few of the topics that will be addressed during the education program include: An Overview of the Future;

Renovation of Old Turfgrass Sites; Turfgrass Management in the Year 2000; Effect of Light on Turfgrass Seedling Establishment; the Joys of Grass; Turfgrass Disease Research Update; 25 Years of Mistakes; Xeriscaping; Wild Flowers or Potential Weeds; Low Maintenance Turfgrass Species; Water Movement in Soils, Drought Tolerance in Turfgrasses; Strategic Plan for the Growth of Golf; Golf Course Hydroseeding; Thinking Superintendent; Tree Pruning and Tree Wounds; Ornamental Pests; and many others.

This year's education program is better than ever! You can't afford to miss it!

#### Pesticide Recertification

Oregon and Washington pesticide recertification credits will be available.

### TURFGRASS FACILITIES TOUR:

Monday's program will offer an alternative to those conference registrants who don't golf — a five stop tour of a number of turfgrass facilities in the area and lunch. After assembling at the hotel ballroom foyer (conference registration area), you'll leave for a guided tour of the famous Riverfront Park, Spokane's legacy from the World's Fair, which is now owned and operated by the city. Nestled in the heart of the vital city center, Riverfront Park consists of 100 acres of landscaped, lush, green, rolling hills along the beautiful cascading Spokane River.

After touring the park, you'll board busses for the second stop of the tour at Senske Lawn and Tree Care's Spokane branch for a tour of the chemical lawn care company and get a first-hand explanation and demonstration of chemical lawn care and spraying equipment and insecticides.

Next, the third stop, will be at the WSU Necrotic Ring Spot Research plots and a research status report by WSU researchers Dr. Gary Castagner and Dr. William Johnston.

The fourth stop will be one of the city's largest parks, Manito Park and the adjacent Nishinomiya (Japanese) Garden, along with the world-famous Duncan Formal Gardens and Conservatory Greenhouse, Lilac Garden and Rose Hill. Located on Spokane's south side, Manito Park has acres of peaceful alcoves, beautiful flower gardens, woods and greenery, playgrounds, and the duck pond. The Conservatory greenhouse displays tropical foliage, seasonal flower and houseplant varieties.

Back on the busses and you're off to the fifth stop, the Jacklin Seed Company, for a tour of their turfgrass trial plots, a brand new research laboratory and greenhouse, and their seed processing plant. Arrival back at the hotel is scheduled for 6:00 p.m., in time to freshen up for the "Get Acquainted Reception and Dinner" that evening.

### GOLF:

The annual men's and women's Turfgrass Conference Golf Tournaments will be held at the Spokane County Parks Department MeadowWood and Liberty Lake Golf Courses. The courses are located near the shore of Liberty Lake just 15 miles (15-20 minutes) east of downtown Spokane.

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## SPOUSE/GUEST PROGRAM:

Tuesday will be a full day of activity for spouses and/or guests. At 9:00 a.m. you will meet in the hotel's 15th floor Inner Circle Lounge, from which you'll depart for a delicious brunch in the famous original 1900's handcarved masterpiece Loeff Carrousel.

Following brunch, you'll be treated to a small scale train tour of the 100 acres of lush rolling hills of Riverfront Park along the Spokane River and Falls in the center of Downtown Spokane.

At the end of the tour you will disembark the tour train and enter the famous IMAX (Image Maximum) Theatre presentation in the enormous image of unsurpassed clarity on a screen 5½ stories tall and 69 feet wide.

Wednesday will, once again, begin at the hotel's 15th floor Inner Circle Lounge. From there it's off by bus to the gracious Campbell House, built in 1989, for a portrait of the life of the elite mining tycoon and his family during what is called Spokane's "Age of Elegance."

The next stop on the morning tour will be the Cheney Cowles memorial Museum with its exhibits interpreting the exciting history of the area through one of the best collections of artifacts and pictures portraying the geology, forestry, wild life and flora of the area.

After all the touring it will be time for an outstanding lunch and fashion show at Patsy Clark's Mansion which was designed and built in the late 1890's.

## EXHIBITION:

The 40,000 square foot Spokane Convention Center, located along the Spokane River just next door to the conference headquarters hotel, will house this year's equipment and supplier exhibition. The response from exhibitors has been outstanding and the show should be the largest and best ever. Every type of equipment, material, supplies and services will be represented along with technical personnel to assist with any inquiries you may have. This show is a must for anyone involved at any level of the turfgrass industry.

## Pesticide Compatibility

Tank mixing of pesticides is allowed if specified on the label or in this bulletin; however, precautions are necessary. Each applicator must use the manufacturer's recommended rates and should conduct small tests of any specific mixture before using it extensively. Brief guidelines follow: (1) Wettable powder formulations usually can be mixed together safely. (2) Never mix emulsifiable concentrates. (3) Insolubles can be tank mixed, provided that products are sprayed at recommended rates. (4) Only one soluble chemical can be tank mixed with any number of insolubles. (5) Soluble fertilizers and trace elements can be added, provided that the amount will not exceed 1 ounce of solid per gallon of tank spray mix.

Source: Cornell Guide

## Turfgrass Information File (TGIF)

Have you ever said, "I can remember seeing an article on that about a year ago but where was it?" Or perhaps you want to track down information on a particular turf disease. Now there's help.

The USGA Turfgrass Information File (TGIF) provides computer-based bibliographic access to published materials on turfgrass research and management. The Turfgrass Information Center (TGIC) at the Michigan State University Libraries operates the file in cooperation with GCSAA.

### Scope and content

To build the file, current published literature is selected from approximately 70 journals including:

- Research – *Agronomy Journal, Plant Disease, Phytopathology, Crop Science, Canadian Journal of Plant Science, Journal of the Sports Turf Research Institute...*
- Professional – *USGA Green Section Record, California Turfgrass Culture, Golf Course Management, Greenmaster...*
- Trade – *ALA, Grounds Maintenance, Landscape Management (Weeds, Trees & Turf), SportsTURF...*

In addition, on-line files and bibliographies from such sources as the National Agricultural Library, Commonwealth Agricultural Bureaux (U.K.) and Biological Abstracts are reviewed regularly.

The database also includes journals, conference proceedings, research annuals, newsletters and extension bulletins in addition to the books, papers, theses and dissertations, and special publications.

More than 95 percent of the file entries have been published since 1968. Literature published since 1980 is most complete; the 1972-1979 period is less well-represented. Because the file is still "under construction" it cannot be considered exhaustive at this time but significant results can be retrieved on most turf topics.

## Sources for Summer Help

*I haven't hired all the people I need for this summer and I'm desperate. Where can I find them if they didn't answer my help-wanted ad? – California.*

At the recent Lawn Doctor meeting in Atlantic City, participants were reminded of these sources:

- Labor Department – Show them your job descriptions and keep periodic contact with a person there.
- Local businesses like gas stations and supermarkets – Talk to stock boys and others working weekends on the chance they want a job with weekends free.
- Senior citizens – The *Yellow Pages* lists senior citizens' organizations, some of which have job placement departments or bulletin boards.
- Community service organizations like the Elks – Lawn care might be a good second job for someone with an unusual work schedule.
- Public notices and classified ads placed in papers serving people within reasonable commuting time.
- Religious organizations.

# Conserving Water in Turfgrass Areas

by Dr. William Johnston

The Pacific Northwest has a Mediterranean climate that is characterized by hot, dry summers. Under these conditions, turfgrasses often require irrigation to be aesthetically pleasing, to function properly (e.g., as play fields, golf courses, etc.), and to merely survive. Because water is a limited resource we must learn how to use it as efficiently as possible. In the Pacific Northwest, we have several turfgrass species and cultivars which are grown in a variety of soils and microclimates under a host of cultural practices. All of these factors have a varying influence on irrigation practices. However, the general concepts of turfgrass irrigation can be followed throughout the region.

## Techniques to Determine Turfgrass Water Needs.

1. Monitor the plant water status. There are several very sophisticated techniques to measure plant water status. However, for most turfgrass managers, one of the best methods is to simply observe the grass. Look at the turf! When a grass changes color from a bright green to a dull blue-green or smokey, gray-green color, it needs immediate water. Also, when stressed for moisture, turf plants lose turgor and when walked on will not spring back. That is, the turf area shows footprints when walked on. Ignoring these two signs will lead to tan turf and then possibly dead turf that will not recover.

2. Monitor the soil moisture status. The monitoring of soil moisture with sensors is nothing new. However, there has been a great resurgence of interest in this area with the potential for interfacing sensors, computers, and irrigation systems. Although these systems are impressive and somewhat reassuring, they are certainly no better than the personnel behind them, be that the turf manager, the irrigation designer and installer, computer programmer, or the service personnel.

If you have not yet gone "high-tech", one of the best methods to determine soil moisture is to examine the soil with a soil probe. If the soil looks, feels, and smells moist or will form a ball when squeezed, the moisture level is generally adequate. By looking at the soil moisture in relation to rooting depth, this test can also be used to determine how often to irrigate. The root zone should be moist to the depth of the deepest roots.

Soil texture, organic matter, and soil depth will influence water infiltration and percolation and the soil's water holding capacity. Sandy soils with large pore spaces rapidly take up water but do not retain large amounts. On the other hand, clay soils have poor water movement but high water retention. For additional information on soil-water relations read WSU publication EM 3536 "Turfgrass Soil-Water Relationship."

How often you irrigate usually depends upon turfgrass appearance and/or soil moisture. Unless you are purposely syringing a turf, you should always avoid daily, light irrigations.

3. Monitor the atmospheric demand. Weather data can be used to predict plant-water requirements. Weather records over long periods of time are good indicators; however, for precise water management, day-to-day information is needed. U.S. Weather Bureau evaporation pans can be

used to evaluate plant water use. Ratios of water use to pan evaporation for all turfgrasses are not known, but according to Hagood and Goss (EM 3536), a practical ratio is 0.5:1.0. They further state that since few irrigation systems apply water uniformly, a better use of the evaporation pan method would be to apply one inch of water when one inch has evaporated.

Workers in California, using Bureau of Plant Industries' pans (BPI pan evaporation = 0.80 U.S. Weather Bureau pan evaporation) found that cool-season grasses used about 85% as much water as the pan over a year. Therefore, ET (evapotranspiration) equals 68% of the U.S. Weather Bureau pan according to the California system.

## How to Meet Turfgrass Water Needs?

As previously stated, the objective of irrigation is to moisten the root zone. Any more water applied is too much, any less water applied is too little. Most turfgrass roots grow 4 to 6 inches deep, however, some grow down to a depth of 12 inches. Grasses with deeper root systems "mine" water from a greater soil volume so they require less frequent watering than those with a shallow root system. Probably a good "rule of thumb" is to wet the top 6 inches of soil thoroughly. Do not apply water more rapidly than the soil can take up or significant water runoff loss will occur.

Major factors affecting water infiltration are thatch, soil compaction, and steep slopes in the landscape. Thatch must be eliminated, compacted soils need core aerified, and irrigation rates need adjusted on sloping land to adjust the rate of application to that of infiltration.

## Irrigation Strategy for Turfgrass Survival.

1. When limited water is available. First, proceed as suggested. Examine the soil profile with a soil probe. See where the roots are and where the soil moisture level is. Then make adjustments to "tune up" the system. If moisture is present throughout the root zone, try reducing the amount of water applied, thus saving on irrigation. Also, replace only the amount of water used by the turfgrass. Do not over irrigate.

Following irrigation wait approximately 12 hours to allow for gravitational water drainage through the soil profile. Again use your soil probe and again fine tune the system. The use of a soil probe is one of the best ways to determine water need under different soil and turfgrass conditions.

Make certain that all of the water being applied is being utilized by the grass. This implies good water infiltration and percolation aided by such cultural practices as thatching, core aerification, proper irrigation rates and timings, the use of wetting agents, etc. Also, check the irrigation system to insure it is functioning properly.

Practice selective watering throughout the turfgrass area to best utilize what water is available to you. Examples of selective water sites are: golf greens and tees, high visual impact areas, and around buildings. In the future, consider xeriscaping.

2. When no water is available. First, plan now how you are going to manage with no water. When that time comes, hard decisions will have to be made. These decisions should be well thought out before hand and the implications of these decisions should be well understood by all parties concerned.

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Second, remove thatch. Thatch impedes water movement into the soil and also increases evaporation.

Third, reduce fertilizer applications. Fertilizers can be applied in the spring if there is enough moisture for good grass growth. However, once the soil moisture begins to deplete, apply no further fertilizer.

Fourth, control weeds. Many weeds are deep rooted, e.g., dandelion and plantain, and these plants are heavy users of water. These weeds must be controlled in the spring.

Fifth, increase cutting height. Although a higher cutting height will increase turfgrass water use, it will also promote a deeper root system. When we are working with limited water what we need is turfgrass survival, not turfgrass water use efficiency.

#### **What will the grass look like under survival management?**

At first the turf will develop a spotty, irregular look as shallow rooted plants gradually die and the turf thins out. Shallow rooted plants like **Poa annua** will be among the first to go. Hopefully, the deeper rooted grass plants will remain "relatively" green until water is again available. In short, it will not be a pretty sight, but the turf will survive.

#### **If the turf dies, what next?**

Think positive. Look at it as a second opportunity to get things right. This is the time to soil test, incorporate fertilizers and lime as required, modify soil texture, install drainage, control perennial grassy weeds, etc. In short, renovate the turf area. Then when moisture is again available, and at the correct planting period, reseed with certified seed of a recommended species and cultivar. For seeding recommendations read PNW 299 "Turfgrass seeding recommendations for the Pacific Northwest."

## **Pacific Seedsmen President**

Members of the Pacific Seedsmen's Association (PSA) elected Tom Castle, Castle Vegtech, as their new president for the 1988-89 year. The election took place at the group's annual convention earlier this month in Oahu, Hawaii. Castle has been serving as first vice president and served PSA in several committee positions. He replaces Fred Clark, Clark Seeds, Nampa, Idaho.

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## **Lilly/Miller Educational Seminar Series Begins 2nd Year**

The second year of Integrated Turf/Grounds Management Seminars begins August 4, 1988, at the Skagit Valley Inn, Mt. Vernon. The full day of classes will cover thatch development and control, aquatic weed control, insect activity and controls, turf and ornamental diseases, special presentations on pruning, park construction and athletic turf renovation. Cost of \$22.50 (\$25 for late registration) will include lunch and the seminar manual. For information contact James Chapman, Technical Services Manager for The Chas. H. Lilly Co., 762-0818 (Seattle) or 1-800-562-7013.

Special speakers include Sharon Collman and Dr. Ralph Byther, WSU Cooperative Extension; Cass Turnbull, Plant Amnesty; John Hicks, Port Angeles Parks Superintendent; Laura Footer-Strehlau and James R. Chapman, Lilly/Miller Commercial Turf Department. This program will be repeated November 10, Tye Motor Inn in Tumwater; November 16, Executive Motor Inn in Fife; December 7, Holiday Inn in Issaquah. Pesticide recertification credits (and WSN/WSL credits) will be given.

Integrated Turf/Grounds Management Seminars do stand alone as educational functions. However, the original concept is a four year program designed to provide basic data and support information on turf and grounds management in Western Washington. Then the series will repeat.

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## City Uses Median Strip Landscaping

In California's Silicon Valley, where competition for new industry is intense, the City of San Jose is building roads with attractively landscaped median strips to enhance land value and help lure developers and tenants to the area.

In one such median strip project, on a 1.5-mile extension the Oakland-based landscape architecture firm of Singer & Hodges, Inc. created an instant landscape, using 36-inch boxed trees and other large specimens.

But the landscape would not have flourished for long in the native serpentine soil, a real problem on the northern portion of the project. With too little calcium and too much magnesium, serpentine soil typically stunts plant growth and distorts foliage.

B&B Landscaping of Mountain View, which installed the landscape, overexcavated and removed twelve inches of subsoil. They ripped the bottom and added gypsum – the calcium in the gypsum displaces the excess magnesium.

An irrigation system was laid and a new soil mix imported. It was used at the rate of six cubic yards per 1000 square feet.

The mix was mounded high in the middle, sloping gently to the edges of the median strips. To protect the oaks from excess moisture, the landscape architects designed a subdrainage system, with a perforated drain to each tree.

All of the plantings are well-established and thriving – giving the impression that the area will soon be bustling with industry and that it is a desirable location for a company. At least, that's what the City of San Jose is banking on when developers and potential tenants tour Silicon Valley looking for sites.

Source: Park/Grounds Management

## Jacklin Seed Expands Research Staff

The newest addition to the research department at Jacklin Seed company, Post Falls, Idaho, is Craig Teel. He is a graduate of Washington State University with a BS in general agriculture and agriculture economics.

Teel will be a support technician for the cool season grass breeding section of the research department. He will also serve as ranch-research liaison for Jacklin Seed.

## International Pesticide Applicators Conference

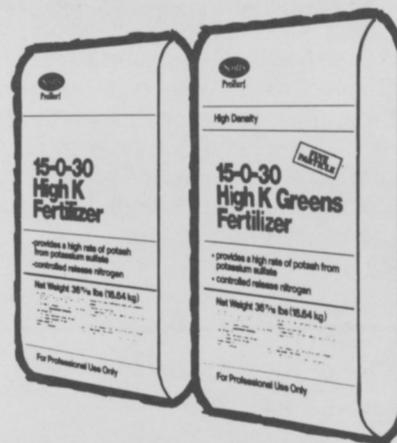
The International Pesticide Applicators Association have scheduled their annual Convention and Trade Show for September 28th, 29th and 30th, 1988. This year's convention will be held at the Red Lion Inn, 300 - 112th Ave. S.E., Bellevue, Washington.

The program that has been planned should be of interest to anyone who applies pesticides. It seems almost on a daily basis one can read in the newspaper, or hear on the radio or television that pesticides are causing unsatisfactory health effects and damage to the environment. Are we as pesticide applicators causing damage to wildlife, water, and the air we breathe? Are we causing human health problems? What are the responsibilities of a pesticide applicator? What is fact and what is myth?

This year's theme "**Pesticides in the Urban Environment – Health and Environmental Responsibility**" will examine these issues. With the help of Dr. David Eaton, a toxicologist from the University of Washington, we were able to put together a program that includes academia, environmentalist, and industry individuals who will delve into these questions.

At the end of the three days these and more questions will be answered, and any professional commercial applicator attending this convention will be able to communicate with their customer and the media more knowledgeable.

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## Superfund vs Initiative 97

The purpose of passing the superfund law (ESB 6440) again was to insure its placement on the November ballot as the alternative to Initiative 97. Last October, legislators agreed that, if Initiative 97 was validated, the current law should be the alternative and Washington voters should decide which version they prefer. The law as passed last October is sound and balanced. It was developed by a bipartisan legislature and passed by two-thirds of each house of Washington's legislature. Implementation of the cleanup rules by the Department of Ecology (DOE) and the Waste Pesticide Program under (ESB 6440) are well underway and set to begin in early summer/fall.

Superfund was designed to cut through the bureaucratic red tape and courts to get cleanup done. The law was drafted to eliminate the frustrations of the federal superfund where government agency haggling and continued litigation resulted in the majority of the money being diverted from cleanups to courtrooms. The legislature made a clear statement with the passage of the superfund law - **"We want cleanups, not court cases."**

The Initiative is well intentioned but contains many of the fatal flaws that are currently in the federal superfund. The chances that cleanups will occur under the initiative are not as great as under the current law.

In summary, the law has the following provisions that allow for a more comprehensive program: It is much more specific in directing DOE, it makes it possible for private contractors to get liability insurance to work on cleanups, it enables small businesses and farmers to get financial assistance to help pay their share of cleanup costs without going bankrupt, and it contains an insurance fund for completing unfinished cleanups.

Finally, the law should be given a chance to work. It is one of the most balanced and workable approaches taken by any state. It is not everything that business or agriculture wants, and it contains provisions agreeable and disagreeable to environmental organizations. It can work, if it is given a chance and if DOE is held accountable to insure that cleanups happen and court fights are avoided.

Source: *Washington Friends of Farms and Forests*

## Farwest Turf Wins Distributor of the Year Award From Jacobsen

Farwest Turf Equipment Co., Portland, OR, won a Distributor of the Year Award from Jacobsen Division of Textron Inc. for outstanding promotion and sales of Jacobsen products. The award was presented at Jacobsen's Annual Distributor Awards Breakfast held in conjunction with the GCSAA's International Golf Course Conference and Show in Houston, TX.

Farwest Turf Equipment Co. distributes and services Jacobsen professional turf equipment, which is used to maintain large turf areas such as golf courses, athletic fields, parks, and school grounds.

## Xeriscaping: Turf and Ornamental Grasses for Low-Water Landscapes

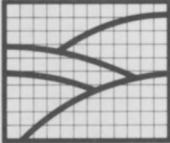
Some quick facts regarding xeriscaping are as follows:

- Proper soil preparation and deep but infrequent watering are most important in establishing grasses in a xeriscape.
- Select grasses according to the nature of the area to be covered, water availability and effect desired.
- Use sod-forming grasses near houses and areas of high foot traffic.  
Buffalograss and drought-enduring varieties of bluegrass are suitable in a xeriscape.
- Use coarse grasses such as tall fescue, smooth brome and wheatgrass in outlying areas where appearance and traffic are not as important as near the house.
- Warm-season grasses, such as blue grama and buffalograss, go dormant and turn tan in fall and green up in late spring.
- Ornamental grasses can be used to complement a xeriscape; some are low ground covers, others make a tall background or screen or accent plant.

Source: *Grounds Management Forum*

## NTA Directory Distributed

The **Directory of the Northwest Turfgrass Association for 1988/89** was recently distributed to NTA members and research and scholarship fund contributors. If you fit one of those two classifications, you should have received a copy. If yours didn't arrive, contact the NTA office.



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## Turfgrass Field Days

Oregon State University (OSU) and Washington State University (WSU) both recently conducted successful Spring Turfgrass field days. The OSU program was held at the Corvallis Lewis-Brown Horticulture Farm May 24th and the WSU program was at the Puyallup Research and Extension Center Farm 5 June 14th.

Turfgrass field days have been an annual part of the research and extension program in the northwest for nearly 30 years. The Oregon State University turfgrass program is headed by Mr. Tom Cook. The Washington State University turfgrass research program currently consists of three faculty members who devote considerable time to turfgrass research. Those are: Dr. Bill Johnston, who teaches turf science and conducts agronomic research at Pullman; Dr. Gary Chastagner, who spends approximately 15-20% of his time in conducting turfgrass disease research in all areas of Washington; and Dr. Stan Brauen, who conducts turfgrass studies throughout Washington. In addition, support is obtained from colleagues in Agronomy and Soils, Entomology, Plant Pathology, Horticulture, and from various industry cooperators.

## Turfgrass Research Funds

Over the years, a very significant level of support to the Puyallup turfgrass research program has been provided by the Northwest Turfgrass Association in the form of the Research Associate program (1975 to 1985); and it was the Northwest Turfgrass Association that has provided financial assistance in 1986 and 1987 in support of turfgrass maintenance following the retirement of Stan Orton, the research technician. In the 10-year period from 1975 to 1985, the Northwest Turfgrass Association contributed \$114,000 to the Research Associate program at Puyallup. In addition, \$37,000 was provided in timeslip labor and equipment contributions to the agronomic program; \$7,000 was provided to Dr. Kuo's aluminum toxicity research; and since 1981, \$18,000 has been provided in support of Dr. Chastagner's disease research at Puyallup.

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## Hazardous Chemical Regulation and Reporting

In October of 1986, Congress enacted the Emergency Planning and Community Right-To-Know Act. Under the Act, facilities that have on their premises chemicals designated as "extremely hazardous substances" must cooperate with state and local planners in preparing emergency response plans. Facilities must report accidental releases of such substances to state and local response officials. Beginning July 1, 1988, facilities must annually report the amounts of chemicals released into the environment, either routinely or accidentally, during the previous year. Reports must be sent to the U.S. Environmental Protection Agency, as well as designated state agencies. Those who fail to report as required are subject to civil penalties of up to \$25,000 per day.

The reporting requirements apply to owners and operators of facilities that have ten or more full-time employees, that are in Standard Industries Classification Codes 20 through 39 (i.e., manufacturing facilities) and that manufactured, processed or otherwise used a listed toxic chemical in excess of specified threshold quantities.

Anyone who thinks his or her facility may be covered by these regulations should take the following steps:

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1. If you have ten or more full-time employees, check the Standard Industrial Classification Code list to determine whether your facility is covered.
2. Check the list of toxic chemicals to see if any are manufactured, imported, processed or in any other way used by your facility.
3. Determine whether you handle any chemicals on the list in an amount greater than the specified thresholds.
4. If you meet the criteria, request copies of the reporting form and instructions.
5. Begin to develop the appropriate information to report on 1987 releases and put in place a record-keeping system that will help you estimate releases for future years.



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**Calendar of Events**

- July 21** NWGCSA Meeting – Contact Ron Coleman (206) 825-3942
- July 29** 1st Annual Golf Course Industry Tourney – Contact Ron Coleman (206) 825-3942
- August 4** Lilly/Miller Integrated Grounds Management Seminar – Contact James Chapman (206) 762-0818
- August 8** BEST Fertilizer Tournament – Contact Steve Houghton (206) 485-2378 or Norm Whitworth (503) 659-3114
- August 18** NWGCSA New Trends in Golf Course Design & Construction Materials Seminar – Contact Ron Coleman (206) 825-3942
- September 18** NTA Board of Directors Meeting – Contact Blair Patrick (206) 754-0825
- September 19-22** NTA NORTHWEST TURFGRASS CONFERENCE and EXHIBITION – Contact Blair Patrick (206) 754-0825
- September 28-30** International Pesticide Applicators Association Convention & Trade Show – Contact Bill Harlan (206) 823-2600
- October 7** NTA First Annual Golf Tournament for Research – Contact Blair Patrick (206) 754-0825 or Norm Whitworth (503) 659-3114
- October 20-22** Washington-North Idaho Seed Association Convention
- October 20** NWGCSA Personal Financial Planning & Investment – Contact Ron Coleman (206) 825-3942
- November 2-4** Weed Conference – Contact Ken Maurer (509) 547-5538
- November 10** Lilly/Miller Integrated Grounds Management Seminar – Contact James Chapman (206) 762-0818
- November 18** NWGCSA Annual Meeting – Contact Ron Coleman (206) 825-3942

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