



Turf Times

Bi-Monthly
Update
Sept./Oct. 1994
Vol. 23, No. 5

The newsletter from the Northern Michigan Turf Managers Association

CLEAN SWEEP

—Unwanted chemicals rounded up in NMTMA project

Credit: Reprinted from the Gaylord Herald Times

GAYLORD— The Northern Michigan Turf Manager's Association (NMTMA) sponsored a Clean Sweep of pesticides and other chemicals for members of the association at the Otsego County Road Commission Aug. 2.

According to Kim Olson, a board member of NMTMA, the group held the Clean Sweep to get rid of unwanted or old pesticides and chemicals that its members had. Clean Sweep is a program initially sponsored by the state to help groups like NMTMA get rid of unwanted chemicals. Members paid a small fee to NMTMA, then the association paid the company disposing of the pesticides.

According to Greg Lyman, environmental education specialist from Michigan State University, the Clean Sweep program is good because it gets old and/or not used chemicals properly disposed of.

"This is a great opportunity because if any one of these sites tried to do this on their own, it would cost them four to five times the cost they're paying today," he said.

Lyman, the principal organizer of the collection, said each member who brought chemicals to the collection site had registered what they were bringing before they came, so the company personnel collecting the pesticides were aware of what was being brought.

LYMAN SAID members from all over northern Michigan, including some from the Upper Peninsula, were participating in the collection.

According to Chuck Cabbage, agriculture environmental

coordinator for the Michigan Department of Agriculture, the Clean Sweep program has been in use for a number of years. The first one was held in Traverse City in 1988.

Cabbage said that the funding for the state portion of Clean Sweep comes from a federal grant from the Environmental Protection Agency. The majority of the costs were covered by the NMTMA.

According to Cabbage, NMTMA asked to sponsor a Clean Sweep for its members. They had heard about the program, and thought it would a good idea for them.

Cabbage said that the Gaylord collection was one of eight scheduled this year. One collection will take place near Stanton and the other sites will be scattered throughout Huron County and by Lake Erie.

Drug and Laboratory Disposal of Plainwell provided trucks, storage barrels and staff to handle the pesticides. During the collection, only the staff of Drug and Laboratory handled the chemicals, once they were at the collection site.

ACCORDING TO Cabbage, Michigan is leader in this type of collection and disposal program. He said this program is the least expensive of any state program in the United States. Michigan has helped at least 14 states over the last three years set up similar programs. Cabbage said that now 43 states have similar programs.

According to Cabbage, the chemicals collected in Gaylord will be disposed of depending on the flow rate, at either Thermo Chem. in South Carolina, and NSCO of Eldorado, AR.

Lyman Thanks NMTMA

Thank you for the recent award of \$500 from the Northern Michigan Turf Managers Association for my involvement in the "Clean Sweep" program. It was my pleasure to assist in this effort. I feel that these are important opportunities for the turf industry to take advantage of when they become available. The project was successful by collecting over 5,000 pounds of material from golf turf operations across the northern Michigan region. I'm sure the success of this program can be better described by those who participated and were able to release these products from their property.

There is another important component of this project which deserves recognition. The "Clean Sweep" project was conducted throughout the Lake Huron watershed and involved most of the eastern part of the state. There was EPA funding to conduct this project which was intended to assist agricultural producers in disposing of unwanted pesticides. The Northern Michigan Turf Managers Association moved quickly to become involved

in the program to take advantage of an attractive disposal price and MDA involvement, while agreeing to pay for the disposal of products individually. This pro-active approach allowed your members to become involved and impressed the personnel at the MDA and EPA who were involved in this program. Your efforts speak favorably for your association and the industry. In addition, I would like to recognize Ms. Kimberly Olsen who was instrumental in making this project work.

Finally, thanks again for the \$500 award. The NMTMA has been very supportive of the Environmental Education Program and it has been my pleasure to serve you. Please forward my appreciation to the rest of the board and association members.

Sincerely,

Gregory T. Lyman
Environmental Education Specialist

1994 Calendar of Events

TENTATIVE Schedule & Locations

(* NMTMA Golf and Meeting)

DATE	EVENT	LOCATION
Oct. TBA	MMTMA Annual Meeting	TBA
Oct. 3	MBCGCSA MTF FUNDRAISER	5 Clubs TBA
Oct. 4	WMGCSA Annual Meeting	Silver Lake G.C.
* Oct. 6	NMTMA Annual Meeting	Mistwood G.C.
Oct. 14	GCSAA Seminar - Employee Safety	E. Lansing Holiday Inn
Oct. 25	GCSAA Seminar - Equip. Managers	Blythefield C.C.
Oct. 25	MBCGCSA Annual Meeting	Maple Lane G.C.
Nov. 4	WMGCSA FALL PARTY	Spring Lake C.C.
Nov. 26	MMTMA CHRISTMAS PARTY	Frankenmouth

Reflections of a past season at Matheson Greens... By Pat Mertz

As the year winds down, and I think back on the past season, I am struck by how quickly it passed. It doesn't seem possible that 15,000 golfers have already played our course!

Matheson Greens has been open four seasons now, and I am starting to see the course shift its requirements from being grown in to regular maintenance. Thatch is starting to accumulate. Disease pressure is increasing and traffic patterns are now a consideration.

Bob Vavrek, the USGA agronomist, came for a day visit. He has a tremendous amount of knowledge and expertise. He was very helpful in coming up with solutions to several problems we are experiencing. We are struggling with a bad infestation of necrotic ring spot. After we hear all the latest reports at the turf conference this winter, we will formulate a plan to ad-

dress this issue next year.

Matheson Greens hosted the NMTMA/MTF fund-raiser this year. It was extra work for all of us, but was a terrific incentive to get done all of the little projects we had been putting off. The course looked great and our crew felt a great sense of accomplishment.

This winter, the Board of Directors of NMTMA will be considering whether or not to become part of establishing and maintaining turf plots at the horticultural research station in Leelanau County. A parcel of land was recently acquired that would lend itself well to this project. The board will be interested in hearing from the membership before making a decision. Please contact one of the board members if you have any questions or suggestions regarding this matter.



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Turf Management Report: How to Solve Winter Turf Injury

... by Nor-Am

Turf in a weakened condition resulting from disease or pest damage, low or excessive moisture, lack of fertility, or poor root development is much more susceptible to winter damage. At no time is the importance of healthy turf more significant than during fall months. But even a lush, vibrant turf often cannot withstand the pressures of severe winter weather. Winter injury results from many different extreme conditions. Symptoms are often complex, since many of the injuries can interact. Some of the conditions include:

Ice Sheet Damage:

Turf covered with ice for extended periods can experience injury from oxygen suffocation and toxic gas buildup, but these conditions are rare. More commonly, freezing and thawing cycles cause crown hydration, which reduces winter hardiness.

(Crown Hydration occurs when plants stand in moisture following a thaw, causing tissues to absorb high levels of water. When temperatures drop again, ice crystals form within the plant cells, rupturing cell walls and killing tissue. The plant crown, or growing point, is the most critical tissue affected by these freezing and thawing cycles. Damage appears in irregular-shaped areas, similar to direct low temperature kill. *Poa annua* is most susceptible to this type of winterkill.)

Low Temperature Damage:

Direct kill may occur in freezing-thawing situations, when turf experiences a rapid drop in temperature (usually below 20°F). Poorly hardened plants with a high moisture content are more susceptible to this type of winterkill. Leaves and stems appear water-soaked, turn brown and become matted. A foul odor is often evident, and damage occurs in large, irregularly shaped areas.

Chill Injury:

Most commonly seen on warm-season turf grasses, chill injury occurs when green pigment production ceases during periods when temperatures dip below 55°F, along with high light intensity. Generally, grass leaves appear light brown to white.

Desiccation Injury:

This condition is common in regions with high winds and low relative humidity, but can occur anywhere turf remains unprotected and soil moisture is limited due to low temperatures or drought. Leaves and shoots turn white to silver and plant tissue is not matted down. Damaged areas vary from small patches to large irregularly-shaped areas.

Frost Heaving Injury:

Freezing and thawing cycles on wet soils move the surface during ice formation, pushing crowns and roots out of the soil. Roots can be severed from the plant. Symptoms include tissues turning white or silver to tan. This condition is most common on seedling turf.

Traffic Injury - Frozen Ground:

Foot and vehicle traffic on frozen leaves causes mechanical injury by rupturing cells in leaves and shoots. Frost damage is common when traffic occurs in early morning before frost leaves the turf. Damage to frozen turf appears as white or silver areas, taking on the shape of footprints or tire tracks.

Traffic Injury - Slush-Covered Ground:

Traffic on slush-covered turf causes crown hydration and reduces winter hardiness. Damage is most severe when temperatures drop

(Continued on Page 4)

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Turf Management Report: How to solve winter Turf Injury

... By Nor-Am

(Continued from Page 3)

below 20°F. following heavy traffic injury, except patterns tend to be more regular.

Diagnose Winter Injury Early:

Early diagnosis of turf winterkill or injury is essential to alleviating damage. Diagnostic steps should be taken prior to normal greenup in the spring. If you suspect winter injury, take the following steps to determine the extent of turf damage:

- Collect turf plugs from suspected sites.
- Place plugs in suitable container for short-term growth.
- Place containers in a greenhouse or well-lighted area, preferably a window facing south.
- Keep turf adequately watered.
- Turf will initiate greening in 5-7 days, depending on growing conditions.
- Assess the extent of greening after two to three weeks.

Areas with less than 50% greenup should be considered extensively damaged, and will require renovation to ensure satisfactory quality. Lesser damaged areas can be recovered with extra attention to proper fertilizing, watering and mowing. Keep traffic off damaged areas until adequately recovered.

Take Action Early

If you determine that your turf suffers from winter injury, plan early to reseed those areas in the spring. Some of the steps you may wish to consider include:

- Communicate with your membership or customers to alert them that some turf areas will be under renovation.
- Ascertain equipment needs.
- Arrange your seed purchases and locate the best source.
- Plan your herbicide and fertility programs.

Proactive Approach Pays Off

Even if you experience severe winter injury on your turf, you can assure your membership or customers of a quality turf in the spring by planning early to re-establish damaged areas. A proactive approach will yield positive results a few months down the road.

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By... Larry Dorr, Lost Lake Woods Club

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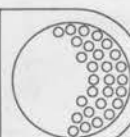
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1994 Golf Course Expo planned Nov. 11-12 in Orlando

ORLANDO, FL.— Golf Course Expo is scheduled for November 11-12, here at the Orange County Convention Center. Sponsored by *Golf Course News*, the newspaper for the golf course industry, Golf Course Expo is the first exposition and conference devoted to public-access golf. It is designed specifically for the entire public-access golf facilities facilities: daily-fee, municipal, semi-private and resort.

Arnold Palmer, golfing legend and principal of Palmer Course Design, will keynote on November 11 and Golf Course Designer Robert Trent Jones II will be the opening speaker on November 12.

The Expo is free and will feature over 150 companies, highlighting displays and demonstrations spanning 66,000 square feet of exhibit space. Also located on the show floor will be the "Shop Talks" vendor-sponsored technical and demonstration sessions. The Palmer and Jones talks, in addition to the Expo and Shop Talks are free to Expo attendees.

Exhibitors include fertilizer, seed and sod, consultant services, golf cars, mowers, aerators, irrigation equipment, chemicals, architectural services, construction services, software, equipment parts, landscape supplies, utility equipment, greens rollers, and ball washers.

Palmer will keynote the conference on Nov. 11, opening the trade show and setting the stage for afternoon conference sessions in the areas of Agronomy, Management

and Development. Each of the three educational tracks is designed to shed light on issues, unique to the public-access golf market. Superintendent's who register and participate in the conference will receive 6 Continuing Education Units from the GCSAA. There is a registration fee to attend the Expo conference.

The Agronomy program will feature sessions on how to maintain golf courses under high-traffic conditions, staffing and crew motivational techniques and maintenance on a shoestring. As part of the Management program, Terry Buchen, CGCS and author of GCN's "Savvy Superintendent" column, will enlighten owners and managers on course-related matters with his discussion of "Agronomy for Non-Agronomists." The Development track, co-sponsored by *Golf Course News* and the National Golf Foundation, will feature several discussions of financing, course renovation and its relation to the bottom line, and environmental regulation and its relation to sound public-access development.

Show hours are Friday, November 11 and Saturday, November 12 from 10 a.m. to 5 p.m. at the Orange County Convention Center on International Drive in Orlando, FL. For more information contact: *Golf Course News*, Conference Group, P.O. Box 997, 38 Lafayette St., Yarmouth, ME 04096; the Golf Course Expo hotline at 207-846-0600, ext. 248; or fax 207-846-0657.

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Serving the Northern Michigan Turf Managers Association

...By Brian M. Holmes

By the time you read this my term on the Board of Directors for the NMTMA will have expired. I served six years, and they went by very quickly.

I enjoyed being on the Board of Directors. It has been a positive learning experience, and very interesting. I've met and worked with many conscientious people. The quality of the people in the turf industry is very high. I feel the dedicated people involved in the NMTMA make it a progressive and worthwhile association.

It takes many people to operate our association, whether through a director on the board, assisting with registration at meetings, or being a host superintendent. Please take the time to be involved in the NMTMA. Remember we are looking for a "few good people." The NMTMA will only be as good as the people involved with it.

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GCSAA's Conference and Show Head to San Francisco

An estimated 15,000 to 16,000 golf industry professionals are expected to attend the 66th International Golf Course Conference and Show, Feb. 20-27, 1995, at the Moscone Center in San Francisco. The event, which is the largest in the golf course management industry, is hosted annually by the Golf Course Superintendents Association of America (GCSAA).

The week will include nearly 80 educational seminars, sessions and forums; a three day trade show, which is expected to fill 190,000 square feet of the center; a gala banquet featuring the presentation of GCSAA's Old Tom Morris Award; the association's annual meeting and election of officers; and the 1995 GCSAA Golf Championship.

Conference week opens with the annual GCSAA Golf Championship, which will be played Feb. 20-21 at five courses on the Monterey Peninsula. A field of up to 480 will compete for individual and chapter team honors in the national tournament. Beginning in 1995, GCSAA's golf championship will be presented in partnership with The Toro Company.

Many of the educational and professional development needs of golf course superintendents will be covered in the 60 one- and two-day seminars that will be offered during the first four days of the conference, Feb. 20-24. Seminars will address issues ranging from environmental responsibility to personal stress management.

(Continued on Page 8)

Preventing Winter Storm Damage to Trees...

By Davey Tree Expert Co.

KENT, OHIO— Winter storms can damage or kill a mature, valued tree in very little time. Hundreds of years of growth can be wiped out by a strong gust of wind, heavy ice or wet snow. In some cases damage is inevitable, but usually it is preventable, if sound arboricultural practices are followed, say scientists at The Davey Tree Expert Company.

"Winds, heavy ice and snow are serious problems for structurally weak trees," says Trevor F. Vidic, technical advisor with The Davey Institute, the research and development division of The Davey Tree Expert Company. "Such trees have branches that are weakly attached at a narrow, V-shaped fork. Long or fruit-laden branches are often weak, as well. Storms can cause these branches to fall, seriously damaging the tree or surrounding property."

Cabling and Bracing

Cabling and bracing can prevent breakage during winter storms. Cables are typically used when two branches are joined at a V-shaped crotch, Vidic says.

"The cable takes the tension off the branches," he says. "it also ensures that the branches will move together in the wind, preventing the tree from twisting apart. If the crotch is cracked, a bolt and cable are installed to relieve tension and hold the crotch together."

Pruning

Proper pruning also helps reduce winter storm damage. A dense tree acts as a sail, catching the wind's force and increasing the probability of breakage. Reducing the crown's density allows the wind to blow through it, decreasing the tree's resistance to high winds.

Dead or weak branches can become unsafe during high winds. Removing dead or weak branches prevents them from falling on property or people during a storm.

Cavity Filling

Trees with cavities are also structurally weakened. Filling the cavity provides a surface for new tissue to grow over. Cavity closure helps strengthen the trunk so it can support the crown and withstand high winds.

"A vigorous tree produces more woody tissue annually than a stressed, unhealthy tree," he says. "Branches are attached to trunks by an overlaying system of woody tissue layers, so a healthy tree should have stronger branch attachments than an unhealthy tree of the same species."

A tree can only grow as well as its environment will allow. Trees, like all plants, have specific growing requirements, such as sun and wind exposure, as well as soil moisture, texture and pH, that must be fulfilled for a large, beautiful specimen to develop.

for future plantings, golf course superintendents should consider the effect of winter weather, Vidic says.

"An often-overlooked aspect of storm damage prevention should begin before a tree is even planted," he says. "Certain tree species characteristically have weak wood and should not be considered for most landscape situations because of their susceptibility to breakage in storms."

Careful selection of an appropriate planting site is also important. The selected tree should be well suited to planting site conditions. Periodic watering, fertilization, mulching and pest management helps develop a healthy, strong tree that is better able to withstand winter hazards. Proper fertilization is especially important because landscape soils are usually low in nutrients. Supplemental fertilization helps provide the right amount of nutrients to landscape trees.

Following these simple preventive steps helps improve a tree's chance of surviving a destructive winter storm. In most cases, the cost of protection is far less than the value of a mature tree.

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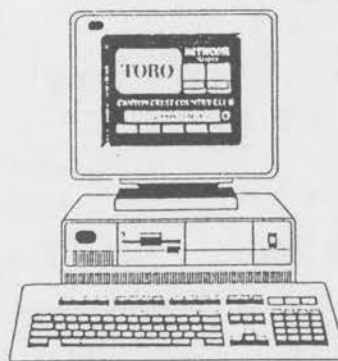
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GCSAA's Conference and Show Head to San Francisco

(Continued from Page 6)

Concurrent education sessions and special-interest forums are scheduled Feb. 24-27. Half-day programs hosted by allied associations, including the American Society of Golf course Architects, the American Zoysiagrass Association, the Golf Course Builders Association of America and the United States Golf Association Green Section, round out the conference portion of the week.

Rocky Bleier, legendary running back for the Pittsburgh Steelers, will keynote the Opening Session on Thursday, Feb. 23, at the San Francisco Marriott.

More than 650 companies that manufacture and distribute golf and turf industry products, supplies and services are expected to exhibit at the trade show, which will run Feb. 25-27, at the Moscone Center. A record 671 exhibitors showcased their products and services during the 1994 show in Dallas.

A headline performance by recording artist Anne Murray will provide entertainment at the formal closing banquet on Monday, Feb. 27.

The highlight of that gala evening will be the presentation of the Old Tom Morris Award, GCSAA's highest honor. This year's award will be presented to turf industry giant, Dr. James Watson. Previous recipients of the award include Arnold Palmer, Bob Hope, Patty Berg and Byron Nelson.

The 1994 conference and show in Dallas drew 15,386 people. More than 1,300 of those attending were international visitors and guests, representing more than 50 countries and territories outside the United States.

Since 1926, GCSAA has been the leading professional association for the men and women who manage and maintain golf facilities in the United States and worldwide. From its headquarters in Lawrence, Kan., the association provides education, information and representative to more than 14,000 individual members from more than 50 countries. GCSAA's mission is to serve its members, advance their profession, and enrich the quality of golf and its environment.

Fall good time for planting

... by Davey Tree Expert Co.

KENT, OHIO— Though many golf course superintendents do most of their tree and shrub planting in the spring, fall is also a good time for planting, say scientists at The Davey Tree Expert Company.

"Roots continue active growth until the ground freezes," says Roger C. Funk, Ph.D, Davey's vice president of human and technical resources. "As a result, trees and shrubs planted in the fall have several weeks to become established before winter."

Only containerized or balled-and-burlaped trees and shrubs should be planted in the fall, Funk says. Bare-root planting should be done in the spring. Also, plant broadleaf evergreens, cherry, dogwood, Japanese maple, magnolia, pin oak, white birch and willow in the spring.

Plant Selection— The first step in ensuring successful planting is selection the right plant for the site. Plants most commonly fail in a landscape because they are not suited to their location. According to Funk, the following factors are critical:

- **Hardiness zone.** The U.S. Department of Agriculture publishes a map of hardiness zones in the United States. Select only landscape suitable for your area's hardiness zone.

- **Microenvironment.** The microenvironment is the climate immediately surrounding the planting site. Does the planting site have intense sunlight, or is it in the shade? Is it subjected to high winds? Choose only plants that are tolerant of the conditions immediately surrounding the site.

- **Soil drainage and pH.** To check soil drainage, dig a hole at the planting site, fill it with water and let it drain. Then, refill the hole and let it drain again. For normal drainage, the water should drain about 1 inch per hour. Check pH with an indicator strip. Choose plants that grow well in the site's soil conditions.

Planting Technique— The second most important factor in plant survival is proper planting technique, Funk says.

"The most common mistake is planting too deep," he says. "Planting too deep may limit the amount of oxygen that reaches plant roots, inhibiting plant growth and possibly limiting nutrient and water uptake. For a new transplant, this can be devastating."

Instead of digging a deep hole, prepare a wide planting area. Spading a large area helps the plant overcome transplant shock.

(Continued on Page 11)

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Fall good time for planting

(Continued from Page 8)

During transplanting, the plant can lose as much as 98% of its absorbing roots. Transplant shock is the period when the plant re-establishes equilibrium between the roots and the crown. During that time, it is stressed.

Roots need oxygen to grow, and soil is their only oxygen source. In a wide planting area, more oxygen penetrates the soil and reaches the roots. Ideally, extend the planting area about three times the area of the rootball.

Next, dig the planting hole. The hole should be no deeper than the container or root ball. Planting just 1 inch deeper can cause the new transplant to die from lack of oxygen. In poorly drained, heavy clay soil, it may be a good idea to plant 1 or 2 inches higher than the container to allow more oxygen to reach plant roots. The sides of the hole should be rough, or broken up - otherwise, the roots may encircle the plant as they grow.

Place the plant in the hole. If roots are encircling a containerized plant, either spread them out or cut them. To cut the roots properly, use a sharp knife or shears to make three equidistant vertical cuts around the ball. Backfill the planting hole with the soil removed during planting site preparation. Amending the soil is usually not necessary. Tamp lightly.

Mulching- Next, apply mulch around the plant. Mulch provides many benefits to plants. It moderates soil temperatures, suppresses weed growth and keeps soil moist.

Funk cautions that mulch must be applied properly to be beneficial.

"The most common mistake when mulching is applying it too deep," he says. "Apply mulch at a depth of 2 to 4 inches at the plant's drip line, tapering to 1/2 inch just outside the stem. Never pile mulch on the stem. Mulch on the stem attracts rodents and creates ideal conditions for decay fungi."

Watering- Water is critical for newly transplanted trees and shrubs. Monitor soil moisture carefully, as the plant can be stressed by too much or too little water. By the time stress symptoms appear, considerable damage may have occurred to the plant's root system. Check soil moisture by removing a small amount of the soil from the root area using a soil probe or trowel. The soil is too dry if it crumbles in your hand instead of holding together in a moist ball.

Staking- Stake newly transplanted trees only when they cannot remain upright on their own. To provide proper support, stake the new tree low enough on the trunk to allow some flexing while keeping the root system stable. Determine the ideal staking point by putting your hand on the base of the trunk and moving it up until the tree stands upright. Move your hand back and forth slightly to ensure the trunk can flex but the root system remains stable.

A common mistake is the use of only one stake. Two stakes with a flexible tie on each will provide better trunk support and reduce the potential for injury.

A tie should have a flat, smooth surface and be somewhat elastic to allow slight movement of the tree. Do not use wire in a hose. Instead, use a 2-inch wide inner tube or other flexible wrap. Stake so that the tree is snug, but not tight.

Following these simple steps will ensure that your landscape plants not only survive transplanting, but also become a healthy, attractive part of the landscape.

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