Trees, palms and tropical foliage plants are acclimatized at John's Inc. by use of shade and reduction of water and fertilizer.

maintenance to be performed by the buyer of the plant.

Once a month inventory is taken and a new price and quantity list mailed to a selected group of buyers over the country who use and specialize in interior landscape plants. Wholesale price of the plants ranges from $4 to $2,000. for the largest trees.

Some of the plants in the acclimatizing house include silk oak and Norfolk Island pines, Ficus such as benjamina, decora, pandurata, areca, Rhapsis, and Phoenix Roebelini palms and other palms.

There are also various philodendrons such as selloum, cordatum, and pertusum in pots and with poles. Vern Buck commented he would like to see more rigid specifications in bid jobs concerning acclimatizing plants for interior use. "This would help interior landscape people do a better job. Using acclimatized plants may cost more initially but they are better looking plants and replacement costs would be lower in the long run," he said.

William H. Baker, ASLA member with the Winter Park, Fla. firm of Tom H. Wallis and Associates, said landscape architects have been limited in their use of interior landscape plants.

He said if nurseries can do more with materials specifically for this use, then landscape architects will have a broader spectrum from which to choose.

"By acclimatizing plants, more and more southern plant materials can be used in enclosed northern malls which are looking for a greater variety of greenery," he said.

Mr. Buck, who has been with John's for 37 years, said the firm has 8½ acres of greenhouses, 23 acres of shade house and 20 acres of podocarpus in open fields.

He said John's is doubling the amount of acclimatizing space to take care of demand for trees and tropical foliage plants that will thrive under low light and low maintenance conditions.

This ficus Pandurata or fiddle leaf fig (foreground) will be ready for a mall or similar interior in a few weeks. Light intensity is reduced over a 3-month period from 1,500-2,000 foot candle power to 400-500 foot candle power.

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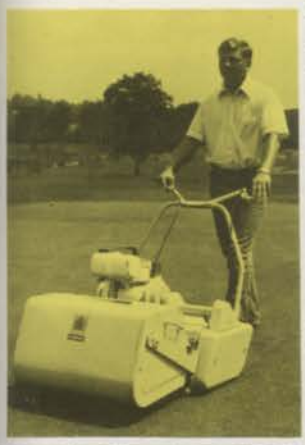
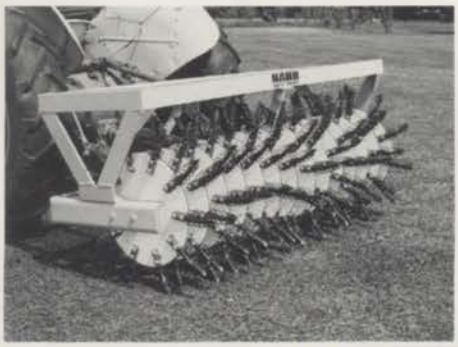




Well Received

I want to thank you for reviewing my booklet, HOME LAWN CARE, in the August issue of your magazine. Several orders have already been received and many many lead to big sales in the future . . . **Melvin J. Robey, West Lafayette, Indiana.**

As Good As Done

As Park Superintendent for the City of New Richmond, I find the material presented in your magazine WEEDS TREES AND TURF very helpful in development and maintenance of our park systems. However since I must go to the library to read each issue, I sometimes miss a month's copy. Therefore I would like to have my name added to your list.

I was very surprised to find myself pictured on a front cover of a recent issue. The cover showed several of us standing around an elm tree in Eau Claire, being shown how to use the chemical called Benlate. This summer I used Benlate a great deal in New Richmond to help stop the spread of Dutch Elm Disease . . . **Curt Gerken, River Falls, Wisconsin.**

Strong Hunter Reaction

I have enjoyed reading your magazine and its many informative articles but a recent article just didn't seem fair.

The article was concerned with expelled shot laying around lake bottoms and other wildlife habitat.

First of all it used estimates of either two or three million. Now there is a great deal of difference between the two.

It referred to the wildlife as our feathered friends.

Many people who do not hunt or are against hunting and guns really take these articles seriously. They think all sportsmen are either insane or have some kind of mental problem.

All articles like yours that misprint the facts or guess at estimates only do harm to a sport enjoyed by a great many people.

If it were not for sportsmen paying tax on shells and guns and purchasing licenses there would be a great deal less of any kind of wildlife. There is very little money spent by people like the person who must have written this article to support our wildlife.

I am a grounds superintendent, and am very much concerned in the out of doors in all aspects.

Please remember no sportsman wishes to deplete our wildlife resources. We only wish to keep them plentiful so we can continue our sport . . . **Ronald E. Fulkeod, Fort Collins, Colorado.**

A Real Weed Problem

. . . How do you get rid of tules. We have two kinds that give us trouble. I really don't know the correct names but one is the round tule and the other is a flat tule. On a dry year, we can disc and disc and chop them back in good order but this is not always the case. Is there any good material that will go down and kill the roots? I have tried Ureabor which does well on everything but does not seem to affect tules . . . **Jim B. Nielsen, Watsonville, California.**

ANSWER: *We don't know what tules really are. We'd suggest contacting an area extension weed specialist or send a sample of the weed to your local Land Grant University.* **Editor.**

Trees Suffer Stress Plants Pathologist Says

Stress.

You've heard of it. You know humans and animals suffer from it. But did you know trees also suffer stress?

Today, many trees that line urban streets and communities are showing signs of stress, says Donald H. Scott, Purdue University extension plant pathologist.

Weather conditions of recent years and tree location figure prominently as causes of this stress, he adds.

While maples are the most severely affected, damage is also apparent among pin oak, ash, locust and other street planted trees.

One symptom of stress is thin foliage.

Another stress symptom, known as leaf scorch, appears on trees in late summer and early fall. Leaf scorch is evident in the browning and dying of leaves at the margins and progressing toward the mid vein.

Shortly, still another symptom of stress may appear, warns Scott. This is premature fall coloration and defoliation of leaves. Many affected trees already have started to die back from the top or have individual limbs that have died.

Open winters, extreme and rapid changes in winter temperatures and drought are all weather conditions that have affected trees in the last three or four years, the plant pathologist adds. Besides weather conditions street planted trees sustain stress from root systems restricted by sidewalks, streets and building.

Futhermore, the root systems of these trees are often damaged by digging, by continuous compacting of the soil or by a buildup of salt concentrations in the soil from deicing operations. Then, too, trunks of such trees are often scarred by lawnmowers, automobiles or other mechanical devices.

Symptoms of stress often resemble symptoms of an infectious disease. For the most part, however, plant pathologists at Purdue have been unable to isolate any infectious disease agent from a majority of the trees studied.

Symptoms of stress generally become progressive, notes Scott. Affected trees sometimes die unless the stress factors are removed. Removing stress is difficult and often impossible, he realizes, especially with trees planted along streets.

Proper fertilization, pruning and watering of trees, however, will prolong their useful life, he concludes.

Golf Course Builders Prepare Membership Directory

A special membership directory of the nation's golf course contractors and suppliers is being prepared by the Golf Course Builders of America.

Harry J. Lambeth, executive director of the Washington-based organization, says the booklet will be pocket-sized and feature a full page for each Builder member. Associate or supplier members will be given a half-page. The publication will be sent at no charge to golf course architects and to persons planning golf courses.

The Golf Course Builders of America, now two years old, has a membership of 35 firms stretching from British Columbia and California to Florida and Massachusetts. Pennsylvania and Ohio lead the states in members. Pennsylvania has six members and Ohio five. There are three from Texas.

—meeting dates—

Ohio Parks and Recreation Conference, Cleveland-Sheraton Hotel, Cleveland, Ohio, Nov. 13-15.

Tidewater Shade Tree Conference, 2nd annual, Norfolk Botanical Gardens Auditorium, Norfolk, Va., Nov. 14.

Metropolitan Shade Tree Conference, Lubber Run Recreation Center, 300 N. Park Drive, Arlington, Va., Nov. 15.

Washington State Weed Conference, Chinook Motel and Tower, Yakima Wash., Nov. 15-17.

Nebraska Turfgrass Conference, Kellogg Center, University of Nebraska, Lincoln, Nebr., Nov. 20-22.

Oklahoma Turfgrass Conference, student union, Oklahoma State University, Stillwater, Okla., Nov. 29-30.

Texas Turfgrass Conference, Memorial Student Center, College Station, Tex., Dec. 4-5.

National Agricultural Aviation Association Conference, 6th annual, Las Vegas Hilton (international) Hotel, Nev., Dec. 11-14.

Ohio Turfgrass Conference and Show, Franklin County Memorial Building, Columbus, Ohio, Dec. 12-14.

Western Association of Nurserymen, 83rd annual meeting and trade show, Plaza Inn, Kansas City, Mo., Jan. 7-9.

North Carolina Nurserymen's Short Course and Trade Fair, 36th annual, University Student Center, N.C. State University, Raleigh, N.C., Jan. 7-9.

Golf Course Superintendents Association of America, 44th annual International Turfgrass Conference and Show, Boston, Mass., Jan. 7-12.

New York State Arborists Convention, Annual, Nevele Country Club, Ellenville, N.Y., Jan. 14-17.

California Weed Conference, 25th annual, Disneyland Hotel, Anaheim, Calif., Jan. 15-17.

Michigan Turfgrass Conference, 43rd annual, Kellogg Center, Michigan State University, E. Lansing, Mich., Jan. 16-17.

Southern Weed Science Society, 26th annual meeting, Jung Hotel, New Orleans, La., Jan. 16-18.

Ohio Chapter, International Shade Tree Conference, annual meeting, Sheraton-Columbus Hotel, Columbus, Ohio, Jan. 21-25.

Rocky Mountain Regional Turfgrass Conference, 19th annual, Colorado State University, Fort Collins, Colorado, Jan. 25-26.

Penn-Del Chapter, International Shade Tree Conference, annual meeting, Marriott Motel, Philadelphia, Pa., Jan. 25-26.

Annual Winter Seminar for Commercial Arborists, O'Hare Concord, Rosemont, Ill., Jan. 30.

Virginia Turfgrass Conference, Sheraton Motor Lodge, Fredericksburg, Va., Jan. 30-31.

Midwestern Chapter, International Shade Tree Conference, annual meeting, Holiday Inn, 1926 W. Wisconsin Ave., Milwaukee, Wisc., Feb. 6-8.

Northern California Turfgrass & Environmental Landscape Exposition, 9th annual, Hall of Flowers, San Mateo County Fairgrounds, Feb. 7-8.

Professionals Turf & Plant Conference, 5th annual, Holiday Inn, 80 Clinton Street, Hemptead, L. I., N. Y., Feb. 16.

EDITORIAL *(continued from page 4)*

Alaska, Connecticut, Indiana, Iowa, Maine, New York, Oregon and New Jersey. Agriculturally oriented administrators can not and should not be expected to speak for the professional applicator on every interpretation of the law. The applicator must speak for himself and his organization.

In the State of Washington, the governor appoints, among others, three licensed applicators to sit on the Pesticide Board. Likewise, Kansas' 13 member pesticide board acting in an advisory capacity, includes both a custom ground applicator and custom aerial applicator.

History has proved that without representation, laws become superficial and anarchy reigns. We urge state administrators concerned with use and application laws to look favorably to the addition of a certified professional applicator to the pesticide board. The consequences of ignoring this issue could be tantamount to another Tea Party.

Rohm and Hass Company Discovers New Rodonticides

A new class of highly effective rodenticides has been announced by the Rohm and Haas Company.

Classed as carbamates, the new rodenticides have high activity against rodents, yet do not pose a hazard to other species. A wide margin of safety is present to dogs, cats, chickens, pigeons and various songbirds. Secondary hazards in feeding rats killed by the rodenticides to dogs and cats have resulted in no adverse effects.

According to a Company spokesman, only a single feeding of a poisoned bait is required. Baits containing the rodenticides are readily accepted by rodents. Even when the bait contained 10 percent of the rodenticide — more than ten times the amount required for fatal results—the rats ate the poisoned bait without hesitation and died.

Operating Cost Study Released By Nursery Industry

One of the nursery industry's most applauded research publications has been released for the seventh consecutive year by the Horticultural Research Institute. It's the HRI Operating Cost Study covering the year 1971.

The 31-page document actually presents three separate cost studies in a single volume, permitting each basic type of business in the industry (wholesale production, landscape nursery, retail garden center) to compare its operating costs with similar types and sizes of businesses. Detailed listings of the various cost items related to the operation of a business are given in percentages of total sales, making the publication an efficient, easy-to-use management tool.

The Operating Cost Study has been sent, without cost, to HRI members and participants, and is available to others at a cost of $5. Inquiries should be directed to Horticultural Research Institute, 230 Southern Building, Washington, D.C. 20005.

Emory Hunter Appointed 1973 Expo Chairman

The Northern California Turfgrass Council has named Emory Hunter of Warren's Turf Nursery as chairman for the 1973 Exposition.

Confirmation of the appointment was made at the August board meeting of the Council.

Exposition sites and dates have not been selected. Persons interested in working on the various committees for this show are asked to contact Emory Hunter or write to the Northern California Turfgrass Council, P. O. Box 268, Lafayette, Calif. 94549.

Calif. Pesticide Applicators To Form New Association

Pesticide Applicators and Advisors Association of Southern California, a new group, is being formed to head off emotional legislations on the banning of certain environmental protection chemicals.

"Ground rig pesticide applicators and advisors have been inadequately represented both in Sacramento and in Washington D. C.," says Paul G. Walker, chairmen of organization for the new group. "Anyone in the ground rig application business is welcome to join this group and pledge support for the safe and wise use of environmental protection chemicals."

The kickoff meeting will be held November 17 in the Balboa room, Newporter Inn, 1107 Jamboree Rd., Newport Beach. Cocktails and dinner at 7:30 p.m. will precede the adoption of by-laws and election of officers.

All licensed applicators /advisors are invited to attend. For reservations, contact Paul G. Walker, 4358 Poplar St., San Diego, Calif. 92105 or call (714) 281-0470.

Grass Identification Guide Available From O.M. Scott

Here's an identification guide that was designed to be carried into the field.

It's the ProTurf Identification Guide to Grasses, a pocket-sized field manual written for experienced turf managers as well as students and laymen.

Sixty varieties of grasses are cross-indexed, first by characteristics, then by name, while graphic black-and-white illustrations demonstrate identifying features of each grass. Price is $2.00, including professionals' discount. Order from Jim Converse, ProTurf Division, O. M. Scott & Sons, Marysville, Ohio 43040.

Conrad L. Scheetz Is New GCSAA Exec. Director

A Drexel University graduate with a "consistent record of successes, especially in association management activities," has been selected from a field of 325 candidates as executive director of the Golf Course Superintendents Association of America.

Conrad L. Scheetz, 42, assumed the position in early August. It was vacated earlier this year by Ben J. Chlevin who resigned in January to return to public relations within the golf industry.

"We're very fortunate to have a man with 'Connie" Scheetz's many years of varied business experience," said GCSAA president, Robert V. Mitchell. "The valuable skills he brings to the GCSAA include not only a well-rounded background in association work but also a knowledge of budgets, personnel, accounting, data processing, membership services and conference management, all of which are vital areas in serving a growing membership and expanding member services."

Scheetz was formerly business manager with International Reading Association. During his seven years of employment, the Newark, Delaware based firm experienced an almost 60 percent jump in membership. Member services also increased and the budget quadrupled to over one million dollars.

The new director has also worked extensively with budgets and electronic data processing as head of budgets for the data processing division of Educational Testing Service in Princeton, N.J. Earlier in his career, he served as a project administrator in the missile and surface radar division of RCA in Moorestown, N. J.

Scheetz is a member of the Tau Kappa Epsilon fraternity and the American Society of Association Executives. He is married and has four children.

industry people on the move

DR. ROBERT E. HANNEMAN, JR., joined O. M. Scott & Sons, Research Division. He will be working in the seed production and seed research group at Salem, Ore.

* * *

JERRY L. ERICKSON, ROBERT L. LINDSEY, A. MILTON WALSH, elected vice presidents of Asplundh Tree Expert Company. Erickson will handle operations of the field management corps in western Pennsylvania; Lindsey will manage the company's tree trimming operations in most of Connecticut, all of New Hampshire and also oversees the underground work in Massachusetts; and, Walsh is charged with the management of all operations for the several utilities in the state of New Jersey.

* * *

HAROLD F. DEPUE, promoted to vice president of sales and marketing for Ackley Manufacturing Co.

* * *

GORDON A. BRANDES assumes the new position of manager of the Morris Arboretum following retirement from Rohm and Haas Company. The Morris Arboretum is part of Penn State University and is a 175 acre "museum of living plants" located in a suburban area of Philadelphia.

WELTON MOOREHEAD, transferred from Tulsa, Oklahoma to Dallas, Texas by Thompson-Hayward Chemical Company. He will call on agricultural and industrial accounts in the Dallas and Northeast Texas area.

* * *

HERBERT V. KOHLER, JR., elected chairman of the board and chief executive officer of Kohler Co. He succeeds **LYMAN C. CONGER** who retired. Kohler is a grandson of John Michael Kohler, founder of the Company in 1873.

* * *

CHANCE HILL, JR., named director of parks for the City of Long Beach, California, following the death of **DON OBERT,** 67, who held the position since its inception in 1954. **WILLIAM T. BELL,** named assistant director of parks, the position vacated by Mr. Hill.

* * *

ROBERT P. KNUTSON, appointed operations manager of Bolens-Division of FMC Corporation, Port Washington, Wisconsin. He replaces **HOWARD L. McPHERSON** who was promoted to manager of the Pomona, California operations of Wayne Manufacturing Company. Wayne recently signed a merger agreement with FMC.

* * *

ROBERT M. BOOK, named group vice president of agricultural marketing for Elanco Products Company, a division of Eli Lilly and Company. He succeeds **WILLIAM G. DAVIS, JR.** who was recently named a group vice president for Eli Lilly International Corporation.

IPAA REPORT *(from page 17)*

but the insect remains on the foliage for some time.

Siemer said that biological compounds do not act as quickly as present insecticides. This is primarily due to the fact that the biological compounds control by stomach action causing a paralysis of the stomach muscles.

"Biological control is not magic. It will be used in conjunction with chemical control for many years to come, and even if it is successful in completely replacing organic chemical usage, it will require an extremely high level of technical competence on the part of all people involved," he concluded.

This year's program included topics for everyone. Of particular interest to the professional applicator was a presentation on "Safety and Your Operation" by Robert B. Black, industrial hygiene engineer, State of Oregon. He cautioned members that much of the safety of application of pesticides rests on the user. "We must continue to stress personal hygiene and cleanliness," he said.

A high pressure sprayer manufactured by Wayne Engineering Corporation was demonstrated for delegates by Rick French, western regional manager, and Herb Perrin, Schetky Equipment Corporation, Portland, Ore.

Black outlined in detail the four routes of entry of pesticide compounds into the body: dermal, respiratory, oral and through cuts or abrasions in the skin. He said that the dermal route is the most important in relation to applicators applying liquid formulations of compounds. "This route has undoubtedly been responsible for many poisonings of workers, especially where they were using organophosphates," he said. Recommendations of proper protective clothing, gloves, shoes and headgear were made. It could be concluded that this speaker's comments affected a greater number of applicators present and absent than any other presentation of the convention.

Also on the program was an interesting discussion of the use of infra-red photography in detecting disease, fire and insects in forests. John F. Wear, forester, U.S. Forest Service, said that this false color film has been used successfully in studies of soil condition, hydrology, and other areas of scientific endeavor. For the applicator, it holds potential in detecting disease and insect damage before the natural signs of stress appear.

A number of changes in the bylaws of IPAA were passed during the annual board meeting. These include a new dues structure to allow small groups to form local chapters. Also, one person in any state may now join IPAA as a member at large. The board also elected Don Caldwell, Salt Lake City, Utah, as a board member at large, a new position.

New officers of the Association are: Don Mock, president; Bob Huntwork, vice president; Ken Thorpe, recording secretary; and Lew Sefton, executive secretary and treasurer.

Figure 2. Comparative tolerance of three turfgrasses after being held 150 days in an ice block. Toronto creeping bentgrass (l), Merion Kentucky bluegrass (c), and annual bluegrass (r).

TURFGRASS KILL *(from page 15)*
riod or the use of excessive quantities of nitrogen during late summer fertilizations.

The second nutritional consideration is to ensure that there are adequate potassium levels available to maximize the low temperature hardening capability. (Under Michigan conditions, a nitrogen-potassium ratio somewhere in the order of 2:1 to 3:1 has proven most effective.)

Other beneficial cultural practices involve (a) raising the cutting height to a moderate degree, (b) elimination of thatch problems that elevate the vital meristematic tissues above the protective layer of the soil, and (c) avoiding excessive irrigation that will waterlog the soil and increase the degree of crown hydration.

Insulation against direct low temperature kill can also be provided by placing an insulation cover over turfs that are of great importance and are particularly prone to low temperature kill. Materials that can be used effectively include the Conwed Winter Protection Cover, Soil Retention Mat, use of natural organic mulches such as straw, or enhancement of snow cover accumulation by means of snow fence or brush.

ICE SHEETS

Contrary to statements appearing in some literature, ice sheets that cause oxygen suffocation or lethal gas accumulations under the ice cover are not a major concern in terms of turfgrass winter injury. Most perennial cool season turfgrasses will survive at least 60 days of ice coverage. Serious injury to annual bluegrass can be anticipated if the ice cover remains in place for a period of 70 to 90 days (Figure 2).

Merion Kentucky bluegrass and Toronto creeping bentgrass have been subjected to ice coverage for up to 150 days with no significant injury. This length of ice cover will rarely occur in most sections of the United States. More commonly, turfgrass injury associated with ice and snow covers occurs prior to freezing or during thawing when the standing water results in an increased crown hydration level. *Serious kill may occur if the temperature subsequently drops at a rapid rate to below 20° F.*

REMOVING ICE AND SNOW COVERS. The best way of minimizing damage associated with ice covers is to ensure that there is adequate surface drainage from the area. From a turfgrass standpoint, the plants should enter the winter at a moderate growth rate with adequate but not excessive nitrogen nutritional levels of potassium nutrition.

The situations that have been documented where ice removal has reduced the degree of winter injury have usually been associated with direct low temperature kill. Rather than breaking up the ice barrier to enhance gas movement, the professional turfman was actually mechanically removing water from the turfgrass area; thus minimizing the degree of crown hydration that could occur and in turn reducing the chance of direct low temperature kill.

Where crown hydration due to standing water and subsequent direct low temperature kill associated with the ice cover is of primary concern, it is important to remove the ice cover and snow prior to periods of anticipated thaw. One should not attempt to remove the entire ice or snow cover but should leave a protective layer of between one and two inches remaining on the surface. This modest layer will serve to protect against winter desiccation injury and will also function to a certain degree in insulation against direct low temperature stress.

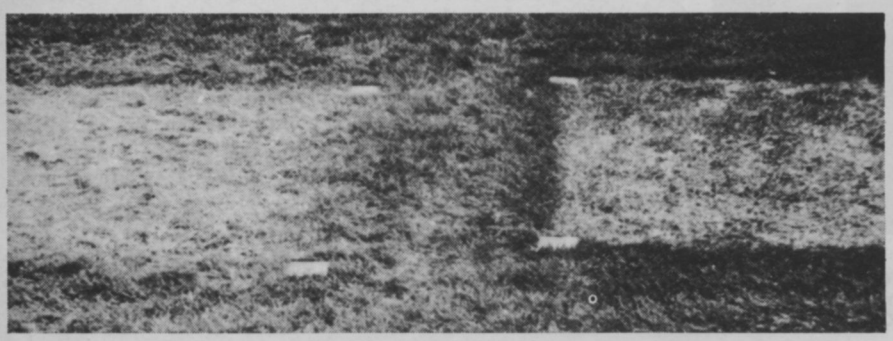
It is preferable to remove the ice and snow during periods when the turf and underlying soil are frozen in order to minimize damage to the surface itself.

Snow blowing equipment or plows can be used in the removal of snow while thick layers of ice may have to be chipped and broken up by use of such equipment as powered rototillers. The latter procedure has been used quite effectively on sports fields in England.

Where poor drainage and crown hydration-low temperature stress problems are not a serious concern, the thaw and breakup of ice covers can be enhanced by placing a black organic material on the surface of the ice. On sunny days this functions quite effectively in absorbing the incident radiation and generating heat which will assist in thaw of the ice sheet from the surface rather than from the underside. Milorganite has been utilized very effectively in this regard.

Clear ice sheets frequently thaw from the underside when periods of high intensity sunlight occur. Under this condition it is not uncommon for a considerable quantity of water to be trapped under the ice sheet for an extended period of time which increases the turfgrass crown hydration level. If this thawing period with standing water under the ice sheet is followed by a severe freeze to below 20° F., the chance of direct low temperature kill is quite high.

Figure 3. Serious damage to a Kentucky bluegrass turf resulting from one person stepping uniformly over two 4 x 4 foot areas one time when two inches of wet, slushy snow was present and a severe freeze occurred the following night.



The placement of a black material on the surface of the ice will enhance surface thawing and more rapid breakup and drainage of water from the area.

TRAFFIC EFFECTS. Traffic is frequently a consideration on snow covered turfgrass areas that are utilized for recreational purposes as well as the areas immediately surrounding ice rinks.

Damage can be of two types. One involves traffic during moderate cold periods when a wet, slushy condition exists. The traffic forces the down into intimate contact with the turfgrass crowns which in turn increases the crown hydration level. If the effects of traffic on this wet slush are followed by a rapid freeze to below 20° F., there is a high probability of serious damage to the crowns, rhizomes, stolons, and roots (Figure 3).

The second type of injury may involve the use of motorized snow vehicles which, on thin snow covers, can mechanically disrupt or tear out pieces of turf by their abrasive action.

PREVENTING TRAFFIC INJURY. The first consideration so far as traffic is concerned is to **restrict** these activities during periods when a wet slushy condition exists. *This is one of the most important preventive measures.*

Snowmobile traffic is a more recent concern in terms of turfgrass winter injury. Serious damage and thinning of turfs can occur if snowmobile traffic is not controlled or restricted under certain conditions. Damage to dormant turfs is most common (a) during periods of minimal snow accummulation, (b) during wet slushy periods of alternate freezing and thawing, and (c) on trails where the traffic is intense causing rutting and removal of a major portion of the protective snow cover.

Under most conditions it is preferable to have a minimum of four to six inches of snow cover present over the turfgrass area. The minimum protective snow depth is less for compacted snow than for loose snow. Placing traffic barriers such as snow fence on high value turfgrass areas where any degree of injury would be costly should also be considered.

Finally, the development of specific snowmobile trails should be considered on sites where intensive snowmobile activity is anticipated. This will encourage travel on locations that are less critical in terms of turfgrass damage.

Turfgrass Ice Rinks

In discussions associated with ice covers and winter injury, the question of proper utilization of ice rinks on turfgrass areas is frequently raised.

Ice rinks can be effectively used on turfgrass areas with minimum permanent damage providing certain key considerations are followed.

First of all, it is very desirable to have a site where the existing turf is composed of the more low temperature hardy turfgrass such as creeping bentgrass or Kentucky bluegrass.

Second, the surface contours of the site on which the ice rink is to be constructed should be such that the water will drain rapidly from the area during late winter or early spring thaws.

Third it is preferable to have at least a two to three inch layer of compacted snow established under the ice sheet to provide a protective insulating zone for the turf. On smaller ice rinks, the use of a polyethylene cover that protects against standing water in contact with the turf will minimize direct low temperature kill.

The final consideration is to be sure that the appropriate preventive snow mold fungicide has been applied to the turf prior to establishment of the snow cover and ice sheet.

The ice should be formed by the application of water at very low rates over an extended period of time during the night when air temperatures are below 20°F. The flood application of water to a depth of one to two inches followed by slow freezing over a long period of time is not desirable due to the increased likelihood of direct low temperature kill to the turf.

The final consideration is during the thawing period in the spring. It is important to check the ice rink frequently at this time to ensure that no ice dams or other problems develop that result in water standing on the turf for an extended period of time. *All precautions should be taken to ensure rapid drainage of excess water from the area.*

Marketing Order Concept A Necessity For Sod Producers

By TONY TASHNICK
Secretary
Sod Growers Association of Michigan

IN 1969, LIFE magazine surveyed the American public to gain insight into the demand that Americans would make on the economy during the decade of the seventies. Leading the list, before all of the so-called necessities of life (nice house, car, full pantry, etc.) was "Grass and Trees around me!"

We seem to be at the right place, at the right time, with the right product. But as one sod grower coyly put it, "We don't seem to be able to do anything but lower the price."

Few growers realize the economic impact of our industry, or the amount of business activity that our 39 million yards of sod are able to generate. We are so busy with the everyday job of getting that seed down, or that flooded spot drained, or that truck loaded, we can't comprehend the problems that would arise if the sod market should collapse.

Growers who were formerly landscapers would go back to landscaping; farmers would go back to the more profitable crops of corn and tomatoes.

Before that happens though, indications are that in order to stay in the sod business, the sod grower is going to be required to sell his crop to the home owner and builder by getting out and laying sod himself or combining with an already established sodding firm.

The present trend in the landscaping business is to deal exclusively in trees, shrubs, flowers and grass seeding and leave the sodding to the "fly-by-night," the layed-off factory worker and the sod grower. They can't waste their time on sod. It's a low profit item. A no profit item.

Presently, there is no distinction between retail trade and wholesale trade. The home owner can often have sod layed for the same price that the legitimate landscaper can have quality sod delivered. And the home owner will be sold poor quality sod.

The sod grower, in order to generate a cash flow adequate to cover expenses, has been obliged to provide more and more services at or below cost. We have thereby succeeded in cutting out our best salesmen and most reliable customers, the legitimate landscape nurseryman.

Attempts have been made to find solutions by the Sod Grower Association of Michigan, and the Sod Producer Association of Michigan before it. Many suggestions were put forth; some were implemented. For example, the credit report system is somewhat successful, but many of the people on it are still hitting growers with credit problems.

A pricing agreement was tried. It worked for a while, but was eventually eroded by growers who found it economically impossible to either commit themselves or maintain a non-commitment.

The market report was able to provide useful information to some growers, but could not be sustained.

An acreage assessment to provide funds for an executive secretary and advertising program was initiated, but money had to be returned due to a lack of cooperation on the part of the majority growers.

All of these abortive attempts to solve the sod industry's ills only succeeded in creating the feeling that nothing can be done without having means of enforcing industry wide agreements. At meetings sod growers have been extremely reluctant to bring up the subject of pricing because many have had to maintain the 33¢ price and lost business as a result.

As a last resort, directors of the Sod Growers Association of Michigan formed a committee to investigate the marketing order concept and its possible application to the

A Marketing Order Explained . . .

What is a marketing order? George Stachwick, program director agricultural marketing at Michigan State University, defines it as "a self-help marketing program that agricultural producers can implement to solve a wide range of problems through unified action."

The purpose of a marketing order is to increase and stablize a grower's income and to promote orderly marketing of sod. Every order is based on enabling legislation. This legislation outlines the procedure that must be followed in initiating, administering and dissolving an order as well as types of programs that are permitted under it.

Acocrding to Stachwick "a marketing order is not a fixed entity which can be described and understood in unchanging terms. Marketing orders provide a kit of tools among which choices must be made to select the combination best suited to a given marketing situation."

Sod growers must work together to make a marketing order succeed. Under the terms of the order, growers control the flow of sod to the market and eventually enable all growers to ask a better price for sod. The order is controlled and operated by sod growers. Government participation is strictly through advice and enforcement of the order.

Why are not other industries using marketing orders? Many are, including fruit, milk, tobacco and cranberry industries. Generally, a marketing order is most effective in situations where the production and/or marketing area and the marketing problems are limited and definable, and where producers have common economic interests, Stachwick concludes.