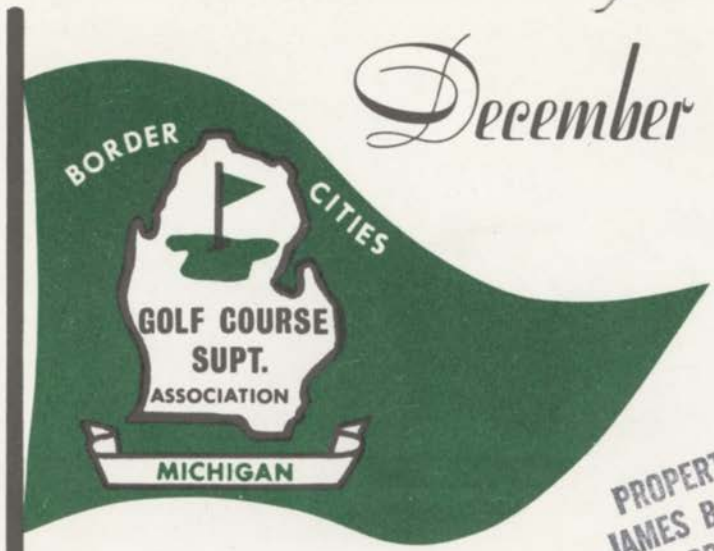
December 1972



A Patch of Green

Official Publication of the
Michigan & Border Cities Golf Course Superintendents Association

"A Patch of Green"

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Ted Woehrle, Oakland Hills CC
Editor

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MICHIGAN AND BORDER CITIES GOLF COURSE SUPERINTENDENTS ASSOCIATION

The President's Message

Here in a condensed form is a run down on our events in 1972.

Jan. 7	Holiday Inn
February	GCSAA- Conference and Show - Cincinatti, Ohio
March 21	Bay Pointe Golf Club
April 18	Essex Country Club
May 2	Knollwood Country Club
May 22	C. C. of Detroit
June 13	Chemung Hills
July 18	Hillcrest Country Club
Aug. 3-6	PGA Tournament - Oakland Hills
Aug. 8	Burrough's Farm - Picnic
Aug. 29	Edgewood Country Club
Sept. 13	Northern Mich. Turf Day
Sept. 18	Fund Raising Day - Oakland Hills
Sept. 26	Stoney Croft Golf Club
Oct. 9-10	Kalamazoo C.C. & UpJohn
Oct. 24	Maple Land Golf Club
Nov. 7	Morey's Golf & C.C.
Dec. 8	Christmas Party - Edgewood Country Club

In all, we had 19 functions to attend and if you count the Turf Clinic at MSU in January, it would be 20. I personally wish to thank all the Clubs and the Host Superintendents for allowing us the use of your facilities. 1972 was a grand year.

Have a Merry Christmas and a Happy New Year.

Thank you all for your support.

Your President,
Ted Woehrle

Turfgrass Conference

Attend the 44th International Turfgrass Conference and Show - January 7 - 12, 1973 - Boston, Mass.

The Michigan and Border Cities Golf Course Superintendents Association is planning on having another Hospitality Room at the Conference.

Details are being worked out and once additional information becomes available, we will pass it on to you.

Plan to attend. Participate in the fun at our room. Get acquainted.

1973 MBCGCSA Officers

Ted Woehrle, Superintendent of Oakland Hills Country Club, Birmingham, Michigan, was re-elected President of the Michigan and Border Cities Golf Course Superintendents Association, at the annual meeting on Tuesday, November 7, 1972, at Morey's Golf and Country Club, Union Lake, Michigan.

Re-elected Vice President for the coming year is Gerald Gill, Superintendent of Tam-O-Shanter Country Club, Orchard Lake, Michigan. Also re-elected Secretary-Treasurer for 1973 was Bob Hope, Superintendent Knollwood Country Club, Birmingham, Michigan.

The two new Directors of the Association elected to three-year terms are Bill Milne, Superintendent, Country Club of Detroit, Grosse Pointe Farms, Michigan, and George Prieskorn Superintendent, Burroughs Farm Golf Club, Brighton, Michigan.

The two retiring Board members were Bob Prieskorn, who retires after serving 16 years on the Board of Directors and Dave Moote, Superintendent, Essex Golf & Country Club, Windsor, Ontario, Canada.

Materials Used to Modify Soil Reaction

Reprinted from THE ROLE OF LIME IN TURF MANAGEMENT
Bul. No. 1, Turf Service Bureau, Sewerage Commission

Gypsum and Lime are Soil Amendments: Gypsum and Lime are commonly called soil amendments because they have not been considered sources of essential plant food elements. Their function is an indirect one, to make conditions favorable for growth. The mechanism involved when they are used on an acid soil is not generally understood.

Gypsum is another name for calcium sulphate. It was used extensively as a soil amendment before the chemistry of acid soil was well understood. It is not a good material to use for the sole purpose of reducing soil acidity. When gypsum reacts with an acid soil, sulphuric acid is formed. So the first effect is to increase the amount of soluble acids in the soil. Acidity is not reduced until the soluble acid disappears as a result of leaching.

When limestone is applied on an acid soil, the calcium reacts with the soluble acids, and with the insoluble acid clay. Carbonic acid is the by-product in both instances. It is a very feeble and unstable acid and breaks down into water and carbon dioxide gas which escapes into the air.

Lime Sources: Ground limestone, hydrated lime, and quicklime are the kinds of lime used to correct acidity. Calcium carbonate is the active ingredient in limestone. The other two are formed from it. Quicklime (or calcium oxide to the chemist) is produced by subjecting limestone to intense heat in a kiln. The carbon dioxide is driven off as a gas and calcium oxide is the residue left in the kiln. Hydrated lime, or calcium hydroxide, is formed when quicklime reacts with water. Hydrated and quicklime act faster because they are more soluble. Quicklime by combining with water becomes hydrate when added to a moist soil. Hydrated lime reacts with the soil acids to form a calcium salt. Water is the by-product of the reaction and is the reason why acidity is reduced.

1973 MBCGCSA Officers

Board of Directors, Back Row: Left to Right; Clem Wolfrom, George Prieskorn, newly elected, Ward Swanson, Roger Gill, Al Kaltz, Bill Milne, newly elected. Front Row: Left to Right; Gerald Gill, Vice President, Ted Woehrle, President, Bob Hope, Secretary/Treasurer, Gary Bartsch, Director.

Jim Vlassis,
George Prieskorn,
Jerry Prieskorn

Annual Golf Tournament at Stoneycroft

Jim Vlassis and George Prieskorn tied for the Association Championship at Stoney Croft in October.

They had a play off at Maple Lane Golf Club later that month and Jim Vlassis was victorious.

Jim is the Superintendent at the Lakeland Country Club.

Congratulations to two great competitors.

Some of the smiling faces at the Annual Golf Tournament held at Stoneycroft: L to R; Don LaFond, Gordy LaFontaine, Gary Gartsch, Don Benham.

Some real serious players: L to R; Bill Davis, Doug Forier, Ward Swanson and Clem Wolfrom.

Bob Kirkpatrick
John Macfarlane
Burt Bradshaw
Gordon Lafontaine

Reprinted from the Rocky Mountain Golf Course Superintendents' "REPORTER"

Thatch Removal

by PAUL E. RIEKE

Thatch has been variously defined as the layer of organic accumulation in turfgrass sod between the soil surface and the green portion of the turfgrass plant. Its composition is the dead roots, stems, and leaves, although living roots and stems are also an intricate part of the thatch layer.

A limited amount of thatch is usually considered desirable because it provides some resilience to the turf. It may tend to buffer soil temperatures from air temperatures and reduce weed invasions.

Generally, however, thatch is considered undesirable because it accumulates to objectionable levels and several disadvantages become apparent (1) roots tend to grow in the thatch layer rather than into the soil making the turf more drouth susceptible; (2) the thatch layer may become hydrophobic, severely reducing water infiltration rates and decreasing water use efficiency; (3) dry spots often develop, requiring increased attention to watering and other management practices; (4) aeration may be reduced, possibly to the point of limiting growth; (5) water retained in the thatch layer may provide an environment conducive to pathogen activity; (6) thatch may harbor certain turfgrass insects; (7) thatch may cause the development of an uneven surface, reducing turfgrass quality, and increasing the opportunity for scalping of the turf; (8) effectiveness of certain pesticide treatments may be reduced because of the inability of water to penetrate into the thatch layer; (9) it is difficult to obtain satisfactory overseeding under heavy thatch conditions; and (10) the management practices required to reduce thatch are costly, usually cause some injury to the turf, and may take the turf area out of use for a period of time.

Factors Contributing to Thatch Formation

Several factors are suggested as contributing to thatch accumulation and, therefore, affect the thatch removal program required for a given turfgrass area. A most significant factor is the extremely vigorous growth and high density of plants usually associated with high quality turf. Such turf is achieved by utilizing; (1) heavy nitrogen fertilization rates; (2) intensive irrigation, especially when frequent and

Continued on Next Page

Thatch Removal Cont.

heavy rates are applied; (3) highly vigorous species and varieties of turfgrasses; and (4) frequent pesticide applications. Other factors which may contribute to thatch accumulation are; (5) compacted and heavy soils which are poorly drained; (6) acid soil conditions; (7) return of clippings to the turf; (8) mowing practices; (9) environmental conditions which encourage rapid growth of grasses; and (10) the amount of traffic on the area.

Means of Thatch Removal

There have been several research studies on the troublesome thatch problem, but results are often variable because of the complexity of the environmental and management factors which affect thatch accumulation.

Practices which have been utilized in thatch control are topdressing, vertical mowing, coring (aerification), liming, clipping removal, spiking, and fertilization. Many of these practices have other objectives, but still affect thatch accumulation.

Topdressing has given most consistent reductions in measurable thatch of treatments reported. Mixing soil with the thatch apparently provides more favorable conditions for microbial activity and thatch decomposition. Topdressing is costly and timeconsuming, however, so this technique is usually practiced only on small areas which are intensively managed. In addition, good quality soil materials for topdressing are often difficult to locate, or if commercially prepared, quite expensive for use on large areas.

Vertical mowing is suggested most widely as the tool to use for thatch removal. Engel and Alderfer[1] reported topdressing and vertical mowing were about equally effective in controlling thatch in a bentgrass green. Vertical mowing reduced the amount of topdressing needed for thatch reduction in Tifgreen bermudagrass in Mississippi. On a heavily thatched bermudagrass turf Morgan[2] found that irrigation water did not penetrate the thatch, but when the turf was vertically mowed the water penetrated to a 4-inch depth, improving infiltration. Vertical mowing and coring increased penetration to 15 inches. No report was make on the degree of thatch control.

The depth of vertical mowing is significant in thatch removal. With a very shallow setting little more is achieved than lifting and slicing stolons which aids in reduction of grain and close mowing on greens. For thatch removal the teeth (or tines, flails, etc.) are normally set to penetrate to the soil surface. More than one treatment may be needed for effective removal. The degree of thatch accumulation, the condition of the turf, and the type of vertical mower will all be factors in determining how many passes and how frequently vertical mowing should be

Coring has given a limited degree of thatch control under greens conditions.

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Season's Greetings

and Best Wishes for the Coming Year

Wilkie Turf Equipment Company
The Anderson Division
23455 TELEGRAPH RD., SOUTHFIELD, MICH. 48075 • PHONE: 353-5300

Thatch Removal Cont.

This treatment is more effective if the soil cores are worked back into the turf and the thatch debris is removed.

Liming has given variable results. Most of the studies have been conducted on acid soils in eastern U.S. It is doubtful if liming itself would be beneficial in California where the soils and water used in irrigation are both already quite high in pH.

Clipping removal is a standard recommendation for keeping thatch problems at a minimum in home lawns, yet detailed studies indicate that grass leaves decompose very rapidly and probably contribute very little to thatch accumulations. Clippings should always be removed, however, if they interfere with use of the turf or if they cause significant smothering or shading conditions.

Spiking penetrates the thatch with knoves that go down into the soil. The major advantages is improved water infiltration with little damage to the turf, although the influence is short term.

Fertilization with nitrogen has been suggested for thatch reduction because of the wide carbon/nitrogen ratios reported in the thatch. When heavy nitrogen fertilization is practiced, increased thatch usually results because of increased vigor and density of growth.

In attempts to increase thatch decomposition under field conditions, additions of gypsum, sugar, and nitrogen had no effect on thatch in bentgrass turf. Martin[4], working with J. B. Beard, studied the decomposition of red fescue in the laboratory. Pectinase, sucrose and ferulic acid caused increased carbon dioxide evolution in test tube studies, indication there might be hope for use of such chemicals in field studies. Much more research needs to be done but, ultimately, chemical additives might be a practical, economic alternative to present methods of thatch control.

Continued use of pesticides which kill earthworms has resulted in significant increases in thatch accumulation in Kentucky bluegrass (D. J. Butler, unpublished data). Detailed studies on soil plugs indicated less thatch and greater numbers of worm channels in the untreated plots. Under acid soil conditions reduced earthworm populations and increased thatch are commonly observed.

Specifications for Thatch Control

Because of variation in degree of thatch accumulation, condition of the turf, environmental conditions, budget, equipment available, manpower available, use of the turf area, and level of maintenance, it is impossible to design a program of thatch removal for all turfgrass areas. Some turfs may never need thatch removal, while others may require treatment as high as 8 to 10 times annually.

For effective thatch control one must

Continued on Next Page

Thatch Removal Cont.

consider the total management program including fertilization, mowing, and irrigation, as well as cultiyation practices. As an example of some programs, the Southern California Golf Association reported in 1967 that Superintendents in the metropolitan area practiced an average of 4.5 vertical mowings, 2 topdressings, and 2.5 corings on putting greens. On non-metropolitan courses each practice was followed 3 times per year on the average.

Data compiled from reports presented by turf managers at recent conferences show that golf and bowling greens receive the most intensive treatment with a high of 5 corings, 8 vertical mowings, and 4 topdressings annually. Intensively managed cemeteries, football fields, and fairways receive intermediate management, while general athletic fields and parks usually receive the fewest treatments. Each turf manager must adjust his program to utilize the practices which best fit his particular set of circumstances.

In the following discussion, only vertical mowing will be considered. Vertical mowing should be practiced during periods when active growth can be expected to follow. This is important for recovery from the thinning and injury which occur due to treatment. Nitrogen fertilization 2 to 3 weeks previous to treatment will encourage rapid recovery.

For warm season grasses, vertical mowing is suggested during late spring to early summer (May, June) and late summer to early fall (October, November). Light treatments are often utilized during the summer on turf which tends to thatch readily without serious injury. For cool season grasses, March to early April, and October to early November are recommended. Treatment during hot weather should be avoided.

Other factors which should be considered in the timing of vertical mowing includes laborpool, use of the area, requirement for overseeding, and degree of *Poa annua* problem. For example, Youngner[6] reported serious *Poa annua* infestation within 10 days after vertical mowing of bermudagrass turf in November. Cultivation of turf which contains appreciable quantities of *Poa annua* seeds should be avoided during its peak period of germination unless chemical control treatments are also utilized.

Evaluation of cost factors in vertical mowing is difficult because few records are available which consider this practice alone. Based on information provided through personal contact and reports from previous conferences, costs range from as low as $7.50 per acre to as high as $23 per acre per vertical mowing. This range in figures reflects a number of variables including: equipment depreciation (or rental), equipment repair and servicing, labor and benefits costs per hour, number of men needed for the job, travel time, collection and disposal of thatch debris, size of area to be treated, type of equipment available, and intensity of vertical mowing needed for a given turf area. Not all of these factors were considered equally in the figures quoted above.

Conclusions are: (1) further research

Continued on Page 18

New Turfgrass Book

The long awaited book, "Turfgrass", by Dr. James Beard, is finally off the presses and it looks like a winner.

It is the most comprehensive book on turfgrass science and culture available today. We now have a "Green Bible" for our use in turfgrass management.

James B. Beard (Ph.D, Purdue Univeristy) is Associate Professor of Turfgrass Physiology, Ecology and Culture, Michigan State University.

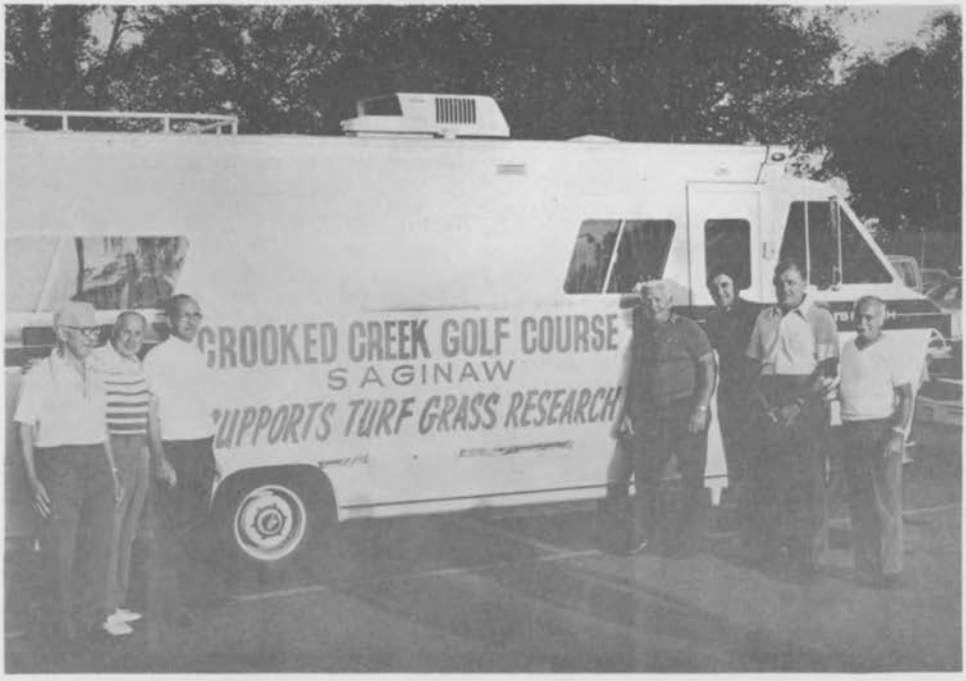
Order your copy today!!

Send $17.95 plus $2.32 for taxes, postage and handling to: Prentiss Hall, Inc., Englewood Cliffs, N.J. 07632 and ask for your copy of "Turfgrass" Science & Culture by Dr. James Beard.

Congratulations Jim!

More golf day Photos

Michigan State University was well represented at our Annual Golf Day at Oakland Hills. Left to Right: Dr. Paul Riecke, Soils Department; Dr. Joe Vargas, Plant Pathologist; Dr. Kenyon Payne, Plant Breeding and Student Co-ordinator.



Some of the gang from Crooked Creek – they came in style and proudly supported our effort.

Winter Protection of Trees, Shrubs and Roses

Trees and Shrubs: The main objectives in winter protection are to minimize temperature fluctuation, guard against or slow down extreme desiccation (loss of water), reduce the mechanical breakdown of plant material, and minimize the effects of low temperatures.

Mulching: Due to these extreme fluctuations of temperature, havoc is raised with our plant material. Mulches, such as ground corn cobs, peat moss, oat leaves, pine needles, wood chips, or straw, should be piled up 6 inches around the shrubs just after the soil is frozen. These materials will insulate the soil so that it will not freeze and thaw often throughout the winter and thus not heave the plants out. In addition, these mulches will help conserve moisture and keep the soil cooler later in the spring so plants will not break dormancy too soon.

Water Loss: With the soil frozen, we must try to cut down on the effects of drying wind so plants will not burn. This can be accomplished by watering the plants just before the soil freezes, screening the plants with a hedge, building, or burlap windbreak on the leeward side of the plants, or spraying with "Wilt Proof"* or "Foligard."* Wilt Proof and Foligard are plastic emulsion sprays that when applied to the leaves of evergreen plant material help reduce loss of water.

Mechanical Protection: Of all our plant materials, trees and shrubs in the foundation planting suffer most from mechanical damage. Everyone has experienced snow falling off the roof and breaking the branches of trees and shrubs. Protection must be applied against this type of damage. This protection may be simply tying the plants together, building a structure of 2 X 4"s around the plant material, a simple open structure nailing snow fence across the top, or lastly, putting a bushel basket over smaller shrubs. Further, simply brushing snow off evergreens will markly decrease the adverse effects of heavy snow.

Low Temperatures: If one knows some shrubs that are tender, that is, may be damaged by low temperatures during the winter, wrap the top of the shrub with straw and/or burlap. This simple protection will bring many flower buds through for spring enjoyment. One precaution - don't tie black or clear plastic over the ropes of shrubs. If you want to see what kind of effect this will have, wrap your hand in a plastic bag on a sunny day and see how hot it gets inside. This will do nothing more than burn up plant material, and in fact, encourage drastic temperature fluctuation.

Continued on Next Page

Winter Protection Cont.

Roses: Roses must be protected from the rigors of our hard Michigan winters. Roses are not only damaged by low, cold temperatures but also temperature fluctuation can cause the plants to make false starts, and more important, the plants to heave out of the soil.

Winter protection should be started just after the first hard frost. This is the time to mound the soil up about 8 - 10 inches around the crown of the plants. If not enough soil is present, consider using mulches, such as wood chips, peat moss, rotted manures, cocoa shells, or buckwheat hulls. If temperatures dependably dip lower than -10 degrees, additional protection should be added, such as straw or peat moss, around the exposed soil area and the tops of the plants.

Just prior to the straw or peat moss application, all branches should be tied together to insure the tops will not break apart under the weight of heavy snows.

Pruning? No! Roses should not be pruned until spring. Late fall pruning in most cases will result in more severe winterkill. The one exception to fall pruning is if one uses styrofoam cones to protect their plants. It is obvious that these rose bushes must be cut down to accommodate the styrofoam insulation cones.

Don't remove any of the winter protection until the danger of frost has passed in the spring.

If in past winters one has experienced damage to trees and shrubs, protect them as described previously. These precautions will insure a beautiful landscape next spring.

For any further questions, don't hesitate to call your County Cooperative Extension Service.

**Any tradenames should not be considered endorsements.*

Gregory Patchan
County Horticultural Agent

Thatch Removal Cont.

is needed to understand the value of specific treatments for thatch control, and to develop new methods of control; (2) thatch removal is only one of a series of management practices which influence thatch; and (3) thatch removal costs vary considerably depending on the particular situation and the method of calculation of expenses.

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CLASSIFIED ADS

GOOD USED EQUIPMENT SALE

(1) 1956 200 Gal 10GPM Hardie Sprayer Wood tank. Ex. condition, $350.00; (1) 1964 Ryan Renovaire Fairway Aerifyer, set up to Hyd. quick change 1 - new set ½ tines 1 set 4" slicing knives completely rebuilt Model R-96, $500.00; (1) 1963 Ryan Spikeaire, Ex. condition, $150.00; (2) 1964 Henderson Contour Vericuts, $30.00 each; (2) Jacobsen 22 GPM, Good condition, $175.00 each.

IRRIGATION EQUIPMENT SALE

(76) Buckner 1360 Manual Pop up, 1/4 by 3/16 Nozzels, $15.00 each; (14) Buckner 882 G Impact Sprinklers, 2 sets Nozzels, $12.50 each; (5) Rainbird 808 W Impact Full Circle, $10.00 each; (36) Rainbird 80 B Impact Full Circle, $10.00 each; (20) Rainbird 70E Series, $8.00 each; (10) Rainbird 40B Series, $4.00 each; (14) Toro 404, $5.00 each; (2) Toro 403, $2.50 each.
Above sprinklers do not include quick couplers. Couplers are available at $3.00 each.
If interested Call: William Madigan, Supt., Country Club of Jackson, Jackson, Mich. Area Code 517-787-0650.

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*WIN – Water Insoluble Nitrogen. Available WIN based on standard AAFCO Availability Index analysis procedure.

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