

January/February 1987

62nd Year

A PATCH of GREEN

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PRESIDENT'S MESSAGE

With the beginning of a new year I am looking forward to another great golf season. Our goals for the MBCGCSA during 1986 were many and while we did not achieve them all I feel our progress is continuing at an exceptionally good pace. All of the officers and board of directors worked diligently in making our Association worthwhile to the membership. Ted Woehrle continues to produce a fine magazine in the form of **A Patch of Green**. Largely, his effort goes unnoticed but having worked with Ted the past two years I know the time and effort he dedicates to the magazine.

Our Association continues to be a leader in raising funds for turfgrass research and scholarships to worthy organizations and students. In 1986 over \$12,000 was given to the Michigan Turf Foundation from our annual Golf Day held last October. Four-thousand dollars was donated to the Special Olympics in May. Five-hundred dollars was given to the GCSAA Research & Scholarship Fund last year and we will do the same this year. Also, the O.J. Noer Foundation will receive \$500 from us to go towards turfgrass research. The scholarship that our organization awards to a worthy four-year student at MSU every year has been increased from \$500 to \$1,000.

Through the hard work of many of our members is this all possible. In the past twenty years our Association has raised and donated over \$200,000 in support of the turfgrass industry. This is something that all members, past and present, can be proud of.

In 1987 we will continue to emphasize member services of the MBCGCSA. We would like to continue to improve our educational programs and meeting sites. We are in the process of obtaining high quality speakers and informative topics for our meetings. Also, the MBCGCSA & GAM Spring Green Seminar will be held March 28, at the Detroit Golf Club and the program looks again to be real strong. If any member has any suggestions or comments concerning our education program for 1987, please contact Roger Gill.

This year we are attempting to organize a state-wide golf course superintendent's golf tournament to be held sometime in September. The tournament site is being discussed with the other Associations in the state and further information about will follow in the near future.

The Board of Directors has instituted a new policy by which the F members will now have a liaison to the Board. This person will be selected soon and his position will be to improve communications between the F members and the Association. We feel this will make our organization stronger and closer.

I would like to thank Dan Uzelac for his six years of service as a Director of our Association. Dan has just stepped down as a Director and the contributions to the Association will be missed. At the same time I would like to welcome Jay Delcamp to the Board. Jay was elected to a three-year term at the 1986 Annual meeting and I know he will be a great help to us all.

Kevin Dushane
President, MBCGCSA



"A PATCH OF GREEN"

Published Bi-Monthly by the

MICHIGAN AND BORDER CITIES GOLF COURSE SUPERINTENDENTS ASSOCIATION

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Looking Ahead to 1987

The year 1986 will long be remembered as the year with no fall. The weather was a big concern for most of us starting in September and continuing through the end of the year.

Because of the extreme wet conditions and the relentless cloudy skies, our turf did not have very good conditions to prepare itself for the winter. This is a big concern for us at the beginning of the year. Poor roots and few carbohydrates were stored for the early growth and the turf is very weak. Unless mother nature is kind to us this winter and early spring we may witness a disaster in April and May.

Several golf courses have purchased green covers for some of their greens this winter. Others have covered all their greens. Two types of covers are being used and the results of each will be closely watched. The results last year were very encouraging and hopefully they will allow the turf to overwinter in a healthier condition and give us an early start next spring. And maybe even make up for some of the lost revenue last fall.



GREEN COVERS FOR 1987



GREEN COVER

The Plant Growth Regulators are still showing promise and many more Superintendents will be trying them this year. If there is one thing we are learning, it is how **not** to use them.

A number of new herbicides are being marketed for 1987 - among them are pre-emergent broad-leaf

controls and several post-emergent crabgrass controls. All look promising.

The EPA and other governmental agencies will become more assertive and demand more "safety" in chemical use. They will monitor more closely the use of pesticides and I have a feeling that we are really going to have to comply with more rules and regulations this year and it will get more and more difficult in the future. Be prepared!

There are some exciting new pieces of equipment on the horizon too. As more and more clubs mow fairways with riding greens mowers and collect the clippings we will be seeing better mowers and better methods of collecting and disposing of the debris.

We will be changing some of our practices in bunker maintenance, tree maintenance and cart traffic controls also.

Remember, as Dr. James Beard said, "The closer we get to perfection on our golf courses, the more obvious our imperfections become."

Little things that have not been considered as important in the past will become more important in the future. We will be spending more time on fairways and bunkers than on greens and tees and beautification of golf courses will be more emphasized.

USGA REGIONAL CONFERENCES

The USGA will again sponsor a series of one-day regional conferences in the spring of 1987. These meetings are designed to provide valuable information to superintendents, golf professionals, club managers owners and operators of public golf facilities, association officials and other interested golf groups.

Approximately twelve seminars will be conducted nationwide in the spring of 1987. There will be two in the midwest; Tuesday, April 7, 1987 at the Inverness Club in Toledo, Ohio and Thursday, April 9 at the Westmoor Country Club in Milwaukee, Wisconsin.

Members of the PGA of America and the Golf Course Superintendents Association of America have received certification points for attending USGA Regional Conferences in previous years.

Registration forms will be available in February, 1987. For more information contact USGA Regional Affairs, P.O. Box 616, Crystal Lake, Illinois 60014, (815) 459-5590.

Christmas Party 1986

the annual Christmas party of the Michigan and Border Cities Golf Course Superintendents Association was indeed the gala affair of the year. More than 60 couples found their way to the Links at Pinewood.

Host Superintendent Earl Prieskorn and his wife Jean greeted the guests along with the Chairman, Charles Gaige and his wife Andra.

It was great to see so many of our members from the far corners of Michigan. The Flint area was well represented and of course Bob and Jackie Hope drove all the way over from Kalamazoo.

The lively music of Don Fichter was enjoyed by all and once again "Elvis Vargas" made a surprise visit and performed some of his more famous songs. The friendly atmosphere was a welcome time for celebrating the end of a hectic year.

Especially heart-warming was the appearance of Gerry Gill and his wife Mary out on the dance floor - it was great seeing them again.

We hope to see more of you next year to share the friendship of this great association.



HOSTESS & CHAIRMAN,
ANDRA & CHARLIE GAIGE



"ELVIS VARGAS"



BEV MADDERN (left) winner of one of the table prizes — ANDRA GAIGE holding box of names from which Bev's name was drawn.



JIM ECCLETON AND WIFE DENISE

The Black Layer Problem on Greens

by: Bruce Branham, Assistant Professor
Paul Rieke, Professor
J.M. Vargas, Professor

There have been an increasing number of reports from golf courses around the State of a black layer which forms below the soil surface on greens. In a worst case, those areas which develop a black layer can suffer significant turf loss. The turf research group at MSU has observed the problem on many golf courses and are beginning several research projects to determine more about the cause and cure for this problem.

At the present time, we have formed the following hypothesis on the development of the black layer. We are certain that the black layer is in an anaerobic state (no oxygen present - waterlogged) and this waterlogged condition is responsible for the loss of turf. An anaerobic condition can develop whenever the ground becomes saturated with water which displaces the oxygen in the soil and prevents normal gas exchange with the atmosphere. In many greens

which are constructed according to the USGA greens mix and are predominately sand, the formation of an anaerobic condition may seem contradictory because sandy soils normally have excellent drainage. However, where layers develop in a soil profile, these layers retard downward water movement and under certain conditions anaerobic areas may form.

It is our belief that the black layer forms when a layering problem causes an anaerobic condition following heavy rains or irrigation. Under anaerobic conditions an entirely different group of microorganisms become active. These organisms produce products quite different from anaerobic respiration. Gasses produced under anaerobic conditions include carbon monoxide (CO), methane (CH₄), ammonia (NH₃) and hydrogen sulfide (H₂S). Many of these anaerobic respiration products are toxic to plants. In

CONTINUED PAGE 19

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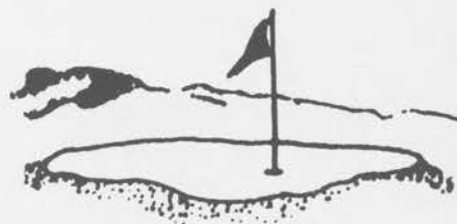
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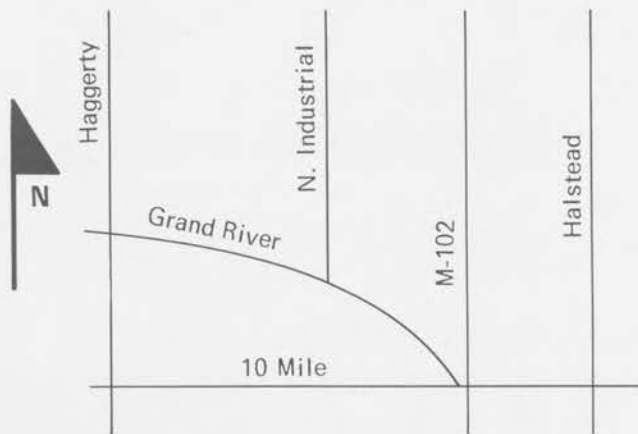
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THE JOHN WALTER AWARD

The second annual "John Walter Award" for the best article written by a golf course superintendent and published in "A Patch of Green" for 1986 was presented to Clem Wolfrom, Superintendent of Detroit Golf Club.

Along with a beautiful plaque which was presented by Editor Ted Woehrle, Clem was given a check for \$100.00. The presentation was made on December 5 at the annual Christmas party held at the Links at Pinewood.

Clem's article appeared in the July/August, 1986 issue and was entitled "Do You Remember - 40 Years Ago?" It was a trip down memory lane highlighting the history of our profession in the Michigan and Border Cities area.

We the editors would like to thank all the Superintendents that presented articles for publication in our magazine. The purpose of the John Walter Award is to encourage Superintendents to write articles of interest and perhaps even win \$100.00 for their effort.



CLEM WOLFROM (left), winner of John Walter Award, being presented by Editor, TED WOHRLE

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All attendees at the GCSAA Golf Course Superintendents Conference in Phoenix are invited to participate in the 8th Annual Golf Course Supts. Christian Prayer Breakfast. Family groups are encouraged and if you were with us last year, come again and bring a friend.

The Prayer Breakfast will be held Saturday, January 31, 1987 in the Phoenix Civic Plaza near the Trade Show. We will serve coffee and rolls at 6:30 A.M. and the program will begin at 7:00 A.M. A light buffet will be available in the Civic Plaza at your own cost if you wish more than coffee and rolls.

"Preeminence", a group of young people from the Arizona College of the Bible will fill you ears and hearts with good music and help you wake up, if necessary.

Our guest speaker will be Mr. Owen C. Carr, conference speaker, pastor, author and past president of Valley Forge Christian College, Pennsylvania. Prior to all these accomplishments, Mr. Carr founded Channel 38, WCFC-TV in Chicago. He served for

more than 40 years in full-time Christian service in Kansas, Illinois, California and in 30 foreign countries.

Come join us for a real up time in Phoenix. **EARLY BUS SERVICE WILL BE AVAILABLE - CHECK THE SCHEDULE.**

From the "Bull Sheet", Dec., 1986

Accompanying article on Page 15

IT ISN'T EASY

To apologize,
To begin over,
To be unselfish,
To take advice,
To admit error,
To face a sneer,
To be charitable,
To keep on trying,

To be considerate,
To avoid mistakes,
To forgive and forget,
To think and then act,
To keep out of a rut,
To make the best of time,
To shoulder a deserved blame,
To recognize the silver lining,
... BUT IT ALWAYS PAYS!

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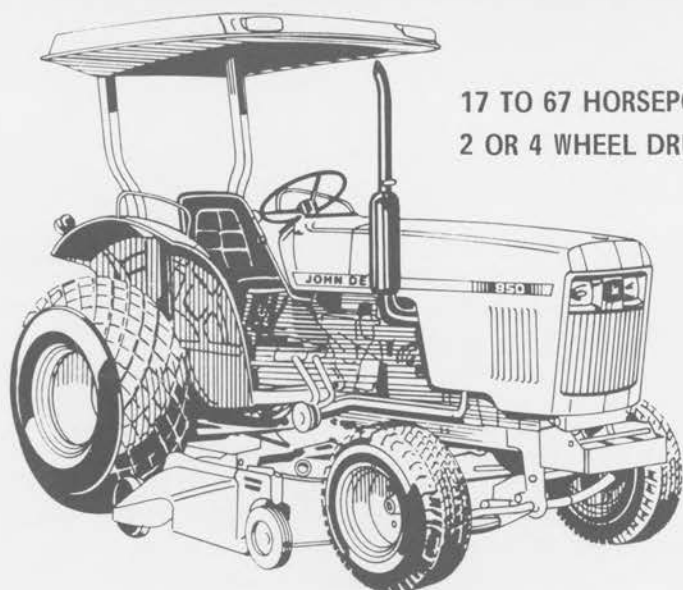
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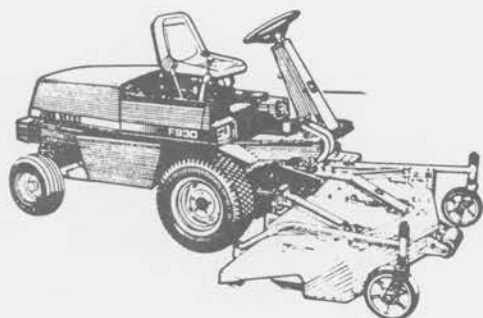
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FAIRWAY SPECIES AND MANAGEMENT

by B.E. Branham
Assistant Professor, Department Crop and
Soil Sciences, MSU

More and more golf courses are following the trend toward lower fairway mowing heights. This trend is reducing the choices a superintendent can make in terms of choosing a species for fairways. Many courses want to have wall-to-wall bentgrass tees, greens and fairways. The desire for bentgrass fairways is probably good because it is the only turfgrass species capable of maintaining a good turf when mowed at $\frac{1}{2}$ " or less. Kentucky bluegrass and perennial ryegrass, in general, won't persist under golf course conditions, a $\frac{1}{2}$ " mowing height and our cold winters.

By lowering the mowing height in the fairways, the superintendent is going to face some of the same problems seen on greens. That is, how to keep out that old nemesis, annual bluegrass. If you are establishing new fairways and desire creeping bentgrass as your fairway species, I would recommend planting the most aggressive bentgrass variety available. Currently, that would be "Pennncross" creeping bentgrass. An aggressive variety is going to be needed to withstand wear and poa annua invasion. To maintain a fairway that is 100% creeping bentgrass is probably not possible, but an aggressive program of preemergence herbicides (bensulide would be the best choice) applied in early spring and late summer should help reduce Poa annua invasion. To give the turf a break from repeated applications of preemergence herbicides, you may want to use a growth regulator such as flurprimidol (Cutless) or paclobutrazol (active ingredient in Scotts TGR Poa control product). These two growth regulators are also weak preemergence herbicides and combined with the severe growth retardation of those seedlings that do germinate, flurprimidol and paclobutrazol may provide effective seasonal control against Poa annua invasion. We don't as yet have complete data to back up this statement, although we do know that flurprimidol can reduce Poa annua germination by over 30%. One can hypothesize that those seedlings that do germinate would lack the vigor, due to the growth regulation, to become established in the stand.

At the present time, I would not recommend reestablishing fairways that are predominately annual bluegrass with the typical Roundup renovation procedure. While this method may give good initial results, you have to question what species composition your fairways will have 5-10 years from now. In many instances after a renovation procedure the turf-

grass community shifts gradually back towards Poa annua with time. In some cases the transition back to Poa annua takes only 3-5 years.

I think the most sound approach to converting existing fairways to creeping bentgrass is as follows. First and foremost is to remove clippings. Three years of testing at MSU has shown this to be a valuable practice that favors the developing of creeping bentgrass while providing a better playing surface than where clippings are returned. Annual bluegrass, as all superintendents know, is a truly unique turfgrass species. It can produce viable seed under any mowing height or frequency regime. By removing clippings (and the associated seeds) a superintendent is preventing annual bluegrass from overseeding itself.

The second practice is to begin an overseeding program with creeping bentgrass. Overseeding 20-25 acres of fairway with "Pencross" creeping bentgrass at \$7-8 lb. is an expensive proposition. However, using a slicer-seeder at a low seeding rate of $\frac{1}{4}$ - $\frac{1}{2}$ lb. seed/M should produce an improvement in fairway species composition over a 3-5 year period.

This program of overseeding with creeping bentgrass and not overseeding with annual bluegrass (i.e. picking up clippings) should lead to a predominately bentgrass fairway in a 3-5 year period. This procedure will represent an increase in operating budget due to the expense of removing clippings, but removing clippings is more than a cultural program to control annual bluegrass.

I am most excited about a new herbicide called Prograss. It is currently labeled for removing annual bluegrass from Kentucky bluegrass and perennial ryegrass. Our trials show it to have good tolerance to Pennncross and Penneagle creeping bentgrass.

Split applications made in mid-September and mid-October seem to give the best results. Rates in the range of 0.75-1.5 lbs./A applied twice for a total of 1.5-3.0 lbs./A have given very good results. The shift in species composition caused by Prograss is gradual. What has been observed at MSU is a yellowing of the Poa annua in the late fall with little apparent change in species composition. But coming out of the winter the plots have shown fairly dramatic decreases in the amount of annual bluegrass. Much more research is needed before this product is commonly used but I anticipate that Nor Am will attempt to get a label for Prograss on

CONTINUED PAGE 19

GOALS AND POSITIVE LIVING

by Jacques Weisel

WARNING: The Surgeon General Has Determined That Apathy is Dangerous to Your Health.

Most people have an aim in life, but no ammunition.

You're at a picnic and you spot a young man with an archery set, shooting arrows into a tree trunk. Every time he goes over and paints a perfect bullseye around the arrow. Passersby who only see the results of his work think he is a great archer. You smile, knowing better of course. Or do you? . . . After all isn't this basically the way you run your life? You end up somewhere, and then decide that's where you wanted to be all along. As a mature individual you've forgotten the most basic concept to living which is to Plan Ahead. You'll go over the day-by-day activities for a 2-week vacation (perhaps 50 times in your lifetime) as if you involved in a forcible overthrow of a hostile government. Yet your only **once-in-a-life-time** journey is played through without too much rhyme or reason. Usually with no plan beyond today and what it may bring. The Koran says "If you don't know where you're going and road will get you there." I've watched people do the same thing in Chinese restaurants. They don't know how to use chopsticks, and try for the beef, shrimp or pork in the dish. All they end up with are some grains of rice, which they proceed to eat. Occasionally, in order not to starve to death they go back to the fork. And yet, a little training ahead of time with the chopsticks (short-range goal) would eliminate the problem before it occurs, and no one would have to be satisfied with the "crumbs" dished out, since we would be in full control.

It is a well-known fact that man is a goal-striving mechanism. This means that whether he has goals or not he will reach them. My question is simply this - Would you rather reach goals which are yours or someone else's? As a child we were given short-range goals to live by. "Eat your food", "go to bed", "don't step in the gutter", "go to college", "get married" . . . All short-range and long-range plans that someone else wanted us to execute. It's no wonder that we got out of that habit as soon as we could - and usually end up by throwing out the baby with the dirty water. Goals are not important to Positive Living. They are crucial. It is not a coincidence that the word goal begins with "go". Daily goals give you the best reason to get up and do. Weekly goals make the months fly, and monthly goals renew your enthusiasm for life twelve times per year. Annual goals can guarantee a lifetime of successful happenings, as you maintain

full control of your personal destiny.

The captain of a cruise ship needs to see his destination thousands of miles away to know he will reach it at a certain date and time, so can you plan your life according to your own timetable. Your goals must be realistic and reachable, so that you can reap the rewards of positive reinforcement at timed intervals, and thus have the confidence to know that you're on target for the big plan. One last condition. You must feel you deserve to reach your personal and financial targets, and only a healthy self-esteem can do that. As children we are all either the victims or beneficiaries of attitudes instilled in us by others. We are either cursed or blessed by our early conditioning . . . and we also know that the Bible says "As a man thinketh in his heart, so is he . . ." This means that if we don't like some of our "programmed" thinking we can change it by putting stronger and healthier thoughts into our minds.

Goals have changed a lot in recent years. Witness the following example. We used to marry on a long-range basis "till death do us part", which meant a **commitment**. Now it's become "till divorce do us part", a short-range affair wherein the 'commitment' has turned into 'convenience'. A recent **Redbook** survey of marriage counselors showed that the 3 most common causes for divorce are: (1) A breakdown in communications; (2) The loss of shared Goals and Interests; (3) Sex and incompatibility.

There are literally hundreds of self-help books out on numbers 1 and 3, and very little on the subject of proper goal-setting. Profit-oriented companies have discovered the secret. They call it "management by objective". They make money and reach corporate goals by carefully pre-planning the direction in which they want the company to go. Unfortunately the same cannot be said of our governments, both national and local. The reason is simple. Since elections take place every few years politicians cannot plan beyond their short-term positions, so that as a nation there is never a continuity of ideas designed to benefit the People. Japan, on the other hand, has 30-year plans for industrial growth and it is understood that whoever is in power will continue the program of predecessors, because it is in the National Interest to do so, and not for the benefit of the local

CONTINUED PAGE 19

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PHOENIX CONFERENCE FIRE SAFETY

(The following article is printed with your safety in mind - please read it. Since most of us will be staying in hotels during the Conference, it may be important).

SAVING YOUR LIFE IN A HOTEL FIRE

In recent weeks, two devastating hotel fires - one at the MGM Grand in Las Vegas, the other at the Stouffer Inn in Harrison, New York - underline the tragic fact that too many travelers do not know what to do if they are caught in a burning hotel or motel. This may help explain the fact that the United States has the worst record in the world for fire fatalities, according to experts at the U.S. Fire Administration in Washington, D.C.

However, there are guidelines which, if memorized and followed, can sharply reduce the risk for travelers. Here are the precautions that the U.S. Fire Administration recommends:

1. As you go to your room, look for the fire doors in both directions. Count the number of doors down the hall from your room to the nearest fire exit on each side of you.
2. Make it a point to notice where the alarms are located. Also check fire doors to see that they operated properly and are kept closed.
3. Report and fire safety deficiencies you spot to the management.
4. Look for any posted fire emergency regulations and make sure you understand how to follow them.
5. Always leave your key in the same place when you are in the room - preferably on the bedside table or in the door.
6. If a fire starts in your room, take the key and leave. Close the door behind you, pull the nearest alarm, and proceed to the fire stairs. Never take an elevator when there is a fire in the building. As soon as you reach the lobby, notify the desk.
7. If the fire breaks out elsewhere, follow the posted instructions and/or the tips below . . .
 - **To Learn if it is Safe to Leave the Room**, take your key, go to the door and use your hand to check the temperature of the door. If it is hot, do not open it. Instead, assume that you are trapped in the room.
 - **If the Door is Cool**, open it a crack. But be ready to close it immediately if there is hot air, smoke or flames. If there are none of these, but the hall is hazy, crawl down the hall, counting the doors to the nearest fire exit. If you can't reach that one, crawl back toward the other. Should that be impossible, count the doors back to your room and go inside.

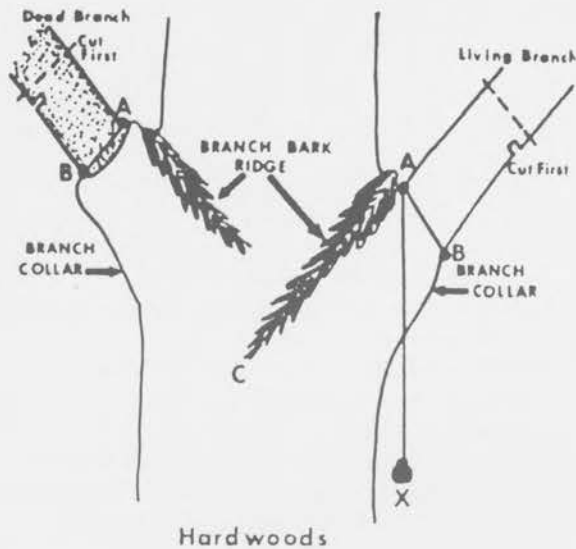
- **Once in Your Room**, fill the tub with cold water and use it to wet towels and clothes. Stuff these under and around the door.
- **Close as Many Doors as Possible** between you and the fire - but be sure to stay in a room with windows. If the fire is on the floor below, or there are clouds of smoke outside, you are better off leaving the windows closed. Otherwise, open one and hang out a light colored bedspread or sheet as a signal.
- **If Smoke Gets in Your Room**, hold a wet towel to your face and stay low, close to the floor as near to an open window as possible.
- **Do Not Jump**, no matter how panicky you feel, unless you are not too high above the ground. Professional fire fighters will tell you what to do. Wait for their help.

Credit: Research Institute Personal Report

1987 COMMITTEE ASSIGNMENTS

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MEMBERSHIP - JIM TIMMERMAN
BY-LAWS - KEN DeBUSSCHER
GOLF - JAY DeLCAMP
FUND-RAISING - ED HEINEMAN
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NATURAL TARGET PRUNING

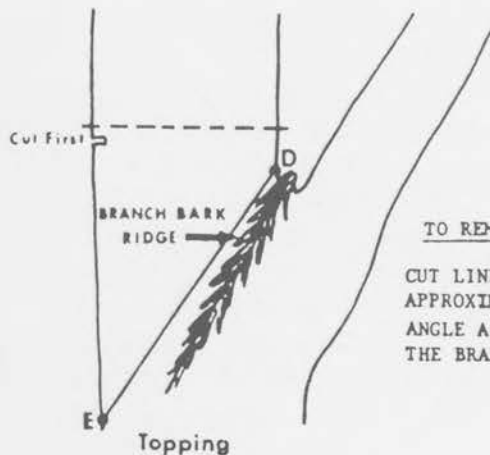
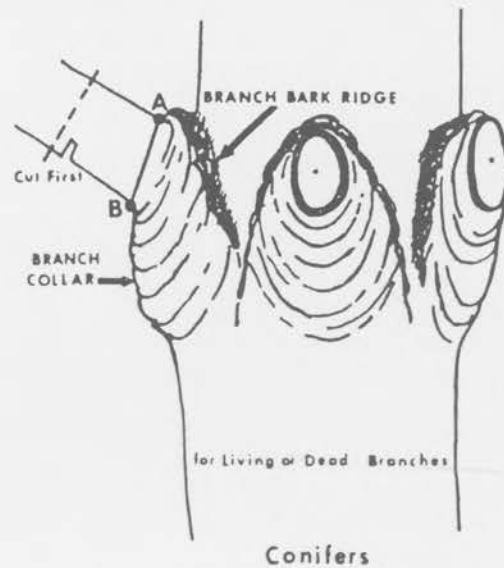


NATURAL PRUNING STEPS

1. LOCATE THE BRANCH BARK RIDGE
2. FIND TARGET A - OUTSIDE OF BRANCH BARK RIDGE
3. FIND TARGET B - SWELLING WHERE BRANCH MEETS BRANCH COLLAR
4. IF B IS HARD TO FIND - DROP A LINE AT AX. $\angle XAC = \angle XAB$.
5. STUB BRANCH TO BE PRUNED
6. MAKE CUT AT LINE AB

DO NOT

- * CUT BEHIND THE BRANCH BARK RIDGE
- * LEAVE STUBS
- * CUT BRANCH COLLAR
- * PAINT CUTS - EXCEPT FOR COSMETICS
- * LEAVE FLAT TOP WHEN TOPPING



TO REMOVE TOP:

CUT LINE DE AT AN ANGLE APPROXIMATELY THE SAME ANGLE AS THE ANGLE OF THE BRANCH BARK RIDGE.

Best Time To Prune

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WOLFROM CONFERENCE ROOM DEDICATED AT MSU

On Tuesday, September 16, 1986 a group of friends and relatives of the late Clarence Wolfrom were present for the dedication of the C.H. Wolfrom Conference Room in the newly opened Plant and Soil Science Building on the campus of Michigan State University.

Clarence was the superintendent of the Maple Lane Golf Club in Sterling Heights, Michigan and for over 50 years, through his leadership and dedicated service to the Club, it was able to grow and become one of the finest clubs in Michigan. It was because of his loyalty and hard work that the Roehl family owners of Maple Lane, donated funds to develop the beautiful C.H. Wolfrom Conference Room in his memory.

All of us in Turfgrass Management are proud of Clarence and the Roehl family for their recognition and support of a truly great man.



CLEM WOLFROM PROUDLY STANDING WITH
CARL ROEHL AND SON PETER ROEHL



L to R — BRUCE WOLFROM AND BROTHERS WAYNE, CLEM
AND GERALD SITTING AT THE CONFERENCE TABLE WITH
DEAN ANDERSON IN THE NEWLY DEDICATED CLARENCE
WOLFROM CONFERENCE CENTER AT MSU.

TOBACCO AND DIET MORE SIGNIFICANT THAN CHEMICALS

Many people believe that chemicals - whether they are drugs, pesticides, food additives or air and water pollutants - are a major cause of cancer. Although some toxic substances have been linked with cancer, recent studies indicate that various habits or lifestyles within the control of each individual are more likely to cause cancer. Two British scientists analyzed American cancer mortality rates and concluded that carcinogens in the workplace, environment, food additives and industrial products cause fewer than 8 percent of American cancer deaths.

Two-thirds of all cancer deaths were attributed to two factors: **tobacco**, which was blamed for 30 percent and **diet**, which contributes to about 35 percent. Dietary contributors include low-fiber, high fat diets.

Most experts agree that there are 30 to 40 chemicals known to cause cancer in humans. All of them are governed by existing regulations and in some cases the regulations are being re-examined. Direct occupational exposure is believed to cause from 1 to 5 percent of all cancer. In the workplace, exposure to these materials is being reduced, either through new manufacturing methods or protective equipment.

NATURAL DOESN'T GUARANTEE SAFETY

Advertisers are fond of using claims like "all-natural" or "contains no preservatives" when promoting certain foods. Natural foods are nutritious but they are **not** free of chemicals. The freshest fruits and vegetables, grown using only natural fertilizers, are filled with a variety of chemicals.

Some of natural foods contain toxic chemicals. For example, shrimp contain arsenic, peanut butter contains aflatoxin, potatoes contain solanine and celery contains furocoumarin. All of these chemicals may be carcinogenic when consumed in sufficient quantities.

The point of all this is not to alarm anyone over the presence of chemicals in the foods we eat, but to remind ourselves to keep a reasonable perspective when it comes to the risks vs. benefits of chemicals. Our fears should be allayed by the fact that, according to the National Institute of Health, the death rate for most common cancers (except lung cancer) has remained stable or declined over the past 50 years. During the same period of time we have seen the greatest growth in the use of chemicals.

We are living longer than ever before, so we must be doing something right.

EVEN SUNLIGHT HAS RISKS/BENEFITS

It is not just the substance itself, but also the amount of the substance and the time of continuous exposure

CONTINUED PAGE 20



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BLACK LAYER PROBLEM, CONT.

particular H₂S is the poisonous gas responsible for the deaths of over 1,500 people in Cameroon recently. The hydrogen sulfide produced by anaerobic organisms can react with metal ions such as iron or copper to form insoluble black precipitates. These metal sulfides are probably responsible for the color of the black layer. Indeed, the Black Sea derives its name from the production of vast quantities of these black metal sulfides. The precipitated materials seem to enhance the layering problem and thus once the black layer is formed it is very difficult to dry out.

WHAT TO DO

It is clear from our observations that once the black layer forms, it is difficult to destroy. Prevention of the formation of the black layer is therefore very desirable. Attempts should be made to alleviate or prevent the formation of any layers in the soil profile. Core cultivation is the best method to disrupt layers and improve downward water movement. Topdressing programs should be done correctly to prevent layering. Watering should be restricted to syringing to help dry out the black layer. In addition, because roots are usually killed by the gasses released in the black layer, the root system is so shallow that syringing is needed to maintain the turf. Our current research is aimed at developing treatments to disrupt the black layer and improve drainage. Wetting agents should be helpful in preventing the black layer from forming by improving water percolation. However once the black layer forms, wetting agents would be of limited benefit.

We stress that the above explanation is only a hypothesis, but one we feel describes the current problem. Research is underway to prove or disprove this hypothesis.

GOALS, CONT.

politicians.

One last good thought on goals by Henry David Thoreau: "The man who goes alone can start today. But he who travels with another must wait till the other is ready." Nuff said . . .

Jacques Weisel is a national authority on positive living and selling. He is co-author of the book, "the Management Motivators", producer of sales and motivational tapes and past president of the New York Chapter of the National Speakers Association. For a free information kit, contact him at: P.O. Box 224, Coram, NY 11727, (516) 698-7760.

Article borrowed from the "Three Rivers Green"
Dec., 1986

FAIRWAY MANAGEMENT, CONT.

creeping bentgrass fairways by 1988.

In summary, a fairway of predominately creeping bentgrass can be realized with a program of clipping removal and overseeding with bentgrass. A selective herbicide such as Prograss would be a big benefit if future studies continue to demonstrate its efficacy and safety.

Everything is farther than it used to be. It's twice as far from my house to the station now and they've added a hill that I've just noticed. The trains leave sooner, too, but I've given up running for them because they go faster than they used to.

Seems to me they are making staircases steeper than in the old days. The risers are higher and there are more of them, because I've noticed it's harder to make two at a time. It's all one can do to make one step at a time.

Have you noticed the small print they are using today? Newspapers are getting farther and farther away when I hold them and I have to squint to make out the news. Now it's getting ridiculous to suggest that a person of my age needs glasses, but it's the only way I can find out what's going on without someone's reading aloud to me and that isn't much help because everyone seems to speak in such a low voice that I can scarcely hear.

Times sure are changing. The material in my clothes, I notice, shrinks in certain places (you know, like around the waist, or in the seat). Shoe laces are so short they are next to impossible to reach.

Even the weather is changing. It's getting colder in winter and summers are hotter than in the good old days. Snow is so much heavier when I shovel it and rain is so much wetter that I have to wear rubbers. I guess the way they build windows now makes drafts more severe.

People are changing, too. For one thing they are younger than they used to be when I was their age. On the other hand, people my own age are so much older than I am. I realize that my generation is approaching middle age.

I ran into my roommate the other night and he had changed so much that he didn't recognize me. "You've put on a little weight, Bob," I said. "It's this modern food," he replied. "It seems to be more fattening."

I got to thinking about poor Bob this morning while I was shaving. Stopping for a moment, I looked at my reflection in the mirror. They don't use the same kind of glass in mirrors any more.

Author unknown

SUNLIGHT, CONT.

that count. Consider the sun. Sitting in the summer sun for 12 hours a day 3 days in a row could make a person quite ill; for an old or infirm person, it might be fatal. However, those same 36 days could be beneficial because the sun can produce Vitamin D in our bodies.

"What is there that is not a poison? . . . Only the dose makes a substance not a poison."

- Paracelsus, 1493-1541 A.D.

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GRASS CLIPPINGS



The following article, headline and accompanying photographs appeared in the June, 1975 issue of A Patch of Green and was written by Frank Green.

MURPHY'S LAW

I think the only thing that this spring proves is that Murphy's Law concerning Mother Nature is a true and valid statement. The spring season was about two to three weeks later than normal (whatever normal is) according to most weather people. Depending on your location it was either a cold, dry spring or a very wet spring with record floods.

The more southern parts of Southeastern Michigan received abnormally cold weather through most of March and April and with the exception of three inches of snow in April, received only scattered



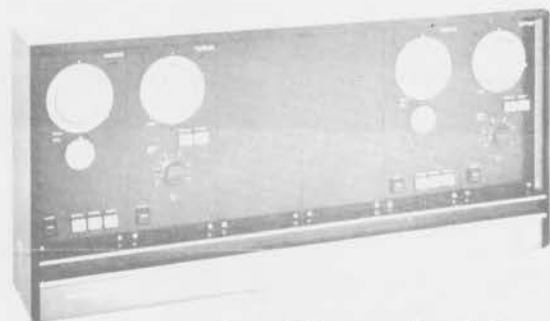
15TH FAIRWAY AT HILLCREST, 04/19/75

precipitation. The part of the state that received most a Mother Nature's fury was Lansing, Flint and Northern Oakland and Macomb Counties. Things really looked like they were going to break around the end of March and in fact several clubs had already mowed their greens. Little did they know that on April 2 and 3 they were to receive up to seventeen inches of snow. This put a damper on golf for a few weeks and even rekindled pink snow-mold in some areas that had just recovered from the disease.

CONTINUED NEXT PAGE

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SHOP AT HILLCREST, 04/19/75

GRASS CLIPPINGS, 1975, CONT.

As if the above were not bad enough, on April 18 the same area was deluged with from two to five inches of rain. This in turn caused flash flooding throughout the area and several golf courses in Flint, Lansing and Mt. Clemens were almost totally under water.

As it stands now most courses are in a very good condition and excluding a few cases of Helmenthisporium Leaf Spot here and there, turf diseases are at a minimum.

This article, bearing in mind last fall's weather and the back-to-back mild winters in '84 and '85 just proves that the Earth's first lady, Mother Nature, will always do what no person can predict and that we should thank the fact that no matter what she is up to at a particular time is acceptable because she could always bring worse.

GRASS IS IMMORTAL

Grass is the forgiveness of nature - her constant benediction.

Fields trampled with battle, saturated with blood, torn with the ruts of cannon, grow green again with grass and carnage is forgotten. Streets abandoned by traffic become grass grown like rural lanes and are obliterated. Forests decay, harvests perish, flowers vanish, but grass is immortal . . .

Unobtrusive and patient, it has immortal vigor and aggression. Vanished from the thoroughfares and the field, it bides its time to return and when vigilance is relaxed, or the dynasty has perished, it silently resumes the throne from which it has been expelled, but which it never abdicates. It bears no blazonry or bloom to charm the senses with fragrance or splendor but its homely hue is more enchanting than the lily or the rose. It yields no fruit in earth or air and yet should its harvest fail for a single year, famine would depopulate the earth.

John H. Ingalls,
U.S. Senator, Kansas, 1873-1891

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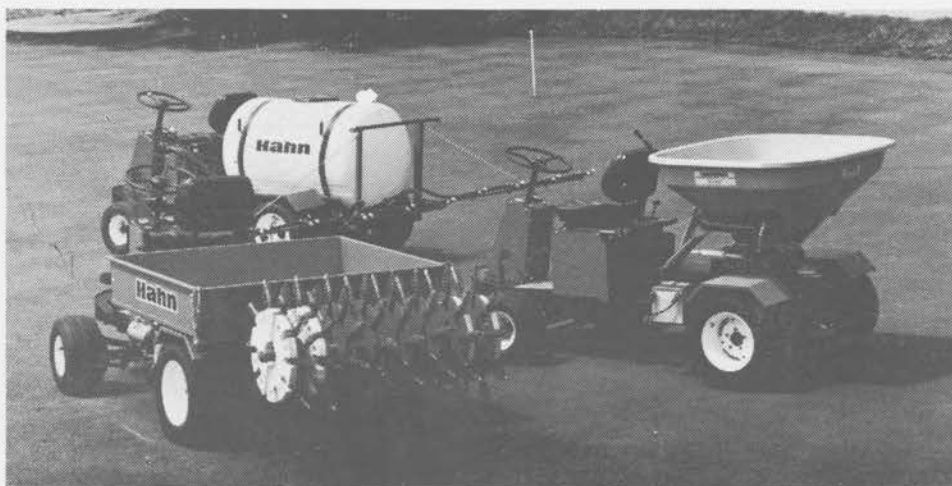
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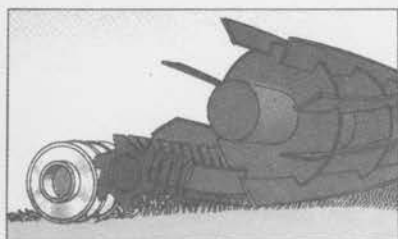
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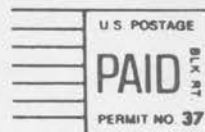
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