

grass had crept into the rough.

The course was closed for the entire spraying day and the maintenance crew was instructed to avoid the spray areas. In addition the course was closed the following morning until the dew was off of the grass. Being closed the second morning is very important because our 1982 tests showed that roundup tracking will do severe damage to nontarget areas on shoes and cart tires, if play is allowed while the dew is still on the grass.

The roughs were seeded three days after the Roundup application. The 1982 test showed that a three way blend of Kentucky bluegrass with 50% Baron, 25% Glade, and 25% Majestic, seeded at a rate of 1/2 pound per 1,000 square feet produced the best results. The test areas with perennial ryegrass were not satisfactory due to the different growth rates of the bluegrass and the ryegrass. A slit seeded was used to apply the seed in one direction following the contours of the fairways. Four days after the seeding, triple superphosphate was applied at a rate of one pound per 1,000 square feet.

Twelve days after seeding the first seedlings were visible and by the time winter dormancy set in, the new seedlings had grown to the height of one inch. The fall of 1983 was very good for seed germination. Unfortunately, the annual bluegrass seed, already in the soil, germinated as well or better than the Kentucky bluegrass. This was also a problem the previous year during the test. Ronstar, applied the next spring did a good job of reducing the competitiveness of the annual bluegrass when used at a rate of four pounds active ingredients per acre. Various rates of Rubigan and 2, 4-D will be tested next spring to try to eliminate the remaining annual bluegrass and bentgrass in the new rough area.

Other problems encountered in this program include:

1. The establishment of turf in high traffic areas. The only solution to this problem in areas which cannot be roped off is sod.
2. Irrigating newly seeded areas without over-watering the fairways requires considerable hand labor.
3. The activity of skunks and crows searching for white grubs devastated many seeded areas which had high grub populations. Next year a grub control product will be used on all areas to be seeded.

With the need to reduce fairway acreage to contain maintenance costs and to allow for triplex fairway mowing and to increase the beauty of the course, many more courses may find the need to convert fairway grasses to rough grasses. It is hoped this discussion will be of some benefit to other superintendents considering this program.

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In the midst of Summer's heat,
Some may prosper, Some will get beat.
As Mother Nature does Her things,
Who will sit the saddle, Who will She fling?
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It takes know how and desire,
To harness a wild wind blown fire.

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Up Coming Events — Mark Your Calendar

August 1 — Illinois Landscape Contractors Association 25th Anniversary Summer Field Day at Synnestvedt's Burr Oak Nursery, Round Lake, IL

August 7 — Midwest Institute of Park Executives Equipment Show at Meadow Park, Northbrook, IL. Questions: Call Mike Schiller at 291-2989 for registration fees & times.

August 20 — Midwest Meeting at Riverside Golf Club. 11:00 A.M. Shotgun Start

September 10 — Midwest Meeting at Turnberry C.C.

September 24th — Illinois Turfgrass Foundation Golf Day at Itasca C.C. Get a foursome and GO SUPPORT this worthwhile group.

October 1 — Midwest Meeting at Cress Creek C.C., Naperville, IL.

Hey! Hey! Hey! Ed Smith had a "Hole-In-One" on the 10th hole at Sportsman C.C. at the last Midwest meeting on July 9th. Ed stated that he has had a few eagles on the par 4's and par 5's, but that this was his first hole-in-one. Congratulations Ed! You can buy at the next meeting where we have to pay for our drinks. We all can thank Yamaha for the drinks at the July meeting.

Boy oh Boy, you sure can't beat Joe Jemsek for being able to pick good people for his organization. Now he has picked two of the best in our area to help with a new course he is building in Mundelein, Illinois. Joe has snatched Carol McCue out of retirement to co-ordinate all of the required leases, licenses and whatever one may need when starting up a new business or in this case a golf course. Then Carol will become the Manager of the new course once it opens in May 1985. For those of you who worked with Carol while she guided the CDGA you knew when she was asked something or given a job to do you had better stand back out of the way — for she got it done. It's great for golf that Carol McCue is back in the game.

The second person our Mr. Jemsek picked to organize the construction of the course and the building of the club house was Ted Sokolis from the Village Links of Glen Ellyn. Ted has spent many years at the Links, he started when the first spade was turned in the mid sixties and advanced thru the chairs from construction superintendent, to superintendent, to facilities manager of the recreation department of Glen Ellyn. Good luck to both Carol & Ted in their new positions.

Maddox will be the builder for the course following the golf architects of Joe Lee and Rocky Requemore who built Dubs Dread and the course at Disney World, to name a couple.

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Congratulations to the Illinois Turfgrass Foundation! They are celebrating their Silver Anniversary this year. This is a very fine organization that every golf course should belong to and SUPPORT. In the past 25 years the ITF has contributed over \$258,000 to research. They have held annual educational turfgrass conferences since 1960 for our benefit.

It's A Boy!!!! David & Chris Behrman become proud parents of Zachary David on June 20th, 1984.

I am both sad and happy to report that Ed Stewart, Supt. of River Forest C.C. is home from the hospital after amputation of his right leg from just below the knee.

Wasn't it great to see and read of all the outstanding comments of one of our local Superintendents — Oscar Miles — with the great job he and his crew performed for the Western Open. Oscar must have had his own press corp with all of the fine "print" that he and the golf course received during the coverage of the tournament in early July. The weather was perfect for once and crowds set records every day. The Pros even raved about the course. I do not want to take anything away from Butler or Oscar, but as we all know there are at least three dozen other courses in the Chicago area that are in just as fine a condition. It's a shame that they aren't able to be seen by the golfing public and appreciated for the fine work by their Superintendents. At any rate Oscar, it was a great job and we are proud of you for representing us to the nation as an area where we have fine golf courses.

1984 and 1985

North Central Turfgrass Exposition

The 1984 NCTE will be held at the O'Hare Exposition Center in Rosemont, Illinois, Tuesday through Thursday, December 11-13. We have moved to a new facility to help bring the tradeshow together in one room. It is believed that this move was necessary for the further growth of the NCTE. Highlights of the 1984 program include a turfgrass disease symposium, workshops on preventive maintenance, disease diagnosis, and computer communications. The Midwest Clinic will again be held on Wednesday, December 12, with the majority of topics being presented by golf course superintendents. For the first time, the Central Illinois Golf Course Superintendents Association will also be conducting a clinic. This clinic will be held on Thursday morning, December 13. The clinic will rely on superintendents to relay their experiences over the past season. The headquarters hotel will be the O'Hare Hyatt and a special celebration of the 25th Anniversary of the Illinois Turfgrass Foundation, Inc. is being planned for Wednesday evening, December 12.

In order to help make this educational opportunity available to all people in the State of Illinois at a reasonable cost, we have decided to hold the annual NCTE at an alternate location once every five years. The 1985 NCTE will be held at the Peoria Convention Center, Peoria, Illinois, December 17-19, 1985. The Peoria Convention Center is an excellent facility, allowing for a full-size tradeshow and a full educational program. Preliminary plans are being made to accommodate a superintendents clinic under the auspices of the Central Illinois Golf Course Superintendents Association.

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Joe Jemsek (L) the master of eight golf courses in Chicago starts his ninth in Mundelein, IL (Sat., June 25) and gives a lesson in mowing to local junior golfers Kevin Huber, a junior at Libertyville high school (on tractor) and Trey Carter, a recent graduate of Mundelein (IL) high school and son of golf professional, Lew Carter. Jemsek has leased the 18 hole course at St. Mary of the Lake Seminary and has begun restoring it to traditional quality. The course will open to the public May 1, 1985, and will have four sets of tees, approximately 7000; 6600; 5900 and 5400 yards and will have men's and women's course ratings for each set.

Jemsek's other courses are: Cog Hill, Lemont, IL (4 18 hole courses); St. Andrews, West Chicago (2 18 hole courses); Glenwoodie, Glenwood (1 18 hole course); and Fresh Meadow, Hillside, (1 18 hole course).

Insect Pest of Golf Greens to be Studied in Ohio

The frit fly, *Oscinella frit* (L.), is a small black fly often present in large numbers on golf courses and seen by golfers when it lands on white clothing or golf balls. Recognized as a nuisance to golfers, the frit fly larvae can and do cause damage to turfgrass, especially greens, collars, and aprons. Adults lay eggs that hatch into small maggots which tunnel into grass stems to feed on growing tissues. Little is known about the insect; in fact, it has never been studied on turfgrasses in the U.S. Research is currently underway to study the biology, seasonal life history and distribution of this pest on golf course turf. The work is being conducted by Mike Tolley, Ohio State University Ph.D. graduate student, under the guidance of Dr. Harry D. Niemczyk, Professor of Turfgrass Entomology at OSU's Ohio Agricultural Research and Development Center, Wooster. The project is being supported, in part, by the Ohio Turfgrass Foundation.



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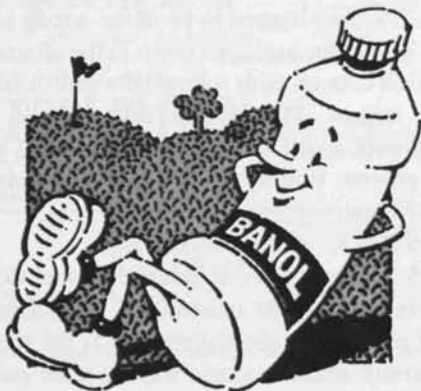
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“Lightning Can Strike Without Warning”

by Bruce R. Williams, Bob O’Link Golf Club

Of all the weather phenomena affecting the golf course manager today, lightning is the most often overlooked. We worry about the heat, cold, rain, wind, humidity, sunshine, clouds, etc. but we know so little about lightning and its effects. After reading several books and a number of articles on the subject - I will present a review of all of the information currently available.

WHAT IS LIGHTNING?

Simply stated lightning is nothing more than a very long spark which discharges a region of excess electrical charge developed in thunderclouds. It reaches a peak temperature of 50,000 degrees Fahrenheit which is five times greater than the surface temperature of the sun. Each cloud-to-ground lightning flash has a voltage of between 100 million and a billion volts and travels at a speed of between 20,000 and 60,000 miles per second.

Meteorological data shows that there are roughly 2000 thunderstorms in progress in the world at any given time. Each storm produces 1 to 3 lightning flashes each minute and collectively they may produce as many as 100 cloud-to-ground discharges each second or more than 8 million each day worldwide.

WHO IS AFFECTED BY LIGHTNING?

Data published by several life insurance companies and government agencies shows that from 200 to 600 deaths occur in the United States each year as a direct result of lightning. This is more than any other weather phenomena including tornadoes and hurricanes. The Lightning Protection Institute reports that at least 50% of the lightning related deaths or injuries happen to golfers. Golfers are prime targets for lightning strikes. They just happen to be in the wrong place at the wrong time. 70% of the accidents occur in the afternoon in outdoor areas. Golf courses with rolling hills and/or tall trees are more likely targets. Players are sitting ducks during a thunderstorm with a golf club in hand and metal golf spikes serving as a ground. Umbrellas often act as a conductor to attract the fatal blow.

A CASE HISTORY

In the 1975 Western Open, at Butler National Golf Club in Chicago, there occurred the most widely publicized lightning accident to a golfer in recent history. It was the second round of the tournament when an alarm was sounded and play dispensed. Lee Trevino and Jerry Heard were on the bank behind the 13th green. Bobby Nichols was on the 14th fairway and opted to finish the hole although the warning had been given. A bolt of lightning came down and struck Teel Lake on the golf course and offshoots of electrical energy hit each of the three players. All of them were hospitalized and only Jerry Heard returned to finish the final rounds of the tournament. Trevino and Nichols withdrew.

Oscar Miles, Superintendent of Butler National, stated that the Western Golf Association receives advance information from meteorologists. The meteorologists use a system of triangulation to track any potential storms. The Western Golf Association then uses this information and may choose to sound an alarm to dispense play if hazardous conditions exist.

WHAT CAN THE GOLF COURSE MANAGER DO
ABOUT LIGHTNING?

(cont'd. page 18)

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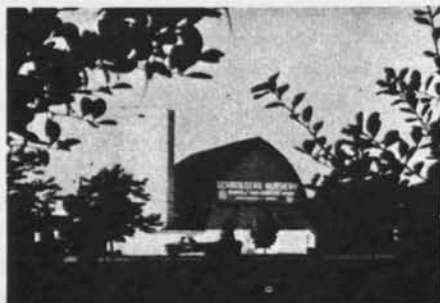
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(Lightning con't.d)

1. Read up on the subject and then pass this information along to your members in your club newsletter or post a warning statement in the clubhouse. Many injuries and deaths could be prevented if only the victims were aware of the danger lightning poses.

2. Inform the members of your staff about lightning. It should be written into your personnel policies that employees will stop work and seek shelter during a thunderstorm. Just as golfers are prime targets so are your crews on the golf course. Most machinery will attract lightning as well as uncovered utility vehicles. Designate those shelters which are properly protected by lightning rods.

3. Post instructional signs at rain shelters with safety procedures to follow if lightning should occur.

4. Be sure that your buildings and rain shelters have the required amount of lightning rods which are properly installed and grounded. Buildings which are used for equipment and chemical storage are rarely protected. While some irrigation controllers are protected in the field it is uncommon to see lightning rods on pumphouses. And once again it must be emphasized that a rain shelter or halfway house is not a safe place without adequate lightning rods.

5. If there are any irreplaceable trees on your golf course, lightning protection is a small price to pay to insure their existence. While there are no statistics on the actual number of trees struck by lightning each year the USDA Forest Service reports about 10,000 forest fires are ignited in the U.S. by lightning annually.

IS A LIGHTNING STRIKE ALWAYS FATAL?

About 2/3 of the people involved in lightning accidents make a complete recovery. Most are not victims of a direct hit but are in close proximity of a strike and receive a lesser shock. Many victims stop breathing and have no heartbeat. Through the use of CPR (cardio-pulmonary resuscitation) and mouth to mouth resuscitation many victims can be revived and stabilized until a physician or paramedic is on the scene. This is another good reason to have as many crew members as possible trained in First Aid and CPR.

WHAT TO DO IS NO PROTECTED SHELTERS ARE AVAILABLE DURING A THUNDERSTORM

1. Never stand under a tall tree. If you must use trees as a shelter than choose a small tree in a wooded area that is not on a hill.

2. Do not touch any metal objects such as rakes, golf clubs, ball washers, etc.

3. Stay away from fences, overground pipes, and metal railings.

4. Avoid standing water and do not lay on moist ground.

5. As a last resort find a ravine or valley and crouch down in that area.

In summary, the danger of lightning has been shown in several different ways. The statistics speak for themselves in regard to the threat posed to use on golf courses. Educate yourself about lightning and pass the information on to players and staff. Install lightning rods for the protection of human lives, buildings and fixtures, pumphouses, rain shelters, irrigation controllers, and irreplaceable trees on the golf course. The next time a thunderstorm threatens your area - be prepared.

Development and Management of Gaeumannomyces Patch

by J. M. Vargas, Jr., Principal Investigator

Supporting Investigators: MSU Turfgrass Faculty

Gaeumannomyces patch or take-all patch formerly known as *Ophiobolus* patch, occurs in many regions of the United States, but has typically been associated with the Pacific Northwest. Monteith and Dahl in 1932 implicated the fungus as an occasional turfgrass pathogen. However, it was not until 1960 that the disease was actually confirmed on creeping bentgrass in western Washington. More recently, the disease has been reported on creeping bentgrass turf in Rhode Island and in the Washington, D.C., Maryland area. We have made similar observations on newly seeded "Pennncross" greens in Michigan, although the disease has never been very serious.

Take-all patch has been reported to be most severe during wet years in poorly drained soil. In 1983, however, the Midwest had one of the warmest, driest summers on record. The disease is also most severe under conditions of high soil pH and low phosphorus levels. But many of the soils on which the disease occurred this summer has high phosphorus levels although the soil pH's were generally high which may have made the phosphorus unavailable. Sulfur has been reported to reduce the severity of take-all patch and is believed related to the effect of sulfur on the soil pH. The use of acidifying fertilizers, i.e. ammonium sulfate, has also reduced the severity of take-all patch, presumably by reducing the soil pH.

Symptoms: The symptoms initially appeared in patches of yellow turf. The grass in the center of these patches usually becomes bronze as it dies completely or becomes severely thinned. The bare or thin areas become filled with broadleaf weeds, creeping bentgrass or later on with annual bluegrass again. The initial spots may be 1 to 6 inches in diameter, but may grow to a diameter of several feet over a period of years. The plants in the disease patches had short and very poorly developed root systems. Examination of the roots under a dissecting microscope revealed dark cortical tissue inside the root and crowns from infection, and dark runner hyphae of a Gaeumannomyces-like fungus lengthwise on the exterior of the roots.

Recent Developments: In recent years, our laboratory has received occasional turf samples from midwestern states that were infected with Gaeumannomyces-like organisms. This August, numerous annual bluegrass samples were received from eastern, mid-central and midwestern states infected with this organism. Annual bluegrass is the major component of golf course fairways in the northern United States, whether it is desirable or not. A disease like "take-all patch" destroyed large areas on many annual bluegrass fairways this summer and since no known control was available many superintendents felt their jobs were in jeopardy. This research proposal is being submitted for funds to try and identify the organisms involved, predict the environmental conditions under which the disease occurs, and to find cultural or chemical means of managing it.

Proposal

Modeling: There is no real quantitative data concerning the environmental conditions leading to the development of "take-all patch". Does it start in the cool weather and remain a minor disease until the soil and/or air environment changes? Does it

(cont'd. page 20)

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(Vargas cont'd)

infect and become a severe problem in a short time? What are the environmental conditions under which it occurs? In short, there are many questions to be answered. The best way to do this is to develop a mathematical prediction model for the occurrence of the disease. The air temperature, humidity and rainfall will be monitored along with the soil temperature and soil moisture in developing the model. The positive identification of the organism or organisms involved in this disease will be determined as part of this study.

Cultural: Sulfur - While the addition of sulfur has been implicated in reducing the severity of the disease, no research has been done to determine if the effect is directly on the fungus or the soil pH or both. This will be determined both in the laboratory and in the greenhouse experiments.

Phosphorus — High phosphorus has been associated with disease reduction. The exact effect of phosphorus on disease development will be determined in the laboratory and in the field.

Chemical: The systemic fungicides may offer the best hope of chemical management because of their internal mode of action. The newer systemic fungicides will be screened in the laboratory, greenhouse and in the field in an attempt to identify those fungicides with the greatest efficacy. Fungicides may be economical to apply once the occurrences of "take-all patch" can be accurately predicted.

Credit — "Our Collaborator", 6/84

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