

THRU THE GREEN

EDITOR

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OUR OBJECTIVE: The collection, preservation, and dissemination of scientific and practical knowledge and to promote the efficient and economical maintenance of golf courses.

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PRESIDENTS

I am writing my monthly message from a prone position. I sure hope this isn't an indication of how the new year is going to be. I have had the flu for over a week. This combined with the lack of normal rainfall and the sustained low temperatures is not a real good sign for golf courses in Northern California.

Once again, we are going to have to rely on our skills and experience to keep our courses in playable condition. We also have at our disposal our own Information Referral Service, The University of California Cooperative Extension and the services offered by the Northern California Golf Association and the United States Golf Association. This is going to be a tough year for golf course maintenance, but if we work together with all the resources available, we can benefit not only individually, but as an allied turf industry.

After talking to a few of our members who were not aware that our chapter is affiliated with the California Golf Course Superintendents Association, I thought it might be a topic for discussion at one of our future meetings. Maybe February. We are automatic members of the State Association and are represented on the Board of Directors by two delegates. Northern California also pays dues in the form of \$10.00 per each A and B member. This is to conduct the

MESSAGE

business of the State Chapter. Your Board of Directors is of the opinion that the main function of the State Association is as a voting bloc for national elections and the coordination of the California Hospitality Suite at the GCSAA Convention. Some items under discussion at this time are:

1. Eliminating our monthly newsletter and using Golden State Fairways magazine, which would come out monthly.
2. Collect dues from all members or increase dues.
3. Invite vendors to join.
4. Sponsor and collect fees from GCSAA Seminar now going to local chapters.

I think it is important for our members to be informed and would like some feedback. Ask questions and talk to your Board of Directors about the State Chapter.

On another topic, this is the time of year to start thinking about running for your Board of Directors. If you don't like what direction your association is going, so something about it. Be a part of it. The more input the better.

Have a Happy New Year!

Joseph A. Rodriguez, CGCS

GCSANC DUES ARE NOW PAST DUE

PLEASE SEND YOUR REMITTANCE TO:

GCSANC

1745 SARATOGA AVE. SUITE A1

SAN JOSE, CA 95129

A LOOK AHEAD

February

GCSAA National Convention

February 27

Seascape GC, Aptos

March 28

Joint Meeting with USGA, NCGA
Castlewood CC

April 8

GCSANC Annual Meeting,
Rossmoor

May 2

Oakhurst CC, Clayton

June

Opem

July 15

Supt./Pro Tournament, San Francisco
Golf Club

August 14

Oakland A's Baseball Game,
Oakland Coliseum

September 19

Richmond CC

October 10

Bodega Harbour GC

NAUMANN'S NORCAL NEWS

Brad Hines has accepted the Supt. position at Pebble Beach Golf Links-Brad was the Supt. at Castle Pines Golf Club at Castle Rock, Colorado. Brad is replacing Larry Norman...**Jim Ferrin** has left Cameron Park CC to become the Supt. at Brookside CC in Stockton-Brookside CC is a new course under construction, designed by Robert Trent Jones, Jr. Succeeding Jim at Cameron Park CC is **Amby Mrozyk**. Amby has been the assistant there for over 6 years. Prior to that he was a salesman for Country Club Sales and a Supt. at Los Angeles in Southern California...**Carl King** at Contra Costa CC recently completed reconstruction of two greens and bunker areas.

MARK YOUR CALENDARS

The joint meeting with the USGA and GCSANC will be held on March 28, 1991 at Castlewood CC.

We will gather to hear such topics as "Public Golfers Deserve More!"; "Methods of Summer Patch Detection"; "Golf Course Liability"; and more research data on the new Toro Hydroject.

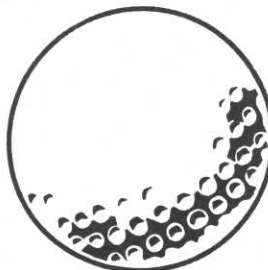
Watch your mail box for the registration for this event.

TURFGRASS MANAGEMENT FOR PROFESSIONALS

The University of California Extension, Davis, in cooperation with U. C. Cooperative Extension, is offering this two day course which will focus on current techniques and research results pertaining to turfgrass management. It should be of special interest to golf course superintendents, park and recreation site managers, pest control advisors and other professional turf and landscape managers. To receive the program details for this Turf Management Course on March 12 and 13, 1991, write or call University Extension, University of California, Davis, CA, 95616, (800) 752-0881.



62nd International Golf Course
Conference & Show
February 5-12, 1991



TURF PROJECT UPDATE

As previously noted in our newsletter, Sunnyvale Municipal Golf Course was selected as the site for a Bentgrass Trial Study project by **Dr. Ali Harivandi**. The site which was chosen is located behind the twelfth and thirteenth tee. Three plots measuring 60' x 100' each were sited with the entire plot measuring 220' x 110'. One plot is sand base with the other two plots native soil.

After conferring with **Dr. Harivandi** and **Ted Moore** of Shelton Transfer Service, Inc., it was decided to use Olympia #125, #30 mesh sand. The sand was to be sat 12' depth with the total amount used to be approximately 246 tons. The native soil plots were amended with redwood fir bark.

Nutrients were then determined and incorporated into the plots. The sand plot was amended with 140 pounds of superphosphate and 70 pounds of gypsum. This corrected a high pH problem experienced previously during reconstruction on our new greens at Sunnyvale Municipal Golf Course. The native soil plots were treated with starter fertilizer, Hydroprill 15-15-15.

The border between and around the plots were outlined in Savannah Rye Sod.

Anticipating an irrigation renovation to our system, we designed the plots with Toro 660 Series Valve-in Heads.

Again, we would like to thank Ted Moore for the sand and amendments; Pacific Sod for the Rye Sod; Mike Ginnelli, West Star for the irrigation heads, Craig Stenehjem from R.V. Cloud for the PVC Pipe.

This is the most complete set of bentgrass trials anywhere in the United States. January 1991 is the first month the trials have been rated. They will be rated once a month for the next three years. A field day is planned for the summer of 1991, for all to come and see the plots and to monitor their progression. Keep reading this newsletter for the dates.

WEED-EATING GRASS CARP PROVE TO BE A REAL CATCH

Research at UC Davis has netted a fish solution to a weedy problem

Studies at the US Department of Agriculture's Aquatic Weeds Control Laboratory on campus have shown that a species of carp called grass carp may just be the answer to keeping waterways free of clogging weeds. The grass carp has proved to have a voracious appetite for hydrilla, a particularly devastating aquatic weed in Southern California, and now also appears to relish the aquatic weeds found in Northern California, such as pondweeds and water milfoil.

Water weeds, in addition to making swimming dangerous and fishing difficult, present a costly problem to the agricultural industry, which nationally spends hundreds of millions of dollars each year to keep irrigation canals free of weeds, according to Lars W. J. Anderson, research leader and plant physiologist with the laboratory. Usual methods of controlling the weeds - herbicides or excavation and burial - are often ineffective, costly or only temporarily successful. So researchers have turned their attention to the carp - a means of weed control used for centuries in China.

Grass carp, in fact, come from Asia, but therein lies one of the reasons that the fish have not been used for weed control in the United States, said Anderson. It is feared that if allowed to proliferate, this non-native species would harm the habitat of the native fish. Until 1982, consequently, grass carp were banned in most states. But the success of a recent breeding program has allowed the fish to be used at limited test sites.

Researchers in Florida and Arkansas have bred "triploid" carp - carp with an extra set of chromosomes - which are sterile. The fish are produced from fertilized eggs that have been subjected to heat, shock or a pressure treatment, which results in an abnormal separation of the egg chromosomes into the triple-chromosome configuration.

On the UC Davis campus researchers have placed about a dozen of these carp into small test canals to study their feeding behavior under Northern California conditions. The

researchers are studying the carp's feeding preferences and their behavior in both static and flowing water. They are also developing management techniques for the fish and are looking for an affordable way to remove the fish from canals, since many Northern California canals are allowed to go dry during the winter.

So far, the carp have proved to be very effective in keeping aquatic weeds under control. The fish eat two to three times their weight per day, said Anderson - which means that a 5 pound carp can eat 10-15 pounds of weeds a day. And though the fish eat less in the colder Northern California climate than they do in the warmer weather of Southern California, they can live in the colder temperatures, surviving even in ice covered canals, said Anderson.

So far the testing is limited to only the protected, self-contained laboratory canals, because of continued fears that the fish, if they escaped, might compete with or affect the habitats of other species. But Anderson plans to test the fish in one or two pilot field studies in the next few years. Eventually he hopes the fish can be used more extensively as a safe and natural alternative to chemical herbicides and expensive mechanical methods of weed removal.

Editor's Note:

A letter from the Northern California Golf Association was mailed to all Northern California Golf Course Superintendents concerning information on Grass Carp on December 17, 1990. The letter asked all superintendents to respond on their interest in using grass carp for weed control in their lakes and ponds.

The response will be used to aid our legislative advocate in Sacramento working with the California State Fish and Game Department to determine an appropriate permit process and fee for use of the grass carp in golf course ponds and lakes.

If you did not receive this information, please contact the NCGA (408) 625-4653.

FOR SALE

Near new Brillion Seeder;

3-pt hitch-ground driven

\$2,500-Ask for John Stanowski

(916)-577-0801 or (209)-683-8629

HIDDEN VALLEY GOLF RESULTS

NET

Bob Dalton	70
Mitch Frazier	70
Mike McCraw	72
Jeff Roberts	72

GROSS

John Flachman	75
Don Ballard	77

BLIND BOGEY

Dana Waldor	65
Bill Fitzpatrick	74

1990 GCSANC Larry Lloyd Memorial Tournament Final Results

SUPERINTENDENTS FLIGHT

GROSS

1ST Place	Armando Claudio	70
2nd Place	Steve Good	72
3rd Place	Dave hayes 74	
4th Place	Ross Brownlie 75	
5th Place	Ed Stocke 76	
6th Place	Roy Enos 77	

NET

1st Place	Jess Pifferini 67	
2nd Place	Jerry Bodenhorn	70
3rd Place	Jim Ross 72	
4th Place	Paul Dias 72	
5th Place	Tim Sedgley 73	
6th Place	Ernie Martin 73	
7th Place	Mike Cl.ark 74	
8th Place	Blake Swint 74	

AFFILIATES

GROSS

1st Place	Steve Mills 81	
2nd Place	John Winskowicz	82
3rd Place	Ron Rogers 86	

NET

1st Place	Don Naumann 68	
2nd Place	Mike Ginelli 74	
3rd Place	Doug Weaver 74	

MIXED COUPLE SCOTCH BALL

1st Place	Fred and Jean Thomsen	82
2nd Place	Rod Kilcoyne and Jean LaDuc	96
3rd Place	Don and Barbara Kuhlman	97

GCSANC AWARDS COMMITTEE

The GCSANC Awards Committee (Jean LaDuc, Chairperson, Dean Gump, Mulkh Raj, CGCS, and Chuck Dal Pozzo), is currently soliciting nominations for Superintendent of the Year, Excellence in Golf Turf Management, Affiliate Merit Award, and Distinguished Service Award.

Nominations will be accepted by the committee until February 20, 1991 and awards will be presented at the GCSANC Annual Meeting April 8, 1991 at Rossmoor Golf Course.

Superintendent of the Year

Criteria: Must be a member in good standing who has contributed in a manner which would be considered above and beyond the normal performance of their duties and is committed to outside activities for the betterment of the Association and other superintendents. This person must not have received this award during the preceding seven years.

Nomination:

Comments:

Excellence in Golf Turf Management

Criteria: Must be a member in good standing who has done a superior job of maintaining and grooming their golf course, keeping in mind unusual problem solving, budget, manpower, number of rounds, etc. This person must not have received this award during the preceding seven years.

Nomination:

Comments:

Affiliate Merit Award

Criteria: Must be an Affiliate Member in good standing who is deserving because of their dedication and contributions to the betterment of the Association, and who is giving of their time and resources to the Golf Course Superintendent. This person must not have received this award during the preceding seven years.

Nomination:

Comments:

Distinguished Service Award

Criteria: Awarded to an individual who has made exceptional contributions to the Association, the Golf Course Industry and the Community.

Nomination:

Comments:

ALL THINGS CONSIDERED WHAT'S YOUR BATTING AVERAGE?

OPINION ON UNREASONABLE EXPECTATIONS

Golfers are well known for making comparisons. They seem to take pride in telling anyone who will listen how a course down the road does something this way or that. They compare budgets, acreage maintained, soils, grass types, green speed, the amount of labor, and many other facts. Sometimes the comparisons are accurate, sometimes not.

Let's take this comparison one step further. It's not really valid, but it is interesting nonetheless.

Baseball: A .250 batting average is just that - average. A ball player hits safely one at-bat in four. A "star" bats .300, and an immortal like Ted Williams bats .400. If you are keeping score, and you should be, that's four out of ten.

Basketball: Superstars shoot just over 50% from the field. They shoot a ball into a hoop at a distance of zero (a dunk) to 18-22 feet or more.

Golf: A par round of golf is normally about 72. Golfers who consistently shoot less than par are found on the PGA Tour, making lots of money. Golfers who shoot consistently over par are found everywhere, and includes those people making the comparisons. The average handicap in the country is 18. The average golfer, therefore, shoots about 25% over par.

At what percentage do golf course superintendents produce quality turfgrass? As a basis comparison, golf course contain about 30 acres of fairways, 2.5 acres of greens, and 2.5 acres of trees. This equates to about 100,000 sq. ft. of greens and tees and 1,320,000 sq.ft. of fairways. Thus, if a superintendent "bats" .400, which would put him in great company in baseball, it means your superstar would lose the equivalent of 10.8 greens and tees out of 18. On fairways, he would lose about 18 acres of turf.

While this .400 batting average might get you into the Baseball Hall of Fame, you would probably lose your job as a golf course superintendent.

All of this may sound ludicrous, but the fact remains that golfers have set such high standards for their golf course that maintaining these standards for their golf courses that maintaining these standards is difficult, expensive, and sometimes impossible to achieve. To keep alive every blade of grass on every green, tee, and fairway regardless of the conditions, and not being willing to accept anything less, is wishful thinking and a mistake.

Everything cannot be perfect on every golf course every day. Even if it were possible, what would it cost?

So, look at your golf course. My message to course officials reading this opinion is not to be so concerned if the golf course

superintendent bats only .998. After all, this equates to losing about 200 sq. ft. of turf, a 10 ft. by 20 ft. area of greens or tees and 2,640 sq. ft. of fairways, or .06 of an acre.

Anyone who bats this percentage or better deserves a pat on the back, not a kick in the pants. After all, what other industry which deals so closely with Mother Nature can boast a 99% average or better? Not many.

Therefore, the next time you read about a professional athlete making \$2,000,000 a year to achieve only a 30% batting average, be proud. . .because golf course superintendents are batting 99% or better.

As seen in the September/October 1990 USGA Green Section Record

HELP WANTED

ASSISTANT SUPERINTENDENT OR EXPERIENCED MAINTENANCE MAN

AMERICAN GOLF CORPORATION

SAN BRUNO PRACTICE CENTER

SEND RESUME TO SAM SINGH

100 GOLF COURSE DR.

ROHNERT PARK, CA 94928

ASSISTANT SUPERINTENDENT:

CONTRA COSTA COUNTRY CLUB

SEND RESUME TO: CARL KING

CONTR COSTA COUNTRY CLUB

801 GOLF CLUB ROAD

PLEASANT HILL, CA 94523

415-687-9880

ASSISTANT SUPERINTENDENT

RIDGEMARK GOLF & COUNTRY CLUB

SEND RESUME TO: RICK KEY

3800 AIRLINE HWY

HOLISTER, CA 94523

408-637-8151

SUPERINTENDENT WANTED

OLD BROCKWAY GOLF COURSE

NORTH LAKE TAHOE

SEND RESUME TO:

BOB COSTA

LAGUNA SECA GOLF CLUB, INC.

10520 YORK ROAD

MONTEREY, CA 93940

408-373-0881

Special Thanks

Golf Course Superintendents Association of Northern California wishes to thank the following people for making our Christmas Party and Larry Lloyd Memorial Tournament a success.

Special thanks to the staff at Rancho Canada Golf Course, Tim Greenwald, Superintendent, Carl Miller, Manager and Shim LaGoy, Pro.

Thank you to the following supporters:

Mr. and Mrs. Claus	Bay Counties Sand & Gravel
Robert Muir Graves,Ltd.	Advanced Drainage Systems, Inc.
Ted Moore Trucking	Club Car
R. V. Cloud	Buckner Sprinklers, Inc.
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Northern California Golf Association	J.R. Simplot Co.
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Allied Container Corporation	Hydro Engineering
Golden Bear Equipment Co.	Daylen, Inc.
E-Z-Go	Ciardella's Garden Supply, Inc.
Moyer Chemical	Pacific Parts and Equipment
Country Club Sales, Inc.	Jenkins Machinery Co.
	West Star Distributing Co.

PART ONE

SPECIAL EDITION:

SUMMER PATCH DISEASE IN CALIFORNIA

*This is a follow-up regarding THE VERY DESTRUCTIVE DISEASE infecting the vascular crown and root of **Poa annua** on golf course greens as evidenced by the numerous samples of grass plants submitted to Dr. Robert Endo, UC Riverside. The diligent research efforts of the University pathologists sparked by your many samples culminated to date in the findings reported in their release that follows:*

The summer patch pathogen *Magnaporthe poae*, is the cause of the vascular crown and root rot disease in California.

R.M. Endo, and H.D. Ohr, Professor and Extension Plant Pathologist respectively, Department of Plant Pathology UCR and A.H. McCain, Extension Pathologist, Department of Plant Pathology, UCB.

During last summer and fall, a very destructive and common patch disease affected *Poa annua* greens in southern and central California; bentgrass plants were apparently not susceptible. The disease was not severe during hot weather.

Microscopic examination of diseased plants from the patches revealed that the primary and secondary roots are affected with a brown to black dry root rot which sometimes involved the crown as well; frequently a discoloration of the central vascular cylinder was also

present. Since we were unable to identify the casual fungus that we isolated, we tentatively called the disease "vascular crown and root rot."

The severity of "vascular crown and root rot" depends upon whether the outer portion of the root (fig. 1, epidermal and cortical cell) and/or the inner portion of the roots is infected (fig. 2, xylem or vascular tissues). Outer root infection causes little damage but inner root infections of the vascular tissues are very damaging because the xylem is responsible for transporting water and nutrients up the roots.

Since Smiley has demonstrated that cortical infections tend to become vascular at soil temperatures above 82 F., this explains the severity of the disease at high temperatures.

The cause of the disease in California has been unknown since the isolate, pathogenic fungus failed to form spores in the laboratory and could not be identified. We finally identified the fungus as *Magnaporthe poae* in February 1989, following mating of our unidentified isolates with either of two known mating types of *M. poae* obtained from Dr. Peter Landschoot of Rutgers University. Following mating with one of two compatibility types of *M. poae*, the fungus produced the typical sexual stage of the fungus by which identifications could finally be made. Of nine pathogenic isolates that we had isolated from *P. annua* plants obtained from nine golf courses in southern California, eight turned out to be isolates of *M. poae*, the established cause of the summer patch disease of *P. annua* in the eastern and midwestern U.S. One of the 9 isolates was not the fungus, *M. poae*, but a yet to be determined fungal pathogen, probably *Gaeumannomyces incrustans* cause of second patch disease of *P. annua* or *Leptosphaeria koerreae* (cause of the necrotic ringspot disease of *P. annua*). Thus, there appear to be several patch diseases of *P. annua* in California that are caused by different root-attacking fungi but *M. poae* appears to be the most common and damaging.

In the last 6 years, plant pathologists in the U.S. have described many new patch diseases of turfgrass that are caused by at least five different species of fungi that are able to grow on and attack the surfaces of turfgrass roots as hyphae or fungal threads. Such fungi are called ectotrophic fungi. The situation on turfgrasses in California in regard to all these new patch

diseases caused by ectotrophic root fungi is incompletely known, mainly because complete descriptions of the causal fungi have not yet been published. For a more detailed discussion of these new, destructive, difficult-to-control patch diseases that are caused by ectotrophic root fungi, see the article by Endo, Ohr & McCain, entitled "Patch diseases of turfgrasses caused by ectotrophic fungi are difficult to control" in the spring 1989 issue of "California Turfgrass Culture."

Very little has been published about the summer patch disease and its casual fungus *Magnaporthe poae*. What we learned about summer patch according to the above plant pathologists, to write this article was information obtained directly from two researchers currently in summer patch research: Dr. Peter Landschoot, Department of Biology, Rutgers University, New Brunswick, N.J. and Dr. Henry Wilkinson, Department of Plant Pathology, University of Illinois, Urbana, IL.

The only method of controlling summer patch is by preventing infections of the roots by applications of systemic chemicals to the soil in early spring at the time the fungus is growing over the roots. The systemic chemicals should be sprayed onto the plants in 4 gallons of water / 1000 sq. ft. and watered immediately into the root zone with a "short", sprinkler irrigation. Do not allow the fungicide to dry on the leaves before watering-in. The systemic fungicides must be watered-in because the fungicide does not move down the plant from the foliage to the roots; it moves only upward in the xylem.

Proper watering-in is both difficult and critical because of the following reasons: 1) if the fungicide is a wettable powder, it will tend to get filtered-out and therefore diluted by any litter and thatch that is present; 2) yet the water containing the fungicide must be made to penetrate the soil or sand as uniformly and as deeply as possible (1.5 inches) in order to obtain uniform, deep coverage of the roots; and 3) uniform deep coverage of the roots requires just enough water to do the job but not to dilute the fungicide to the point of ineffectiveness. Unfortunately, no watering-in guidelines can be

recommended because each area of turf has a different amount of thatch, layering, different soils, different numbers of plants, different amounts of compaction, water repellency, etc. A dry-run irrigation with water might be attempted in advance to obtain an approximation of the watering-in time that is required. To get around the problem of soil-repellency, add a detergent.

The next problem is proper timing: when to apply the fungicide. For *M. poae*, apply the systemic fungicide from mid-March through mid-May. The trouble is that fungicides only reduce the soil populations of *M. poae* temporarily, and that the hyphal growth of *M. poae* over the roots occurs over a rather wide range of soil temperatures that includes several months of the growing season. This means multiple applications of systemic fungicides which are very expensive. Fortunately, eastern turf pathologists have frequently found (Personal Communication) that a single timely application of a systemic fungicide against the summer patch pathogen is sometimes as effective as several applications applied 4 weeks apart. The unexpected success of a single treatment is surprising, and may be due to the fact that reduction of infections early in the season may result in very significant levels of season-long control.

However, since several applications of a systemic fungicide 4 weeks apart are likely to be more effective, on the average, than a single application, this choice should be left to the individual applicator concerned. If several applications are made rather than one, apply anytime successive applications 4 weeks apart beginning in mid-March. If a single application is made, apply from mid-April to mid-May. The systemic fungicides effective against *M. poae* are banner, 1.1 EC, at 4 fl.oz; Bayleton 25 DF at 4 oz; Tersan 1991, 50 W, at 7 Oz; and Fungo, 50 W, at 8 oz. Banner is not yet registered for use in California and Rubigan is herbicidal against *P. annua*.

This article from "Rub of the Green" April, 1989

Part 2 will be in February issue of Thru the Green