

PRESIDENT
PAUL J. DIAS, CGCS
3414 Kohler Dr.
San Jose, CA 95148



VICE PRESIDENT
Gilbert Bibber
30 Via Contenta B
Carmel Valley, CA 93924

SECRETARY-TREASURER
Joseph A. Rodriguez, CGCS
3312 Mountaire Dr.
Anticoh, CA 94509

PAST PRESIDENT
Allan Schlothauer
356 Curie Dr.
San Jose, CA 95119

DIRECTORS

Rod Kilcoyne, CGCS
140 Norman Ave.
Clyde, CA 94520

Robert Dauterman
114 La Quebrada Way
San Jose, CA 95127

Mike Garvale, CGCS
3000 Alexis Dr.
Palo Alto, CA 94304

Sam Singh, CGCS
231 Fauna Ave.
Rohnert Park, CA 94928

EDITOR

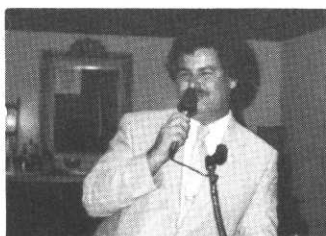
Jean LaDuc
P.O.Box V-46
Palo Alto, CA 94p304

OFFICE

1233 Kansas Ave.
Modesto, CA 95351
(209) 523-7141

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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Paul Dias

MESSAGE FROM YOUR PRESIDENT

Deadlines seem to really come up fast. I am writing this on the plane returning from the GCSAA Conference in Anaheim and, as such, I am trying to create another miracle by putting this together for our next newsletter deadline.

As always, the conference was filled with many outstanding educational opportunities. Topics ranging from Environmental and Regulatory Issues to basic Golf Course Management Techniques were presented in detail. The Public Golf Operations agendas as well as the presentations on contemporary soil and water issues were well attended. The USGA presentation also drew large crowds due to the informational program made available covering a wide spectrum of issues. All in all, another very good conference...attendance exceeded 15,000, which should be another record.

Congratulations are in order for several of our members...**Don Naumann**, an active member in GCSANC, walked off with the Affiliates Championship Trophy during the golf tournament; **Jim Ross**, from Santa Teresa GC, finished fourth in the Seniors division, and was also honored at the Annual Meeting with a 25 year pin presentation; **Ken Sakai**, CGCS at Sunnyvale Municipal Golf Course, ended a succession of very successful terms as Director of GCSAA. Over the past 3 years, Ken has represented GCSANC and the Western Region in an extremely professional manner. Ken was the 1988 Membership Chairman, and Vice Chairman of the Education and Certification Committees. During his terms on the GCSAA Board of Directors previously, Ken chaired the conference and Show Committee and Co-chaired the Industrial Relations Committee. Under his direction, the Golf Tournament grew from two golf courses and 270 players to four courses and over 480 players. He was also honored as one of two members at the Annual Meeting with a third level achievement of recruiting 25 new members during the past year. Our heartfelt thanks and congratulations to Ken for all his hard work and efforts on behalf of all Golf Course Superintendents.

On another front, **Ali Harivandi**, Extension Specialist for the Bay Area Counties, has been appointed as an "Educational Advisor" to the GCSANC Board of Directors. Ali has much expertise which he has shared with our members over the past several years, and through this appointment, more definite educational goals and objectives can be implemented, and continuity throughout the evolution of different Boards of Directors will be maintained. Look for enhanced meeting programs and an annual one day seminar with outstanding speakers from across the country as part of this new program. We welcome member participation on this committee, and if this interests you, please contact any board member.

NAUMANN'S NORCAL NEWS

Dave Davis is the new Superintendent at Dry Creek GC in Gault-He is replacing **Mike Jones** who is now Superintendent at Valley Hi CC in Sacramento. Dave was the Ass't. at Sunol GC prior to his move...**Bob Costa** has added another title to his job. In addition to being the Supt. at Laguna Seca Golf Ranch and Pajaro GC, Bob is now the man in charge of old Brockway GC (formerly Woodvista GC) in King's Beach, Lake Tahoe. Bob works for Nick Lombardo who purchased the 9-hole GC at the end of last year...**John Buckley**, Supt. at Presido Army GC was working on a project that involved some native soil that he took from a sand pile located on the course. As he was completing the project, he was met by representatives of the California Native Plant Society and members of the press. It seems as though, the sand pile from which he took the sand to complete the project, was the home of the San Francisco Lessingia, a rare member of the Aster family. The Society said since there were only 3 places in the world that this plant grows, (all located in the Presido), this spot should be left alone. John has now returned the sand he used on the project back to the sand pile. The plant is now proposed for listing by both Federal and State Government as a rare and endangered species...**Steve Carlton** has accepted the Supt. position in Guam for the Guam Municipal Corporation...**Leonard Theis**, Ancil Hoffman GC has accepted the Golf Supt. position for the City of Modesto.

HELP WANTED

Kurt Krizek, Supt. at The Villages GC, is looking for an Ass't. Superintendent and an ass't mechanic. Contact Kurt at (408) 274-0409 for more information.

Certified or Class A Supt. wanted immediately. Experience in all phases of GC management necessary. 18 hole public GC, 70,000 rounds annually, new equipment, good budget, good benefits; salary-40,000 range; golf course is operated by a non-profit corporation and is looking for a qualified GC supt. to help realize the facilities potential. Send resume to Lone Tree GC, Pat Caine, General manager, P.O.Box 2115, Antioch, CA 9453

Golf Course Supt. Wanted: Immediate Opening Mt. Whitney Golf Course, Lone Pine CA (60 miles south of Bishop), 9 hole GC, driving range, semi-private small membership club, automatic irrigation, year round operation; Club wishes to enhance its operations with strong emphasis on

the Golf Course Maintenance; Salary @\$1,500 month, plus a mobile home, plus vehicle. Excellent Opportunity for someone to grow and progress with the club.
Resumes to:
Club President
Mt. Whitney GC
P.O.Box 0
Lone Pine, CA 93545

WHY DO SUPERINTENDENTS BELONG TO GCSAA?

They are proud of their profession and want to improve it.

They recognize that a strong organization can better represent the combined interest of the profession through its unified voice.

They are convinced that professional growth can best be achieved through the uniting of similar minded colleagues.

They realize that their active participation in the Association can shape the future of their profession.

They have discovered that the Association's activities, programs, and publications can keep abreast of the latest technological information.

They believe that a strong Association can strengthen their regional and local turf organizations and programs.

They understand that their personal participation can assist other Superintendents and the turfgrass industry.

They know that the resources of a vast organization can only act to increase their professional stature, knowledge and abilities.

They appreciate the opportunities they will have to attend national and regional educational assemblies, developed to meet their specific needs.

They know that their fellow Association members are a valuable asset whenever information is exchanged.

They realize that they can no longer work alone in a vacuum, but must share the insight, experiences and technical information of as many other professionals as possible.

Credit: A Patch of Green July/August 1988

The beautiful crystal-clear droplets that you see on a turfgrass leaf in the early morning is not "Dew". They are droplets of exudated liquid being pumped out of the grass plant. Exudate is pumped out of the grass blades through its hydathodes. The hydathodes are located along the edges of the leaves.

Exudate is easy to see with the aid of a simple magnifying glass. You will see the precise location of each exudated droplet along the edges of both sides of the leaf, and a large droplet at the tip of the leaf, if it has been cut off. This liquid is crystal clear. It looks like a fine piece of jewelry.

Each droplet hides potency in its beauty. This liquid is not harmless water of condensation that we call dew. Dew is moisture from the air that condenses on a cold surface. Dew and exudate are completely different in composition. Dew is water of condensation and exudate is plant sap which is pumped out of the plant through the hydathodes. Dew can sometimes be found as a whiteish coating on the leaf surface. Exudate is found primarily along the edges of the leaf.

Dew is inert, because it is pure water of condensation. Exudate, on the other hand, contains all of the elements that are present in the plant sap, such as nitrogen, phosphorous, potash, calcium, magnesium and trace elements. With these salts, we can also find sugars, such as glutamine.

"Dew is Not Dew". When the grass is covered with millions of droplets in the early morning hours, what we have been calling "Dew" is actually exudated liquid.

The presence of salts of the elements contained in the plant sap can be demonstrated in a number of ways. With a clean glass or paper cup you can scoop up the exudate and pour it into a clean container. A clean sponge will also do.

The concentration of solids contained in the exudate will depend upon the fertility of the soil, and how much is available to the plant.

Allow the water to evaporate. You may have to fill the dish a number of times, each time allowing the water to evaporate. When all of the water is gone, crystals of the salts present in the exudate will form, and can be observed closely with a low power magnifying glass.

If you pour a small amount of exudate on a piece of window glass, the salts will etch marks on the surface. Fill a glass with exudate from a well fertilized green and pour it on one spot of grass, and you will get a severe chemical burn.

Try pouring a small amount of exudate in the palm of your hand and allow it to dry. Feel how sticky it is.

Pour some pure exudate in a petri dish or small clean saucer. In order to gather pure, uncontaminated exudate, use a glass tube or clean soda straw. Touch the end of the tube to the exudated droplet and it will be drawn into the tube by capillary action. After gathering a number of droplets in this manner, blow the liquid into your clean container and store in a warm place. Observe the fungi that germinate and grow pure exudate. Since fungi have no chlorophyll, they can only grow in a medium that has an abundant supply of ready made food. Exudated liquid is a perfect food for any fungal spores. These simple basic experiments demonstrate how exudate and turfgrass management practices can have a profound affect upon the health and growth of the turf.

We look at Dr. Mike Brittons research and his graphic illustrations of how fungal spores germinate slowly in water, while spores germinated in water with sugar added grew more rapidly. When he added glutamine to a solution, spores germinated quickly and the mycellium from these spores grew many times faster. He found that glutamine is one of the ingredients in exudated liquid.

The presence of glutamine is known to every golfer, because his hands get sticky when he plays while the so called "Dew" is on the turf. The presence of glutamine also accounts for the fact that clippings accumulate on the mowers.

(con't. on page 5)

(con't. from page 4)

Syringing the turf when exudate is present in the early morning will quickly wash this material back into the soil., Clean water dries more rapidly than exudate, therefore less clippings adhere to the mowers. It is interesting to note that over forty years ago, Dr. Fred Grau, after making a survey of member clubs, found that greenkeepers (as they were called then) that practiced early morning watering had far less disease than those who didn't. Today we know that it was not the time of watering, but that the washing off of the exudate minimized the incidence of disease. Golf course superintendents have always been a very important part of turfgrass research. In practicing their science and art, they found many ways to combat problems that seemed to have no answers.

This liquid, first found and reported in Egypt in 1893 was referred to as guttated water, Guttated water and exudated water are one and the same, and can be found reported either way in the literature.

Dr. Wilson also made another interesting discovery. he found that all grasses do not exudate at the same rate. He classified each of the turfgrasses in the following order: the Bentgrasses, Bermudagrasses, and Poa Annua were prolific pumpers of exudated fluid. The Bluegrasses were medium pumpers (except Poa Annua). We can also include St. Augustine grasses as medium pumpers. The Fescue grasses, Zoysia grasses and the Rye grasses were the low pumpers.

When we lose grass for some unknown reason, we need to find the answers. When 18 greens are lost overnight, we need to take a hard look at our management practices and an even harder look at research. We need research that gives us answers to problems and not just cures.

Starting with the management of the soil, we concentrate on the need to relieve compaction so that air, and nutrients can move into the root zone. What about exudated liquid? An open porous soil allows the exudate to be diluted and washed down into the soil to be recycled. aerification. therefore is essential to minimize or

We know that we can rely on some research, some theory, and lots of green thumb hands on experience to keep grass alive during periods of stress.

We also desperately need more meaningful research to separate dew from exudate. As we get the answers. turfgrass management will become more biological and cultural than curative.

Copywrited by Tom Mascara, Credit to The Florida Green, Fall 1988.

MEMBERSHIP-MARCH 1989

Members Today-30 day waiting period up

Class D

Larry Coving, Colusa G&CC

Kevin Smith, Moffett Field GC

Paul Gillis, Summitpointe GC, Milpitas

Class F

Richard McAllister, Rancho Solano GC, Fairfield

Mike Eisele, Country Club Sales, Inc. Benicia

Charles Messimer, Braman Pipe & Supply

Bob Whittaker, Western Lawn Equipment Co.

Hal Bonnet, Sierra Chemical Company, Milpitas

Current 30 day waiting period

Class A

D.J. (Donald) Pakkala, Pebble Beach Co.

Class D

Daniel A. Giammona, Sharon Heights G&CC

Andrew McBride, Spanish Bay GC

Class F

Donald D. Radford, Asst. Director of Parks, City of South Lake Tahoe

Craig Stenehjem, R.V. Cloud Co. Campbell

CONGRATULATIONS TO PETER J. GALEA

Crystal Springs GC, Burlingame for becoming a Certified Golf Course Superintendent.

OUR HOST AND HIS COURSE FOR MARCH:

Our host superintendent, **Ray Sabbaattini**, has spent his life farming. In 1970, Ray was retained as the Golf Construction Supt. and supervised construction of a second 18 holes and stayed on as the Golf Course Supt. **Rick Key**, graduated from Chico State University in Biological Science. He worked on the original turkey ranch and has been with Ridgemark for 1 1/2 years.

A LOOK AHEAD

- March 9 USGA, NCGA, GCSANC conference
Caslewood CC, Pleasanton
- March 14 Ridgemark G&CC
- April 11 Palo Alto Golf Club
- May 1 Rossmoor Golf Course
- May 21, 22 Calif. State Annual Meeting
San Diego, CA
- June Discovery Bay
- July 24 Jr. Golf Tournament-Santa Clara
Golf and Tennis Club
- July 27 Sharon Heights G&CC-Supt.-Pro
Tourney
- Aug. 25 Salinas Fairways Golf Club

ANNUAL AWARDS COMMITTEE:

The GCSANC awards committee would like your nominations for the following categories: Superintendent of the Year; Excellence in Golf Turf management; Class F Merit Award; Distinguished Service Award. Submit your nominations to Joe Rodriguez, CGCS, or Steve Carlton, CGCS, or John Winskowicz. Awards will be presented at the annual meeting April 11 at Palo Alto Golf Club.

MARCH NEWS NOTES:

Many thanks to the GCSANC Members who helped with hospitality host responsibilities during the conference: **Pete Bibber, Mulkh Raj, Jean LaDuc, Tom Thatcher, Leonard Walsh, and Brian Bagley** acted as Hotel Greeters and were very well received. **Jean LaDuc, Emil Yappert, Joe Rodriguez, and Rod Kilcoyne** covered the convention center during GCSANC's shift. Again, thanks for making our guests comfortable during their visit to California.

CEU values have been revised downward for GCSAA Seminars to bring them into compliance with the Council for Continuing Education. .1 (1/10) CEU will be given for every contact hour of instruction.

As of July 1, 1989, the new educational pre-requisites for entry into the Certification Program will go into effect. At that time, applicants must have completed one year of college or one-half of GCSAA's Division 1 curriculum to be eligible for Certification.



The Board of Directors at a recent meeting, voted to enhance our contributions to fellow industry professionals by contributing \$1,000 to the University of California for use by **Ali harivandi** at the Santa Clara Field Station. This program has been expanding steadily over the past few years, with ten different trials under investigation presently. Some 200 turfgrass species and varieties are being evaluated for their suitability in the Central Coast California Climate. In the past, Ali has enjoyed the moral support of individual Golf Course Superintendents, and it is befitting that we as an organization contribute to his ongoing efforts to provide research and educational opportunities to our group.

ALMADEN GOLF AND CC GOLF RESULTS

Gross	
Ross Brownlie	72
Don Ballard	72
Scott Jorgenson	72
Mike Garvale	73
Armando Claudio	74
Net	
Denny Plato	65
Gale Wilson	65
George Bell	66
Marion Harp	66
Alistair Brownlie	66

First Prize \$50 Gift Certificate
Ross Brownlie-Denny Plato
Second Prize- \$40 Gift Certificate
Don Ballard-Gale Wilson
Third Prize \$30 Gift Certificate
Scott Jorgenson-George Bell
Fourth Prize \$20 Gift Certificate
Marion Harp-Mike Garvale
Fifth Prize \$10 Gift Certificate
Armando Claudio-Alistair Brownlie

Gift Certificates are redeemable through GCSAA. Gift Certificates can be accumulated and redeemed at the end of the year. Winners were determined on all ties by matching card beginning with the #1 handicap hole and going up.

YOU ARE A TURFGRASS PROFESSIONAL

When someone comes to your golf course and asks "Is the Pro around?", everyone including you, will proceed to tell the someone "The Pro is in the Pro shop, or giving lessons, or home in the shower."

I look forward to the time when the answer to the question "Is the Pro around?", the answer will also be a question "Which Pro do you mean? The Turfgrass Pro or the Golf Pro?"

Remember, not too many years ago your job was called the greenskeeper. Then some farsighted people began to raise the image of your position by referring to the Golf Course Superintendent. Not too bad for a start, but not too professional either considering the knowledge you must have and the ability to cope with not only the turf and tree problems on your course, but to cope with the people problems also.

Is your name on a nice plaque over the entrance to your Turfgrass Pro's office? You probably don't even have your name and position painted on an old board in many cases. Even if the club does not buy you the plaque, you should! And it should say-**TURFGRASS PRO-George Somebody.**

The Golf Pro has the God-given ability to hit a ball fairly far and fairly straight. Some of them are even pretty good teachers of the game of golf. And they all have the financial advantage of taking a cut out of selling clubs, balls, shirts and shoelaces. And it doesn't take too much professionalism to sell shoelaces to a person who has just broken his or hers. And he has his name on a nice plaque over the door to his office!

If the greens, the fairways, the trees and flowers which really make the good golf course, go to pot, do the members want to fire the Golf Pro? They want to replace you with someone who is more professional at making things grow. They want a new Turfgrass Pro- and that's you!

So what is more important to the golf course- the greens, the fairways, the ornaments, or the variety of colors of balls, shirts and shoes in the Golf Pro's shop?

You have spent many hours in classrooms, in turfgrass meetings, in consulting with other Turfgrass Pros, and many years in learning how to make turfgrass grow to improve the game of golf, and you should be recognized at your club as the **TURFGRASS PROFESSIONAL!**

Credit: The Greener side