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GCSANC

OFFICIAL PUBLICATION OF THE GOLF COURSE SUPERINTENDENTS ASSOCIATION OF NORTHERN CALIFORNIA

EDITOR

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OUR OBJECTIVE: The collection, preservation and practical knowledge and to promote the efficient and economical maintenance of Golf Courses.

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PRESIDENT'S MESSAGE

Again, I would like to thank the Education Committee, Paul Dias, CGCS, Rod Kilcoyne, Joe Rodriguez, CGCS, Jean LaDuc, Alison Good, and Dr. Ali Harivandi, whom are members of GCSANC for all their dedication and hard work putting the Superintendent's Institute at Spanish Bay together. Also on this committee was **Carl Rygg, CGCS**, Supt. at The Links at Spanish Bay. He involved himself getting the course set-up for the round of golf on Monday. Many thanks to Carl and his staff for a great day on the links!

The program consisted of speakers from the turf field and was very impressive. There was a lot of information desiminated to the people in attendance. The general feeling about the seminar was very positive and we (GCSANC) feel that there will be another such seminar next year.

It is difficult to get such speakers for monthly meetings. By putting this mid-winter seminar together, we are able to fill some of the requests that we receive.

Thanks to all the participants who attended the seminar, you made it work.

Now to other matters. It is the time of year when many of us are getting ready to go to the International Golf Superintendents Convention in Orlando. Your voting representatives need your input as to how you would like them to vote on the issues and candidates. Would you vote for the dues increase this year? Who do you want to see in office? Please let myself or Joe Rodriguez know of your feelings.

When we return from Orlando, It will be once again time to think of our own elections within the Association. Perhaps you would like to run for office or work on one of the committees for the Annual meeting. In this issue, there are the special award categories for you to submit your nominations for.

GET INVOLVED!! WE NEED YOU!!

Pete

MEMBERSHIP FOR FEBRUARY

PASSED CLASS A EXAMS

Carl Rygg, CGCS-Links at Spanish Bay
Ross Brownlie-Sharon Heights CC
Ben Keechler,II-Plumas Pines CC
Jeff Hardy-Moffett Field GC

PASSED CLASS B EXAMS

Dana Waldor-Meadowood GC
P.J. Spellman-Poppy Hills GC
Gary Feliciano-Pajaro Valley GC

TRANSFER TO CLASS A LIFE

Gurmit Sandhu

TRANSFER CLASS B TO E

Frank Olivera

CLASS D

David Piper-Poppy Hills NCGA Intern
Peter Fredeen-Monterey Peninsula NCGA Intern
Jerry Sandoval- San Jose Muni

Class F

Paul Falkenstein-Pacific Parts and Equipment

MEMBERS 30-DAY WAITING PERIOD

CLASS D

Kim Trainor-Del Monte GC
Clayton Hughes-Del Monte GC
Jim Ballard-Bennett Valley GC
Mike Gamble-Spring Hills GC
Al Nunez-Canyon Lakes CC, subject to Class A exam
Charles Schultz-Carmel Valley G&CC, subject to Class B exam
Bill Davis-Spyglass Hill

CLASS F

Tammy Kovar-Monsanto Agricultural Chemical Co.



NAUMANN'S NORCAL NEWS

Brian Bagley has accepted the Supt. position at the Villages G&CC in San Jose. Brian was the Supt. at Saratoga CC prior to his move...

Leon Snethen has accepted the Supt. position at Saratoga CC. Leon was elevated from the Assistant's position...

Manual Souza has moved to Monterey to become the Supt. at Poppy Hills GC. Manual was the Supt. at Lake Wildwood CC in Penn Valley prior to his move. Manual replaced **Paul Collieran** who accepted the Supt. position at Tacoma Country and Golf Club in Tacoma, WA. Interim Supt. **P.J. Spellman** kept Poppy Hills in top in the few months until Manuals arrival...

Scott Jorgensen moved to the Valley to become the Supt at Del Rio CC in Modesto. Scott left the Golf Club at Quail Lodge (formerly called Carmel Valley G&CC) to replace **Brian Ash** who voluntarily moved on to accept a position elsewhere...

Denis Kerr replaced Scott at the Golf Club at Quail Lodge. Denis was the assistant Supt. at Monterey Peninsula CC prior to his move...

John Kukawski is the new Supt. at Laguna Seca Golf Ranch in Monterey. John was the Assistant prior to his promotion replacing **Bob Costa**. Bob is now the Director of Maintenance for Laguna Seca Golf Ranch, Old Brockway GC and Pajaro GC in Watsonville. **Gary Feliciano** is the new Supt. at Pajaro GC. He was the assistant at Corral de Tierra CC in Salinas.

I am about out of ink, so I will sign off for this month.

OUR HOST FOR FEBRUARY AND HIS COURSE

Ray Story was born in and raised in Sonoma California. His golf career began in 1967 when he began working in the Pro-shop at Sonoma National Golf Course. Then in 1970 after High School Ray began working out on the golf course at Sonoma National for then Golf Course Superintendent John Flachman. Ray worked summer months and part-time at Sonoma National through his college days at Santa Rosa Junior College and California State University at Chico. After finishing school in 1975, and earning degrees in microbiology and chemistry, Ray began working full time as the assistant Superintendent at Sonoma National. Ray then became Golf Course Superintendent in 1976. In 1979 Ray took the position of Golf Course Superintendent at Green Valley Country Club.

Ray's hobbies are Golf, fishing and family camping with his wife Ann and two daughters.

The 600 Acre Sidney Jones Cherry Ranch was the original site of Green Valley Country Club. In 1949, the club began with the purchase of the property and E.G. Mover was hired to design the Golf Course which opened in 1950. Green Valley Country Club currently has 457 members which produce approximately 45,000 annual rounds of golf. Green Valley CC has been doing major projects on the golf course lately. Two of the most recent are concrete cart paths in 1988 and a new irrigation system on four holes this past December.

The General Manager is David Henderson and the golf professional is Fred Covey. The course rating and yardage: Champ 70.1, 6491; Reg. 69.2, 6281.



SPANISH BAY RETROSPECTIVE

The Inn and Links at Spanish Bay was originally a rock quarry. The Links were built as a dune reclamation project. The dunes were the priority the golf links was a by-product as the result.

I would like to take this opportunity to thank the members of the Education Committee who made the Institute a reality.

Paul Dias, CGCS

Rod Kilcoyne

Joe Rodriguez, CGCS

Alison Good

Dr. Ali Harivandi, Co-Chair

Many special thanks go to the staff at The Inn at Spanish Bay for fulfilling our every request and with a smile.

Special Thanks to **Carl Rygg**, CGCS and his staff for stopping the rain for an incredible round of golf.

Last of all, Thanks to all the participants who attended. It is with your support, the Institute will happen again. Watch this publication for details. If you would like to be a part in the planning of the next Golf Course Superintendent's Institute, please let me know.

Jean LaDuc, Co-Chair

ANNUAL AWARD TIME

The GCSANC Annual Awards for Superintendent of the Year, Excellence in Golf Turf Management, and the Class F Merit Award are presented annually at the election meeting in April. This is your opportunity to nominate someone (even yourself) for one of these prestigious awards. The criteria for potential candidates should follow the general guidelines as set forth below. Supportive data should be included as to the qualifications of each candidate.

SUPERINTENDENT OF THE YEAR:

Will be a member in good standing who has contributed in a manner which would be considered above and beyond in the performance of their duties and is committed to outside activities for the betterment of the association and their fellow superintendents. (Recent recipients are ineligible for seven years.)

EXCELLENCE IN GOLF TURF MANAGEMENT:

A member in good standing who has done a superior job of grooming and maintaining their golf course, keeping in mind the unusual problem solving, budget, manpower, number of rounds, etc. (Recent recipients are ineligible for seven years.)

CLASS F MERIT AWARD:

Awarded to the Class F member who is deserving because of attendance and contributions at meetings, dedication and contributions to the betterment of the Association, and who has given their time and resources in helping the Golf Course Superintendent. (Recent recipients are ineligible for seven years.)

DISTINGUISHED SERVICE AWARD:

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

The Awards committee is composed of: Ken Sakai, CGCS; Rodney Kilcoyne; Emil Yappert; and Rich Scholes. Please submit your candidates to any of these individuals or the GCSANC office, 1745 Saratoga Ave. Ste. A, San Jose, CA 95129.

Turfgrass Management For Professionals

Thursday and Friday, April 12 & 13, 1990
University Extension
University of California, Davis

Current techniques and research results pertaining to turfgrass integrated pest management are the focus of this year's two-day course. It should be of special interest to golf course superintendents, park and recreation site managers, cemetery and athletic turf managers, horticultural consultants, pest control advisors and other professional turf and landscape managers.

Topics include

Turf Selection—The First Step in Pest Management

Turf Cultivation Effects on Pest Management

Turf Irrigation Effects on Pest Management

Pre-Emergent Turf Weed Management and Control

Advances in Biological Turf Insect Control

Post-Emergent Turf Weed Management and Control

Rodents and Other Turf Animal Pests Management of Nematodes in Turf

Turfgrass Management to Reduce Diseases

Low Temperature Turfgrass Diseases

High Temperature Turfgrass Diseases

Instructors

Clyde Elmore, Weed Scientist, UC Davis

Victor Gibeault, Environmental Horticulturist, UC Riverside

Ali Harivandi, Area Turf, Soil & Water Advisor, UC Cooperative Extension, Hayward

Harry Kaya, Professor of Entomology, UC Davis

Rex Marsh, Vertebrate Pest Management Specialist, UC Davis

Art McCain, Plant Pathologist, UC Berkeley

Becky Westerdahl, Nematologist, UC Davis

Coordinator

Ali Harivandi

PCA credit hours: 10 hours (pending)
Certified Golf Course Superintendent credit hours: 1.5 hours (pending)

For more information

contact Debbie Roberts, University Extension, University of California, Davis, California 95616; (916) 757-8899.

Enrollment form

You may enroll over the telephone if you use Visa or MasterCard. Call toll free in California 1-800-752-0881. Davis and Dixon residents should call direct 757-8777.



To enroll by mail, simply complete this enrollment form and mail it to

University Extension
University of California
Davis, California 95616

YES! Please enroll me in **Turfgrass Management For Professionals** April 12-13 / section 893E33 / \$140 includes lunches and course materials.

I do not wish to enroll at this time, but please place me on the mailing list for additional information about this program.

Name	Social Security number*	
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Address		
City	State	Zip
<input type="checkbox"/> Enclosed is my check payable to the Regents of the University of California <input type="checkbox"/> Please bill my Visa/MasterCard:		
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* Disclosure of your Social Security number is voluntary. It is used to maintain complete and accurate transcripts.
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EVALUATING AN IRRIGATION SYSTEM

An integral part of Irrigation Management is the ability to know what is happening with an irrigation system. With accurate information it becomes much easier to develop a maintenance program or to troubleshoot a system that isn't working properly. In order to properly evaluate a system you have to:

- 1) Know how to measure the performance of an irrigation system.
- 2) Know what the information means once you have it.

Today, we will discuss some of the tools that make it easier to evaluate a system.

One of the key factors affecting sprinkler performance is spacing, therefore it is very important to have a measuring wheel or a steel tape measure available. Any areas that are starting to look weak should be measured. This is a good time to start a good "as-built" if you don't have one.. Obviously, spacing won't change so these are one-time only measurements.

Another type of measurement that can change is pressure. This is one of the most important parts of sprinkler operation. A pressure gauge and a pitot tube can be used to check the pressure of the water as it comes out the sprinkler nozzle. The person checking pressure should be very consistent about the method he (or she) uses to check the sprinklers. Ideally the pitot tube should be placed in the middle of the sprinkler system about 1/16 " outside the nozzle. The actual location of the tube is not as important as having the same location on each sprinkler. A pressure recorder can help you understand what is occurring over the whole period of watering. These recorders are battery operated and can be placed in a QCV. Severe fluctuations or low pressure can lead to many types of problems, so these units can be extremely helpful.

Many systems today are electrical, so a modest amount of "electrical" knowledge and a few simple instruments can make life a little easier. A "multi-meter" allows you to measure voltage and resistance in your control system. It's simple because most systems require 110 volts to supply controllers and 24 volts to activate valves or sprinklers.

As your understanding of the electrical system increases, you may find it practical to purchase a "tracker" and "fault -finder". If you don't know where your wires are, the tracker can be used to flag the path that your wires follow. The fault finder can help you locate breaks or "leaks" in your


wire.

These are just some of the tools available for use by irrigation workers. If you have a suggestion that helps with maintenance, please write us. One of the questions sent in asked for a tool to help find plastic pipe. After talking to other irrigation people, we have come up with two suggestions:

- 1) Keep looking for an as-built, since that should show every pipe, valve, and sprinkler.
- 2) The second idea would be to try a water-witch. I realize that the skeptics will laugh but it might work if the line is large enough.

One other thought, if you have an electrical control system, you can try wire tracking. Another question received asked about pre-fab swing joints. In talking with different contractors, the results so far are very positive. All recommended using the swing joints as they were easier to install and had not given any problems.

Thanks for the questions sent in -- we are still looking for answers to some sent in, and will respond as soon as possible. Keep the questions coming in so we know what you need.




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CHOOSING APPROPRIATE AERIFICATION METHODS FOR GREENS

DR. JAMES WATSON, AGRONOMIST
THE TORO COMPANY

Aerification is a term used synonymously with aerifying and aeration. All are terms that describe the more technically accurate process of turfgrass cultivation. Turfgrass cultivation is the loosening or "working" of soil with minimal disturbance of the turfgrass surface.

Turfgrass cultivation is an essential cultural practice for golf greens, fairways, and sports fields--for all turfgrass areas that support play or traffic.

Cultivation of golf greens, when performed at the right time with the proper tools, will accomplish a number of things.

Among them:

- 1) Alleviate soil compaction, thereby improving water infiltration and percolation, gaseous exchange between atmosphere and soil air and diffusion of oxygen within the soil and root zone.
- 2) Provide for deep placement of fertilizer, especially the mineral constituents and thereby promote deeper, more extensive root growth;
- 3) Mix topdressing and other surface-applied materials into existing soil thereby developing a more uniform soil profile and precluding buildup of layers that are disruptive to movement of water and that adversely affect root growth;
- 4) Affect or facilitate textural (particle size) changes in surface layers when used in conjunction with topdressing;
- 5) Eliminate, disrupt, mix or at the least, partially alter textural composition of layers especially those of variable constituents and textural classes;
- 6) Remove and reduce thatch mechanically as well as promote biological decomposition of thatch;
- 7) Prepare seedbeds in established and damaged turfgrass areas for reseeding and for overseeding;
- 8) Prepare seedbeds in established and damaged turfgrass sites for introduction of new, improved species and cultivars of turfgrass, and;
- 9) Aid in leveling and truing of turfgrass surfaces.

Most of these functions improve the soil-air-water relationships and, as a result, promote deeper more efficient root systems and consequently, more easily managed, healthy, vigorous dense and wear-resistant turfgrass.

Compaction resulting from the surface pressure of traffic occurs for the most part, in the upper 2-3 inches of the soil. The zone of maximum compaction usually is found between 3/4 and 1 1/2 inches below the surface. And, layers of non-uniform textural materials caused by poor construction techniques sometimes occur on greens. In these latter cases, "deep tine" cultivation may be required. However, tines that penetrate 3, 3-1/2 inches effectively alleviate compaction caused by surface traffic.

How Turfgrass Soils Are Cultivated

Cultivation of turfgrass is accomplished by one or more of three basic methods. Namely, spiking or coring. For best performance throughout the growing season a combination of devices and techniques will produce more satisfactory results than will the use of a single unit on a continuing a basis.

Spiking —This was, more than likely, the earliest turf cultivation technique. Nails driven through a board to which a handle was attached; or a pitchfork-like device used to punch holes in severely compacted, heavily-thatched, diseased or otherwise damaged areas is conjectured to have been the earliest tool used for this process.

Slicing — is accomplished by a number of disc-type devices. These simply slice through the sward into the soil. Depending upon the nature of the unit and the size, shape and configuration of the tine or blade, slicers may be used as a "quick fix" for crusted soil, to break up relatively thin layers of clay and silt that have been deposited by windstorms, and to simply cultivate turf areas. Also, the process may be used to prepare a seedbed for in-season repair and to facilitate overseeding.

Coring — is a turf cultivation technique that employs a hollow tine to punch a hole through the turf into the soil and extract a "core" of soil as the tine exits. The core or plug of soil is then deposited on the surface.

Three tine configurations are generally recognized:

- 1) A straight hollow tine that punches a vertical hole and that extracts a more or less cylindrical plug of soil;
- 2) A closed tine; or, sometimes a partially open "spoon" that penetrates the soil at a 50 to 60

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degree angle; then, as the unit moves forward, the point of the tine or spoon sweeps backward and exits at a similar angle. This action creates a cultivated "cavity" and extracts a plug of soil. The underground cavity thus created is substantially greater than the hole that results from vertical penetration only;

2) A closed tine; or, sometimes a partially open "spoon" that penetrates the soil at a 50 to 60 degree angle; then, as the unit moves forward, the point of the tine or spoon sweeps backward and exits at a similar angle. This action creates a cultivated "cavity" and extracts a plug of soil. The underground cavity thus created is substantially greater than the hole that results from vertical penetration only;

3) "Drill" type tines will cultivate under a wide range of soil conditions and remove a spiral of soil. It's major disadvantage is the slowness of operation.

Timely cultivation, especially coring, is a practical way of reducing excess thatch and of maintaining a desirable level of thatch. Cultivation combined with topdressing helps to mix soil and organic matter at or near the soil surface. This speed microbial activity and reduces thatch. Thus, core cultivation increases air, water and nutrient penetration of the thatch layer and further, aids in thatch decomposition.

Agnew (Grounds Maintenance, Sept, '85), shows the effect of tine diameter and spacing on the amount and percentage of soil removal by coring to a 3 inch depth. Table 1 and 2 prepared by Agnew are shown below.

Cultivation disrupts a smooth, true putting green

Table 1

Cubic inches of soil removed by coring to a 3-inch soil depth

Tine diameter (inches)	Tine spacing (inches)		
	6"	4"	2"
1/4"	0.60 cu. in.	1.40 cu. in.	5.40 cu. in.
1/2"	2.40 cu. in.	5.30 cu. in.	21.20 cu. in.
3/4"	5.30 cu. in.	12.00 cu. in.	47.90 cu. in.
1"	9.40 cu. in.	21.20 cu. in.	85.00 cu. in.

This paper prepared for the 1990 Superintendent's Institute Spanish Bay — January 1990

Table 2

Percentage of soil removed from a 6-in. soil profile by coring to a 3-in. soil depth

Tine diameter (inches)	Tine spacing (inches)		
	6"	4"	2"
1/4"	.07%	.16%	.63%
1/2"	.28%	.61%	2.45%
3/4"	.61%	1.39%	5.54%
1"	1.09%	2.45%	9.83%

surface. And, when topdressed following cultivation, the green putts more slowly for the next 6-8 days. When putting surfaces are disturbed during the playing season, golfers are unhappy! As a result, greens are usually cultivated only in the spring and the fall. And, often an insufficient number of tines to adequately alleviate compaction. Thus, when environmental stress due to temperature or moisture extremes occur, the grass is unable to cope.

A machine which incorporates a new concept of cultivation that avoids surface disturbance but breaks up layers and alleviates compaction to a depth of 5-7 inches will be available near term. It shows great promise of providing a means of cultivating greens throughout the growing season without causing damage to the turfgrass or the putting surface.

Cultivation is an essential cultural practice. It improves water infiltration and percolation, enhances soil compaction and aids in the decomposition of thatch by creating an environment conducive to microbial activity. Currently, the golf course superintendent has a wide array of equipment and techniques from which to select the most appropriate method to cultivate their greens. Factors that affect that decision are climate, weather, amount of play, type of soil, green design (as it affects traffic flow), thatch and type of grass.

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