THRU THE GREEN

March, 1996

The Golf Course Superintendents Association of Northern California

GCSAA Election Results

The annual election of officers and directors was held at the GCSAA Annual Meeting on February 10, 1996 in Orlando, Florida. Bruce R. Williams, CGCS was elected President. Paul S. McGinnis, CGCS, was elected Vice President. George E. Renault III, CGCS was elected Secretary/Treasurer. Ken Mangum, CGCS and R. Scott Woodhead, CGCS were each elected to serve a two-year term as Director. Michael Wallace, CGCS (the next highest vote total) was appointed by President Williams to fill the one year unexpired term of Director Renault. Tommy D. Witt, CGCS and David W. Fearis, CGCS will continue for another year as Directors. Congratulations to all the winners.

The Articles of Incorporation and Bylaws Amendments were also voted on at this Annual Meeting. All ballot issues were passed by large margins including the reduction of dues for Class C members.

Because of the passage of these ballot measures, our chapter will now face somewhat similar ballot measures at our annual meeting in April. Randy Gai, our Bylaw Committee Chairman, will be presenting these proposed bylaw changes to the Board for our review at our next meeting on March 4, 1996. Your ideas on these changes are encouraged. Your attendance at our Annual Election Meeting is very important. Please try to attend our Annual Election Meeting on Thursday, April 25, at Peacock Gap Golf and Country Club.

USGA/NCGA Green Section Regional Conference

Mark your calenders for Wednesday, March 27, 1996. That's the day for the USGA/NCGA Green Section Regional Conference to be held at Castlewood Country Club in Pleasanton.

On the program are our own Western Region Agronomists, Larry Gilhuly, Pat Gross, and Mike Huck, as well as Southeastern Regional Agronomist, Chris Hartwiger and Western Regional Affairs Manager, Ron Read. Topics for this year's program include irrigation system injection, putting green rolling, salt tolerant turfgrasses, and trends in golf course architecture. There will be an update on the 1996 changes to the rules of golf, a discussion of women's golf and a progress report on the turf program at Cal Poly, San Luis Obispo.

Moderators for this year's program are Bob Murphy and Randy Gai, CGCS. CEU credits for CDFA, GCSAA, PGA, and CMAA will be available. **Make your plans now to attend.** Registration forms from the NCGA will be in the mail soon.

Abstract of Motion Picture -

"Water Movement In Soils"

Made at Washington State University

By W. H. Gardner and J. C. Hatch in 1959

Editor's Note: I recently rediscovered this while browsing through some very old issues of the "California Turfgrass Culture." This original movie is on video and available from GCSAA. I highly recommend this as an excellent review of basic soil science. It is as applicable today as when it was made in 1959.

Water moves in an unsaturated soil in all directions indicating that gravity is not the only factor affecting its movement. The dominant force causing water to move in a medium or fine textured soil is soil suction. This is the attraction of fine soil particles for water. As soil approaches saturation, gravity's role in water movement becomes more important.

In a sandy soil, gravity is a more important factor in water movement. Coarse particles neither have as great an attraction for water nor do they permit as great a movement of water films as do fine particles. If water is supplied directly to a layer of coarse sand which is exposed at the surface, water will enter it readily through the large pores. Water moves through these large pores by the force of gravity and is not dependent upon soil suction.

If a sandy layer occurs within a loamy soil, water will not move into this layer until the soil above the sand layer is saturated. Such a situation occurs when a layer of coarse sand or gravel is placed in a soil. Often this is done when planting or building a putting green. Soils with a sand layer buried within them also are more difficult to leach because of this restriction of water movement.

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In This Issue . . .

Strictly Business

By Bob Costa

Much of what we accomplish in life, both personally and professionally, can be attributed to our attitude. An upbeat optimistic approach to the daily challenges we all face generally results in a positive outcome, or at least provides us with a valuable learning experience that we can grow from. There isn't a more fundamental ingredient for success, or happiness, than a positive attitude. Conversely, a negative pessimistic attitude often results in failure and frustration and more often than not, we wind up blaming others for what we are unable to achieve.

Think about it for a moment, all the great accomplishments that we witness, hear, or read about are the result of people who believed that no matter what the odds, they couldn't be stopped.

I have compiled a list of "Can and Can't" do attitudes that illustrate how the simple arrangement of a few words can have such a powerful impact on our lives.

Can't	Can
It will never work	We'll give it a try
We never did it before	We have the opportunity to learn something new
It's too complicated	We can figure it out
There's no way it will work	We can make it work
There's not enough time	We can make the time
It's a waste of time	Think of the possibilities
It's a waste of money	The investment will be worth it
It's good enough	There's always room for improvement
We're understaffed	We'll have to be more efficient
It will never fly	We'll never know unless we try
It's not going to get any better	We'll try one more time
It can't be done	It'll be a challenge
Isn't it time to go home	Days go quickly around here
I don't have any idea	I'll come up with some alternatives
It's not my job	I'll be glad to take the responsibility
Let somebody else deal with it	I'm ready to learn something new

Water Movement In Soils (Cont'd)

If a clay layer exists within a sand, the water will be less restricted in its movement into the clay layer from the overlying sand than in its movement out of this clay layer to the sand under it. Water tables normally do not build up over a silt lens because of the inability of the silt to absorb water but rather because the water movement to the layer beneath it is restricted. As saturation builds up above a sandy layer, eventually the water will move into the sand. When it does, it will move through the sand and into the soil beneath it.

The question is frequently asked — would water move differently if the sand layer under a loam soil were slightly moistened, that is, moist enough to support plant growth. Again, it has been found that water will not move down through the soil into moist sand any more readily than if the sand layer is dry.

In comparing the rate of water entry and movement through a uniform sandy soil with loam or clay loam soil, water moves into the sandy soil at a faster rate than it does into the clay loam soil because of the difference in pore size. Despite this fact, the net usable water, once the soil is wet, in the clay loam soil is greater than in the sandy loam soil. This means a clay loam soil should need to be wetted less frequently than a sandy loam soil. Water normally will need to be applied to the clay loam soil at a slower rate for good absorption than to a sandy loam soil.

It is important to understand the relationship of water movement to the movement of fertilizer materials which may be in the soil. Fertilizer materials applied to the soil will not necessarily move uniformly down through the soil but will be carried in several directions with the moving water. Therefore, in areas where two wetting fronts come together, as when

(Conclusion on back page)

NorCalendar, 1996

March 4	Board of Directors Meeting
March 27	USGA Regional Conference Castlewood Country Club, Pleasanton
March 28	Production Techniques for Sustainable Turf & Golf Course Management Sponsored by The Committee for Sustainable Agriculture San Leandro California (Look for Brochure in the mail)
April 25	GCSANC Annual Meeting and Election of Officers Peacock Gap Golf and Country Club San Rafael
May 5 & 6	CGCSA Meeting Hi-Lo Desert Chapter Host Doubletree Desert Princess Cathedral City (Palm Springs area)

Water Movement In Soils - (Conclusion)

furrow irrigation is practiced, one can be a concentration of fertilizer or other salts on the beds or ridges between furrows. This suggests an advantage of using sprinkler irrigation where water is applied more uniformly. There is little opportunity for salt accumulation due to "subbing". Fortunately, more areas of turf are sprinkler irrigated.

Water movement into soils is affected by tillage. An important practice is the inclusion or incorporation into the soil of organic matter, such as manures, peat moss or wood shavings. They should be thoroughly mixed into the soil to increase water movement into the soil. Organic matter, such as manures, can aid in stabilizing the structure of a soil to improve water penetration. However, if they are incorporated into the soil in a horizontal layer not open to the free water surface above, i.e.. buried, they will restrict the movement of water in the same manner as a sand layer. Channels left in soil by earthworms or other burrowing animals if not open to the free water surface above will not aid the movement of water but will act as if they were filled with sand. If vertical mulching is used and the layer of organic matter continues up to the surface, that is open to free water, water will readily move into this area. However, if these channels become sealed at the soil surface, the water movement into them will be restricted.

In summary, unsaturated flow of water in soil and other porous materials takes place because of the attraction of fine soil particles for water and of molecules for each other. How readily the water moves depends upon the nature of the pores and the particle size in the system.

***Prepared by — Wesley A. Humphrey, University of California Agricultural Extension Service Orange County.**

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