

## 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.

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