

lying principle for the USGA Green Section specifications for construction of golf putting greens. Water will not move out of the finer layer until it is completely saturated. Then water only moves by gravity. Because of low rainfall at this location, there is little chance of extended periods of rainfall to saturate the soil and leach accumulated salts. Since the available water in this area of Hawaii is brackish (average salinity readings of 3.0 to 3.5 mmhos/cm) and the water infiltration rate of the rootzone material is slow, extremely high salt buildup is occurring in some cases.

BECAUSE OF the problems with obtaining adequate high-quality irrigation water, research is being conducted at the University of Hawaii on effects of sewage effluent and brackish irrigation water on soil chemical properties and growth of turfgrasses. As part of this research, soil solution sampling stations have been established at four golf courses, two each on Oahu and Hawaii.

The soil solution is sampled monthly by means of suction lysimeters installed at different depths (*Figure 4*). Table 1 shows selected soil chemical properties from these four locations. It is clearly apparent that soil salinity levels have reached excessive levels in certain cases.

Fortunately, bermudagrasses are used on golf courses in Hawaii and are very salt tolerant. Experiments are presently being conducted to determine if salinity levels can be reduced by increasing leaching, gypsum applications, and aerification treatments.



The Turf Advisory Service: Won't You Join Us in 1987?

T'S THE START of another and new high-tech year in turfgrass management. In many cases, one small bit of new information given by the visiting Green Section agronomist has saved many clubs the actual cost of the Green Section Turf Advisory Visit, if not more. Of greater importance, however, is the significant improvement in turf and playing conditions one might expect from such a consultation. No small part of this is the authoritative backing and second opinion the agronomist provides the golf course superintendent.

The fee schedule for TAS visits in 1987 is:

Half-day visit: \$550 if paid by April 15 \$600 if paid after April 15 Full-day visit: \$850 if paid by April 15 \$900 if paid after April 15

For less than one-quarter of one percent of most golf course maintenance budgets today, your club will receive a half-day or full-day visit and tour of the course, followed by a written report of all recommendations by an experienced, highly trained and qualified Green Section scientist. The fee also covers travel expenses, emergency consultations and other requests via telephone, a one-year subscription to the GREEN SECTION RECORD, news of the USGA Regional Meetings and the annual Green Section Educational Program, as well as the informative annual Turfgrass Research Report from the USGA.

Green Section services are offered for the benefit of golf by the USGA, a nonprofit organization. The Green Section agronomists have no axes to grind — no strings attached — no peers in the field of turfgrass consultation for golf.

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