

- pH—This greatly affects nutrient availability.
- Timing—For warm-season grasses, high fertilization rates during the growing season mean increased mowing and thatch.
- Balance—Whenever there is an imbalance among nitrogen (N), phosphorous (P), and potassium (K) the nitrogen can be taken into the plant but not utilized, and is therefore ineffective.
- Microorganisms—An active microbiological population must be maintained. This requires nitrogen and decomposable organic matter in the soil, in addition to air and water.

Aeration—The optimum time for core aeration is when the turfgrass is growing vigorously and is not subject to severe stress. Aeration releases gases from the soil and facilitates the drying of wet soil. It also stimulates root growth in the hole and improves turfgrass response to fertilizer.

Pest Control—A turfgrass pest is any organism that causes deterioration in the appearance or functional use of turf. Pests include insects, weeds, disease-causing organisms, and other destructive organisms. The proper use of pesticides and herbicides is part of a sound cultural program that ensures high-quality turf.

Pesticides vary in the hazards associated with their use and should only be applied by qualified applicators. These applicators should know the relative hazards posed by exposure and understand the words "Caution," "Warning," or "Danger-Poison." They should know the lethal dosages of the chemicals they apply, and use them accordingly. In short, chemical applicators should be *alert and informed*, so that they read labels, wear proper protective equipment, and never change containers. To effectively control turfgrass pests, avoid waste, and abide by rules set down by the Environmental Protection Agency, these chemicals must be applied uniformly and at proper rates, as dictated by the product's label.

As the sports turf manager, you should establish annual, flexible schedules for fertilization, preemergence herbicides, postemergence herbicides, disease control, nematode control, and insect control. Pesticides, insecticides, and herbicides should be carefully inventoried. Records as to where the chemicals are being applied and at what rate should also be kept.

Safe, healthy sports fields can be maintained on a limited budget. The key to success is going back to basics by attending to each of the seven links in the sports field management chain. It is always a shame when some young athlete is injured or even crippled because of an improperly maintained field. It is much easier to prevent a sports injury than repair one.

Editor's Note: Edmund Birch is supervisor of maintenance for the Broward County, FL, School District.

COLLEGE OFFERS TURF PROGRAM

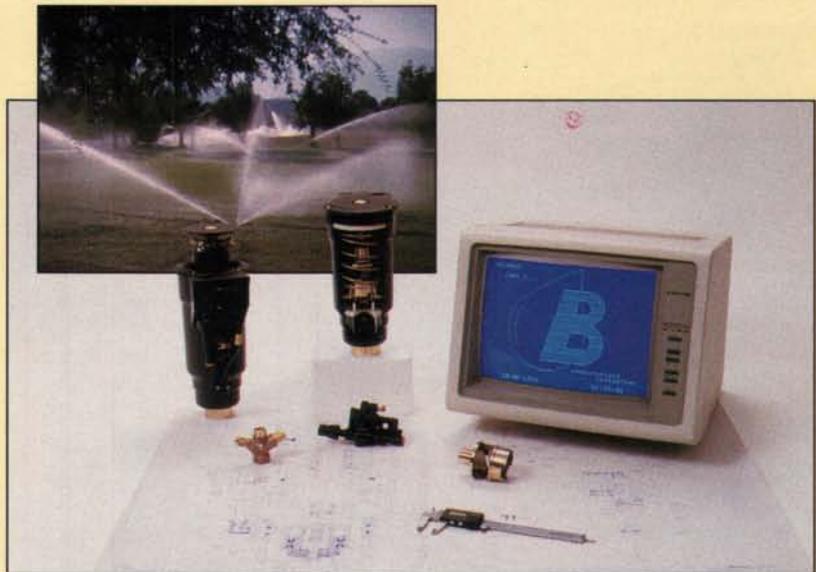
A two-year sports turf manager curriculum will be offered by Cuyamaca College in El Cajon, CA, beginning this fall. The program consists of classes in horticulture, plant pest and disease control, soils, principles of irrigation, landscape construction, and golf course and sports field management.

A subcommittee composed of key members in the golf course and sports turf industry was formed last year by the Ornamental Horticulture Advisory Committee of Cuyamaca College to explore the

feasibility, procedures and requirements of a sports turf manager program at the El Cajon, CA, campus. After a year of research and discussion, objectives of the program, as well as course requirements were finalized. The total program was approved by the District Board of Directors and Curriculum Committee, and is now offered in 1989-1990 Cuyamaca College Course Catalogue.

Those interested in the program can contact: Cuyamaca College, Dept. of Ornamental Horticulture, 2950 Jamacha Rd., El Cajon, CA 92019.

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