

## A New Definition

### 'Organic' golf turf management doesn't have to exclude synthetic materials

BY ELIOT C. ROBERTS

**O**rganic golf turf management, like organic gardening, usually assumes the use of chemical fertilizers and pesticides to be inappropriate and even detrimental to the soil and environment. On the other hand, use of natural substances, whether they contain carbon (criterion for classification as organic) or not are beneficial to soil and plants to the degree that synthetic pesticides are not necessary.

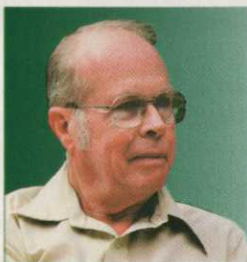
Plant growth without use of pesticides is feasible for plants under soil and climatic conditions that are favorable for their healthy maintenance; for plants that have a high degree of insect and disease resistance and vigorous growth habit by virtue of genetic make-up; and for plants when population thresholds of damaging insects and pathogenic fungi are low. However, plants often become so insect- and disease-infected and weedy that the appropriate pesticide is required to maintain their high quality.

Use of chemical fertilizers and pesticides, according to rates, timing and methods resulting from commercial and Agricultural Experiment Station research, have proven effective and well within acceptable levels of risk to the applicators, soil and environment. Thus, much of the concern for the use of these materials is overstated.

However, there is another side to the coin. Evidence exists that overuse of fertilizers and pesticides is common practice. In these situations, soils and the environment may be exposed to concentrations sufficiently high to become polluted. Since it is the dose that makes the poison, applicators may become overexposed. This is not a function of the chemical compound but of improper use.

New concepts of integrated pest management (IPM) are designed to bring about reductions in the use of materials that have the potential for overuse and thus environmental pollution. This can best be accomplished by a sound knowledge of how plant and soil systems work, including relationships with beneficial and detrimental micro- and macro-organisms.

In fact, a new definition of "organic" golf turf management that places emphasis on the activity of these organisms is overdue. It is this activity that makes a soil dynamic, highly productive and conducive to the growth of healthy



plants. These organisms respond favorably to the use of natural materials, but they are also enhanced by the proper recommended use of synthetic materials. The new definition of "organic" golf turf management includes three criteria important in turf maintenance:

**First** — "Organic" golf turf management is concerned with a complete maintenance program that includes mowing, grooming, watering,

core cultivation, fertilizing, liming and use of soil conditioners and pesticides. All these practices influence the beneficial activity of soil macro- and micro-organisms and are all essential for the production of high quality turf.

**Second** — "Organic" golf turf management places emphasis on the application of organic (containing carbon) products, either natural or synthetic, that are biodegradable (provide a source of carbon for nonphotosynthetic soil organisms.) These may be fertilizers that release nutrients slowly. They may be bioactivators, biostimulants, enzymes or growth regulators. They may be surfactants or pesticides. In any event, they possess active and decomposition properties that promote turfgrass growth.

**Third** — "Organic" golf turf management recognizes the value of natural or synthetic inorganic (not containing carbon) products. Some of these breakdown slowly and release nutrients over a period of time. Many inorganic products contain nutrients that are readily available. These are recommended for use in small quantities applied frequently.

The bottom line: "Organic" golf turf management is concerned with the application of all of the following products in ways that promote both fine turf and all of the living organisms in the root zone of 1,000 square feet of this turf: natural organic fertilizers; synthetic organic fertilizers; dry mineral fertilizers; liquid fertilizers; chelated micronutrients; bioactivators; humates; biostimulants; enzymes and growth regulators; mixtures and formulations of the above; surfactants; oxygen enriched irrigation water; soil conditioners; limestone; and pesticides.

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