



The state of turfgrass research

by Dr. Eric B. Nelson

THE STATE OF TURFGRASS RESEARCH has seen a spectacular evolution as demands to meet the needs of an ever-changing industry have become more acute. In just the past five to ten years, dramatic changes in government regulations, public opinions, and philosophies about turfgrass management have propelled this evolution to warp speeds.

In the past, turfgrass research efforts were limited largely to larger manufacturers of turf-related products, who had the resources to support research efforts ultimately aimed at promoting their own particular products. Independently generated biology-based research was an area of exploration left mainly to the curiosities of a handful of university faculty, who saw turfgrass biology merely as an interesting sideline to their primary research program. As a result, a solid body of information on the biology and ecology of turfgrass ecosystems has not developed.

A principle factor limiting the generation of biology-based information on turfgrasses has been, and continues to be, that few scientists across the country have positions in universities that allow them to devote their full-time efforts to turfgrass research. Turfgrass agronomists are perhaps the only exception to this situation. They generally have full-time responsibilities for turfgrass research extension and in teaching. When one looks at the turfgrass sub-disciplines, such as entomology, pathology, and weed science, there are probably only four or five people nationwide, in each sub-discipline, with positions that allow them to devote their full-time efforts to turfgrass research. As a result, the generation of biology-based information for the turfgrass industry has come slowly and only in bits and pieces.

One only has to look at research efforts with other commodities to realize the state that turfgrass is in. For example, at some universities, there may be as many as 10–15 faculty across a campus devoted to both basic and applied aspects of wheat or corn research. There is substantial incentive to develop research programs in these areas, because they are food crops that occupy considerable acreage nationwide. Research funding for commodities such as these can be considerable. Compare those figures with the 0–6 faculty at any given university, who maintain only part-time responsibilities for turfgrass research. It is not surprising, therefore, that the information needed for turfgrass managers to make sound biological decisions is lacking.

Over the past 10 to 15 years, turfgrass associations in many states have become more organized and have developed granting programs or foundations to support turfgrass

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research in their respective states. In these situations, the resources that, in fact, are held in the hands of the beneficiaries of that research, (i.e., the lawn care operator, the golf course superintendent, the landscaper, etc.) can now go to work to generate biologically specific information for the betterment of the industry as a whole—instead of for the betterment of specific products or product uses.

During the past decade, there have been considerable advances in turfgrass biology in the following areas:

- TURFGRASS NUTRITION
- PATHOGEN BIOLOGY AND ECOLOGY
- INSECT BEHAVIOR AND CONTROL
- SOIL SCIENCE
- WEED MANAGEMENT
- AND INTEGRATED PEST MANAGEMENT.

Advances in all of these areas have dramatically changed the ways in which turfgrasses are managed. These advances have occurred as a result of key groups within the turfgrass industry being more outspoken about the importance of turfgrasses to our environment and our society and about the need to understand biological processes in turfgrass ecosystems for most effective, sustainable, economical, and environmentally sound turfgrass management. Those advances would not have been possible without the resources provided by various turfgrass associations, and both federal and state funding agencies, as well as the commitment from turfgrass scientists across the United States, who, for the most part, are young, enthusiastic, and full of new and innovative ideas and management approaches for the turfgrass industry.

Research results have been traditionally delivered to the beneficiaries of this information through various channels—such as field days, workshops, conferences, newsletters, fact sheets, bulletins, etc. However, we need to expend much more effort on getting the proper information to the proper audiences. We have designed *Turf Grass Trends* to facilitate this transfer of information—so that the latest and most significant biologically-based information can be relayed to the end-user—but obviously one newsletter is not going to solve the whole problem. In effect, closing this biological information gap parallels the effort by manufacturers to shorten the gap between their research and development and the marketing of new products. In both cases, the idea is to not waste time and opportunity. ■