

Using Turfgrass and Environmental Research on the Internet

Accessing research results is just a click away.

BY MIKE KENNA

More than 20 years ago the USGA initiated a new turfgrass research program. Harry W. Easterly, Jr., the USGA senior executive director at the time, made the following statement: "We believe this will develop into one of our most important undertakings. In time, the research program developed by this Committee could lead to major breakthroughs in all phases of turfgrass maintenance . . ."

Since the beginning of this research commitment in 1983, the USGA has provided \$25 million to fund 290 research projects at 32 universities. There is a tremendous body of information contained within USGA publications and research reports generated by this program. In the Green Section Research office, I have what I call the million-dollar files, as the information in these files cost \$25 million!

Since 2002, the Green Section has increased its efforts to make this information available to as many people as possible. For example, Turfgrass and Environmental Research Online (TERO) was created, and more than 60 research summary articles have been published to date. The goal is to publish a new article every two weeks. The *Green Section Record* has published 38 articles on USGA-sponsored research since January 2002. All of the USGA Annual Research reports since 1984 have been scanned and made available online, and more than 250 full research reports submitted to the USGA are available online today.

How do you get to this information from your location? This article will briefly review the steps to get you started.

TERO ARTICLES

TERO is an online service that provides the results of research projects funded through the USGA Turfgrass and Environmental Research Program. This free resource is located at <http://usgatero.msu.edu>. To browse TERO, first click on [Browse TERO Articles](#) and the list of articles will appear. The articles are sorted by their publication date, but you can also sort articles by *research area*, *workgroups*, or *specific area* of interest. *Specific area* is a sorting method you may find useful. Use the drop-down box under [Current and Past Issues sorted by:](#) and select *specific area*. Now, the articles will be sorted alphabetically by a keyword such as *amphibians*, *bentgrass*, *bermudagrass*, etc. Once an article is selected, Acrobat Reader® will load and a PDF version of the article will appear on your screen.

Each TERO article has a cover page and information about the research program and committee. Articles are usually 6 to 20 pages in length, and all have a short, bullet-point summary to provide a quick overview of the information. Articles include useful data, tables, graphs, or pictures to more effectively communicate the research results. All articles have a literature-cited section that, in most cases, is linked to a record in the Turfgrass Information File (TGIF) at Michigan State University

libraries. You simply click on the TGIF record number to access all the information available on that particular publication. There also may be a link to the actual publication if you are interested in reading further.

TERO articles also can be searched using a *keyword*. First, click on the [Search TERO Articles](#) link on the left of the TERO Web site page. Use a single word or short phrase to find articles in which you are interested. For example, if you use *dead spot* as a search term, a total of four TERO articles will appear. Five of the articles have information on *spring dead spot* in bermudagrass, and one article is about *bentgrass dead spot*. The search feature works in a manner similar to many of the internet search engines.

USGA GREEN SECTION RECORD

You also can research the entire *Green Section Record* history. First, click on the [USGA Green Section Record](#). The *Record* page has all of the issues, as well as the preceding Green Section periodicals that have been published since 1920. All of the issues are arranged by decade for easy browsing. Once a particular year is selected, the content of each issue for that year is arranged by the month it was published. Articles can also be searched by keyword. Click on [Search the USGA Green Section Record](#) on the *Record* page and type in a keyword or phrase. If your keyword produces too many articles, narrow it down by adding additional information. For example, the keyword *traffic*



<http://usgatero.msu.edu>



Turfgrass and Environmental Research Online

...Using Science to Benefit Golf

USGA Turfgrass and Environmental Research Online (TERO) ISSN 1540-0271 is an electronic technical journal published by the United States Golf Association and housed with the Turfgrass Information File (TIGF) at the Michigan State University Libraries. It reports the results of research projects funded under USGA's Turfgrass and Environmental Research Program.

Purpose

The purpose of USGA Turfgrass and Environmental Research Online is to effectively communicate the results of research projects funded under USGA's Turfgrass and Environmental Research Program to all who can benefit from such knowledge. Since 1983, the USGA has funded more than 200 projects at a cost of \$25 million. The private, non-profit research program provides funding opportunities to university faculty interested in working on environmental and turf management problems affecting golf courses. The outstanding playing conditions of today's golf courses are a direct result of using science to benefit golf.

USGA Turfgrass and Environmental Research Program Committee

USGA Green Section

USGA Green Section Record

Other USGA Technical and Research Publications

Author Guidelines PDF

Terms and Conditions of Use PDF

Editor, Jeff Rex, Ph.D.

Turfgrass Information Center

Full Database Research Report Turfgrass Information File

TERO Home Articles Author Guidelines Terms of Use Contact the Editor

will produce more than 100 links; however, if you use *putting green traffic*, the search will narrow considerably. You can read the article on your computer screen, print it out, or access the article in your back issues of the *Record* on your bookshelf.

OTHER USGA TECHNICAL AND RESEARCH PUBLICATIONS

Another source of information is [Other USGA Technical and Research Publications](#) found on TERO. Clicking on this title reveals a complete library of all the annual reports the USGA has published or received since 1983. On this page there are three types of reports, [Executive Summaries](#), which are brief summaries; [Research Summaries](#), which are one page in length; or [Full Research Reports](#), which were submitted to the USGA by sponsored scientists and range between 10 and 20 pages in length.

[Research Summaries](#) generally provide the best information for use. The

summaries are sorted by publication year and grouped within decades. For example, if you go to the 2003 summary, a table of contents with all of the reports for that year appears on your computer screen. These reports are one-page summaries that contain the research objectives, project description, progress for the year, and a short, bullet-point list of highlights located in the lower right corner of each report. If more information is needed about this research project, click on the right column of the table to call up the TIGF record for the report.

TURFGRASS INFORMATION CENTER WEBPAGE

The Turfgrass Information Center, or TIC, is housed at Michigan State University and can be selected from the TERO webpage. This database contains the largest collection of turfgrass literature available in the world. The USGA has made significant time and resources available in support of the TIC. All

USGA publications are available free of charge.

Once on the TIC home page, you will see that there is an endowment campaign to make the Turfgrass Information File free of charge. Consider making a contribution to this important component of the turf industry. The TIC protects valuable publications about turfgrass in the O. J. Noer Memorial Turfgrass collection, and it recently worked closely with Dr. James B. and Harriet Beard to include what is generally acknowledged to be the finest personal collection of turfgrass research information in the world. In addition, there are many other services that the TIC offers to people in the industry who need information about turf.

These valuable resources are available to be used. They just might provide exactly what you are looking for!

MIKE KENNA, PH.D., is director of the USGA Green Section Research Program.