

Green industry knowledge center introduced

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The Green Industry Knowledge Center (www.waternut.org/moodle) is an online resource for educators, growers, industry professionals and students. Credit: Photo courtesy of John Lea-Cox

The nursery and greenhouse industry is big business in the United States, accounting for more than \$14.6 billion in agricultural sales. Most of the ornamental plants grown in the U.S. are produced in container-nursery or greenhouse operations. These operations are classified as "intensive agricultural systems" because they use a combination of expensive resources (labor, water, and fertilizers) to produce plants in large numbers on relatively small land areas. Increasing environmental concerns and legislation are prompting industry professionals and students to find sustainable "best management" approaches to production techniques in nursery and greenhouse operations. A new online knowledge center provides numerous resources to help nursery and

greenhouse professionals and students design and implement more sustainable practices.

According to John Lea-Cox and colleagues, who debuted the online center in a recent issue of [HortTechnology](#); "Because container-nursery and greenhouse operations produce plants in soilless substrates, these farms differ radically from traditional agronomic-type agricultural operations in terms of how they use [water](#) and nutrients. Water issues, specifically irrigation, surface water management, and water quality, are quickly becoming topics of major concern to the industry even in water-rich states."

To help nursery and greenhouse growers and allied industries stay informed, improve production practices, protect the environment, and maintain profitability, a web-based knowledge center was designed by a team of researchers comprised of extension and research faculty from land-grant universities in the mid-Atlantic and southern regions of the U.S. The comprehensive "Green Industry Knowledge Center" (www.waternut.org/moodle) provides a cost-effective mechanism for information delivery to diverse and widespread audiences. The Knowledge Center's mission is to "provide best management practice information for the cultural production, technological and engineering challenges which producers and industry professionals may face, growing ornamental crops in the eastern region of the United States."

Funded through a competitive grant from the USDA-CSREES (now NIFA)–National Integrated Water Quality Program, the user database currently serves over 700 registered educators, growers, industry professionals, and students from all over the world. According to Lea-Cox, corresponding author of the report, the online knowledge center includes two areas: a standard website and an active learning area featuring 25 in-depth learning modules. "The learning modules are designed to actively engage learners in topics on substrate, irrigation,

surface water, and nutrient and crop health management, which are integral to formulating farm-specific strategies for more sustainable water and nutrient management practices", the report noted. Additional modules provide assessment and implementation tools for irrigation audits, irrigation methods and technologies, and water and nutrient management planning. All modules include numerous resources (pictures, diagrams, case studies, and assessment tools) to enable learners to fully understand all of the options available and to think critically about decisions.

The learning modules have already been put into practice; 16 of the modules were used to teach an intensive Principles of Water and Nutrient Management course at the University of Maryland. The water and nutrient management planning module also supports the nursery and greenhouse Farmer Training Certification program in Maryland. Since the center's initial release in June 2008, visits to the site have increased from less than 100 per month to over 1,800 per month during 2010.

On future goals for the online center the researchers wrote: "Our wish is to facilitate the active learning process so that the end user can make rational decisions on how to change practices for economic, environmental, or personal reasons." They hope that users will also view the center as a means to facilitate public policy education and individual action, "thereby increasing the water quality of operations within the regions' watersheds, and improving our ability to form partnerships between cooperative extension and state and federal agencies."

The team noted that although the learning resources were developed by faculty in the eastern region of the United States, much of the information is applicable to more widespread audiences.

More information: [horttech.ashspublications.org/ ...nt/abstract/20/3/509](http://horttech.ashspublications.org/...nt/abstract/20/3/509)

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