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## **A Web-Based Knowledge Center for Water and Nutrient Management for the Nursery and Greenhouse Industry**

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### Abstract Text:

The ornamental (nursery and greenhouse) industry is a major economic force in US agriculture, which in 2002 had 4.82M acres in production, accounting for 15.4% of wholesale crop receipts, with an average net return of \$947 per acre. Given the nationwide expansion of ornamental production and the intensive use of water and nutrients by these operations, we have to ensure that producers are familiar with the most current best management practices. To facilitate this education process, we have developed a web-based knowledge center for Water and Nutrient Management and Conservation, to facilitate and disseminate up-to-date information about strategies and tools to implement best practices. The website (<http://www.waternut.org>) provides the general public with an overview of the project and a link to the knowledge center (<http://www.waternut.org/moodle/>), which currently has twenty in-depth learning modules, with a further seven in development. These learning modules have been designed within Moodle, to actively engage learners in topics on substrate, irrigation, surface water, nutrient and pathogen management, which are integral to formulating farm-specific strategies for effective water and nutrient management. Additionally, tools such as irrigation audits and water and nutrient management planning are covered in specific modules. Over fifty regulatory agency, industry and education professionals were active in the developmental review of these resources, through face-to-face workshops and on-line reviews of content. The site is now being used as a resource center by growers, county and regional-based faculty and well as other professionals that serve these industries. Although the resources were developed by eastern region faculty, we already have registrants from mid- and western states, and some international users accessing and using the information from the site. We plan to actively engage additional users in the coming year, and are considering becoming an eXtension community of practice, to further broaden our outreach efforts.

### Impact Statement:

There are various strategies to improve water and nutrient use efficiency, from precision applications using micro-emitters, to more precisely scheduling irrigations based on actual plant water use, to re-use of runoff water through repeated recycling. Most of these practices require a fundamental knowledge of the underlying issues, to understand how to implement these best practices. Having an on-line resource center is an economic and efficient way to provide research-based knowledge on all the issues surrounding water conservation and management, to a wide array of industry professionals.