



Webinar Series Irrigation Pathogens & Water Quality



Webinar Presentation

Pathogen Risk Mitigation through System Design and Using Precision Irrigation Tools

Tuesday, 3 June, 2014

Noon to 1:00 pm (Eastern)

To participate in this webinar, please go to

<https://connect.extension.iastate.edu/irrigation-water/>

and dial 1-888-619-1583 then enter pass code: 491981

Presenter:

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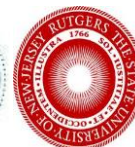
Summary:

The use of recycled water from containment ponds or structures is an integral part of the sustainability of container-nursery and greenhouse production systems, even in those areas of the US which receive adequate rainfall. The capacity of containment structures is influenced by how much water can be captured and replenished from rainfall, groundwater or other sources. We need to therefore understand how we can *firstly* conserve water by scheduling daily irrigations to not only optimize plant growth, but reduce runoff and create drier, more antagonistic environments for pathogens within production areas. We don't typically make very good decisions in estimating daily plant water use, especially in intensive nursery and greenhouse production environments, because of the diversity of crop species that are grown. We have developed advanced irrigation tools that allow growers to not only better estimate daily crop water use, but use those tools to automatically schedule and apply irrigations *only* when necessary. This seminar will cover the basics of good system design, and illustrate some of the advanced tools we are using to halve irrigation water applications, reduce runoff and create drier environments that increase plant growth while reducing disease incidence.

Each webinar in this series is qualified for one Certified Horticulturist CEU in Maryland, Pennsylvania and Virginia. Participants from these states just need to document and report their CEUs to local Nursery and Landscape Associations.

All previous webinars are posted at <http://www.irrigation-pathogens.ppws.vt.edu/webinar/index.php>.

Check out the project website at www.irrigation-pathogens.info for ongoing research and education activities. For more information about the webinar, or questions, contact Chuan Hong at chhong2@vt.edu



Daily irrigation water scheduling decisions are dictated by a number of inter-related factors:

Plant species and container size, which determine water requirements

Substrate physical properties, which determines water availability and porosity = leaching potential

Irrigation system type and uniformity determine irrigation efficiency

Irrigation efficiency is the key to reducing leaching, reducing the chance of pathogen movement and survival

**PRECISION SCHEDULING AND IRRIGATION MANAGEMENT ARE NEEDED TO
CREATE AND MAINTAIN DRY, ANTAGONISTIC ENVIRONMENTS**