MANAGING IRRIGATION FOR ORNAMENTAL CROPS

Most greenhouse and nursery crops rely on irrigation, but the availability and quality of water for irrigation is decreasing. Drought, pollution, competition for water resources, and concerns about environmental impacts are making it necessary for greenhouses and nurseries to better manage their water use.

To address these challenges, 21 land-grant universities are leading a Multistate Research Project. Researchers and Extension specialists are working together to find innovative tools and strategies and share them with growers.

IMPROVING IRRIGATION EFFICIENCY

To understand water use patterns, researchers surveyed nearly 400 ornamental nursery and greenhouse crop growers nationwide. Since then, the group has been busy developing tools and practices that will help ornamental crop growers conserve water, minimize impacts on the environment, and sustain production.

The group's research on the water requirements of plants and the effects of different growing media, container types, and environmental conditions has led to recommendations and tools that are helping growers adjust irrigation timing and amounts to be more efficient. Researchers have also tested ways to use alternative water sources and manage runoff from nurseries and greenhouses. The group plans to conduct a follow up survey in 2022 to find out whether growers have adopted these new tools and strategies.

Photo by Susan Collins-Smith, Mississippi State University

# NEW IRRIGATION MANAGEMENT TOOLS & STRATEGIES

GroZoneTracker.com, a free mobile app, helps growers record, track, and share information, making it easier to quickly fine tune irrigation practices.

iStock photo

Sensor systems, landscape plants, rain gardens, and constructed wetlands can reduce the amount of sediment, chemicals, and plant-damaging pathogens in runoff from nurseries and greenhouses. Filtering runoff protects surface waters and allows runoff to be reused for irrigation.

SCRI-MINDS Smart Farms photo
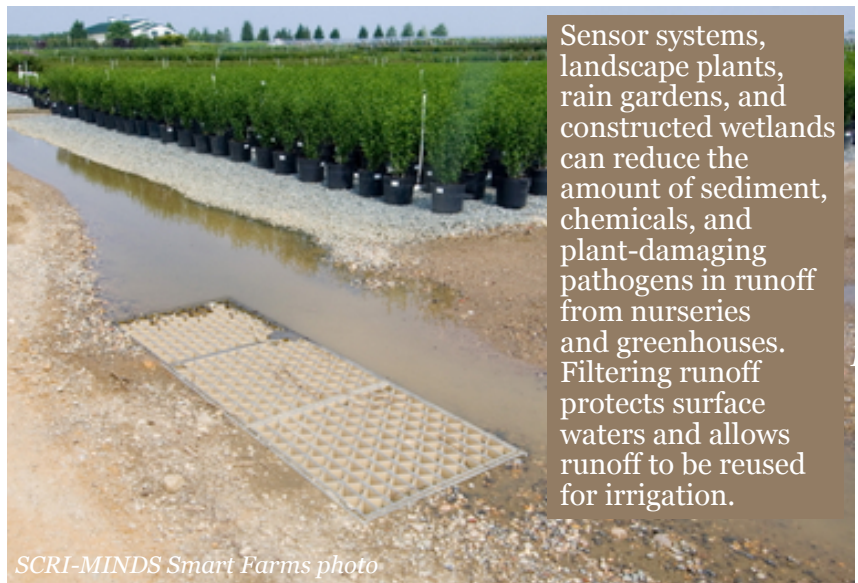
Researchers found ways to use alternative sources like laundry water, pond water, and saline water for nursery and greenhouse irrigation, saving millions of gallons of freshwater for other uses.

Horticultural Research Institute photo

Growers using a new wireless soil moisture sensor system have seen shorter production cycles, less disease, better plant quality, and large water savings. One user reduced irrigation by 50%, saving 43 million gallons of water. Sensors can also reduce required fertilizer applications by 50%, which could save ornamental growers millions of dollars per year.

Photo by Edwin Remsberg, University of Maryland

For more information, visit: *bit.ly/nursery-greenhouse-water-mgmt*