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NCDC216: A New Multistate Group for Water Management and Quality for Ornamental Crop Production and Health

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Abstract:

We have established an approved USDA multistate group (NCDC216) to focus on water management and quality for ornamental crop production and health. The nursery and greenhouse industry ranks 5th (>\$14.6 billion) among US agriculture commodities and within the top 5 commodities in 26 states (USDA, 2004). Water issues, specifically shortage of supply, water quality, surface water and waterborne pathogens, are quickly becoming major concerns to the ornamental plant industry even in water-rich states. Drought, urban competition for surface and groundwater water reserves, salinity and runoff water quality, and increasing legislation at state and county levels are all increasing the need for ornamental crop producers to manage water more effectively while promoting crop production and health. The goals of this national group are to provide a forum for representatives from all land-grant and other institutions to develop multidisciplinary approaches to 1) improve water efficiency and crop productivity in the industry while minimizing the risk of nutrient- and chemical-rich irrigation runoff water releasing into natural waterways, 2) de-couple crop health risk with recycling irrigation to promote water resource conservation and protection through understanding aquatic ecology and water treatment innovation, and 3) investigate alternative water sources such as treated municipal waste water. Several active research programs around the US are currently investigating ways to improve water management and quality for nursery production to achieve these objectives. This multi-state effort will allow for better coordination of research and extension efforts, to more efficiently address these multidisciplinary issues. Projects can be replicated at different participant sites when necessary and, conversely avoid unnecessary duplication of effort. Data can be shared among participants to help test and refine models. Interaction among a national group of researchers and stakeholder groups will also provide a forum to discuss and determine future research needs and priorities.

Impact Statement:

Improving water management and quality for ornamental plant production and health in the United States will have several important impacts: 1) a reduction in total water use through more efficient practices; 2) improved technology for irrigation scheduling; 3) improved crop production through increased water and nutrient use efficiency, 4) reduced runoff and potential off-site pollution from fertilizers and other agricultural chemicals and 5) enhanced crop health and consumer confidence stemming from more sustainable practices.

Category: Agricultural BMPs

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