Literature Study Provides Independent Analysis on Recycled Water & Citrus Crops

Riverside County, CA (May 30, 2013)—As part of a collaborative effort between multiple public agencies and private agricultural interests, the Riverside County Water Task Force recently commissioned an independent analysis to evaluate the impact of Boron levels in recycled water on citrus crops throughout western Riverside County.

Dr. Steven Grattan, a noted crop-salinity consultant and professor at University of California, Davis, was recommended by the Water Task Force to conduct the study, ultimately entitled, “Evaluation of the Impact of Boron on Citrus Orchards in Riverside County.” The study was jointly funded by Eastern Municipal Water District and Western Municipal Water District. The study provided a comprehensive look at the potential impact of Boron levels in recycled water and the role it plays in the short- and long-term successful yields of citrus crops within the region.

Additionally, Dr. Grattan researched – through previously-published academic papers and first-person interviews – the impact of Boron and recycled water irrigation on citrus crops in other parts of the United States and other regions of the world, including Israel and Jordan.

While the study and corresponding paper talks at length about the potentially negative impact of Boron on citrus crops, particularly for certain soil types, it’s important to understand that irrigation water provided to citrus orchards is one piece in an overall management plan to yield successful crops.

To ensure a successful yield, agricultural organizations must utilize best management practices and weigh many factors to formulate their operational plans. These plans typically have many variables, including water quality and irrigation sources, soil type, crop type, soil leaching capability, soil amendments and cost-to-benefit ratios. All of these factors must be weighed to create a decision that each individual grower believes will offer the best all-around benefit.

Local water agencies are aware that recycled water typically has increased levels of Boron, as compared to treated, potable water. These levels have no adverse impact on public health and all
recycled water is treated to ensure it meets strict state and federal standards before it enters delivery systems.

Agriculture, and in particular citrus, is important to our region’s unique history and continues to contribute to its economy. Additionally, local water agencies have worked to maintain and enhance longstanding relationships with area citrus farmers and have long worked together to sustain mutually beneficial partnerships.

“As responsible public agencies, it’s essential that we understand how the products and services we provide will impact our customers and their business operations,” Water Task Force Chair Paul D. Jones II said. “This study certainly helped all of us obtain a deeper understanding of how Boron levels in recycled water may affect citrus crops in our region.

“As water agencies, we rely on a diverse water supply portfolio, which includes both recycled and potable water to meet the varying needs of our many customers. Regardless of the water supply, it’s important to recognize that appropriate application and best management practices be followed to ensure healthy crops and the long-term success of our region’s farming industry.”

Recycled water plays a vital role in the overall water supply portfolio for many agencies, including Eastern and Western. The use of recycled water by agricultural organizations is vital to efficiently using the region’s limited potable water supplies.

Because of the sensitivity of citrus crops to Boron in certain soil conditions, some area growers may prefer potable water over recycled water. Dr. Grattan’s study stresses that, regardless of water supply source, best management practices must be adhered to in order to ensure successful long-term management of citrus crops.

The Water Task Force, and its member agencies, adopted Dr. Grattan’s study at yesterday’s meeting and discussed looking at conducting further studies that would look at the application of recycled water on soil types.

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