

CNGA 2025 Fall Workshop: Water Wise, Soil Smart: A Deep Dive into Soil and Water and Their Interactions in Production

Wednesday, October 22, 2025
8:00 am – 2:45 pm

LIVESTREAM + Front Range Community College
3645 W. 112th Ave., Westminster
Room C0770

WE THANK OUR SPONSORS:

CNGA Gold Sponsor



Schedule

8:00 – 8:30 Continental Breakfast and Beverages

8:30 – 9:30 Opening Panel / Roundtable Session: What's the Scoop With Soils, Mixes & Components?

Dominic Vercelote, Harrell's
John Frey, Premier Tech Growers and Consumers
Bart Eller, Paonia Soil Co.
Eric Hammond, CSU
John Bergman, Berger

Session Summary: In this panel discussion, we'll begin with a broad look at Colorado soils, what they're made of and what trends are emerging in the field. From there, panelists will offer quick-hit insights on growing media, including the shift toward functional mixes, key physical properties, and the differences between containerized and field-grown applications. The group will also touch on soil amendments add-ins like biostimulants and mycorrhizae, and the latest in soil and media technology. We'll wrap with Q&A to bring it back to real-world application.

9:30 – 10:15 State of Colorado Drought and Forecasting and Effect on Water Resources

Peter Goble, Colorado State University

Session Summary: We will take a look back at Colorado's weather, climate, and water situation during Water Year 2025, along with an overview of drought monitoring and important data sources and where you can access them. We'll also take a look ahead at the outlooks for the upcoming winter, and discuss some of how climate change is impacting water resources in Colorado.

10:15 - 10:30 **BREAK**

10:30 – 11:15 **Getting the Most from Growing Substrates**

John Bergman, Berger

Session Summary: Getting the most from your Growing Substrates - Show you how to fill more pots with the same amount of substrate. Learn how to get stronger root development and decrease crop time. Help you increase the porosity, oxygen and gas exchange in your substrate.

11:15 – 12:00 **New Irrigation Technologies**

Ken Cox, Perennial Favorites

Session Summary: Review of Perennial Favorites custom, state-of-the-art water reclamation system we've designed and built. We will walk through every key component—filtration setups, injector configurations, pump systems and use of french drains across the property, to show how we've dramatically improved sustainability and reduced water waste. We'll also discuss challenges overcome, lessons learned and how this type of system can be adapted to other operations of varying scale.

12:00 - 12:30 **Lunch (provided)**

12:30 - 1:15 **Research on Biostimulants for Drought Tolerance in Plants**

Bill Bauerle, CSU Dept. of Horticulture

Session Summary: This session explores how osmotic adjustment supports plant drought tolerance by sustaining cellular hydration and physiological function under water stress. Attendees will gain insights into emerging research on biostimulants—substances that may enhance water use efficiency by promoting osmotic adjustment through improved root water uptake and stomatal performance. The session highlights current gaps and new findings relevant to Colorado's horticultural systems, where optimizing drought resilience is increasingly critical.

1:15 - 2:00 **Practical Growing Skills**

Dominic Vercelote, Harrell's




Session Summary: This session highlights practical growing skills and techniques that can be easily implemented into production settings. Attendees will learn helpful tips and tools to avoid common pitfalls in production, as well as troubleshooting methods for when problems arise.

2:00 - 2:45 **O₂ in Water**

Kurt Becker, Dramm

Session Summary: Dissolved oxygen (DO) content in irrigation water has gained attention in recent years. Previously, DO was an unknown influence on plant growth. Depending on the source and temperature, dissolved oxygen in water can vary greatly. Saturation of oxygen is temperature and pressure dependent. At 70°F, the saturation point of oxygen in water is approximately 11ppm. Typically, plants require more than 5 ppm for normal growth. Supplementing DO is possible through several means. However, sanitation is extremely important. Kurt Becker will discuss the basics and describe the processes to enhance DO in irrigation water.

Speaker Profiles

	<p>Bill Bauerle – <i>Professor, Horticulture and Landscape Architecture, Colorado State University</i></p>
	<p>Kurt Becker – <i>EVP Commercial Products, Dramm</i></p>
	<p>John Bergman – <i>Grower Advisor, Berger</i></p>

Dr. William L. Bauerle is a Professor of Horticulture and Landscape Architecture at Colorado State University. His research focuses on plant-environment interactions, with an emphasis on water and nutrient use efficiency under climate variability. Dr. Bauerle is internationally recognized for pioneering controlled-environment hop and cannabis production systems that optimize CO₂, light, and nutrient inputs. His work bridges basic plant science and applied innovation, informing both research and commercial production practices.

Kurt Becker manages the professional segment of the Dramm Corporation. With over 30 years of experience in irrigation, water systems and pesticide application, Kurt leads the team that works with growers to improve their watering, water management and application efficacy.

John Bergman has worked as a grower manager for some of the largest innovative horticultural breeding and production company's for over 30 years. As the Berger West Coast Grower Advisor he is looking to use his growing experience to partner with our customer to help them grow high quality crops profitably.



Ken Cox – Owner & Sales Representative, Perennial Favorites

Ken Cox is the Co-Owner and a Sales Representative at Perennial Favorites, a family-run wholesale nursery in Layton, Utah. Ken brings 20+ years of horticultural experience and a degree in Sales and Marketing to his role co-leading Perennial Favorites with his brother Cort as they take the reins from their parents. Deeply passionate about plants, especially native species and the industry as a whole, Ken combines his love of horticulture with a forward-thinking approach rooted in efficiency, technology, and people. He's committed to building a resilient, modern nursery business that invests in its employees and adapts intelligently for the future.



Bart Eller – Founder and Executive Director, Paonia Soil Co.

As the founder and Executive Director of Paonia Soil Co. Bart Eller has helped hundreds of commercial growers and backyard gardeners tackle challenging soil issues, transforming dirt into fertile ground. Rooted in soil science, his unorthodox methods have empowered growers to become the top organic producers in their region. A well-seasoned speaker, Bart is known for combining many natural and organic farming disciplines - including permaculture, no-till, keyline, and many other regenerative practices - into a simple methodology that both novice gardeners and commercial growers can understand and apply for a healthier crop this farming season.



Eric Hammond – Extension Director, Boulder County

Eric works for Colorado State University Extension as the Horticulture Specialist and County Director in Boulder County. He assists clients with issues related to landscape horticulture. Eric attended Colorado State University where he received an undergraduate degree in Natural Resource Management and later a Master of Science in Horticulture. His studies focused on drought tolerant plants and evaluating woody plant material.



John Frey – Sales Representative - Horticulture, Premier Tech Growers and Consumers

John Frey is a Midwesterner and holds a civil engineering degree from the University of Iowa. The first 13 years of his career were spent in the forest products industry with Weyerhaeuser. That stint included engineering responsibilities, national account development, and regional sales / distribution management. John moved to Denver in 2004 to help manage a start-up building materials company, then in 2008 began his horticulture career. For the past 17 years this has involved working with ornamental / nursery growers, food production facilities (CEA), and independent garden centers. His goal of "solving problems with technology" found a home in our industry.



Peter Goble – Assistant State Climatologist: Colorado Climate Center

Peter Goble works at the Colorado Climate Center as the Assistant State Climatologist of Colorado. He received his B.S. in meteorology from the University of Northern Colorado and his M.S. in atmospheric science from Colorado State University. He specializes in climate variability and drought. Recent research projects include investigating the sources of error in western Colorado water supply forecasts, determining areas of Colorado most suitable for expansion of the wine grape industry, understanding the impact of climate change on extreme precipitation patterns in Colorado, and increasing both observational and modeled soil moisture monitoring efforts in Colorado. Peter is the Colorado Community Collaborative Rain, Hail, and Snow Network Coordinator, a community science organization focused on improving precipitation observations around the world.



Dominic Vercelote – Sales Representative - Harrell's

Dominic has been a passionate member of the green industry since graduating with his degree in Horticulture from the University of Georgia in 2011. After graduation, he spent a year working for the Dutch greenhouse operation Florensis in their R&D department. Upon returning to the States, Dominic moved to colorful Colorado to work as a plug and liner grower for Tagawa Greenhouses. After seven years in production, he moved on to Welby as their Operations Manager before finally landing at Harrell's. He is dedicated to bringing excellent service and support and to helping growers with practical solutions to the challenges faced by the industry.