

ABCs of Horticulture (English Session)

Center for Applied Horticultural Research
 2280 Tamara Lane, San Marcos CA 92084
July 25, 2012 7:30am - 2:00pm

Moderator: James A. Bethke, UCCE San Diego and Riverside Counties

Workshop Topics and Goals

This program will focus on basic principles of plant growth and development, so that growers will understand how environmental and cultural practices affect plant growth and quality. There are five parts to this workshop:

- 1) Basic physiological processes of plant growth and development
- 2) Plant Hormones
- 3) Plant essential nutrients and how they are taken up and assimilated
- 4) Fertilizer, media, soil and irrigation practices to optimize nutrient uptake
- 5) Environmental and cultural practices impact on plant production

A simple overview of key physiological processes and the plant hormones will be explained. This is essential for growers to understand how fertilization, irrigation, environment and cultural practices affect plant growth and development. In the third and fourth parts of the program, we will describe the plant essential nutrients, how much is needed in the plant, and how to calculate fertilizer rates. We will then teach growers how to troubleshoot production problems related to nutrient deficiencies, toxicities and how to correct these problems. In the final part of the workshop, we will review environmental effects on plant production:

- Temperature – daily fluxes, seasonal fluxes, media vs. air temperature
- Light – quality, quantity, duration and location.
- Environmental stresses – heat, cold, light, drought, poor water quality –salt.

By the end of the program, participants will be able to:

- ✓ Identify symptoms of key nutrient disorders.
- ✓ Calculate nutrient content from various fertilizers;
- ✓ Identify cultural practices and environmental conditions which may impact optimum fertilize use.
- ✓ Customize fertilizer application programs to individual needs to optimize nutrient uptake and reduce nutrient runoff from nursery production facilities and landscapes.
- ✓ Have a better understanding of how various production practices influence plant growth.
- ✓ Develop BMPs customized to specific crop needs.

Workshop Agenda

7:30am	Registration and Morning Refreshments
8:00am	Overview of Horticulture- Dr. Donald Merhaut, UCCE Specialist for Ornamental and Floriculture Crops, University of California Riverside
8:45am	Plant Anatomy and Development
9:45am	Physiological Processes
11:00am	Nutrient Management, Fertilizer and Irrigation Practices
12:00pm	Lunch Break
12:45pm	Environmental and Cultural Effects on Plant Development
2:00pm	Adjourn

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ABCs of Horticulture . \$65.00 X ____ (number of people) = \$ ____

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