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ABCs of Horticulture (English Session)
Center for Applied Horticultural Research
2280 Tamara Lane, San Marcos CA 92084
March 19, 2014 8:00 am – 3:00 pm

Moderator: **James Bethke**, UC Cooperative Extension Farm Advisor, San Diego and Riverside Counties

Presenter: **Dr. Donald Merhaut**, UCCE Specialist for Nursery and Floriculture Crops, University of California Riverside

This workshop is ideal for entry-level growers and growers who have little or no formal training in horticulture. It will focus on basic principles of plant growth and development and on how environmental and cultural practices affect plant growth and quality. Learn why growers do the things they do and how plants “work.” There will be three sections to the workshop.

Plant Structures and Functions (roots and stems). These structures serve the vital functions of anchorage and support as well as vegetative regeneration of new plants and storage of food. Roots are responsible for the absorption of water and uptake of nutrients which is a complex process balancing the requirements of the plant and the chemical properties of the nutrients. Troubleshooting production problems related to nutrient deficiencies or toxicities is an important skill for growers to cultivate. Stems provide the pathway between roots and leaves for the transport of water and nutrients upward in the xylem tissue and the transport of food manufactured in the leaves downward in the phloem tissue.

Plant Structures and Functions (leaves and flowers). Leaves serve the essential function of photosynthesis combining water and carbon dioxide to produce sugar and oxygen with a little help from sunlight. The reverse process of respiration provides energy for the life of the plant. The balance between the two processes determines how well a plant grows and develops. Leaves are also the site of transpiration which is the driving force for upward transport of water and nutrients resulting in water lost through stomates. The rate of this process controls how often plants need irrigation. Flowers are of course the reason for growing ornamental plants and the success of the crop depends on all the processes covered in this workshop.

Cultural and Environmental Effects on Plant Growth. This part of the workshop will present how temperature, light and environmental stresses affect growth and how they can be used to improve plant development. A review of the major growth regulators or hormones will reveal how these substances control growth and flowering naturally in plants and how their commercial forms can be used to control growth and flowering to produce beautiful and uniform crops.

Workshop Agenda

- 8:00am Registration and Morning Refreshments**
- 8:30am Plant Structures and Functions (roots and stems)**
- 10:00am Break**
- 10:15am Plant Structures and Functions (leaves and flowers)**
- 12:30pm Lunch Break**
- 1:00pm Cultural and Environmental Effects on Plant Growth**
- 3:00pm Adjourn**



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ABCs of Horticulture (English Session).....\$45.00 X ____ (number of people) = \$_____

Name(s)	Company
Daytime Phone Fax	Address
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Payment by Check: Mail this form and your registration fees, made payable to **UC Regents**, to

UCNFA, C/O Linda Dodge
 Plant Sciences Dept. Mailstop 6
 University of California
 One Shields Ave.
 Davis CA 95616

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Registration Fees: Prices listed are per person. A confirmation will be emailed or faxed to registrants whose registration is received up to 5 days prior to the seminar.

Late Registration: Late and at-door registration will be accepted only if space is available and meals cannot be guaranteed. **Refund Policy:** Refund requests must be received in writing (fax & email is acceptable). **For more information please contact the UCNFA office at 530-752-8419 (phone/fax) (email: lldodge@ucdavis.edu)**

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