

ASHS Annual Conference

July 31 – August 3, 2012



**InterContinental Miami Hotel
Miami, Florida**

American Society for Horticultural Science

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July 2012

Welcome to Miami and the ASHS Annual Conference!

Welcome to the 109th Annual Conference of the American Society for Horticultural Science (ASHS), which is being held July 31–August 3, 2012, at the InterContinental Miami Hotel in Miami, Florida

The InterContinental Miami is an all-in-one luxury hotel located in a horticultural paradise. Horticulture is diverse and plentiful in south Florida and in Miami-Dade County. There is so much to see and experience here. There are over 30,000 acres of vegetables, 12,000 acres of tropical fruit groves and about 2,000 acres of ornamental nurseries in Miami-Dade County. The subtropical marine climate allows for year-around production of a tremendous variety of crops. The center of horticulture production in the county is within a one-hour drive of the conference hotel. Professional tours will provide opportunities for you to see some of this crop diversity. There are also lots of family activities in Miami-Dade County and south Florida that I hope you will have a chance to enjoy.

Attending the ASHS Annual Conference provides an outstanding opportunity to share science and education, network with colleagues, and to think about the future of horticultural science. ASHS is composed of public and private sector professionals who are engaged in teaching, research, extension, and industry, which makes horticultural science so rich. By attending this conference, we reinforce the importance of the science of horticulture to the future. The ASHS Annual Conference is also a great venue for undergraduate and graduate students to network, compete and exchange ideas.

This Annual Conference should be a great one, with one of the highest number of abstracts submitted for papers and posters in the past decade! There are four colloquia, 34 workshops, 46 oral sessions and 51 poster sessions scheduled this year.

I do want to take this opportunity to thank Mike, Tracy, a superb ASHS Headquarters staff, and a multitude of ASHS volunteers who have worked very hard to make this conference one of the best ever.

We are delighted to have you in Miami! I look forward to seeing you at the Conference.

Dewayne L. Ingram
ASHS President

ASHS Annual Conference

July 31–August 3, 2012 • Miami, Florida

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General Information

Conference Facilities: All conference activities will take place at the InterContinental Miami Hotel unless otherwise stated. Please check the detailed program and schedule for exact room locations.

Registration: The conference registration desk will be located at the Satellite Registration Mezzanine.
Operation hours are:

Monday, July 30	4:00–5:30 PM
Tuesday, July 31	7:00 AM–6:00 PM
Wednesday, August 1	7:30 AM–5:00 PM
Thursday, August 2	7:30 AM–5:00 PM
Friday, August 3	7:30 AM–3:00 PM

Posters: Posters are located in the Grand Ballroom.

Set-up:

Monday, July 30	3:00–5:00 PM
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Viewing hours:

Tuesday, July 31	8:30 AM–2:30 PM
Wednesday, August 1	8:30 AM–2:30 PM
Thursday, August 2	8:30 AM–2:30 PM

Exhibits: Exhibitors are located in the Grand Ballroom.

Exhibitor move-in:

Monday, July 30	12:00–5:00 PM
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Exhibitor move-out:

Thursday, August 2	2:30–7:00 PM
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Open to attendees:

Tuesday, July 31	8:30 AM–2:30 PM
Wednesday, August 1	8:30 AM–2:30 PM
Thursday, August 2	8:30 AM–2:30 PM

Please Note:

All information in regard to scheduling for the ASHS–2012 Annual Conference is up-to-date as of the time this program goes to print.

During the Conference, check the online program or at the registration desk for any updates.

About Miami:

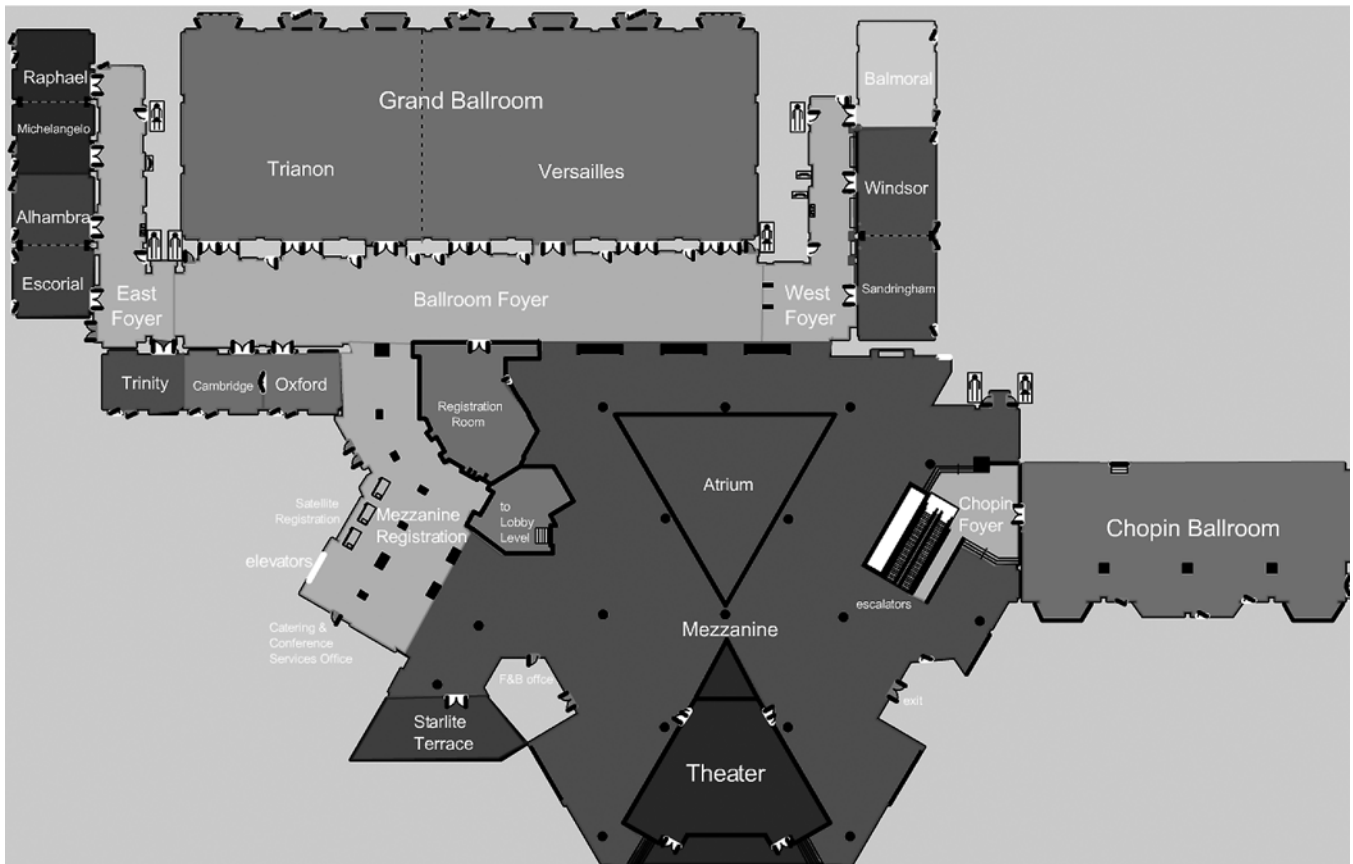
Established: July 28, 1896.

Average daily temperature: 76°F / 23°C.

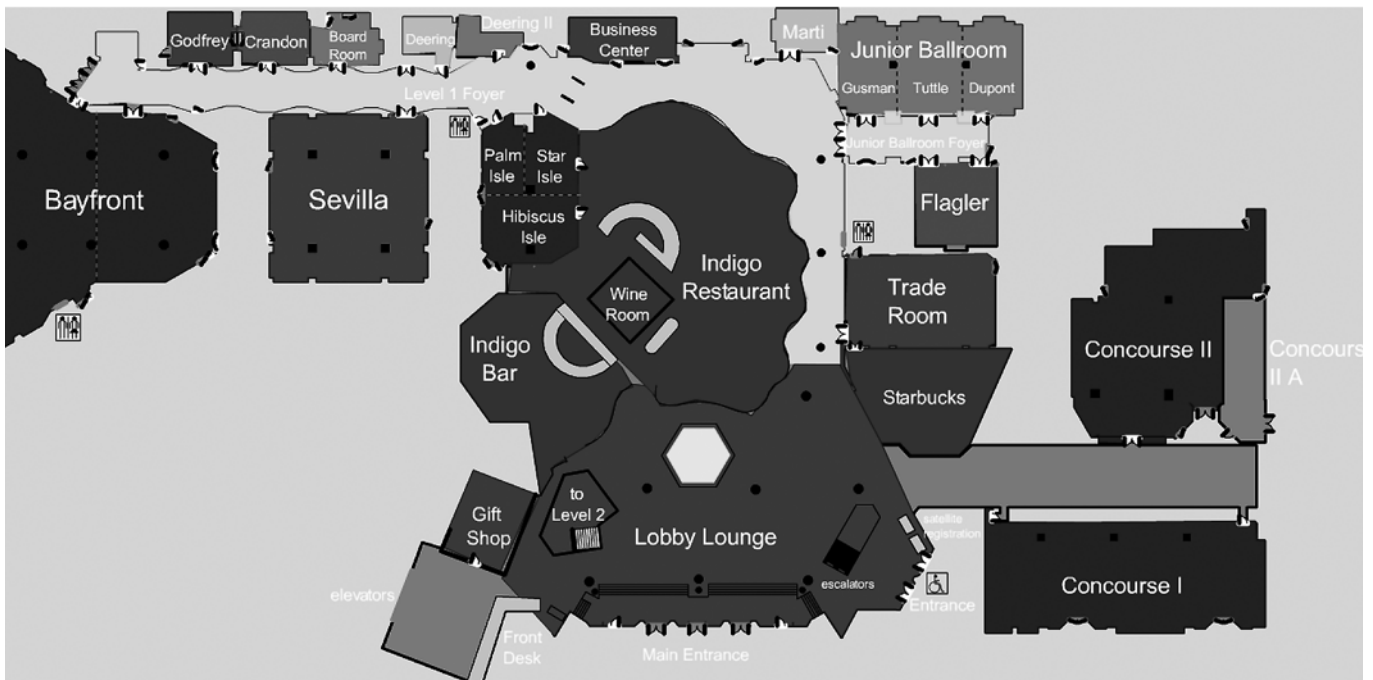
Year-round sunshine

Hotel Maps/Floor Plans

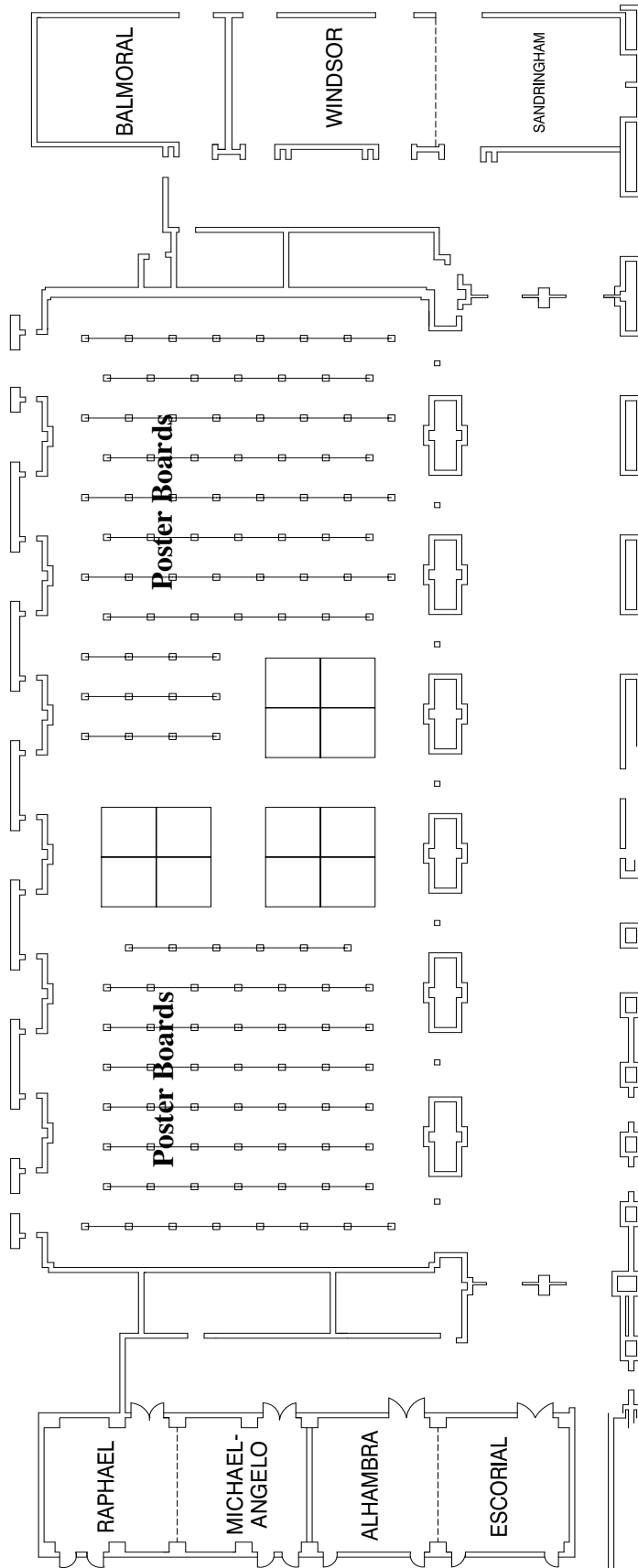
Level 2



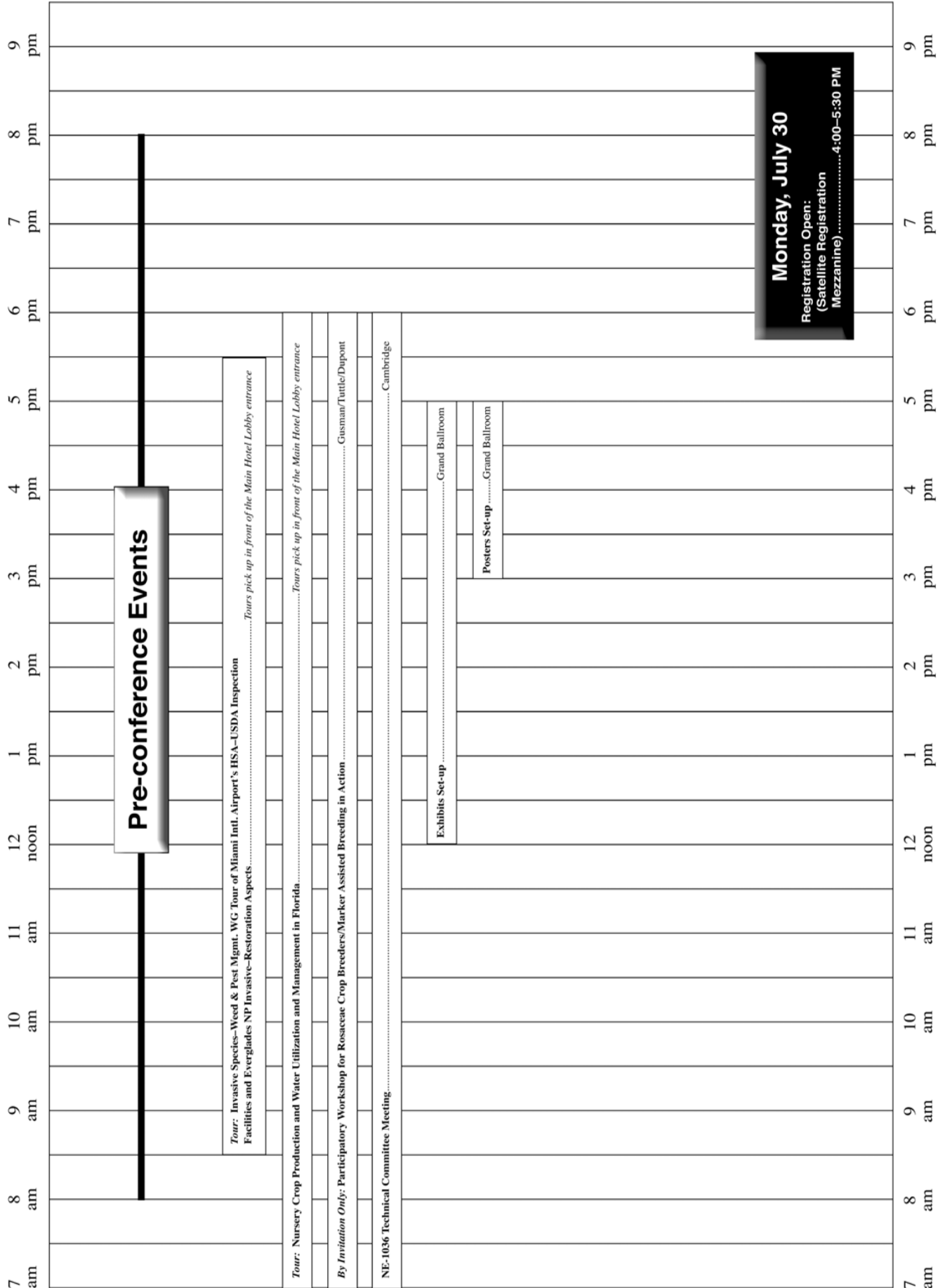
Lobby Level



Close-Up of Grand Ballroom



CONFERENCE AT-A-GLANCE (subject to change)



CONFERENCE AT-A-GLANCE (subject to change)

	7 am	8 am	9 am	10 am	11 am	12 noon	1 pm	2 pm	3 pm	4 pm	5 pm	6 pm	7 pm	8 pm	9 pm
	American Pomological Society (APS) Executive & Advisory Board Mtg. (until 10:00 pm) Escorial														
	Student Reception Blue Water Cafe (5th floor)														
	ASHS Finance Committee Mtg. Escorial														
	Vegetable Crops Management (VCM) WG Bus. Mtg. Raphael														
	Nursery Crops (NUR) WG Bus. Mtg. Alhambra														
	Colloquium: Breeding in a Genomics Era. State of the Art & New Opportunities Theater														
	Southern Coordinating Committee 85: Quantifying the Linkages Between Soil Health and Organic Farming & Food Cambridge														
	Plant Nutrient Mgt. (PNM) WG Bus. Mtg. Raphael														
	Oral Session: Postharvest 1 Tuttle														
	Workshop: Grant Writing and Beyond: How to Write a Grant and What to Do Once You Get It Sevilla														
	Workshop: Issues in Local Food Systems Flagler														
	Oral Session: Plant Nutrient Mgt. 2 Trade Room														
	USDA-SCRI Eastern Broccoli Project WG Mtg. Alhambra														
	Oral Session: Pomology 2 Balmoral														
	Wednesday, August 1 Hours: Registration (Satellite Registration Mezzanine) ..7:30 am-5:00 pm Exhibits Open8:30 am-2:30 pm														
	Art Deco District Tour Tours pick up in front of the main hotel lobby entrance														
	Consulting Editors Mtg. Alhambra														
	HortScience Editorial Board Mtg. Escorial														
	Endowment Fund Committee Mtg. Escorial														
	Certified Professional Horticulturist (CPH) Bd. Mtg. Cambridge														
	Water Utilization & Management (WUM) WG Bus. Mtg. Raphael														
	Pomology (POM) WG Bus. Mtg. Raphael														
	Growth Regulators in Fruit & Nut Production (PGR) WG Bus. Mtg. Raphael														
	History of Hort. Science (HIST) WG Bus. Mtg. Michaelangelo														
	Grad. Student Poster Comp. 3 Grand Ballroom														
	Grad. Student Poster Comp. 4 Grand Ballroom														
	Poster Sessions: Bioenergy, Floriculture, Genetics & Germplasm 2, Organic Horticulture 2, Ornamental Landscapes & Turf 2, Postharvest 3, Vegetable Crops Mgt. 2														
	Posters are located in the Grand Ballroom														
	Workshop: Learning Outcomes—What Every Student Should Know Tuttle														
	Workshop: Tropical Fruits and Vegetables: Impact on the U.S. Economy, Quality, Health, & Food Safety Flagler														
	Oral Session: Horticulture Sevilla														
	Oral Session: Temperate Tree Nut Production/Growth Regulators in Fruit & Nut Production Trade Room														
	Oral Session: Vegetable Crops Mgt. 2 Balmoral														
	Horticultural Commodity Judging Contest and Plant Identification Written Examination Bayfront B														
	Graduate Activities Committee Mtg. Cambridge														
	Membership Committee Mtg. Cambridge														
	Temperate Tree Nut Crops (NUTS) WG Bus. Mtg. Raphael														
	Viticulture & Small Fruits (VSF) WG Bus. Mtg. Raphael														
	Produce Quality, Safety, & Health Properties (QUAL) WG Bus. Mtg. Raphael														
	Local Food Systems (LOCSY) WG Bus. Mtg. Michaelangelo														
	Plasticulture (PLAST) WG Bus. Mtg. Michaelangelo														
	Tropical Hort. Crops (TROP) WG Bus. Mtg. Michaelangelo														
	Teaching Methods (TCHG) WG Bus. Mtg. Michaelangelo														
	Regulating Water Quality: Current Legislation, Future Impacts Theater														
	Industry Division Breakfast Escorial														
	Break Grand Ballroom														
	Gov't, Employees, Proposed New (MECH) WG Bus. Mtg. Alhambra														
	Production & Harvest Mech. (MECH) WG Bus. Mtg. Alhambra														
	Workshop: A Survey on the Contribution of Indigenous Peoples of North America to Horticulture Balmoral														
	Workshop: Updates and Revisions in Intellectual Property: Patents and Other IPR Policy Changes in the United States Flagler														
	Oral Session: Vegetable Crops Mgt. 1 Sevilla														
	Oral Session: Fruit Breeding. 1 Trade Room														
	Oral Session: Produce Quality, Safety, & Health Properties Tuttle														

CONFERENCE AT-A-GLANCE (subject to change)

Table with time slots (7 am to 9 pm) and event descriptions. Includes sessions like 'Workshop: Intellectual Property Rights (IPR)', 'Oral Session: Vegetables in Horticulture', and 'Workshop: Organic Agriculture in the Tropics'. A large black box on the right contains the text 'Thursday, August 2' and event hours.

CONFERENCE AT-A-GLANCE (subject to change)

7 am	8 am	9 am	10 am	11 am	12 noon	1 pm	2 pm	3 pm	4 pm	5 pm	6 pm	7 pm	8 pm	9 pm		
Tour of the Port-of-Miami U.S. Customs and Border Protection – Agriculture Facility <i>Tours pick up in front of the main hotel lobby entrance</i>		Tour: The Subtropical Horticulture of South Florida <i>Tours pick up in front of the main hotel lobby entrance</i>		Florida Everglades Airboat Adventure <i>Tours pick up in front of the main hotel lobby entrance</i>		Certified Horticulturist (CH) Board Mtg. Cambridge		Certiified Horticulturist (CH) Board Mtg. Cambridge		USDA-ARS All Employee Mtg. Chopin		Joint Apple, Prunus, & Pyrus Crop Germplasm Committee (CGC) Mtg. Escorial		<div style="background-color: #f0f0f0; padding: 5px;"> Post-conference Events Saturday, August 4 9:00 am–6:30 pm Miami Area Public Gardens Tour 4:00–5:00 pm Hort.Landmark dedication at Montgomery Botanical Center </div>		
Presidential Address and ASHS Annual Business Meeting Chopin			Symposium: The Use, Application and Analysis of Experimental and Field Sensor Data for Horticultural Applications <i>Advance registration required— Limited to 30 Participants</i> Trade Room		Symposium: A Decade of Progress in Organic Agriculture Science, Teaching, and Extension Sevilla		Workshop: Foliar Nutrition to Enhance Horticultural Crop Production & Quality Balmoral		Workshop: Good Genes from Asia – Contributions and Opportunities of Asiatic Origin Crops to U.S. Horticulture Gusman		Workshop: Vegetable Grafting for Open Field Conditions: Opportunities and Challenges Flagler		Workshop: Globalized World – Opportunities and Challenges from Asia for International Horticultural Enterprises Gusman			
Workshop: Modified Atmosphere Packaging: Physiological & Modeling Limits Based on Critical Input Variables Flagler			Workshop: How Can We Best Support Public Sector Development of New Cultivars?— Given Scarce Resources and the Need to Support Rural Prosperity and Sustainable, Secure Food Systems Dupont		Workshop: HLB/ACP: Approaches to Management of Disease, Pathogen, & Vector Gusman		Workshop: Consumer Horticulture & Master Gardeners Sandringham		Oral Session: Ornamentals/Landscape & Turf 2 Windsor		Oral Session: Vegetables Crops Mgt. 4 Windsor		Oral Session: Plant Biotechnology Flagler			
Annual Conference Technical Program Committee Mtg. Cambridge			Oral Session: International Horticulture & Issues Sandringham		Oral Session: Viticulture & Small Fruits 3 Windsor		Oral Session: Growth Chambers & Controlled Environments Dupont		Oral Session: Postharvest 3 Balmoral		Oral Session: Fruit Breeding 2 Sandringham		Oral Session: Floriculture 3 Theater			
Oral Session: Genetics & Germplasm 2 Tuttle			Oral Session: Propagation Tuttle		Oral Session: Marketing & Economics Balmoral		Oral Session: Citrus Crops Tuttle		Oral Session: Plant Breeding 2 Sandringham		Oral Session: Floriculture 3 Theater		Oral Session: Teaching Methods 2 Windsor			
<div style="background-color: black; color: white; padding: 10px; text-align: center;"> <h2 style="margin: 0;">Friday, August 3</h2> <p style="margin: 0;">Hours: Registration (Satellite Registration Mezzanine): 7:30 am–3:00 pm</p> </div>																

Meetings and Activities of ASHS Committees, Working Groups, and Other Official Bodies

Includes Tours and Special Events (subject to change)

GENERAL MEETINGS AND EVENTS

ASHS Opening Plenary Session and William A. (“Tex”) Frazier Lecture	Tuesday, July 31	10:00 AM–12:00 PM	Chopin
ASHS Welcome Reception	Tuesday, July 31	6:00–7:00 PM	Bayfront Room
ASHS Presidential Address and Annual Business Meeting	Friday, August 3	8:00–9:30 AM	Chopin
Hortlandmark Award Presentation to Montgomery Botanical Center	Saturday, August 4	4:00–5:00 PM	Montgomery Botanical Center

ASHS COMMITTEE MEETINGS

ASHS Board of Directors Meeting	Thursday, August 2	9:30 AM–5:00 PM	Escorial
Annual Conference Technical Program Committee Meeting	Friday, August 3	9:30–10:30 AM	Cambridge
Awards Committee Meeting	Tuesday, July 31	1:00–2:00 PM	Escorial
Certified Horticulturist (CH) Board Meeting	Friday, August 3	10:30 AM–12:30 PM	Cambridge
Certified Professional Horticulturist (CPH) Board Meeting	Wednesday, August 1	2:00–3:00 PM	Cambridge
Collegiate Activities Committee (CAC) Meeting	Wednesday, August 1	4:00–5:00 PM	Cambridge
Consulting Editors Meeting	Wednesday, August 1	2:00–3:00 PM	Alhambra
Education Division Advisory Council Meeting	Thursday, August 2	3:30–5:00 PM	Cambridge
Endowment Fund Committee Meeting	Wednesday, August 1	1:00–2:00 PM	Escorial
Fellows Screening Committee Meeting	Wednesday, August 1	8:00–9:00 AM	Cambridge
Finance Committee Meeting	Wednesday, August 1	4:00–6:00 PM	Escorial
Graduate Student Activities Committee	Wednesday, August 1	11:00 AM–12:00 PM	Cambridge
Horticultural Hall of Fame Selection Committee Meeting	Wednesday, August 1	9:00–10:00 AM	Cambridge
Horticultural Landmark Selection Committee Meeting	Tuesday, July 31	5:00–6:00 PM	Escorial
<i>HortScience</i> Editorial Board Meeting	Wednesday, August 1	3:00–4:00 PM	Escorial
<i>HortTechnology</i> Editorial Board Meeting	Tuesday, July 31	3:00–4:00 PM	Escorial

Industry Division Advisory Council Meeting	Tuesday, July 31	4:00–5:00 PM	Escorial
International Division Advisory Council Meeting	Thursday, August 2	2:00–3:30 PM	Cambridge
<i>Journal of ASHS</i> Editorial Board Meeting	Tuesday, July 31	2:00–3:00 PM	Escorial
Membership Committee Meeting	Wednesday, August 1	10:00–11:00 AM	Cambridge
Moderators Training Session	Tuesday, July 31	9:00–10:00 AM	Sandringham
Nominations and Elections Committee Meeting	Friday, August 3	1:00–2:00 PM	Cambridge
Research Division Advisory Council Meeting	Thursday, August 2	8:00–9:00 AM	Escorial
Scholarship Awards Committee Meeting	Tuesday, July 31	5:00–6:00 PM	Cambridge
William A. (“Tex”) Frazier Lecture Series Selection Committee Meeting	Thursday, August 2	5:00–6:00 PM	Escorial

ASHS Working Group Meetings and Activities

Moderators Training Session	Tuesday, July 31	9:00–10:00 AM	Sandringham
Working Group Chairs and Chairs-elect Meeting	Tuesday, July 31	8:00–9:00 AM	Sandringham

EDUCATION DIVISION

Administrators Working Group Breakfast	Tuesday, July 31	8:30–10:00 AM	Cambridge
Computer Applications in Horticulture (COMP) Working Group Business Meeting	Thursday, August 2	10:00–11:00 AM	Michaelangelo
Emeriti (EMER) Working Group Business Meeting	Tuesday, July 31	12:00–1:00 PM	Escorial
Graduate Student (GRAD) Working Group Business Meeting	Thursday, August 2	11:00 AM–12:00 PM	Michaelangelo
History of Horticultural Science (HIST) Working Group Business Meeting	Wednesday, August 1	12:00–1:00 PM	Michaelangelo
Teaching Methods (TCHG) Working Group Business Meeting	Wednesday, August 1	8:00–9:00 AM	Michaelangelo
Working Group Chairs and Chairs-elect Meeting	Tuesday, July 31	8:00–9:00 AM	Sandringham

EXTENSION DIVISION

Commercial Horticulture (CHEX) Working Group Business Meeting	Thursday, August 2	4:00–5:00 PM	Alhambra
Consumer Horticulture and Master Gardeners (CHMG) Working Group Business Meeting	Tuesday, July 31	3:00–4:00 PM	Raphael
eXtension (EEXT) Working Group Business Meeting	Thursday, August 2	10:00–11:00 AM	Raphael
Extension Division Advisory Council Meeting	Tuesday, July 31	2:00–4:00 PM	Cambridge
Working Group Chairs and Chairs-elect Meeting	Tuesday, July 31	8:00–9:00 AM	Sandringham

INDUSTRY DIVISION

Industry Division Breakfast	Wednesday, August 1	8:00–9:30 AM	Escorial
Industry Division Advisory Council Meeting	Tuesday, July 31	4:00–5:00 PM	Escorial
Intellectual Property Rights (IPR) Working Group Business Meeting	Thursday, August 2	2:00–3:00 PM	Raphael
Marketing and Economics (MKEC) Working Group Business Meeting	Tuesday, July 31	1:00–2:00 PM	Raphael
Working Group Chairs and Chairs-elect Meeting	Tuesday, July 31	8:00–9:00 AM	Sandringham

INTERNATIONAL DIVISION

Association of Horticulturists of Indian Origin (AHIO) Working Group Business Meeting	Thursday, August 2	3:00–4:00 PM	Raphael
International Division Advisory Council Meeting	Thursday, August 2	2:00–3:30 PM	Cambridge
International Horticultural Consultants (ICON) Working Group Business Meeting	Wednesday, August 1	8:00–9:00 AM	Raphael
International Horticulture and Issues (IHI) Working Group Business Meeting	Thursday, August 2	2:00–3:00 PM	Alhambra
Tropical Horticultural Crops (TROP) Working Group Business Meeting	Wednesday, August 1	9:00–10:00 AM	Michaelangelo
Working Group of Asian Horticulture (WGAH) Working Group Business Meeting	Thursday, August 2	3:00–4:00 PM	Alhambra
Working Group Chairs and Chairs-elect Meeting	Tuesday, July 31	8:00–9:00 AM	Sandringham

RESEARCH DIVISION commodity

Citrus Crops (CITR) Working Group Business Meeting	Tuesday, July 31	3:00–4:00 PM	Alhambra
Floriculture (FLOR) Working Group Business Meeting	Tuesday, July 31	5:00–6:00 PM	Alhambra
Fruit Breeding (FRBR) Working Group Business Meeting	Tuesday, July 31	4:00–5:00 PM	Raphael
Growth Regulators in Fruit and Nut Production (PGR) Working Group Business Meeting	Wednesday, August 1	12:00–1:00 PM	Raphael
Herbs, Spices, and Medicinal Plants (HSMP) Working Group Business Meeting	Thursday, August 2	9:00–10:00 AM	Michaelangelo
Nursery Crops (NUR) Working Group Business Meeting	Wednesday, August 1	3:00–4:00 PM	Alhambra
Ornamental Plant Breeding (OPB) Working Group Business Meeting	Thursday, August 2	3:00–4:00 PM	Michaelangelo
Ornamentals/Landscape and Turf (O/LT) Working Group Business Meeting	Tuesday, July 31	4:00–5:00 PM	Alhambra

Pomology (POM) Working Group Business Meeting	Wednesday, August 1	1:00–2:00 PM	Raphael
Research Division Advisory Council Meeting	Thursday, August 2	8:00–9:00 AM	Escorial
Temperate Tree Nut Crops (NUTS) Working Group Business Meeting	Wednesday, August 1	11:00 AM–12:00 PM	Raphael
Tropical Fruit Tasting	Thursday, August 2	4:00–4:30 PM	Sevilla
Vegetable Breeding (VGBR) Working Group Business Meeting	Thursday, August 2	1:00–2:00 PM	Raphael
Vegetable Crops Management (VCM) Working Group Business Meeting	Wednesday, August 1	4:00–5:00 PM	Raphael
Viticulture and Small Fruits (VSF) Working Group Business Meeting	Wednesday, August 1	10:00–11:00 AM	Raphael
Working Group Chairs and Chairs-elect Meeting	Tuesday, July 31	8:00–9:00 AM	Sandringham

RESEARCH DIVISION cross-commodity

BioEnergy (BioE) Working Group Business Meeting	Thursday, August 2	8:00–9:00 AM	Raphael
Crop Physiology (CRPP) [formerly Plant Biology (PB)] Working Group Business Meeting	Tuesday, July 31	2:00–3:00 PM	Alhambra
Environmental Stress Physiology (STRS) Working Group Business Meeting	Thursday, August 2	9:00–10:00 AM	Raphael
Genetics and Germplasm (GG) Working Group Business Meeting	Tuesday, July 31	5:00–6:00 PM	Raphael
Growth Chambers and Controlled Environments (CE) Working Group Business Meeting	Tuesday, July 31	1:00–2:00 PM	Michaelangelo
Human Issues in Horticulture (HIH) Working Group Business Meeting	Thursday, August 2	5:00–6:00 PM	Alhambra
Invasive Plants (INPR) Working Group Business Meeting	Thursday, August 2	4:00–5:00 PM	Raphael
Local Food Systems (LOCSY) Working Group Business Meeting	Wednesday, August 1	11:00 AM–12:00 PM	Michaelangelo
Organic Horticulture (ORGH) Working Group Business Meeting	Thursday, August 2	11:00 AM–12:00 PM	Raphael
Plant Biotechnology (BTCH) Working Group Business Meeting	Tuesday, July 31	12:00–1:00 PM	Raphael
Plant Nutrient Management (PNM) Working Group Business Meeting	Wednesday, August 1	3:00–4:00 PM	Raphael
Plasticulture (PLAST) Working Group Business Meeting	Wednesday, August 1	10:00–11:00 AM	Michaelangelo
Postharvest (PH) Working Group Business Meeting	Tuesday, July 31	2:00–3:00 PM	Raphael

Produce Quality, Safety and Health Properties (QUAL) Working Group Business Meeting	Wednesday, August 1	9:00–10:00 AM	Raphael
Production and Harvest Mechanization (MECH) Working Group Business Meeting	Wednesday, August 1	11:00 AM–12:00 PM	Alhambra
Propagation (PROP) Working Group Business Meeting	Tuesday, July 31	9:00–10:00 AM	Raphael
Public Horticulture (PUBHORT) Working Group Business Meeting	Thursday, August 2	2:00–3:00 PM	Michaelangelo
Research Division Advisory Council Meeting	Thursday, August 2	8:00–9:00 AM	Escorial
Root Growth and Rhizosphere Dynamics (RHIZ) Working Group Business Meeting	Thursday, August 2	9:00–10:00 AM	Alhambra
Seed and Stand Establishment (SSEST) Working Group Business Meeting	Tuesday, July 31	1:00–2:00 PM	Alhambra
Waste Utilization in Horticulture (WUH) Working Group Business Meeting	Thursday, August 2	1:00–2:00 PM	Michaelangelo
Water Utilization and Management (WUM) Working Group Business Meeting	Wednesday, August 1	2:00–3:00 PM	Raphael
Weed Control and Pest Management (WCPM) Working Group Business Meeting	Tuesday, July 31	12:00–1:00 PM	Alhambra
Working Group Chairs and Chairs-elect Meeting	Tuesday, July 31	8:00–9:00 AM	Sandringham

SPECIAL EVENTS

ASHS Certified Horticulturist Certification Exam.	Friday, August 3	1:00–5:00 PM	Fairchild Tropical Botanic Garden
ASHS Opening Plenary Session and William A. (“Tex”) Frazier Lecture	Tuesday, July 31	10:00 AM–12:00 PM	Chopin
ASHS Presidential Address and Annual Business Meeting	Friday, August 3	8:00–9:30 AM	Chopin
B.Y. Morrison Lecture: Horticulture for Space: A Classic Exercise in Controlled Environment Research Studies	Friday, August 3	10:00 AM–12:00 PM	Chopin
B.Y. Morrison Reception and ARS Get-Together	Friday, August 3	12:00–12:30 PM	Chopin
Government Employees - Proposed New Working Group Meeting	Wednesday, August 1	10:00–11:00 AM	Alhambra
<i>Symposium: The Use, Application and Analysis of Experimental and Field Sensor Data for Horticultural Applications (Must Register in Advance for Participation—Limited to 30 Participants)</i>	Friday, August 3	9:30 AM—5:30 PM	Trade Room
Moderators Training Session	Tuesday, July 31	9:00–10:00 AM	Sandringham
SCRI Project Directors’ Workshop	Thursday, August 2	12:45–3:45 PM	Sandringham
Tropical Fruit Tasting	Thursday, August 2	4:00–4:30 PM	Sevilla

BREAKFAST, LUNCHEONS, BREAKS, DINNERS, RECEPTIONS

Administrators Working Group Breakfast	Tuesday, July 31	8:30–10:00 AM	Cambridge
ASHS Welcome Reception	Tuesday, July 31	6:00–7:00 PM	Bayfront Room
Award Recipient Reception (<i>by invitation only</i>)	Tuesday, July 31	12:00–1:00 PM	Gusman
Break — Wednesday	Wednesday, August 1	9:45–10:15 AM	Grand Ballroom
Break — Thursday	Thursday, August 2	9:45–10:15 AM	Grand Ballroom
Extension Division Breakfast	Tuesday, July 31	8:00–10:00 AM	Trade Room
Industry Division Breakfast	Wednesday, August 1	8:00–9:30 AM	Escorial
International Issues Breakfast	Thursday, August 2	7:30–8:30 AM	Cambridge
Pi Alpha Xi Luncheon/Annual Meeting	Tuesday, July 31	12:00–2:00 PM	Trade Room
Student Reception	Wednesday, August 1	6:00–7:00 PM	Blue Water Cafe

EXHIBITS, POSTERS, REGISTRATION

Exhibits—Open to attendees:	Tuesday, July 31	8:30 AM–2:30 PM	Grand Ballroom
	Wednesday August 1	8:30 AM–2:30 PM	Grand Ballroom
	Thursday, August 2	8:30 AM–2:30 PM	Grand Ballroom
Exhibitor Set-up	Monday, July 30	12:00–5:00 PM	Grand Ballroom
Exhibitor Tear Down	Thursday, August 2	2:30–7:00 PM	Grand Ballroom
Moderators Training Session	Tuesday, July 31	9:00–10:00 AM	Sandringham
Poster Set-up	Monday, July 30	3:00–5:00 PM	Grand Ballroom
Registration Open	Monday, July 30	4:00–5:30 PM	Satellite Registration Mezzanine
	Tuesday, July 31	7:00–6:00 PM	Satellite Registration Mezzanine
	Wednesday, August 1	7:30 AM–5:00 PM	Satellite Registration Mezzanine
	Thursday, August 2	7:30 AM–5:00 PM	Satellite Registration Mezzanine
	Friday, August 3	7:30 AM–3:00 PM	Satellite Registration Mezzanine

TOURS

Tours pick up in front of the main hotel lobby entrance unless otherwise specified.

Sightseeing Tours

Art Deco District Tour	Wednesday August 1	1:00–5:00 PM
Miami City Tour	Thursday, August 2	1:00–5:00 PM
Florida Everglades Airboat Adventure	Friday, August 3, 2012	8:30 AM–12:30 PM

Professional Tours

Invasive Species Tour of Miami International Airport's HSA–USDA Inspection Facilities and Everglades NP Invasive–Restoration Aspects	Monday, July 30	8:30 AM–5:30 PM
Nursery Crop Production and Water Utilization and Management in Florida	Monday, July 30	7:00 AM–6:00 PM
The Subtropical Horticulture of South Florida	Friday August 3	8:00 AM–2:40 PM

Miami Area Public Gardens Tour	Saturday August 4	9:00 AM–6:30 PM	
Tour of the Port-of-Miami U.S. Customs & Border Protection Agriculture Facility	Friday, August 3	8:00 AM–12:30 PM	(advance registration and identification required)

STUDENT EVENTS

Workshop: ASHS Primer	Tuesday, July 31	3:00–5:00 PM	Windsor
Student Reception	Wednesday, August 1	6:00–7:00 PM	Blue Water Cafe

Graduate

Graduate Student (GRAD) Working Group Business Meeting	Thursday, August 2	11:00 AM–12:00 PM	Michaelangelo
Graduate Student Poster Competition			
Judging Session 1	Tuesday, July 31	12:30–1:00 PM	Grand Ballroom
Judging Session 2	Tuesday, July 31	1:00–1:45 PM	Grand Ballroom
Judging Session 3	Wednesday, August 1	12:30–1:00 PM	Grand Ballroom
Judging Session 4	Wednesday, August 1	1:00–1:45 PM	Grand Ballroom
Judging Session 5	Thursday, August 2	12:30–1:00 PM	Grand Ballroom
Judging Session 6	Thursday, August 2	1:00–1:45 PM	Grand Ballroom

Undergraduate


Association of Collegiate Branches (ACB) Annual Business Meeting	Tuesday, July 31	2:00–3:00 PM	Windsor
Horticultural Commodity Judging Contest and Plant Identification Contest Set-up	Wednesday, August 1	7:00–9:00 AM	Bayfront B
Horticultural Commodity Judging Contest and Plant Identification Contest	Wednesday, August 1	9:00 AM–12:00 PM	Bayfront B
Plant Identification Contest Written Exam	Wednesday, August 1	9:00 AM–12:00 PM	Bayfront B
Undergraduate Oral Competition	Tuesday, July 31	1:30–2:00 PM	Windsor
Undergraduate Poster Competition	Tuesday, July 31	12:30–1:30 PM	Grand Ballroom

MEETINGS OF AFFILIATED ORGANIZATIONS

<i>By Invitation Only: Participatory Workshop for Rosaceae</i>			
Crop Breeders/Marker Assisted Breeding in Action	Monday, July 30	8:00 AM–6:00 PM	Gusman/Tuttle/Dupont
NE-1036 Technical Committee Meeting (Day 1)	Monday, July 30	8:00 AM–6:00 PM	Cambridge
NE-1036 Technical Committee Meeting (Day 2)	Tuesday, July 31	8:00 AM–12:00 PM	Michaelangelo
American Pomological Society Executive and Advisory Board Meeting	Wednesday, August 1	6:00–10:00 PM	Escorial
American Pomological Society Annual Business Meeting	Thursday, August 2	4:30–6:00 PM	Sevilla
B.Y. Morrison Lecture: Horticulture for Space: A Classical Exercise in Controlled Environment Research	Friday, August 3	10:00 AM–12:00 PM	Chopin

B.Y. Morrison Reception and ARS Get-Together	Friday, August 3	12:00–12:30 PM	Chopin
Crucifer Crop Germplasm Committee	Tuesday, July 31	8:00–10:00 AM	Escorial
Joint Apple, Prunus, and Pyrus Crop Germplasm Committee (CGC) Meeting	Friday, August 3	12:45–2:45 PM	Escorial
Leafy Vegetable Crop Germplasm Committee Meeting (LVCGC)	Tuesday, July 31	8:00–10:00 AM	Alhambra
Open Meeting of U.S. Rosaceae Genomics, Genetics and Breeding Executive Committee	Tuesday, July 31	8:00–10:00 AM	Windsor
Pi Alpha XI Annual Meeting and Luncheon	Tuesday, July 31	12:00–2:00 PM	Trade Room
Root and Bulb Vegetable Crop Germplasm Committee (RBV-CGC)	Tuesday, July 31	10:00 AM–12:00 PM	Cambridge
Southern Coordinating Committee 83: Quantifying the Linkages Between Soil Health and Organic Farming and Food	Wednesday, August 1	2:00–4:00 PM	Michaelangelo
SCRI Project Director's Workshop	Thursday, August 2	12:45–3:45 PM	Sandringham
USDA–ARS All Employee Meeting	Friday, August 3	12:30–1:30 PM	Chopin
USDA–SCRI Eastern Broccoli Project Working Group Meeting	Wednesday, August 1	4:00–6:00 PM	Alhambra

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Graduate Student Poster Competition Schedule

SESSION 1: Tuesday, July 31, 12:15–1:00 PM

Paper Title	Name, Email	Affiliation
(098) Center for Landscape Water Conservation: An Integrated Approach to Internet-based Outreach	Stefan Sutherin, sutherin@cybermesa.com	New Mexico State Univ.
(199) Foliar Nutrient Sprays and Harvest Date Affect Total Phenolics, Antioxidant Activity, and Titratable Acidity of 'Wonderful' Pomegranate	John Chater jchater@calpoly.edu	California Polytechnic Inst. & State Univ.
(203) Prevention of Floral Initiation in Highbush Blueberry with Gibberellins	William S. Lindberg, lindbe35@msu.edu	Michigan State Univ.
(204) Effects of Plant Growth Regulator Applications on Branching, Flowering, and Fruiting of <i>Jatropha curcas</i> L.	Anne Pinheiro Costa, annecosta@ufl.edu	Univ. of Florida
(227) Evaluating Inorganic and Organic Container Media for the Growth of <i>Zamia pumila</i>	Vickie Murphy, mvicki@bellsouth.net	Montgomery Botanical Center
(228) Protocol for Verifying Salt Tolerance in Ornamentals	Charles Wajsbrot, charles.wajsbrot@gmail.com	Univ. of Florida, Fort Lauderdale REC
(161) Nutrient Density in Lettuce Cultivars Grown with Organic or Chemical Fertilization with Elevated Calcium Concentrations	Md J. Meagy, jmeagy@psis.umass.edu	Univ. of Massachusetts
(005) Starch Metabolism in Apple Cultivars	Franziska C. Doerflinger, fcd26@cornell.edu	Cornell Univ.
(370) Different Expression of Root Aquaporin Genes Between Dutch 'Dundee' and Japanese 'Reiyo' Tomato Seedlings	Takumi Sakayori, agrisys@isc.meiji.ac.jp	Meiji Univ.
(364) Development and Application of a Suite of Non-pungency Markers for the Pun1 Gene in Pepper (<i>Capsicum</i> spp.)	Lindsay E. Wyatt, lew67@cornell.edu	Cornell Univ.
(272) Understanding the Ripening Chemistry of Cold Climate Wine Grape Cultivars to Predict Optimal Harvest Times	Luke L. Haggerty, hagge053@umn.edu	Univ. of Minnesota
(277) Comparison of Vegetative Growth, Cropping Potential, and Fruit Quality of Selected American and French–American Hybrid Bunch Grape Cultivars and Advanced Selections in Alabama	Yilanna Hu, yzh0016@auburn.edu	Auburn Univ.
(115) An Economic Analysis of a Univ. Educational Vermicomposting System—Bobcat Blend	John Montoya, montoya@hawaii.edu	Univ. of Hawaii

SESSION 2: Tuesday, July 31, 1:00–1:45 PM

Paper Title	Name, Email	Affiliation
(359) Regulating Citrus Tree Growth with Salicylic Acid Citrus Research and Education Center	Marina Burani Arouca, arouca@ufl.edu	Univ. of Florida,
(356) Influence of Production Practices and Storage on Grapefruit Carotenoids, Limonoids and Fruit Quality Attributes	Kranthi K. Chebrolu, krchebrolu@neo.tamu.edu	Veg. & Fruit Improvement Center, College Station
(358) Interaction of Soil-Applied Fertilizer on Huanglongbing Development in New Growth Flushes of Sweet Orange	Utpal Handique, rcebel@ufl.edu	Southwest Florida Research & Education Center
(049) Characteristics and Volunteering Behaviors of Purdue Master Gardener Interns and Master Gardeners	Elizabeth Gall, gall0@purdue.edu	Purdue Univ.
(213) Detecting Physiological Water Stress in Southern New Mexico Pecan Orchards Using Remote Sensing	Yahia A. Othman, othman@nmsu.edu	New Mexico State Univ
(410) Lettuce Yields and Metabolites Found in 45 Cultivars Grown under Best Management Practices	William Afton, will.afton@gmail.com	Louisiana State Univ.
(408) Assessing Skinning Resistance in Sweetpotato	Reeve Legendre, rlegen1@tigers.lsu.edu	Louisiana State Univ
(068) Fish Emulsion: A Liquid Organic Fertilizer for Healthy Seedling Establishment	Karen Bateman, karenkbateman@yahoo.com	Tennessee†State Univ.
(309) Processed Pulp Recovery Rate in Three North American Pawpaw Cultivars After Periods of Drought or High Rainfall During the Growing Season	Brandon May, brandon.may@kysu.edu	Kentucky State Univ.
(333) Determining the Economic Feasibility of Implementing Irrigation on Small-Scale Farming Systems	Rockiell Woods, rwoods@alcorn.edu	Alcorn State Univ.

Graduate Student Poster Competition Schedule

SESSION 3 Wednesday, August 1, 12:15–1:00 PM

Paper Title	Name, Email	Affiliation
(143) Abscisic Acid Positively Effects Greenhouse Tomato Fruit Quality and Decreases Incidences of Blossom End Rot	T. Casey Barickman, tbarickm@utk.edu	Univ. of Tennessee
(141) Three Plant Growth Regulators Modify Growth and Flowering Responses of <i>Borrchia frutescens</i> (L.) DC. Produced in Containers	Sean Carver, scarver@neo.tamu.edu	Texas A&M Univ., College Station
(145) Methyl Jasmonate Treatment Enhances Glucosinolate Content of Cauliflower Heads without Influencing Postharvest Quality	Kang Mo Ku, ku8@illinois.edu	Univ. of Illinois, Urbana-Champaign
(376) Identification of the Relationships Between Individual Sugars, Sensory Sweetness and QTL Detection for Sweetness in Apple	Yingzhu Guan, yingzhu.guan@email.wsu.edu	Washington State Univ., TFREC
(380) Development of a Random Mating Population for Recurrent Selection in Peach	Rachel Odom, ctigress@ufl.edu	Univ. of Florida
(374) Fruit Texture Trait Phenotypes of the Rosbreed Apple Reference Germplasm Set Database	Cari Schmitz, schm1984@umn.edu	Univ. of Minnesota
(381) Description of Two Simply Inherited Traits in <i>Prunus campanulata</i>	Zachary Tucker, tucker@ufl.edu	Univ. of Florida
(375) Functional Variants Provide Strategies to Improve Breeding for “Fresh Sensation” in Apple	Sujeet Verma, sujeet.verma@email.wsu.edu	Washington State Univ.
(178) Controlled-Release Fertilizer Drying Methods Effect on Nitrogen Recovery Analysis	Luther C. Carson, lutherc@ufl.edu	Univ. of Florida/IFAS/SWFREC
(174) Biofortification of Zinc in <i>Trigonella foenum-graecum</i> and <i>Brassica chinensis</i> to Enhance the Nutritive Value	Semantha Levy, slevy1@my.tnstate.edu	Tennessee State Univ.
(175) Evaluation of Wollastonite As a Silicon Source for Production of Sunflower	Jason S. Nelson, jsn0331@ksu.edu	Kansas State Univ.
(024) Possible Amelioration by MA of Aroma Volatile Loss During Refrigerated Storage of Pink Tomatoes	Angelos I. Deltsidis, adeltsidis@ufl.edu	Univ. of Florida
(015) Properties of Nucleases Associated with Watersoaking and Programmed Cell Death in Ethylene-treated Cucumber Fruit	Jinsu Lee, jslee@ufl.edu	Univ. of Florida
(023) Effect of Postharvest Storage Conditions on Shelf Life of Kale (<i>Brassica oleracea</i> var. <i>acephala</i>)	Harwinder S. Sidhu, harsidhu@uga.edu	Univ. of Georgia
(289) New Discoveries in Cranberry Bud Development	Lisa Wasko DeVetter, lwasko@wisc.edu	Univ. of Wisconsin–Madison
(282) The Roles of <i>Rhizoctonia fragariae</i> and Terbacil in the Development of Black Root Rot in Strawberry	E. K. Lavelly, emily.psu@gmail.com	Pennsylvania State Univ.
(286) Vegetative Growth of Southern Highbush Blueberry Cultivars Obtained from Micropropagation and Softwood Cuttings in Two Florida Locations During First Two Growing Seasons in the Field	Silvia R. Marino, srmarino@ufl.edu	Univ. of Florida

SESSION 4: Wednesday, August 1, 1:00–1:45 PM

Paper Title	Name, Email	Affiliation
(285) Vegetative and Reproductive Traits of Southern Highbush Blueberry under Different Summer Pruning Systems	Alisson Pacheco Kovaleski, apkovaleski@ufl.edu	Univ. of Florida
(120) Foliar Applications of Micro and Macro Nutrients to Control ACP in Citrus	Diego Garza, josele25_80@hotmail.com	Texas A&M Univ., Kingsville
(123) Effects of Cover Crops on Soil Environmental Factors and Weed Suppression	Elisabeth A. Hodgdon, elisabeth.hodgdon@unh.edu	Univ. of New Hampshire
(118) Evaluation of Anaerobic Soil Disinfestation (ASD) for Warm-Season Vegetable Production in Tennessee	D. Grant McCarty, dmccart7@utk.edu	Univ. of Tennessee
(124) Effects of Phosphite on <i>Fusarium oxysporum</i> in <i>Washingtonia robusta</i>	Jiaming Yu, jiaming@ufl.edu	Univ. of Florida
(112) Research of Switchgrass Growth Habits and Its Mutagenesis	Hui Li, hli@my.tnstate.edu	Tennessee State Univ.
(257) Response of Selected Garden Rose Cultivars to Salt Stress	Xiaoya Cai, tstarman@tamu.edu	Texas A&M Univ.
(269) Evaluating Heat Tolerance in <i>Impatiens walleriana</i> ‘super Elfin XP White’ Following the Application of Pageant	Diana Cochran, dc849@pss.msstate.edu	Mississippi State Univ.

Graduate Student Poster Competition Schedule

(263) Biocontainers and the Bigger Picture: Evaluating the Overall Performance of Plastic Pot Alternatives in Greenhouse Production of Coleus (<i>Solenostemon scutellarioides</i>)	Andrew Koeser, akoeser2@illinois.edu	Univ. of Illinois - Urbana/Champaign
(262) Identification and Characterization of Genes Differentially Expressed in <i>Phalaenopsis aphrodite</i> Roots under Nutrient Deficiency Stress	Ya-Chi Yu, anny770109@gmail.com	National Taiwan Univ.
(418) Interspecific Hybridization among the Eastern United States Native Species of Phlox	Peter Zale, zale.6@buckeyemail.osu.edu	The Ohio State Univ.
(065) Influence of Management Practices on Lettuce Yield and Weed Population in Organic Production	Yushen Huang, maple.yushen@gmail.com	Univ. of Florida
(061) Improving Fall Organic Vegetable Crops with Summer Cover Crops	Sarah M. Reynolds, sbm110@msstate.edu	Mississippi State Univ.
(243) Development of Best Turfgrass Management Practices Using Daycent Model	Yao Zhang, rzzhangyao@gmail.com	Colorado State Univ.
(030) The Nature and Role of Volatile Terpene Compounds in Postharvest Needle Abscission	Ernest A. Korankye, korankyee@nsac.ca	Nova Scotia Agricultural College
(342) Specialty Melon Cultivar Evaluation under Organic and Conventional Production in Florida	Wenjing Guan, wguan@ufl.edu	Univ. of Florida
(336) Relationship Between Soil Moisture Potential and Seedling Emergence in Cut and Peel Carrots	Krishanthi D. Vithanage, vithanagek@nsac.ca	Nova Scotia Agricultural College

SESSION 5 Thursday, August 2, 12:15–1:00 PM

Paper Title	Name, Email	Affiliation
(079) The Effect of Essential Oil of Hinoki Cypress on Anti-atopy and Skin	Gyeong-suk Jo, hyeong21@korea.kr	Jeollanamdo Agricultural Research & Extension
(073) An Evaluation of Shade Indices on Growth and Essential Oil Production of 'Italian Large Leaf' Basil	Tara Zasadzinski, taraz@iastate.edu	Iowa State Univ.
(399) Characterization of Resistance Genes of Rosa Spp. to Black Spot by Molecular Markers	Qianni Dong, qiannidong@neo.tamu.edu	Texas A&M Univ.
(394) Effects of Oryzalin and Trifluralin in Polyploidy Induction in In Vitro <i>Cattleya walkeriana</i> Gardner (Orchidaceae) Seedlings Paulista (UNESP)	Renato Galdiano, renatofgaldianojr@yahoo.com.br	Universidade Estadual
(398) Cell Membrane Stability Provided Better Resolution for Screening Heat Tolerance in Garden Roses Than Did Chlorophyll Fluorescence	Ockert Greyvenstein, ockertfc@neo.tamu.edu	Texas A&M Univ.
(396) The Utilization of the Polyploid Nature of Roses	Jake Ueckert, seagrape@neo.tamu.edu	Texas A&M Univ.
(048) Whole Potato Tubers (<i>Solanum tuberosum</i> L.) Provide a Protective Matrix Effect That Stabilizes Antiproliferative Inhibitory Metabolites from Thermal Degradation, and Retains Inhibitory Properties Against HT-29 Colon Cancer Cells In Vitro	Tatiana Zuber, titou420@hotmail.com	Colorado State Univ.
(152) Year-round Testing of Different Supplemental Lighting Treatments for Propagating Tomato Seedlings	Celina Gomez, cgomezva@purdue.edu	Purdue Univ.
(158) <i>Glacium</i> sp. Germination At Different Salinity Levels as Influenced by Growth Regulators	Harrison G. Hughes, hghughes@lamar.colostate.edu	Colorado State Univ.
(298) Location of the Mechanism of Resistance to <i>Amphorophora agathonica</i> (Hemiptera: Aphididae) in Red Raspberry	Danielle Lightle, danielle.lightle@gmail.com	Oregon State Univ.
(182) Comparative Effects of Deficit Irrigation in Landrace and Commercial Chile Cultivars	Israel Calsoyas, icalsoya@nmsu.edu	New Mexico State Univ.
(181) Comparing Substrate Moisture-Based Daily Water Use and On-demand Irrigation Regimes for Oakleaf Hydrangea Plants Grown in Two Container Sizes	Ethan D. Hagen, ethan_hagen2004@yahoo.com	Univ. of Tennessee
(184) Soil Moisture Mapping of Potato Farms Utilizing Four Irrigation Practices: Seepage, Subsurface Drip, Tile Irrigation, and Surface Drip	Libby R. Rens, libbyrens@ufl.edu	Univ. of Florida
(387) Simple Sequence Repeat (SSR) Markers Associated with White Flower in Peach [<i>Prunus persica</i> (L.) Batsch] Identified Using Bulk Segregant Analysis (BSA)	Dario J. Chavez, darioch@ufl.edu	Univ. of Florida
(390) Clonal Propagation of Dragonfruit (<i>Hylocereus</i> sp.) Hybrids	Warren Condon, fruitguy@gmail.com	Univ. of Florida

Graduate Student Poster Competition Schedule

SESSION 6 Thursday, August 2, 1:00–1:45 PM

Paper Title	Name, Email	Affiliation
(383) A Postharvest Quality Study of Univ. of Florida Strawberry Cultivars and Advanced Selections	Yanina D. Perez Cayo, yperez82@ufl.edu	Univ. of Florida
(225) Growth of Containerized Nursery Crops in a Cedar Amended Substrate	Travis R. Carmichael, trcarmic@ksu.edu	Kansas State Univ.
(226) Using Effluent Volumes to Control Leaching in Container Nursery Crops	Maureen E. Thiessen, mthies1@tigers.lsu.edu	Louisiana State Univ.
(220) Irrigation Based on Plant Daily Water Use Conserves Water without Affecting Plant Growth	Xueni Wang, wangxuen@msu.edu	Michigan State Univ.
(251) Ornamental Attributes of 16 Selections of <i>Rhizoma</i> Peanut (<i>Arachis glabrata</i> Benth.) in Response to Sun and Shade	Benjamin Anderson, anders16@ufl.edu	Univ. of Florida
(249) <i>Cryptodiaporthe corni</i> , a Latent Pathogen in Asymptomatic Stems of Pagoda Dogwood (<i>Cornus alternifolia</i>)	Garrett L. Beier, beie0020@umn.edu	Univ. of Minnesota
(250) The Effects of a Controlled Burn on Native <i>Aureolaria grandiflora</i> Populations Existing on an Ozark Savanna and Glade Habitat	Patrick L. Greenwald, patrick89@live.missouristate.edu	Missouri State Univ.
(248) Choice and No-choice Feeding Preferences of the Southern Pine Sawyer Beetle on Four Species of Pine	Matt S. Wilson, wilsoms@ksu.edu	Kansas State Univ.
(130) Improving Diploid Strawberry Yellow Wonder Genotype 5AF7 As a Functional Genomics Resource	Mohamad Fadhli Mad Atari, madatari@ufl.edu	Univ. of Florida
(100) In Situ Changes to Soil Microbial Community Structure and Function Following Degradation of Potentially Biodegradable Mulch Films	Chenhui Li, chenhui.li@ttu.edu	Texas Tech Univ.
(034) The Effects of Storage and Harvesting Method on Anthocyanin Content of Southern Highbush Blueberries (<i>Vaccinium corymbosum</i> L.)	Kristin Abney, kabney22@gmail.com	The Univ. of Georgia
(038) Shelf Life and Composition of Organically Grown North Carolina Blackberries	Moo Jung Kim, mjkim@ncsu.edu	North Carolina State Univ.
(185) Root Morphology of <i>Vaccinium</i> spp. in Response to Iron Concentration	Gerardo H. Nunez, g.nunez@ufl.edu	Univ. of Florida
(318) Effect of Grafting on Root Permeability of Dutch and Japanese Tomato Cultivars	Tomomi Kakita, agrisys@isc.meiji.ac.jp	Meiji Univ.
(320) Do Tunnels Enhance Earliness and Quality in Muskmelons for Local Market?	Mina Vescera, mina.vescera@gmail.com	Univ. of Rhode Island

The American Society for Horticultural Science (ASHS)

would like to thank

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for supporting the ASHS Graduate Student Poster Competition

Guide to Exhibitors

Exhibitor booths are located in the Grand Ballroom

Open to attendees:

Tuesday, July 31 8:30 AM–2:30 PM

Wednesday, August 1 8:30 AM–2:30 PM

Thursday, August 2 8:30 AM–2:30 PM

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Web: www.eXtension.org

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Pi Alpha Xi is the national honorary society for horticulture in the United States. The Society recognizes academic excellence for horticulture students at numerous chapters across the nation.

PP Systems Booth # 11

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Contact: Tim Doyle

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You are cordially invited to attend the

ASHS Awards Ceremony

Ceremony to be held during the

Opening Plenary Session

July 31, 2012

10:00 AM–12:00 PM

InterContinental Miami Hotel

Miami, Florida

and includes

recognition of the following awardees:

ASHS Fellows-elect: Class of 2012

2012 ASHS Career Award Recipients

2012 ASHS Publication Award Recipients

ASHS Fellow



John D. Abbott, PhD, CPH
Syngenta Crop Protection
Greensboro, NC

Election as a Fellow of the Society is the highest honor that ASHS can bestow on its members, in recognition of truly outstanding contributions to horticulture and the Society.

John D. Abbott has been an ASHS member since 1980. He received his BS degree from the University of Rhode Island in Plant Science in 1981, MS from North Carolina State University in Horticultural Science in 1983, and PhD from the University of Rhode Island in Plant Science in 1986.

After receiving his PhD, Abbott held a research and extension position in small fruit crops at Oklahoma State University in the Department of Horticulture and Landscape Architecture. For the past 25 years, he has worked in various roles at Syngenta Crop Protection and its legacy companies within the Biological Research and Development, Technical Development, and Regulatory Affairs departments. He currently serves as NAFTA Senior Regulatory Team Leader for Fungicides and Insecticides. His team is responsible for securing the approval of new products and uses, while ensuring the continued approval of existing products for the Syngenta fungicide and insecticide product portfolio.

While working in field development and other technical roles, he has been actively engaged in and has supported the development of many new crop protection tools that are critical to the successful production of horticultural and agronomic crops. During his tenure in regulatory affairs, he has supported the successful regulatory approval of many of the same crop protection tools in addition to newly developed tools for crops of all types. Many of these projects have been conducted in cooperation with IR4 and the Canadian Pest Management Center.

While working for Syngenta, Abbott has been an active participant in many trade organizations and professional associations and has held numerous positions of leadership within ASHS, Weed Science Society of America, Western Plant Health Association, and Crop Life America. He has received the ASHS Outstanding Industry Scientist Award, several Syngenta awards, and both the Workhorse Award and Roosevelt Award from Crop Life America. He recently was elected by his peers to the post of U.S. Chair of the Industry Working Group for the NAFTA Technical Working Group.

Abbott has served ASHS in many important positions including membership on the Board of Directors as Industry Division Vice President, *Hort-Technology* Editorial Board, Certified Professional Horticulturist Board, Nominations and Elections Committee, Membership Committee, Continuing Education Committee, President's Corporate Council, and Industry Division Advisory Committee. He has served as an Associate Editor for *HortScience*, Chair of the Weed Control Pest Management Working Group, coordinator of Industry Division Workshops/Symposia, and has acted as Syngenta's ASHS Corporate Member Representative.

In addition to his professional activities, Abbott has held numerous leadership positions in civic and religious organizations, has coached youth sporting teams for 25 years, and has been an invited speaker to share his horticultural expertise with various organizations, including local schools.

ASHS Fellow



Anita Nina Azarenko
Professor
Department of Horticulture
Oregon State University, Corvallis

Since 1983, **Anita Azarenko** has had a rich and productive research program in pome and stone fruit production prior to becoming department head of the Department of Horticulture at Oregon State University (OSU) in 2003. Her academic achievements include more than 90 refereed articles and 52 abstracts. She has directed 12 graduate programs resulting in advanced degrees and has served on 24 graduate committees. She has attracted almost \$3 million in research and teaching support.

As department head at OSU, Azarenko's key achievements have been consistent with her administrative role, advocating for the faculty and for quality education for students. She has been involved in designing, implementing and evaluating opportunities, curricula and courses for all types of learners to help them grasp the complexity of managed horticultural ecosystems. She originated and implemented a Bioresource Research undergraduate major, serving as co-director and co-advisor from 1991 to 2006. This interdisciplinary major continues to be administered across three colleges, with over 20 departments participating. Azarenko re-invigorated the curriculum committee in the Department of Horticulture at OSU; under her leadership, this group advances new and revised undergraduate degree options and curricula in horticulture, including the creation of viticulture and enology, horticulture research, horticulture communication options as well as an urban forestry and horticulture curriculum. OSU is the first institution nationally to offer a full general horticulture degree option online. A center for urban horticulture provides a learning laboratory to extend student and community opportunities and practices. Azarenko has played a leading role in developing an agricultural technology center for collaboration and learning, giving College of Agriculture members access to communications and collaborations throughout the world.

Azarenko has made significant contributions through her research program on fruit tree and nut physiology, nutrition and management. She has been an important colleague in the development and support of other programs such as nut genetics and breeding. She developed a reputation as an excellent research cooperator and collaborator both within her institution and across the US. Notably, she was an active participant in the NC140 Fruit Tree Rootstock and Systems project, and the NE183 Apple Cultivar Testing and Development cooperative programs.

Azarenko has served ASHS as Vice President for Education (2011–13); Annual Conference Technical Program Committee (2011–current; 1996–99); Member of Administrators, Teaching Methods, Pomology, Local Food Systems, and Organic Horticulture Working Group (co-organized organic curriculum workshop, 2005); Membership Committee, 2005–07; Undergraduate Research Paper competition, 2004–05; Collegiate Activities Committee, 1990–94 (Chair 1993–94); Outstanding Fruit Publication Award Selection Committee 1994–95; Program committee co-chair for the ASHS 91st Meeting held at OSU, 1993; ASHS Conference Program Steering Committee 1992–95.

ASHS Fellow



Robin G. Brumfield

Extension Specialist in Farm Management
Rutgers University, New Brunswick, NJ

As an Extension Specialist in Farm Management at Rutgers University, Robin Brumfield has focused on two basic areas: horticultural economics and sustainable horticulture. Her unique background and specialization has been especially important for New Jersey producers because 1) the green industry is the largest cash-producing agricultural sector in the state and 2) New Jersey farmers are faced with high land and labor costs, right-to-farm conflicts, urbanization, and increased regulation, making New Jersey one of the most difficult places to farm in the US.

Brumfield's Rutgers Cost Accounting Program is the industry standard. She authored the Marketing and Management chapters in the 7th edition of the internationally best-selling textbook *Greenhouse Operation and Management*.

Internationally, colleagues and the industry have sought Brumfield's expertise. She was asked to convene the XIIIth International Symposium on Horticultural Economics at Rutgers University in Aug. 1996. This was the first time this symposium was held in the US, the first time the proceedings were available for distribution at the symposium, and the first time the economics volume was refereed.

Brumfield has exhibited excellence in leadership most recently in two Rutgers-initiated projects—one in New Jersey, the other in Turkey—that share the common mission of recognizing and developing the managerial and technical capacities of women farmers. In Feb. 2011, she launched the nationally acclaimed educational program Annie's Project with a team of agents and specialists. Brumfield modified this program and took it to Antalya, Turkey for her sabbatical leave in Sept. 2011, where she formed a team to launch Suzanne's Project to provide Turkish women farmers with training on basic business management skills and best technical practices to sustain profitable agricultural businesses. The highly acclaimed New Jersey Farm Management Program that she developed in the mid-1990s with funding from the New Jersey Department of Agriculture trained 4,045 producers in 126 workshops over its 4 years of existence. The program received high praise from the participants and funding agency, was recognized as the best extension program at Rutgers University, receiving the Excellence in Outreach Team Award in 1996.

Brumfield received the ASHS Extension Division Commercial Horticulture Working Group's Distinguished Achievement Award in 1998 and the Epsilon Sigma Phi State Service Award in 1998 and Epsilon Sigma Phi Regional International Service Award in 1999.

Brumfield has been a member of ASHS since 1981: Associate Editor, Marketing and Economics, *HortScience*, 1997–present; Cross-Commodity Publications Award Selection Committee 2003–05; Editorial Board, *HortTechnology*, 1997–2000; Chair, Economics and Marketing Working Group, 1985–86, 87–88, 92–93, 96–98; Member, Floricultural Working Group; Co-Chair and organizer, Sustainable Horticulture Colloquium, 1993; Chair and organizer, Marketing Horticulture Colloquium, 1992.

The first ASHS
Fellows were elected
in 1965.

ASHS Fellow



Zong-Ming (Max) Cheng
Professor
Department of Plant Sciences
University of Tennessee, Knoxville

Zong-Ming (Max) Cheng received his BS from Nanjing Agricultural University, China in 1982 and his MS in 1988 and PhD in 1991 from Cornell University. He served as an Assistant and then Associate Professor at North Dakota State University (NDSU). During that period, he also served as the Director of the Cellular and Molecular Biology PhD program with over 30 faculty members from three colleges, and received the North Dakota Forest Resources Educator Award. He transferred to University of Tennessee (UT) in 2001 as Associate Professor, and now is Full Professor of Horticulture. Since September 2009, Cheng also serves as Professor at Nanjing Agricultural University, China.

Cheng's research focuses on woody plant breeding, biotechnology, and genomics. He has published over 60 refereed articles, 8 book chapters, 5 extension articles. He developed and co-developed three popular birch cultivars with plant patents and trademarks. His recent research in functional genomics of poplar (as a model for woody horticultural plants) has generated two provisional patents with discoveries of a stress-inducible promoter and a stress tolerance gene. Cheng has so far garnered and co-garnered over \$3.5 million of extramural funding, both highly competitive grants from USDA-NRI, NSF, DOE and CPBR and contracts from nurseries and biotech companies.

Cheng is a highly dedicated educator who has taught numerous horticultural courses at UT and NDSU, and has trained 13 graduate students (6 MS, 7 PhD), 6 postdocs, and 10 visiting scientists. At Nanjing Agricultural University, he is advising 12 graduate students, with primary research focus on apple and grape disease and stress resistance genomics and biotechnology.

Cheng's research accomplishment has been widely recognized nationally and internationally, as demonstrated by giving 30 invited presentations and seminars at national and international meetings and at universities home and abroad, invited for contributing reviews and editing special issues, and serving on three editorial boards, the USDA grant panel, and USDA-ARS program review panel.

Cheng has been very actively involved in serving ASHS, initiating two working groups, and served as working group secretary/vice chair/chair for several working groups, and member/chair for several other committees. Currently, he serves as a member of Endowment, Membership, National Issues Task Force committees, and secretary of the Plant Propagation Working Group. He has (co)organized several workshops and colloquium at ASHS annual conferences. His commitment to ASHS is further demonstrated by his financial contribution to the ASHS endowment fund to establish an international graduate student poster award.

Cheng is currently serving as an Executive Committee member of the International Grape Genome Program and an International Advisory member of the Macrowine Conference in France in 2012. He will serve as the convener for the third International Symposium on Fruit-Omics and Biotechnology in Nanjing, China in Oct. 2012, and the co-convener of the 11th International Congress of Grape Genetics and Breeding in 2014 in Beijing, China.

ASHS Fellow



Terry Ferriss

Professor of Horticulture
University of Wisconsin, River Falls
Plant and Earth Science Department

Terry Ferriss began her teaching career in Horticulture at the University of Wisconsin–River Falls (UWRF) in Sept. 1979. She was promoted through the ranks and earned Full Professor in 1989. Her past administrative service includes serving as Assistant to the Vice Chancellor for Academic Affairs; Assistant Dean–College of Agriculture, Food and Environmental Science (CAFES); and Chair of the 20-member Plant and Earth Science Department. She has continuously served as Director of the CAFES Internship Program for the past 17 years. In 1985 Ferriss provided the leadership to establish the Horticulture major at UWRF. The program grew from 35 to over 110 majors by 2005. Ferriss places and tracks 15–25 Horticulture students annually on internships locally, nationally, and abroad.

Ferriss’s professional drive to enhance and support the horticulture industry and discipline is reflected through all of her former students who are now are successfully engaged in multiple facets of professional horticulture. The UWRF Horticulture program and Ferriss are well known for developing well-prepared, well-rounded horticulture students for the industry and graduate school.

Ferriss initiated the establishment of the Alpha Zeta Chapter of Pi Alpha Xi, the National Honorary for Horticulture at UWRF, and coached the UWRF Floral Evaluation Team for 28 years. For over 20 years she coordinated the national distribution of the Flower Judging Manual for Pi Alpha Xi National. She has served as national Secretary/Treasurer, Vice President and two terms as President of PAX National. She was named a PAX Fellow in 2000.

Ferriss has been member of ASHS for over 34 years and has only missed three annual meetings during that time. She has served ASHS in many capacities, including as Chair, Teaching Methods Working Group; Scholarship Awards Committee; and served for 6 years and chaired (2 years) the Collegiate Activities Committee. She is most recognized for her advocacy of the ASHS Certification Programs—CPH, APH, and CH programs—including chairing the ASHS National Certification Board and writing a chapter for the Horticulturist’s Certification Study Guide. She has also served on the American Floral Endowment’s Selection Committee for Ball Internship/Scholarships for over 10 years and on the MNLA Foundation Board of Directors.

Ferriss has received multiple honors including being named UWRF’s Distinguished Teacher in 1996, the highest faculty award given at UWRF. She also earned the UWRF Advisor of the Year in 2003 and the UWRF Compass Award in 2009 for her work with first-year students. She has an honorary FFA degree for her work with students. She was also the recipient of the 1989 ASHS Outstanding Undergraduate Horticulture Educator Award and the 1998 USDA National Excellence in Teaching Award for the North Central Region.

A call for nominations is issued each Fall and award winners are recognized at the following Annual Conference.

ASHS Fellow



Larry D. Knerr
Shamrock Seed Company, Inc.
Salinas, CA

A native of Massillon, OH, Larry D. Knerr received a BS in Horticulture from Purdue University in 1985 and continued his education at the University of Wisconsin–Madison where he earned an MS in Horticulture in 1987 and a PhD in Plant Breeding and Plant Genetics in 1990. He also is an ASHS Certified Professional Horticulturist.

As a graduate student, Knerr authored or co-authored 10 refereed publications. Upon completing his doctoral degree work, he first accepted the position of Plant Breeder with Ferry-Morse Seed Co. in Naples, FL, working on tomatoes; he was soon promoted to Research Station Manager. Subsequently he transferred to San Juan Bautista, CA to assume responsibility for the Brassica breeding program. He later joined Shamrock Seed Co. in Salinas, CA where he has served as Plant Breeder for lettuce and melons and Research Director since 1994.

Knerr has developed and released over 85 cultivars of lettuce, 15 hybrid honeydew melons, 5 hybrid cantaloupes, 1 juan canary hybrid melon, 2 wild rockets, and 1 swiss chard. His cultivars are grown commercially in more than 30 countries on 6 continents. He is named as inventor on 6 Plant Variety Protection certificates, 13 Breeder's Rights certificates, and 28 U.S. utility patents, with numerous others pending. He maintains an international presence, traveling to and conducting research in 22 countries around the world.

Knerr has been an exceptionally active member of ASHS since 1987. He has served ASHS in many important leadership positions including membership on the Board of Directors as Industry Division Vice President, Finance Committee, Nominations and Elections Committee, Continuing Education Committee, President's Corporate Council, Industry Division Advisory Council, and Industry Division Task Force. He received the ASHS Outstanding Industry Scientist Award in 2010.

Knerr has been a driving force behind the ASHS Intellectual Property Rights Working Group (IPR), serving on the Steering Committee (1994–97) and twice as its Chair (1996–97 and 2010–11). On behalf of IPR and the ASHS Industry Division, he served as Coordinator/Moderator of a landmark, 10-hour symposium at the 2010 ASHS Annual Conference, entitled "Current Issues and Applications for Intellectual Property of Horticultural Plant Cultivars."

Knerr is an active member of the International Society for Horticultural Science, European Association for Research on Plant Breeding (EUCARPIA), Cucurbit Genetics Cooperative, USDA Leafy Vegetable Crop Germplasm Committee, and serves as a Co-Worker on the International Bremia Evaluation Board.

ASHS Fellow



Mary Hockenberry Meyer

Professor

Department of Horticultural Science
University of Minnesota, St. Paul

Mary Hockenberry Meyer is a professor and extension horticulturist in the Department of Horticultural Science at the University of Minnesota. She has made major contributions to horticulture with 1) research on ornamental and native grasses, 2) scholarship in consumer horticulture, 3) leadership in ASHS, and 4) service in several areas, including the Interim Director of the Minnesota Landscape Arboretum.

For 17 years, Meyer has been a national and international leader in ornamental grass research and extension education. She has successfully combined applied research and extension outreach work through her research in native and ornamental grasses and their use in the landscape, along with public education in horticulture. Her work with cold hardiness and landscape evaluations of ornamental grasses has helped this new group of plants to become widely available in the nursery trade.

Meyer has done an outstanding job of advancing the scholarship of Extension, especially the public value of the Extension Master Gardener volunteer program and consumer horticulture work. She is a leader in implementing programs that are followed and then adopted in other states and regions. She has written 24 peer reviewed papers on Extension topics; her writing is based on research with in depth surveys of volunteers and the public, advancing our understanding of how to design and implement public outreach programs.

Meyer's Extension publications "Ornamental Grasses for Cold Climates" and "The Best Plants for 30 Tough Sites" are two of the most popular Extension publications in the US. For 13 years she was the State Coordinator of the Minnesota Master Gardener program where she developed online training for Master Gardeners in 1996, and later introduced online volunteer reporting and tracking of volunteer hours. She also developed the Master Gardener course into a credit class along with a statewide standards and a textbook.

From 2004 to 2006 Meyer was the Vice President, Extension for ASHS. She took an active, visible role in providing leadership for Extension work and programs, including the Extension Advisory Committee. Her VP role was also very visible through the 24 monthly columns she wrote entitled "Extension TODAY" in the *ASHS Newsletter*. Meyer has been a tireless advocate and supporter for *HortTechnology*, serving as urban horticulture associate editor (1996–2002), and member of the Editorial Board (2002–10). She has been a reviewer for countless articles for the society's journals. Meyer has been active on several ASHS committees, including Horticultural Landmarks and Nominating, and also participates in several working groups. She has received several awards from ASHS including the 2007 Outstanding Extension Educator, National Career Award; 2000 Extension Distinguished Achievement Award in Consumer Extension; and 1998 Extension Publication Outstanding Paper Award.

A roster of all
ASHS award winners
to date can be found
on the website:

ashs.org/db/awards/winners/

ASHS Fellow



Curt R. Rom
Professor
Department of Horticulture
University of Arkansas

Curt R. Rom grew up on a small family farm producing fruit for local direct markets. He received a BS from University of Arkansas (UARK) in Horticulture along with business management. He then attended The Ohio State University (OSU) (MS, PhD), serving as an advisor to the OSU Fruit and Vegetable Society. Upon graduation (1984) he joined the Department of Horticulture and Landscape Architecture at Washington State University (WSU) teaching fruit crop science and integrated crop and pest management. In 1989 he returned to the UARK Department of Horticulture as a faculty member to study and teach fruit production and physiology, fruit cultivar and rootstock development and apple breeding. In 2000 he changed the direction of his research program to emphasize sustainable and organic production systems, and local food systems. Beginning in 1998, his position was transformed with increased teaching responsibilities, including classes such as home gardening, community and school gardening, fruit and vegetable production, plant propagation, career and professional development, plant physiology, and advanced pomology.

As a respected and awarded educator, Rom has introduced students to horticultural science, especially through the course Principles of Horticultural Science, and other undergraduate and graduate courses. He has advised 11 MS and five PhD students and served on more than 40 other graduate committees. He currently serves as the Director of the College of Agricultural Food and Life Sciences Honors Program at UARK, assisting more than 100 honors students in science disciplines and with independent research projects and theses. He has served as an advisor to the Horticulture Club and GroGreen-Student Organic Farm and Community Garden Alliance. Rom has led several student study tours around the US, to Scotland and Great Britain, Italy, and China. He has received several awards for teaching: L.M. Ware Distinguished Teaching award from Southern Region ASHS, and the Outstanding Undergraduate Educator Award from ASHS. He was selected as a Fulbright Fellow Senior Lecturer to teach at the University of Padova, Italy, in the Department of Environmental Vegetable and Crop Production. He participated in the ESCOP/ACOP leadership development program. He was inducted as a Fellow in the UARK Teaching Academy and served as its President.

Rom is a frequently requested speaker on horticulture and research at grower and trade group meetings in North America. He has presented more than 200 talks to trade groups or organizations, and participated in more than 150 presentations in science society workshops, symposia, conferences and meetings.

Rom has served his professional societies, including key leadership roles in the Arkansas State Horticultural Society (executive secretary and editor), American Pomological Society (advisory committee, executive committee, secretary, president), and ASHS (including Chair of the Executive Committee of the Southern Region, Chair of the Finance Committee and Treasurer, and Vice President of the Education Division, working groups, colloquia, associate editor).

ASHS Career Award

Outstanding International Horticulturist



Esmail “Essie” Fallahi

Professor and Research Director
of Pomology Program
Parma Research and
Extension Center
University of Idaho

Esmail “Essie” Fallahi is currently the ASHS Vice President for the International Division and Professor and Director of Pomology at the University of Idaho. He graduated from Jondishapour University, Iran, earning the top rank among all graduates in 1975. While traveling to all fruit-producing areas in the rough mountainous terrain of Iran, he gathered invaluable information on the germplasm of hundreds of native apples and pears. He then wrote two volumes of books that have become invaluable sources for subsequent genetic studies by many scientists in Asia Minor and the entire Caspian Sea region.

Fallahi received his MS and PhD degrees in pomology from Washington State University and Oregon State University, respectively. After graduation, Fallahi assisted scientists from Tunisia, Morocco, Iran, Brazil, Chile, and other countries with their research projects, emphasizing projects that could be relevant to their native countries. After Oregon, Fallahi accepted a position as assistant professor and fruit physiologist at University of Arizona, where he conducted research projects on citrus rootstocks, adaptation of peaches and other fruit to the desert conditions of southwestern US, and cooperated with citrus and low chill peach projects worldwide, including Morocco, Tunisia, and Iran. During the past 23 years, he has established and led a highly regarded comprehensive pomology program at the University of Idaho.

Fallahi has published numerous refereed journal and popular articles on various aspects of fruit crops, including rootstocks, cultivars, bioregulators, and mineral nutrition. He has been invited as a speaker to many countries, where he has established major joint projects with scientists and/or local fruit growers, particularly China, Iran, South Korea, Chile, Mexico, and Australia. Through his joint research projects, Fallahi has assisted world fruit growers in reducing irrigation water, chemical thinning, use of efficient rootstocks and new cultivars, and improving postharvest storage conditions. His technique for vacuum infiltration of magnesium into apple tissue for early prediction of bitter pit has been perfected and widely used in South America.

Among Fallahi’s noteworthy services is his volunteer teaching to fruit growers, horticulturists, and Master Gardeners. Also, he has established a new table grape industry and new peaches, alternative fruits, and new cultivars of apples in Idaho as a result of his lifetime research.

Fallahi has held many offices at ASHS, ISHS, and other societies: Associate Editor of HortTechnology 1996–2001, President of the American Pomological Society (APS), Editorial Board of Journal of Plant Nutrition and Journal of Fruit (in France), International Journal of Fruit Science. He was a recipient of the National Distinguished Shepard Award from the APS; Distinguished Service as Associate Editor of ASHS HortTechnology; Group Honor Award for Excellence from the USDA for Cooperative State Research.

The ASHS Outstanding International Horticulturist Award recognizes an international horticulturist who has made an outstanding and valuable contribution to international horticultural science, education, research and/or outreach.

ASHS Career Award

Outstanding Researcher



Frank A. Blazich
Alumni Distinguished
Graduate Professor
Department of Horticultural Science
North Carolina State University

Frank A. Blazich received an AAS degree in agronomy in 1969 from Farmingdale State College (SUNY); BS and MS in plant and soil science in 1971 and 1973, respectively, from University of Vermont; and PhD in horticulture, 1977, from Pennsylvania State University. He began his university career at North Carolina State University as an Assistant Professor in 1978 and advanced steadily through the ranks, obtaining Professor status in 1986 and Alumni Distinguished Graduate Professor in 2006. He is the recipient of many other awards and recognitions, including Fellow of ASHS; National Fellow for Pi Alpha Xi; ASHS Outstanding Graduate Educator Award; ASHS Distinguished Achievement Award for Nursery Crops; Outstanding Alumni Award, University of Vermont, College of Agriculture and Life Sciences; Porter Henegar Memorial Award for Horticultural Research (ASHS-Southern Region), and others. He is also a decorated Vietnam War veteran.

Blazich's research on the propagation and culture of herbaceous and woody plants has resulted in 127 refereed journal articles, 20 book chapters, and numerous other publications. His productivity is legendary; the list of his publications exceeds 40 pages. From herbaceous perennials to loblolly pines, Blazich's research has focused on understanding the role of plant nutrition, growth regulators, dormancy, rooting environment, media, daylength, temperature, micropropagation, and somatic embryos on the ability of a plant to be successfully propagated. Today, many of the plant propagation protocols used by the nursery industry, botanical gardens, U.S. Forest Service, conservation groups, and others are a result of his research.

Blazich is also a highly distinguished and successful educator and advisor to numerous undergraduate and graduate students. Students respond to his dedication, knowledge and passion for his subject, the organization of his lectures and labs, and his sincere interest in them. His excellence in teaching has resulted in numerous teaching awards. He has also been a successful graduate advisor of 23 students, 13 at the PhD level. These students have gone on to successful careers in academia, government, private sector and not-for profit organizations.

Blazich has given years of service to the department, university, professional societies, and community. He has received numerous service awards from the North Carolina Museum of Natural Sciences as a volunteer instructor in their educational program, having taught their plant propagation class every year since 1982. Within the Horticultural Science Department, he took over as faculty advisor to Phi Alpha Xi in 1985, a responsibility he continues today. Blazich has served in many professional leadership roles in both academia and industry. He has been heavily involved with the Southern Nursery Association, ASHS, the Horticultural Research Institute, and has served on dozens of committees and chaired many of them. In even more demanding positions, he has served as Associate Editor (Ornamental Horticulture) for both the *Journal* and *Hort-Science* and as Science Editor for the *Journal*, 1999–2002.

The ASHS Outstanding Researcher Award recognizes a horticultural crops scientist who has had an outstanding record in research on one or more horticultural crops and in one or more areas of horticultural research.

ASHS Career Award

Outstanding Graduate Educator



Thomas G. Ranney

Professor

Department of Horticultural Science
North Carolina State University
Mountain Horticultural Crops
Research and Extension Center

The ASHS Outstanding Graduate Educator Award recognizes an educator who has had a distinguished and outstanding graduate education teaching career in horticultural science.

Thomas G. Ranney's research focuses on the genetic improvement of woody ornamental plants across a range of ornamental species, released as new introductions, nine with plant patents. He has conducted breakthrough work in the use of dinitroaniline herbicides to artificially develop polyploids for overcoming interspecific hybridization barriers in woody plant taxa. A national and international leader in breeding for sterile, non-invasive forms of popular woody ornamentals, his current efforts have expanded to include the development of sterile forms of *Miscanthus* grass for both landscape ornamental and biofuel use.

Ranney's program is well funded from a diversity of sources, indicative of the productivity of his program and the importance of his research efforts to the industry and society. During the past 22 years his research program has gradually evolved and is currently recognized nationally and internationally as one of the premier ornamentals breeding programs, much of which has been accomplished by advisement of graduate students.

Ranney spends countless hours mentoring his graduate students, who are well prepared for productive careers following completion of their programs. He has published 64 refereed journal articles, 40 of which have been coauthored by graduate students. Ranney works at the Mountain Horticultural Crops Research and Extension Center, Mills River, NC, 260 miles west of Raleigh. Despite the distance, Ranney keeps in constant contact with his graduate students.

Ranney's primary interaction with students is direct collaboration on research projects, internships, and nonclassroom activities. He works extremely hard to help prepare students for professional careers. He requires, coordinates, and facilitates a summer student seminar series, trips to attend industry and research conferences, visits to nurseries and botanical gardens, and field trips to study native flora. His graduate students also participate in diverse teaching and extension activities to further broaden their backgrounds.

Ranney is actively involved in teaching, outreach, and service in the broader horticultural community. He regularly presents lectures nationally and internationally for groups such as various nursery and landscape associations, International Plant Propagators' Society, Independent Plant Breeders Conference, botanical gardens, extension groups, and for other universities and community organizations. He is also an adjunct professor and advisor to several universities and community colleges.

His honors and awards include: Extension Educational Aids Award, ASHS, 1994; Ornamentals Publication Award, ASHS, 1998; Distinguished Achievement Award for Nursery Crops, ASHS, 2003; Research Friend of Extension Award, North Carolina Cooperative Extension Service, 2004; Porter Henegar Memorial Award: For Outstanding Contributions to Environmental Horticulture Research, Southern Nursery Association, 2006; and H. Marc Cathey Award: Recognizing Outstanding Scientific Research that has Enriched the Field of Horticulture, American Horticultural Society, 2008.

ASHS Career Award

Outstanding Extension Educator



Raymond A. Cloyd

Professor and Extension Specialist
in Ornamental Entomology/
Integrated Pest Management
Department of Entomology
Kansas State University

Raymond A. Cloyd received an Associate of Science degree in Ornamental Horticulture from Monterey Peninsula College (Monterey, CA) in 1985, going on to receive a BS from California Polytechnic State University–San Luis Obispo (1990); and MS (1995) and PhD (1999) in Entomology from Purdue University. Currently he is Professor and Extension Specialist in Ornamental Entomology/Integrated Pest Management (2006–present) at Kansas State University Department of Entomology. Previously he was at the University of Illinois, Department of Natural Resources and Environmental Sciences (1999–2006).

Cloyd has developed an impressive and productive extension program across a range of commodity areas within horticultural entomology and integrated pest management. His program is well known within Kansas, nationally, and internationally for its excellence in assisting horticulture professionals in solving insect and mite pest problems.

Cloyd's educational training in pest management to greenhouse producers, in particular, is highly sought after as he travels frequently to directly assist greenhouse production operations across the US and Canada with insect and mite pest management problems. In addition, he is a very prolific writer on subjects related to horticultural entomology; he is currently under contract with MeisterMedia Worldwide to provide 33 podcasts in 2009–12, each delivered to an audience of more than 11,500 subscribers. He has published more than 400 trade journal articles associated with insect and mite pest management in greenhouses, nurseries, landscapes, turfgrass, interior plantscapes, and conservatories.

Cloyd is a leader in dealing with critical issues and needs of the public. For example, he is involved in the first detector training program, designed to inform the public of the hazards of invasive insect pest species, including the emerald ash borer and walnut twig beetle. He conducts annual professional training sessions for groups in Kansas, and is a frequently invited, out-of-state speaker for professional meetings in the north central region and across the US, including master gardeners, commercial pesticide applicators, state-certified arborists, and state and county extension agents.

Cloyd travels frequently to directly assist greenhouse production operations across the United States and Canada with arthropod pest management problems. For example, he is collaborating with Jolly Farmer Products, Inc., the largest greenhouse operation in New Brunswick, Canada, to update their arthropod pest management programs, and he has assisted the largest producer of perennial crops in Kansas, Arnold's Greenhouses in Leroy, KS in the implementation of a biological control program against fungus gnats using entomopathogenic nematodes.

Cloyd has also participated in a number of ASHS activities including serving on the committee for the ASHS Extension Publication Award from 2002 to 2010, chairperson, 2009–10.

The ASHS Outstanding Extension Educator Award recognizes an educator who has made an outstanding and valuable contribution to horticultural science extension education.

ASHS Career Award

Outstanding Undergraduate Educator



Donald Joseph Eakes

Jimmy and Chris Pursell Endowed Professor
Department of Horticulture
Auburn University, Alabama

Joe Eakes received his BS and MS from Auburn University in 1981 and 1984, respectively; he received his PhD in Horticulture from Virginia Tech University in 1989. Currently he is the Jimmy and Chris Pursell Endowed Professor in the Department of Horticulture at Auburn University, Alabama.

For over 20 years at Auburn University, Eakes has dedicated himself to educating both undergraduate and graduate students and has been a part of developing the Department of Horticulture into one of the most respected programs in the US. Two important contributions made by Eakes include developing the Auburn University Student Chapter of the Professional Landcare Network (PLANET) and Student Career Days Team, and the development of the course Landscape Construction (HORT 3280). These two entities are closely integrated through his program. The Student Chapter of PLANET is a professional as well as a service organization in which students gain the opportunity to spend a significant amount of time with Green Industry professionals through field trips, industry speakers, work days, and the Student Career Days Competition. Landscape Construction was developed in an effort to address industry concerns for gaining hands-on experience in the Green Industry.

Other courses that Eakes has taught at Auburn University include Small Trees, Shrubs, and Vines for the Landscape (HORT 3210), Plant Propagation (HORT 2240), and Landscape Gardening (HORT 2210). He still teaches HORT 3210, a key course in the baccalaureate degree program. Beyond the classroom, Eakes has become an integral part of Auburn's international program. He has led short-term garden study tours for students to Costa Rica and Holland, and will lead a trip to Ireland this spring. He has also participated in the Summer Study Abroad Program in England since 2007.

Eakes has received major teaching and advising awards including: American Nursery and Landscape Association L.C. Chadwick Award, ASHS Southern Region L.M. Ware Distinguished Teacher Award, Auburn University Alumni Association Undergraduate Teaching Excellence Award, Dean's Award for Teaching Excellence in the College of Agriculture, Dean's Award for Advising Excellence, and Outstanding Graduate Mentor. Recently he was honored as the first recipient of the Jimmy and Chris Pursell Public Gardens and Service Learning Endowed Professorship and has been asked to develop a program for public horticulture within the department.

Eakes has co-authored several articles and abstracts in *HortTechnology* and *HortScience* about the Auburn teaching program and classroom techniques. Also, his relationship with industry has provided much-needed funding for the teaching program through direct financial contributions and in-kind donations of material. He is currently creating a teaching garden to support courses and service learning as a part of the developing public horticulture program.

The ASHS Outstanding Undergraduate Educator Award recognizes an educator who has had a distinguished and outstanding undergraduate education teaching career in horticultural science.

ASHS Publication Awards

Cross-Commodity Publication Award

Comparative Analysis of Chilling Response in Cucumber Through Plastidic and Nuclear Genetic Effects Component Analysis

Gordon, Vanessa S. and Jack E. Staub

J. Amer. Soc. Hort. Sci. 136(4):256–264

Education Publication Award

Interactive Online Tools for Teaching Plant Identification

Campbell, Kristin R., Sandra B. Wilson, P. Christopher Wilson, and Zhenli He

HortTechnology 21(4):504–508

Extension Publication Award

Development and Evaluation of a Training Program on Whole Farm Nutrient Planning for Organic Farms

Sanchez, Elsa S. and Heather D. Karsten

HortTechnology 21(4):500–503

Fruit Publication Award

Rootstocks Modify Scion Architecture, Endogenous Hormones, and Root Growth of Newly Grafted ‘Royal Gala’ Apple Trees

van Hooijdonk, Ben, David Woolley, Ian Warrington, and Stuart Tustin

J. Amer. Soc. Hort. Sci. 136(2):93–102

Ornamental Publication

Silicon Differentially Influences Copper Toxicity Response in Silicon-accumulator and Non-accumulator Species

Frantz, Jonathan M., Sushant Khandekar, and Scott Leisner

J. Amer. Soc. Hort. Sci. 136(5):329–338

Vegetable Publication Award

Identification of Salt-induced Changes in Leaf and Root Proteomes of the Wild Tomato, *Solanum chilense*

Zhou, Suping, Roger J. Sauvé, Zong Liu, Sasikiran Reddy, Sarabjit Bhatti, Simon D. Hucko, Tara Fish, and Theodore W. Thannhauser

J. Amer. Soc. Hort. Sci. 136(4):288–302

ASHS Scholar



Lauren Garcia
Texas A&M University

According to **Lauren Garcia**, “My love of horticulture started at a young age, though I did not realize it. I became enthralled with Vincent Van Gogh’s artwork, his depiction of flowers, countryside, and trees. It was not until high school that I realized I wanted to create such designs not on palette with paint, but in reality through the utilization of plant life, soil, and human influence. This desire to create art in landscapes soon led me to begin a degree in landscape architecture.

Yet something was missing, so in my sophomore year I added another degree—horticulture. I want the art I create to impact lives, for others to learn, and to create escapes from everyday life. While visiting the Dallas Arboretum, I realized the gardens accomplished it all. Visitors escape the constant strains of life, while learning, gathering with friends, and enjoying an art that is tangible.

Upon graduation, I plan to pursue my Masters in order to one day become a director of education at a public garden. There, I hope to develop and implement a program that encourages involvement from a young age through high school and college and then continues to provide opportunities into post-retirement.

Ultimately my goal is to become the director of a public garden. I invite the opportunity to oversee the diverse operations that public gardens are held responsible for. By working with one another and learning from each other, the public garden as a whole will be better equipped to face the many challenges of tomorrow, such as child education, climate change, and plant preservation.”

The ASHS Scholars Award was established by the ASHS Board of Directors for the purpose of recognizing and supporting scholastic achievement and to encourage career development in horticultural science at the undergraduate level.

ASHS Scholar



Kevin Richard Cope
Utah State University

Kevin Cope is a senior at Utah State University in the Department of Plants, Soils, and Climate. He is dual-majoring in Plant Science (emphasis: Research) and Biology and simultaneously earning minors in Crop Biotechnology and Chemistry. From a very early age, Kevin has had a strong interest in horticulture: as a teenager he grew 5,000 square feet of vegetable gardens, built and managed two small greenhouses at his home in Salem, UT, and took two years of horticulture and AP Biology at his high school. While in high school he also completed his Associate Degree in Science from Utah Valley University (UVU) and was therefore awarded the New Century Scholarship. Kevin's early scholastic achievements made it possible for him to attend college at USU where he is currently a Presidential Scholar and an Undergraduate Research Fellow. This fellowship opened up the doors for him to get involved with undergraduate research.

As a sophomore, he began working with Dr. Larry Rupp, professor of Ornamental Horticulture. With Dr. Rupp, Kevin designed an experimental protocol for vegetatively propagating Utah juniper based on a review of the literature. This research is important because Utah juniper is a candidate for use in drought tolerant landscapes. His initial experiment was successful and he presented his results at the 2011 ASHS conference where he received second place in the Undergraduate Poster Competition. Since then, Kevin has successfully replicated his results and submitted a paper for publication in the *Native Plant Journal* and will attend the International Plant Propagators' Society annual meeting this fall to present his results again.

Part way through his second year at USU, Kevin began working with Dr. Bruce Bugbee, Professor of Crop Physiology. With him he has conducted several experiments with growing plants under light-emitting diodes in order to determine how plant growth and development is affected by different colors of light, particularly blue and green light. His experimental results will be used to determine what light spectrum is ideal for growing plants on the International Space Station. He has presented his results at the American Geophysical Union (AGU) annual meeting, the National Conference for Undergraduate Research (NCUR), and the 2012 Plant Biology Conference hosted by the American Society of Plant Biologists (ASPB). Furthermore, he has submitted a paper to *Hortscience* for publication and plans to submit another to *Plant Physiology* shortly.

Aside from research, Kevin has also been involved with the USU Honors Program and will graduate with Honors in University Studies and Departmental Honors as well. As a continuation of his research with Dr. Bugbee, Kevin is currently completing an Honors Senior Thesis. He is also serving for his second year as the Plant Science Club president at his university and has had the privilege of being a teaching assistant for Plant Propagation (PSC 3700).

Due to his passion for plants and academic drive, Kevin plans to earn a PhD in Plant Science, with an emphasis on crop physiology or biotechnology. After completing graduate school and starting his career, he would like to travel the world as part of his research and help solve agricultural problems that limit food crop productivity internationally. Kevin attributes much of his success to the wonderful opportunities provided him at Utah State University and would like to specially thank both of his research mentors listed above for their never ending support. He is also grateful to ASHS for their support in helping him achieve his academic goals.

2012 ASHS Outstanding Undergraduate Horticulture Students



Andrea Brennan
Purdue
University



Joshua Craver
Mississippi State
University



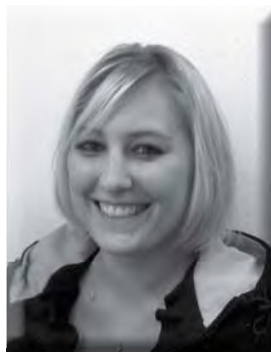
Abigail Debner
North Dakota State
University



Whitney Dirks
University of
Minnesota



Graham Glauber
University of
Vermont



Erin Gunnink
Montana State
University



Heather Hammack
Colorado State
University



Miriam Hawk
Oregon State
University



Christine E. Johns
University of
Florida



Jesse Jones
Delaware Valley
College



Eric Limbird
Middle Tennessee
State University



Tiffany Maughan
Utah State
University

2012 ASHS Outstanding Undergraduate Horticulture Students



Amy Hinkle
Pennsylvania State
University



Victoria Grace Knapp
University of
Tennessee



Joanna Kusilek
University of
Wisconsin–River Falls



Jonathan P. Kressin
New Mexico State
University



Jacob Kuban
Illinois State
University



Madeline Olberg
Cornell University



Craig Parker
University of
Delaware



Katherine Sakaguchi
Kansas State
University



Jacob B. Shreckhise
Virginia Polytechnic
Institute and
State University



Lauren Tuski
Michigan State
University



Jay Paul Wade
University of
Arkansas



Holly Wilson
Texas Tech
University

The American Society for Horticultural Science would like to thank the following people for their efforts in making this a successful conference:

**Annual Conference
Technical Program
Committee**

Dennis Ray, Co-Chair
Carl Sams, Co-Chair
Jackie Burns
Michael Evans
Maren Mochizuki
Kent Kobayashi
Marita Cantwell
Anita Azarenko
Brian Trader
Dean Kopsell

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John R. Clark
William J. Lamont, Jr.
Fred T. Davies
Dewayne L. Ingram

**Fellows Screening
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Robert Trigiano
Elizabeth Baldwin
Michael Wisniewski
Robert Lyons
Chad Finn
Emily Hoover
Caula Beyl
Penny Perkins-Veazie

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Committee**

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Richelle Stafne
Lurline Marsh
Cathie Lavis
Ajay Nair
Curt Rom (*ex officio*)

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Margaret J. McMahon
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Nathan Phillips
Daniel C. Messick
Jeremy Crook

**Graduate Student
Activities Committee**

Robert Mazalewski, Chair
Clare Bowen-O'Conner
Roberto G. Lopez
Justin Moss
Nicole Rud
Sarah Potts

**William A. ("Tex")
Frazier Lecture Series
Selection Committee**

Stephen Love, Chair
Penelope Perkins-Veazie
Ellen T. Paparozzi
Stephanie Harvey
Craig Campbell

**Selection Committees
for Career Awards**

**Extension Educator
Award**

William Terry Kelley, Chair
Richard Buchner
Patricia Skinkis
Gladis Zinati
Mark Ritenour
Patricia Knight
Mary H. Meyer
Marisa Thompson
Rick Heflebower

**Graduate Educator
Award**

Bingru Huang, Chair
Sonali Padhye
Bruce Dunn
Kimberly Moore
Aliya Momotaz
Zora Singh
Wm. Vance Baird
Kent Kobayashi
Sandra Wilson

Industry Scientist Award

Mark Yelanich, Chair
Mike Schnell

Robin Ross
Jeff Norrie
Rod Reed
Eugene Blythe
Fred Hulme
Jim McFerson
Nancy Roe

**International
Horticulturist Award**

Mengmeng Gu, Chair
Ann Marie Thro
Rose Ogutu
Max Cheng
Jinhe Bai
Yi Li
Mary Lu Arpaia
Brian Irish
Maurice Ogutu

Researcher Award

Matthew Whiting, Chair
Fumiomi Takeda
David Obenland
Genhua Niu
John Dole
Patricia Knight
Bruce Schaffer
Donglin Zhang
Jozsef Racsko

**Undergraduate
Educator Award**

Robert Lyons, Chair
Cathie Lavis
David Kopsell
Terri Starman
Kent Kobayashi
Sonali Padhye
Stuart Warren
Alex Niemiera
Zhongchun Jiang

**Screening Committees
for Publication Awards**

**Cross-Commodity
Publication Award**

Rao Mentreddy, Chair
Shawn Wright
John Preece
James Syvertsen
Gladis Zinati
Wenho Dai

Jun Song

**Education Publication
Award**

Mark Rieger, Chair
James McConnell
Terri Starman
John Dole
Glenn Wright
Cynthia McKenney
Suping Zhou

Fruit Publication Award

Gina Fernandez, Chair
Rob Crassweller
Clive Kaiser
Thomas Walters
Rafael Socias i Company
Joshua Klein
Kathleen Anderson

**Ornamentals Publication
Award**

William Sakai, Chair
Ryan Warner
Sven Svenson
Anthony LeBude
Donald Hodel
Thayne Montague
Yunsong Lai

**Extension Publication
Award**

M. Elena Garcia, Chair
Mike Orzolek
Julie Newman
Cheryl Boyer
Janine Hasey
Robert Polomski
Lucy Bradley

**Vegetable Publication
Award**

Elsa Sanchez, Chair
Juan Diaz-Perez
Mike Orzolek
James Shreffler
Milt McGiffen
Tim Coolong
Mari Marutani

Day-by-Day Program Schedule

Annual Conference of the American Society for Horticultural Science

July 31–August 3, 2012

InterContinental Miami Hotel, Miami, Florida

Monday, July 30, 2012

Pre-Conference Events

7:00 AM–6:00 PM

*Tours pick up in front of
the main hotel lobby entrance*

Tour:

Nursery Crop Production and Water Utilization and Management in Florida

Stops along the tour include a bamboo nursery, a container and in-ground tree nursery, and a tropical foliage and succulent plant nursery. The South Florida Water Management District will address the group at lunch on water issues related horticulture crop production in South Florida. The final tour stop features an Algal Turf Scrubber operation that remediates water of excess nutrients while producing a waste product (algal biomass) that can be used as a container substrate after composting.

8:00 AM–6:00 PM

Gusman/Tuttle/Dupont

(invitation-only meeting)

Participatory Workshop for Rosaceae Crop Breeders/Marker Assisted Breeding in Action

Presiding: Cholani Weebadde, Extension Team Leader for RosBREED

RosBREED is a multi-state, multi-institutional project dedicated to genetic improvement of U.S. rosaceous crops by targeted applications of genomics knowledge and tools to accelerate and increase the efficiency of breeding programs. We focus our efforts on the genetic improvement of five Rosaceous crops, apple, peach, strawberry, sweet cherry, and tart cherry. The extension team is charged with disseminating the knowledge generated within the project to the Rosaceae community breeders through a participatory workshop.

Note: this meeting is by invitation only and *not* included in ASHS Conference Registration.

8:00 AM–6:00 PM

Cambridge

NE-1036 Technical Committee Meeting

Presiding: Christopher Walsh

8:30 AM–5:30 PM

*Tours pick up in front of
the main hotel lobby entrance*

Tour:

Invasive Species Tour of Miami Intl. Airport's HSA–USDA Inspection Facilities and Everglades NP Invasive–Restoration Aspects

Tour begins at the Miami International Airport Homeland Security and USDA inspection facilities to see the inspection process for imported vegetative cuttings and cut flowers. After that, the tour goes to Everglades National Park to visit the famous 6,600-acre Hole-in-the-Donut restoration area and also to the Chekika Area of the park where rangers are battling invasive animals and additional invasive plants.

12:00–5:00 PM

Grand Ballroom

Exhibitor Set-up

3:00–5:00 PM

Grand Ballroom

Poster Set-up

4:00–5:30 PM

Satellite Registration Mezzanine

Registration Open

Tuesday, July 31, 2012

7:00 AM–6:00 PM

Satellite Registration Mezzanine

Registration Open

8:00–9:00 AM

Sandringham

Working Group Chairs and Chairs-Elect Business Meeting

Fred Davies, *Chair*

8:00–10:00 AM

Escorial

Crucifer Crop Germplasm Committee

Presiding: Mark Farnham

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

Tuesday, July 31, 2012

8:00–10:00 AM

Trade Room

Extension Breakfast

Advance Registration Required (\$30)

Last year we made a change from the traditional Extension Banquet to an Extension Breakfast and discovered that Extension folks are morning people! We had a wonderful meal and two exciting presentations. We got such wonderful feedback about the event that we are going to do it again this year! So be sure to register for the Extension breakfast. Our speaker this year will be **Ellen Bauske**, Program Coordinator for the University of Georgia Center for Urban Agriculture. She has made effective use of webinars in her program and will share the ‘nuts and bolts’ of doing so. So be sure to sign up to join us at the Extension breakfast. You’ll have time to visit with old friends and make some new ones. You can congratulate your colleagues as we present them with the annual Extension Division awards and learn more about using technology in your extension program. Extension folks are an outgoing, friendly, and upbeat group. So whether you have an extension appointment or not, we welcome you to join us. It’s a good way to start your day and learn about the increasingly important role Extension plays in the world of Horticulture.

8:00–10:00 AM

Alhambra

Leafy Vegetable Crop Germplasm Committee Meeting

Beiquan Mou, *Chair*

8:00–10:00 AM

Windsor

Open Meeting of U.S. Rosaceae Genomics, Genetics and Breeding Executive Committee

Presiding: J.D. Swanson

8:00 AM–12:00 PM

Michaelangelo

NE-1036 Technical Committee Meeting–Day 2

Presiding: Christopher Walsh

8:30–10:00 AM

Cambridge

Administrators Working Group Breakfast

Anita Azarenko, *Chair*; Emily Hoover, *Chair-elect*;
John Peterson, *Secretary*

8:30–2:30 PM

Grand Ballroom

Exhibits Open

9:00–10:00 AM

Sandringham

Moderators Training Session

Chairs: Carl Sams, Dennis Ray

Overview of the processes and duties as a moderator of an oral session held during the ASHS Conference.

9:00–10:00 AM

Raphael

Propagation (PROP) Working Group Business Meeting

Todd West, *Chair*; J. Ryan Stewart, *Chair-elect*

The PROP Working Group exchanges ideas and information on propagation of horticultural crops and to provide interaction between industry and public institutions interested in propagation of horticultural crops.

10:00 AM–12:00 PM

Chopin

ASHS Opening Plenary Session and William A. (“Tex”) Frazier Lecture

Keynote Speaker:

*Ramani Narayan

University Distinguished Professor, Michigan State University,
Department of Chemical Engineering & Materials Science

(See inset on p. 46)

Also during the Opening Plenary Session:

ASHS 2012 Awards Ceremony

Presiding: Dewayne L. Ingram, ASHS President

Presentation of ASHS Professional Awards for 2012 including
Class of Fellows

10:00 AM–12:00 PM

Cambridge

Root and Bulb Vegetable Crop Germplasm Committee (RBV-CGC) Meeting

Chris Cramer, *Chair*

12:00–1:00 PM

Gusman

Reception for Award Recipients (*by invitation*)

12:00–1:00 PM

Escorial

Emeriti (EMER) Working Group Business Meeting

Blanche Dansereau, Arlie Powell, *Chairs*

The EMER Working Group provides a forum for retired horticulturists where some issues of concern to ASHS can be defined, analyzed, and acted on. Goals include: to establish and to identify an accessible reservoir of research, extension, and teaching talent that may be called on for help and guidance.

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

Tuesday, July 31, 2012

12:00–1:00 PM

Raphael

Plant Biotechnology (BTCH) Working Group Business Meeting

Cameron Peace; *Chair*; Kevin Folta, *Chair-elect*;
Jose X. Chaparro, *Secretary*

The BTCH Working Group's goals are to communicate research ideas, techniques, and progress on the emerging techniques in micropropagation, cell selection, protoplast culture, embryo culture, haploidy, gene transfer, and molecular biology as they relate to horticultural crop improvement; and to encourage collaboration among researchers in the fields of plant genetics, germplasm and breeding, stress physiology, tissue culture, growth regulator research, and plant growth and development on problems of concern in improvement and propagation of horticultural crops.

12:00–1:00 PM

Alhambra

Weed Control and Pest Management (WCPM) Working Group Business Meeting

Stacey Bealmear, *Chair*; Teri Gadd, *Chair-elect*;
Kathleen Kelley Anderson, *Secretary*

The WCPM Working Group shares new ideas and other research information concerning pest control in the varied areas of horticultural crop production.

12:00–2:00 PM

Trade Room

Pi Alpha Xi Luncheon and Annual Meeting

12:15–1:00 PM

Grand Ballroom

Graduate Student Poster Competition Session 1

Full competition schedule begins on p. 17

12:15–1:00 PM

Grand Ballroom

**Poster Session:
Computer Applications in Horticulture**

- (095) Reaching Pecan Growers Online: The Northern Pecans Blog
*William Reid
- (096) Use of SMS Technology in Support of Agricultural Decision Making in Florida
*William R. Lusher
- (097) Powering up Multiple Mean Comparisons using the Shaffer-Simulated Method in SAS
*Eugene K. Blythe

- (098) Center for Landscape Water Conservation: An Integrated Approach to Internet-based Outreach
Stefan Sutherin, *Kevin A. Lombard, Rolston St. Hilaire

12:15–1:00 PM

Grand Ballroom

Poster Session: Extension

- (054) Evaluating the Reach and Collaborative Opportunities of a National Social Media Effort
*Karen Jeannette, Terri James, Sarah Baughman, Monica A. David
- (055) Infographics: A Novel Way to Communicate Program Impact
*Cheryl R. Boyer
- (056) eOrganic Builds Information Networks for the Organic Agriculture Community
*Danielle D. Treadwell, Alexandra Stone, Michelle Wander, Heather Darby, James Riddle

12:15–1:00 PM

Grand Ballroom

Poster Session: Growth Chambers and Controlled Environments

- (104) Nighttime Greenhouse VPD Control for Soilless Strawberry Production in Arizona
*Chieri Kubota, Mark A. Kroggel
- (105) Use of Light Emitting Plasma (LEP) Lamps As a New Source of Artificial Light in Growing Lettuce and Tomato
*Chiwon W. Lee, Ju Ho Choi, Lance Brower
- (106) Winter Production of Leafy Greens in New Mexico Using High Tunnels
*Juliette Enfield, Mark E. Uchanski
- (107) Hydroponic Production of Leafy Crops with Alternative Lighting under Ohio Winter Conditions
*Natalie Bumgarner, Peter P. Ling, Wee F. Lee, Robert C. Hansen

12:15–1:00 PM

Grand Ballroom

Poster Session: Growth Regulators in Fruit and Nut Production

- (199) Foliar Nutrient Sprays and Harvest Date Affect Total Phenolics, Antioxidant Activity, and Titratable Acidity of 'Wonderful' Pomegranate
Lauren C. Garner, *John Chater
- (200) Homobrassinolide and Nitrogen Effects on Papaya Seedlings
*J. Pablo Morales-Payan

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

William A. (“Tex”) Frazier Lecture

The Promise of Bioplastics: Understanding Value Proposition of Biobased and Biodegradable Plastics for Reducing Carbon Footprint and Improving Environmental Performance

Tuesday, July 31 • 10:00 AM • Chopin

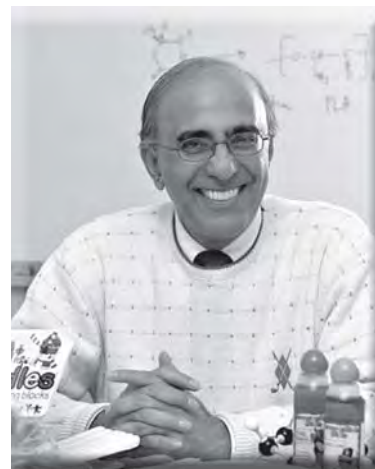
The American Society for Horticultural Science welcomes **Ramani Narayan** as this year’s William A. (“Tex”) Frazier lecturer. Narayan currently is Distinguished Professor at Michigan State University in the Department of Chemical Engineering & Materials Science.

According to Narayan, “Plastic materials are pervasive, universally used, and find applications in all parts of our lives, from agriculture to electronics to medical devices to packaging. From 1.65 million tons in 1950 to 255.5 million tons in 2010 worldwide, plastics usage is expanding and expected to grow at a steady pace of 3% to 4% per year. In particular, rapid industrialization in populous countries such as India and China has resulted in an accelerated pace of plastic materials growth. This is because plastics are lightweight (energy saving), low-cost, readily processable, and command unique and versatile properties that can be tailored for specific applications. It is used extensively in plasticulture as well. However, the sustainability of plastics has become a major issue—specifically the carbon footprint and end-of-life issues.”

This lecture teaches how bioplastics provides a value proposition for reducing the material carbon footprint as well as provide for an environmentally responsible end-of-life soil biodegradability and recycling. The term “bioplastics” encompasses:

- Biobased plastics—Plastics in which the carbon in whole or part comes from biological feedstocks as opposed to petro/fossilfeedstocks—the beginning of life.
- Biodegradable plastics—Using microorganisms present in the disposal or use system to completely remove the plastic substrate from the environmental compartment. However, using the term biodegradable without defining the system and time to complete biodegradation is misleading.

Emerging bioplastic technologies will be reviewed.



Ramani Narayan
Distinguished Professor
Michigan State University

About Ramani Narayan

Ramani Narayan is University Distinguished Professor at Michigan State University in the Department of Chemical Engineering & Materials Science. He has 143 refereed publications, and 27 issued patents in the bioplastics space. He was named Distinguished Professor in 2007, which is the highest honor that can be bestowed on a faculty member by the university. Additional awards and honors include Michigan Green Chemistry Governor’s Award for KTM Industries biodegradable starch packaging and insulation foams, 2011; University Distinguished Faculty Award (2006), Withrow Distinguished Scholar award 2005; and the Fulbright Distinguished Lectureship Chair in Science & Technology Management & Commercialization (University of Lisbon; Portugal). In 2012, Narayan received the Lifetime Achievement Award from the BioEnvironmental Polymer Society.

About the Tex Frazier Lecture Series

The Tex Frazier Lecture series was named in honor of William A. (“Tex”) Frazier, an eminent member of the faculty at Oregon State University. The intent of the lecture series is: “to foster and promote reciprocal liaisons between ASHS and other professional groups; to recognize distinguished scholars and to bring their point of view to ASHS members; and to encourage the development of a holistic philosophy within the horticultural science profession so that ASHS members and students can enjoy the benefits of a broader perspective provided by an understanding of the interrelationship of seemingly diverse disciplines.”

(201) Effects of Selected Biostimulants on Mango Fruit Retention and Size

*J. Pablo Morales-Payan

(202) Mode of Action and Efficacy of Abscisic Acid (S-ABA) As a Postbloom Thinner in Apples

*Jozsef Racsko, Diane Doud Miller

(203) Prevention of Floral Initiation in Highbush Blueberry with Gibberellins

*William S. Lindberg, Eric J. Hanson

(204) Effects of Plant Growth Regulator Applications on Branching, Flowering, and Fruiting of *Jatropha curcas* L.

*Anne Pinheiro Costa, Wagner A. Vendrame, Silvia Nietsche, Jonathan Crane, Kimberly K. Moore

12:15–1:00 PM

Grand Ballroom

Poster Session:

Ornamentals/Landscape & Turf 1

(227) Evaluating Inorganic and Organic Container Media for the Growth of *Zamia pumila*

*Vickie Murphy, Kimberly K. Moore

(228) Protocol for Verifying Salt Tolerance in Ornamentals

*Charles Wajsbrot, Kimberly K. Moore

(229) Greenhouse and Landscape Performance of Nine Native Wildflowers Grown in Varying Containerized Media

Adrienne M. Smith, *Sandra B. Wilson, Mack Thetford, Carrie Reinhardt Adams

(230) Nutrition Rates and Pot Size Affect Stem Caliper, Flowering, and Market Quality of Potted *Adenium obesum*

Kaitlyn McBride, Richard J. Henny, *Jianjun Chen, Terri Mellich, Jietang Zhao

(231) Evaluation of Suspected Drought Tolerant Species in Oklahoma

*Bruce Dunn

(232) Cold Hardiness of Native and Ornamental Grasses in Two Zone Four Locations in North Dakota

*Alan Zuk, Harlene Hatterman-Valenti, Mary Kay Tokach

(233) Morphological and Carbon Allocation Shifts in *Ligustrum japonicum* Thunb. Under Varying Degrees of Water Limitations

Dilma Daniela Silva, *Richard C. Beeson, Jr.

(234) Evaluation of Grevillea and Related Taxa for Use in Western Oregon Urban Landscapes

*Neil Bell, J.E. Altland, J.S. Owen, Heather M. Stoven

12:15–1:00 PM

Grand Ballroom

Poster Session: Plant Nutrient Management 1

(159) Composition of Hydroponic Lettuce: Rate of Change of Composition of Lettuce in Response to Nitrogen Depletion or Resupply

*Martin P.N. Gent

(160) Characterizing the Physiological Response of Tomato to Phosphorus Deficiency and Recovery

*Jonathan Frantz, Scott A. Heckathorn, Sasmita Mishra, Deanna Bobak

(161) Nutrient Density in Lettuce Cultivars Grown with Organic or Chemical Fertilization with Elevated Calcium Concentrations

*Md J. Meagy, Allen V. Barker, Touria El-Jaoual, Geunhwa Jung

(162) Zinc Accumulation in Lettuce Cultivars Grown with Organic or Hoagland Based Nutritional Regimes

*Md J. Meagy, Allen V. Barker, Touria El-Jaoual, Geunhwa Jung

(163) Soybean Symbiotic Nitrogen Fixation and Translocation of Nitrate and Potassium Ions within Plants under Various Rhizobium Inoculation and Early-season Nitrogen Use

*Hong Li, Panchali Katulanda

(164) Sensitivity of Romaine Lettuce to Macro- and Microelement Deficiency

*Grija Vijayan, Samantha Levy, Karen Bateman, Dharma Pitchay

(165) Using the Nugis Software to Track Nutrient Use Trends

*Robert Mikkelsen, P.E. Fixen

(166) Minerals and Metal Content of Four Mango (*Mangifera indica* L.) Cultivar Leaves Grown in South Florida

*Tomas Ayala-Silva, Stewart Reed, Christopher Dunn, Gordon Garry, Osman Gutierrez, Hamide Gubbuk, Sadiye Gozlekci

(167) Management Tools for Fertilization of the ‘Hass’ Avocado

*Richard C. Rosecrance, Carol J. Lovatt, Ben Faber

(168) Seed Germination and Seedling Growth of Tomato and Lettuce As Affected by Vermicompost Tea Treatment

Archana Pant, Theodore Radovich, Norman Arancon, *Nguyen Hue

(169) Physical and Chemical Properties of Pine Barks Used As Root Medium Components in Korea

Eun Young Park, Bo Kyung Shin, *Jong Myung Choi, Chiwon W. Lee

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

12:15–1:00 PM

Grand Ballroom

Poster Session: Postharvest 1

- (001) Easy and Economic Production Techniques of Clear Pear Juice
*Sun-Hee Yim, Jang-Jeon Choi, Jin-Ho Choi, Seung-Hee Nam, Yoon-Kyeong Kim, Han-Chan Lee
- (002) Physiochemical Characterization of Fresh Cut and Juice using Seven Asian Pear Cultivars
Yoon-Kyeong Kim, Sam-seok Kang, *Kyungho Won, Han-Chan Lee, Sherzod Rajametov, Sun-Hee Yim, Seung-Hee Nam
- (003) Multiple Treatments of ‘Cortland’ Apples with 1-Methylcyclopropene (1-MCP) to Improve Control of Superficial Scald
*Xingang Lu, Jackie F. Nock, Chris B. Watkins
- (004) Multiple Smartfresh Applications Prior to Controlled Atmosphere Storage
*Jacqueline F. Nock, Christopher B. Watkins
- (005) Starch Metabolism in Apple Cultivars
*Franziska C. Doerflinger, Chris B. Watkins, William B. Miller
- (006) Application of Pre-storage Short Anaerobic Treatment to Improve Postharvest Quality of ‘Spadona’ Pear
Oleg Feygenberg, Livnat Goldenberg, Ruth Ben-Arie, *Edna Pesis
- (007) Maturity Effects on Flavor of Mandarin Hybrids: A Two-Year Study
*Anne Plotto, Alice Biotteau, Clotilde Leclair, Elizabeth Baldwin, Jinhe Bai, Jan Narciso, Greg McCollum, Fred Gmitter
- (008) Effect of 1-MCP Treatment in Polyphenolics and Antioxidants Compounds in Apple Fruit during Ripening
*Jun Song, Rong Cao, Rymond Yang, Leslie Campbell-Palmer
- (009) Maintaining Fruit Quality and Nutritional Value of Star Ruby Grapefruit by Utilizing Modified Atmosphere Packaging during Prolonged Storage
*Priyanka Chaudhary, G.K. Jayaprakasha, Bhimanagouda S. Patil, Ron Porat
- (010) Mandarin Flavor and Aroma Volatile Composition Are Strongly Influenced by Holding Temperature
*David Obenland, Sue Collin, Jim Sievert, Mary Lu Arpaia
- (011) Candidate Biomarker Discovery and Selection for ‘Granny Smith’ Superficial Scald Risk Management and Diagnosis
Nigel Gapper, Maarten Hertog, Bart Nicolai, Christopher Watkins, James Giovannoni, James Mattheis, Jinwook Lee, Rachel Leisso, David Buchanan, *David Rudell

- (012) Optimum Grading Conditions for Identifying Lesions of Citrus Canker (*Xanthomonas citri* subsp. *citri*, Xcc) on Grapefruit

*Mark A. Ritenour, Jordan Yancy, Lucimeire Pilon, Cuifeng Hu, Jan Narciso, Thomas Burks

12:15–1:00 PM

Grand Ballroom

Poster Session: Teaching Methods

- (081) Toward a National Consensus on Learning Outcomes for the Horticulture Curriculum
*Marvin P. Pritts
- (082) Academic Cultures: Differences in Evaluating Teaching Excellence
*Suzanne Lang, Pat Crawford, Kelly Millenbah, Eva Kassens-Noor, Mike Orth, Eron Drake
- (083) Plants of the Popol Wuh
*Marietta Loehrlein
- (084) Seeking Partners for a Course to Improve Journal Manuscripts Written by Graduate Students
*William R. Graves, James A. Schrader, Richard J. Gladon, Jeffery K. Iles
- (085) Growing Growers Farmer Education and Mentoring Program
*Cary Rivard, Laura Christensen, Katie Nixon, Marlin Bates
- (086) Using Farm Tours to Promote Extension
*Juanita Popenoe, Susan Kelly, Teresa Olczyk
- (087) Implementing a Multi-week Inquiry-based Laboratory Module in Plant Tissue Culture in an Undergraduate Botany Course: Effects of Hormones on Plant Organ Development
*Dimuth Siritunga, Nanette Diffoot, Vivian Navas
- (088) The Development and Implementation of Three Hybrid Units in an Introductory Horticulture Course
*Javier Garces
- (089) Enhancing Student Learning with Increased Mathematics and Quantitative Analysis in Two Horticulture Courses
*Kent D. Kobayashi, Kauahi Perez
- (090) Student Perceptions of an Online Collaborative Landscape Design Project
*Michael Mohny, Martin McGann, Dan T. Stearns
- (091) Developing and Expanding Integrated Pest Management Education in Southern Nevada
*Angela M. O’Callaghan, M.L. Robinson

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12:15—1:00 PM

Grand Ballroom

Poster Session: Temperate Tree Nut Crops

- (193) White Delight Peach Series: Medium Chill, Low-acid, White-fleshed Peach Cultivars
*David H. Byrne
- (195) The Kentucky Eastern Filbert Blight Resistant Hazelnut Trial
*Kirk William Pomper, Sheri B. Crabtree, Jeremiah D. Lowe, Shawn Wright, Martin Stone
- (196) ‘Zinner’ and ‘McMillan’ Pecan Cultivars Perform Well in South Georgia Trials
*Patrick J. Conner
- (197) Dormancy Weather Conditions on Commercial Nut Yield of Pecans Growing under Subtropical Conditions
*Humberto Nunez, José Grageda, Gerardo Martínez, Jesus Arreola, Arnulfo Marquez
- (198) Shoot Fruiting Status, Leaf Nitrogen, and Photosynthesis During Kernel Fill in ‘Western’ Pecan
*Richard Heerema, Rolston St. Hilaire

12:15–1:00 PM

Grand Ballroom

Poster Session: Vegetable Breeding

- (363) Identification of Lettuce Germplasm Lines Resistant to Banded Cucumber Beetle
*Huangjun Lu, Gregg Nuessly, Alan Wright
- (364) Development and Application of a Suite of Non-pungency Markers for the *Pun1* Gene in Pepper (*Capsicum* spp.)
*Lindsay E. Wyatt, Nancy T. Eannetta, Giulia M. Stellari, Michael Mazourek
- (365) Identification and Mapping of QTL Affecting Antioxidant Compounds in Cherry Tomato
*In Ki Ham, Soon Oh Park, Man Hyun Jo, Su Ryun Choi, Tae Il Kim, Mi Kyoung Won, Eun Mo Lee
- (366) Evaluation of Germplasm and SSR Markers for Marker-Assisted Backcross in Tomato
*Younghoon Park, Beunggu Son, Youngwhan Choi, Jumsoon Kang, Yongjae Lee, Jeongmin Suh
- (367) Identification of Drought-induced Root Proteome in a Wild Tomato Species (*Solanum chilense*) using Isobaric Tags for Relative and Absolute Quantitation Proteomics Analysis
*Suping Zhou, Jing Zhou, Marsha Palmer, Tara Fish, Kevin Howe, Theodore W. Thannhauser
- (368) Performance of Current Broccoli Varieties under Eastern U.S. Conditions
Phillip Griffiths, *Mark W. Farnham, Mark Hutton, Jeanine Davis, Wythe Morris, Thomas Björkman

- (370) Different Expression of Root Aquaporin Genes Between Dutch ‘Dundee’ and Japanese ‘Reiyo’ Tomato Seedlings

Ryo Mitsuhashi, *Takumi Sakayori, Kenji Nashima, Katsuhiko Shiratake, Takashi Ikeda

12:15–1:00 PM

Grand Ballroom

Poster Session: Viticulture and Small Fruits 1

- (271) *Diospyros lotus* L. ‘Emperor Bean’
Jianmin Fu, Fangdong Li, Lanying Du, *Donglin Zhang
- (272) Understanding the Ripening Chemistry of Cold Climate Wine Grape Cultivars to Predict Optimal Harvest Times
*Luke L. Haggerty, Mikel R. Roe, Adrian D. Hegeman, Kathryn L. Cook, James J. Luby
- (273) Effect of Nitrogen Application on Mineral Nutrients, Vigor, and Yield under Crop Forcing in a Warm Region to Produce Cool Climate Quality Fruit
*Sanliang Gu, Brodie McCarthy, Hemant Gohil
- (274) Genetic Characterization of *Vitis californica* and *V. girdiana*
*John Preece, Gerald S. Dangl, Andrew Walker
- (275) Effect of Salicylic Acid on Physiological Characteristics Related to Leaf Senescence Under Low Temperatures in Kyoho Grapevines
*Muming Cao, Guopin Chen, Taile Xie, Rende Wen, Xiongjun Cao, Hongyan Li
- (276) FamO28-22-5: A Potential Red Wine Muscadine Selection for Florida
Zhongbo Ren, *Jiang Lu, Xia Xu, Fitz Bradley
- (277) Comparison of Vegetative Growth, Cropping Potential, and Fruit Quality of Selected American and French–American Hybrid Bunch Grape Cultivars and Advanced Selections in Alabama
*Yilanna Hu, Elina D. Coneva, Edgar Vinson, John R. Clark, Raymond Kessler, Jr., James Spiers, Joyce Ducar, Arnold W. Caylor
- (278) Where’s the Grape? High Elevation Grape Trials in Northwest New Mexico
*Kevin Lombard, Bernd Maier, Michael K. O’Neill
- (279) Varietal Response of Grapes to Captan with Emulsifiable Concentrate
*Daniel Ward, W. Cowgill, P.V. Oudemans, G.C. Pavlis, P. Nitzsche
- (280) Effect of Oxygen on Growth and Biofilm Formation of *Xylella fastidiosa* in Defined Media
Anthony Shriner, *Peter C. Andersen

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12:15–1:00 PM

Grand Ballroom

Poster Session:

Waste Utilization in Horticulture

(114) The Effects of Composted Insect Rearing Waste on Radish, Squash, and Green Bean

*Stewart Reed, Nall Moonilall, Nancy D. Epsky, Robert R. Heath, Ricardo Joseph

(115) An Economic Analysis of a University Educational Vermicomposting System—Bobcat Blend

*John Montoya, Jr., Tina Marie Waliczek, Jean-Marc Gandonou

(116) 454 Pyrosequencing Analysis of Bacterial Communities in Dairy Manure After Ten Days, Three Months, Six Months, and Nine Months of Composting

A. Jeanne Knerr, *Robert R. Tripepi

12:30–1:30 PM

Grand Ballroom

Undergraduate Poster Competition

(187) Evaluation of Sapodilla Cultivars

*Bianca C. Bonilla, Richard J. Campbell, Noris Ledesma, Bradley C. Bennett

(188) Response of Two Varieties of Sweet Potato to e-Brassinolide and Propiconazole

*Labaran A. Lawal, Brittany McClure, Devi Prasad V. Potluri

(189) Computer Aided Evaluation of *Rhododendron calendulaceum* Early Seedling Growth Parameters in Relation to Soilless Media

*Eric J. Limbird, Nathan C. Phillips, Daniel C. Messick

(190) Comparison of Parents with F₁ and F₂ Generations of Sorrel (*Hibiscus sabdariffa*)

*Kenya Emanuel, Khalid Matthew, Thomas W. Zimmerman

(191) Nitrogen Level Influences Shoot Tissue Pigmentation in Two Cultotypes of Purslane (*Portulaca oleracea*)

Dean A. Kopsell, *Kimberly J. Whitlock, Carl E. Sams

(192) Going Full Circle; Developing a Campus Community Garden Linked to a Campus Food Pantry

*Emily M. Crossfield, Samantha Jones, Curt R. Rom

1:00–1:45 PM

Grand Ballroom

**Graduate Student Poster Competition
Session 2**

Full competition schedule begins on p. 17

1:00–1:45 PM

Grand Ballroom

Poster Session: Citrus Crops

(353) Response of Government and the Citrus Industry to the Discovery of Asian Citrus Psyllid in Arizona

*Glenn C. Wright, G. John Caravetta

(354) Quantitative Real Time PCR Analysis to Estimate Gene Expression Levels and Transgene Copy Number of Transgenic Citrus Plants Containing Putative Disease Resistance or Insecticidal Genes

*Manjul Dutt, Raquel Campos Herrera, Larry W. Duncan, Jude W. Grosser

(355) Characterization of Commercial and Exotic Citrus for Flavonoid Content in Mature and Immature Fruit

*John Balles, Robert R. Krueger, Amit Chandra, Kathryn Persons

(356) Influence of Production Practices and Storage on Grapefruit Carotenoids, Limonoids and Fruit Quality Attributes

*Kranthi K. Chebrolu, G.K. Jayaprakasha, John L. Jifon, Bhimanagouda S. Patil

(357) Quantification of ‘Candidatus Liberibacter Asiaticus’ in Fruit Tissues of *Citrus aurantifolia* Christ. (Swingle)

*Salvador Guzmán-González, Valadez-Ramírez Pedro, Buenrostro-Nava Marco-Tulio, Manzo-Sánchez Gilberto, Manuel Robles-Gonzalez, José-Joaquín Velázquez-Monreal

(358) Interaction of Soil-applied Fertilizer on Huanglongbing Development in New Growth Flushes of Sweet Orange

*Utpal Handique, Robert C. Ebel, Kelly M. Morgan

(359) Regulating Citrus Tree Growth with Salicylic Acid

*Marina Burani Arouca, Timothy M. Spann

(360) Phloem Anatomy of Citrus Trees: Healthy versus Greening

*Ed Etxeberria, Cody Narciso

(361) Callose Predominates Over Phloem Protein2 in Citrus Phloem Plugging from Huanglongbing

*Leo Gene Albrigo, Diann Achor

(362) Economic Impact of Mild Strains of Citrus Tristeza Virus

*Neil O’Connell, Ann D. Seymore

1:00–1:45 PM

Grand Ballroom

**Poster Session: Consumer Horticulture and
Master Gardeners**

(049) Characteristics and Volunteering Behaviors of Purdue Master Gardener Interns and Master Gardeners

*Elizabeth Gall, Mark A. Tucker, Steven K. McKinley, Brenda Rose Lerner, Kathryn S. Orvis

Tuesday, July 31, 2012

- (050) Changing the Vegetable Garden Paradigm
*Gary R. Bachman, Christine E. Coker
- (051) Mobile Irrigation Lab . . . Model Lab for SWFWMD
*Dianne Dilger Jacobson
- (052) Changing Attitudes in Home Landscaping and Gardening As a Result of Master Gardener Sponsored Garden Tours
*Kelly Young, Kristen Wagner, Linda Thielen
- (053) Fruit Quality Preference and Availability of Quality Fruit: A Case Study with 'Honeycrisp' Apple
*Diane Doud Miller, Jozsef Racsko
- (213) Detecting Physiological Water Stress in Southern New Mexico Pecan Orchards using Remote Sensing
*Yahia A. Othman, Caiti Steele, Cameron Radosevich, Richard J. Heerema, Rolston St. Hilaire
- (214) Electrical Responses of Walnuts Trees to Periods of Light and Darkness
*Pilar M. Gil, Jorge Saavedra, Bruce Schaffer, Jorge Pérez, Rosa Navarro
- (215) Gene Expression Analysis in Garlic Sprouts from Seed Cloves Stored At Different Temperatures
Karla Zavala-Gutierrez, Ramón Guevara-González, *Edmundo Mercado-Silva, Sr.

1:00–1:45 PM

Grand Ballroom

Poster Session:

Environmental Stress Physiology

- (205) Irreversible Commitment to Flowering in Two Mango Cultivars
Samuel Salazar-Garcia, Sr., José González-Valdivia, Sergio O. Álvarez-López, Luis E. Cossio-Vargas, Martha E. Ibarra-Estrada, *Ricardo Goenaga
- (206) Modeling Carbon Gain and Plant Growth of Lettuce (*Lactuca sativa*) under Ethylene and Hypobaric Environments for NASA Advanced Life Support (ALS) Systems
*Fred T. Davies, Chuanjiu He
- (207) Using an Apple Microarray to Characterize the CBF-Regulon in Transgenic 'M.26' Apple Trees Overexpressing a Peach CBF Gene
*Michael Wisniewski, John Norelli, Artlip Timothy, Schuyler S. Korban, John Phillips
- (208) CBF Gene Expression in Peach Leaf and Bark Tissues Is Gated by a Circadian Clock
*Michael Wisniewski, Carole Bassett, John Norelli, Timothy Artlip
- (209) High Temperature Induced Morphological and Oxidative Changes in Different Citrus Genotypes
*Naveen Kumar, Robert C. Ebel
- (210) Silicon Drenches Improve Drought Stress Tolerance in Poplar
*Michal Moyal Ben Zvi, Cankui Zhang, Neil Mattson
- (211) Impact of Kaolin Particle Film and Water Deficit on Water Use Efficiency, Morphological Leaves Characteristics and Growth in Cape Gooseberry Plants
Sergio Segura, Andres Uribe, Juan Carlos Melgar, *Augusto Ramirez-Godoy, Hermann Restrepo-Diaz
- (212) Wyoming Coal Bed Methane (CBM) Water Effect on Japanese Mint
*Valtcho Jeliakov, Charles Cantrell, Tess Astatkie, Peter Stahl, Ekaterina Jeliakov

1:00–1:45 PM

Grand Ballroom

Poster Session: Genetics and Germplasm 1

- (402) Selection of Muskmelon with Resistance to *Monosporascus cannonballus* In Vitro
Hee-Ju Lee, Young-Hee Lee, Yun-Chan Huh, Woo-Moon Lee, Dong-Kum Park, Sang Gyu Lee, Moo-Kyung Yoon, *Chiwon W. Lee
- (403) Assessment of Genetic Diversity and Cyanogenic Glucoside Content Among Lima Bean Landraces from the Dominican Republic, Haiti, and Puerto Rico
Maria Montero-Rojas, Morthemer Ortiz, Jim Beaver, *Dimuth Siritunga
- (404) Agricultural Characteristics and SSR Profiling of Kidney Bean Landraces From Korea and Bulgaria
*Yu Mi Choi, Jeongran Lee, Jeong-ro Lee, Gi-An Lee, Gyu-Taek Cho, On Suk Hur, Myeong-Cheol Lee, Chang-yung Kim, Hyung-Jin Baek
- (405) Genome Size, Base Composition, and Ploidy Analysis in Scarlet Eggplant (*Solanum aethiopicum* L.)
*Hamidou F. Sakhanokho, Nurul Islam-Faridi
- (406) Molecular Marker Screening for Resistance to 4 Major Disease of Tomato Germplasm in Korea
*On Sook Hur, Ho Cheol Ko, Na Young Ro, Hye Kyung Rhee, Jae Gyun Gwag, Yun Chan Huh
- (407) New Sources of Resistance to Cucurbit Powdery Mildew in Melon
*James D. McCreight, Michael D. Coffey
- (408) Assessing Skinning Resistance in Sweetpotato
*Reeve Legendre, Don R. La Bonte, Ramon A. Arancibia
- (409) Evaluation of Lettuce Collections for Heat Tolerance
*Abbas Lafta, BeiQuan Mou
- (410) Lettuce Yields and Metabolites Found in 45 Cultivars Grown under Best Management Practices
*William Afton, Kathryn Fontenot, Jeff Scott Kuehny, Carl Motsenbocker
- (411) Topset Diversity in the USDA National Plant Germplasm System's *Allium sativum* Collection
*Barbara Hellier

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1:00–1:45 PM

Grand Ballroom

Poster Session: Organic Horticulture 1

- (066) A Comparative Analysis of Organic Retail Market Trends in Gainesville, Florida
*Meagan J. Collins, Xin Zhao, Zhifeng Gao
- (067) Influence of Mycorrhizae and Poultry Compost on Tatsoi Growth, Development, and Microbial Food Safety
*Lurline Marsh, Fawzy M. Hashem, Brett D. Smith, Corrie P. Cotton, Patricia Millner
- (068) Fish Emulsion: A Liquid Organic Fertilizer for Healthy Seedling Establishment
*Karen Bateman, Samantha Levy, Grija Levy, Dharma Pitchay
- (069) Use of Organic Fertilizers and Biofertilizers As Alternative for Sandy Soil Amelioration and the Effect on Carica Papaya Plant Growth
*Jose Gerardo Lopez-Aguirre, Candido Mendoza-Perez, María Carolina Hurtado-Zamora, Javier Farias-Larios, Sergio Aguilar-Espinosa, Maria del Rocío Flores-Bello
- (070) Grafting Methods and Rootstocks for Organic and Heirloom Tomato Growers in the Midwest
*Sarah Masterson, Cary Rivard, Megan Kennelly, Rhonda Janke
- (071) Antioxidant Activity and Whitening Effect of Various Tomato Plant Parts
*Bong-yun Oh, Hee-chul Hong, Mi-Ae Bang, You-Seok Lee, Seung-Hee Nam, Jeong-Hwa Kang, Dong-Sub Kim, Hae-Young Na, Changhoo Chun, Jong-Bun Seo, Kyung-Ju Jung, Kyeong-Ju Choi
- (072) Physiochemical Properties of *Lycium chinense* Treated Seawater
*Bong-Yun Oh, Jeong-Hwa Kang, You-Seok Lee, Seung-Hee Nam, Myeong-Seok Kim, Kyung-Ju Jung, Kyeng-Ju Choi, Min-Su Park

1:00–1:45 PM

Grand Ballroom

Poster Session: Pomology

- (300) Restricting Basipetal Transport of Auxin in the Rootstock Stem of Composite ‘Royal Gala’ Apple Trees Reduces Root Growth and Cytokinins in the Xylem Sap
*Ben Van Hooijdonk, David Woolley, Ian Warrington, D. Stuart Tustin
- (301) Enzymatic Solubilization of Asian Pear Flesh and Its Functional Characterization
*Seung-Hee Nam, Sun-Hee Yim, Jang-Hyun Park, Hee-Jeong Chae, Yoo-Suk Lee, Kyung-Ju Choi
- (302) Fruit and Shoot Growth in Exposed and Shaded ‘Red

Sensation’ Pear Branches

*Patricia I. Garriz, Graciela M. Colavita, Laura I. Vita

- (303) Reflective Fabric Improves ‘Bartlett’ and ‘D’anjou’ Pear Yield
*Todd Einhorn, Rachel B. Elkins, Janet Turner
- (304) Cropload Management and Appropriate Harvest Timing Improves Final Fruit Size and Fruit Quality of U.S. 71655-014, a New Fire Blight Resistant European Pear Selection
*Todd Einhorn, Janet Turner, Debra Laraway, Richard L. Bell
- (305) On-tree Bagging As a Production Technique for Peach Orchards in the Humid Eastern United States
*Daniel L. Ward
- (306) Effect of Nitrogen Rates on Bud Distribution in Subtropical Peaches
*Mercy A. Olmstead
- (307) Effects of Nitrogen Control by Soil Injection of Ethyl Alcohol on Freezing Injury and Starch Content in Peach Tree
*Ikjei Kim, Yeuseok Kwon, Kiueol Lee
- (308) Occurrence of Phyllosticta Fungal Fruit Spot and Fruit Cracking in Pawpaw (*Asimina triloba*)
*Sheri B. Crabtree, Kirk William Pomper, Jeremiah Lowe
- (309) Processed Pulp Recovery Rate in Three North American Pawpaw Cultivars after Periods of Drought or High Rainfall during the Growing Season
*Brandon May, Sheri B. Crabtree, Kirk W. Pomper, Jeremiah D. Lowe
- (310) Jujube Flowering and Pollen Germination
*Shengrui Yao
- (311) Effect of Long Term LED Lighting on the Photosynthesis, Structure of Mesophyll Tissue and Fruit Quality of ‘Fuji’/M.26 Apple Cultivar
*Seok-Beom Kang, Yang-Yik Song, Moo-Yong Park, Hun-Joong Kweon, Jinsu Lee
- (312) Pollen Tube Growth Model Improves Apple Bloom Thinning
*Gregory Michael Peck, Keith S. Yoder, Leon Combs

1:00–1:45 PM

Grand Ballroom

Poster Session: Tropical Horticultural Crops

- (345) Chlorophyll a + b Content and Chlorophyll Fluorescence in Avocado
*Stewart Reed, Raymond Schnell, J. Michael Moore, Christopher Dunn, Brooke Borgert, Jacob Barkow
- (346) Fruit Quality Traits and Yield of Six Lychee Cultivars Grown At Two Locations in Puerto Rico
*Ricardo Goenaga, David Jenkins, Angel Marrero

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Tuesday, July 31, 2012

- (347) Growth and Yield Response of Eight Hot Pepper Varieties in the U.S. Virgin Islands
*Dilip Nandwani, Vanessa Forbes
- (348) Using An Organic Biostimulant to Accelerate Growth of Breadfruit Plants for Rootstock
*J. Pablo Morales-Payan
- (349) Characteristics of Sorrel Parents, F₁ and F₂ Generations
*Thomas W. Zimmerman, Anna Bastien-Gilbert, Jewelle Ible
- (350) A Sorrel Wilt Disease Affecting the U.S. Virgin Islands
*Aaron J. Palmateer, Thomas W. Zimmerman
- (351) Early Detection and Suppression of Laurel Wilt, Caused by *Raffaelea lauricola*, in the Primary Commercial Avocado Production Area in Florida
*Jonathan H. Crane, Jorge E. Peña, Rancy C. Ploetz, Edward A. Evans
- (352) Nitrogen Fertilization Guidelines for Non-bearing 'Medjool' Date Palms
*Glenn C. Wright

1:00–1:45 PM

Grand Ballroom

Poster Session: Vegetable Crops Management 1

- (323) Pennsylvania Statewide Cultivar Evaluation Program
*Elsa Sanchez, Thomas Butzler, Timothy Elkner, Lee Stivers
- (324) Eastern Broccoli Supply Chain Model
Shady S. Atallah, Miguel Gómez, *Thomas Björkman
- (325) Impact of Legume Cover Crop, Tillage and Inorganic Nitrogen Across Two Years on Leaf Area Index and Above Ground Biomass Yields of Two Sweet Corn Cultivars
*Wayne F. Whitehead, Bharat P. Singh
- (326) The Effects of Tillage, Legume Cover Crop, and Synthetic Nitrogen on Yield Response and Water Use of Two Sweet Corn Cultivars Over Two Years
*Wayne F. Whitehead, Bharat P. Singh
- (327) Estimation of Chinese Cabbage Yield As Affected by Planting Date and Nitrogen Fertilization for Spring Production
*Sang Gyu Lee, Tae Cheol Seo, Yoon Ah Jang, Jun Gu Lee, Chun Woo Nam, Chang Sun Choi, Young Chul Um, Chiwon W. Lee
- (328) The Organic Liquid Manure with Agricultural By-products for Tomato in Fertigated Cultivation and Manufacturing Method of the Same
*Jongock Jeon, Jaeho Park, Taejung Kim
- (329) Cover Cropping Strategies for Year-round Weed Control on Mixed Vegetable Farms in Southern New England
*Jeff Pieper, Rebecca N. Brown

- (330) Using Compost to Feed the Soil Community and Meet the Nutrient Requirements of Sweet Corn, Is It Realistic
Mark Hutchinson, David T. Handley, *Mark Hutton, Tori Lee Jackson, Will Brinton
- (331) Evaluation of Yield and Quality of Cucumber Grown in Low-tech Greenhouse
Roque Martinez-Vazquez, *Lorenzo Jarquin-Enriquez, Oscar Manuel Portilla-Rivera
- (332) Deficit Irrigation Effects on Gas Exchange, Root Growth, and Fruit Yield of Melons
*Sat Pal Sharma, Daniel I. Leskovar, Kevin M. Crosby, Astrid Volder
- (333) Determining the Economic Feasibility of Implementing Irrigation on Small-scale Farming Systems
*Rockiell Woods, Gretchen Sassenrath, Wesley Whittaker
- (334) Managing Nutrients in Outdoor Floating Hydroponic Systems for Lettuce Production
*Ronnie Schnell, Robert C. Hochmuth

1:00–2:00 PM

Escorial

Awards Committee Meeting

Mary M. Peet, *Chair*; John R. Clark; William J. Lamont, Jr. ; Fred T. Davies; Dewayne L. Ingram

1:00–2:00 PM

Michaelangelo

Growth Chambers and Controlled Environments (CE) Working Group Business Meeting

Robert Morrow, *Chair*; Gioia Massa, *Chair-elect*; Gioia Massa, *Secretary*

The objectives of the CE Working Group are to provide leadership for horticulturists in the use of growth chambers and controlled environments and to provide a means for cooperative research and teaching among those using or interested in such facilities in their programs.

1:00–2:00 PM

Raphael

Marketing and Economics (MKEC) Working Group Business Meeting

Jennifer Dennis, *Chair*; Bridget Behe, *Secretary*

The MKCE Working Group brings together workers having horticultural and economic interests in the marketing of horticultural crops. The group's objectives include improving marketing techniques for horticultural crops and to expand markets.

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

Tuesday, July 31, 2012

1:00–2:00 PM

Alhambra

Seed and Stand Establishment (SSEST) Working Group Business Meeting

Juan Carlos Diaz-Perez, *Chair*, Dharmalingam Pitchay, *Chair-elect*; Aziz Baameur, *Secretary*

The SSEST Working Group brings together those interested in seed technology, seed storage, seed production, seed physiology, seed pathology, plant breeding, and all other phases of research, education, or extension related to horticultural seeds and seed quality to discuss problems, new methods, technologies, and other aspects related to these areas. The group promotes a strong union of public- and private-sector workers interested in seeds and seed crops and promotes activities related to the establishment of a uniform and vigorous crop from seed, transplant material, or vegetative propagules, with emphasis on seed treatments, soil amendments, transplanting techniques, and other practices that might lead to stand enhancement in the field or greenhouse

1:30–2:00 PM

Windsor

Oral Session: Undergraduate Oral Competition

1:30–1:45 PM A Potential Solution to the Nitrogen Dilemma in Modern Agriculture

*Clarice Esch, Martin Stone

1:45–3:45 PM

Balmoral

Workshop: Recent Advances in Palm Horticulture

Sponsor: Ornamentals Landscape and Turf (O/LT) Working Group

Moderator: Donald R. Hodel, drhodel@ucdavis.edu

Palms (family *Arecaceae*) form a natural and easily distinguishable group of plants and are increasingly common in outdoor landscapes in tropical, subtropical, and warm temperate regions and indoors everywhere. However, palms differ significantly from other woody landscape plants in their cultural needs and unconventional management practices. Fortunately, the last 25 years, and especially the last five years, have seen a rapid increase in palm horticulture research. The objectives of this workshop are to bring together the most recent research-based information on palm horticulture for the landscape and nursery industries. This information is applicable to horticulturists, growers, extension agents, educators, and other professionals in the landscape and nursery industries.

1:45–2:00 PM The Effects of Fertilization and Severe Pruning on Canopy Size and Potassium Deficiency Severity in Sabal Palmetto

*Timothy K. Broschat

2:00–2:15 PM The Effect of Leaf Removal and Tie up on Water Loss and Estimated Crop Coefficients of Juvenile, Trunkless, Containerized Canary Island Date Palms and Queen Palms

*Donald R. Hodel, Dennis R. Pittenger, A. James Downer

2:15–2:30 PM The Effect of Sand Backfill on Transplanted Palms

*Donald R. Hodel, Maren Mochizuki, Dennis R. Pittenger, A. James Downer

2:30–2:45 PM The Effect of Glyphosate on Suppressing Basal Suckers on Mediterranean Fan Palm

*Donald R. Hodel, Maren J. Mochizuki, Michael Marika

2:45–3:00 PM The Effect of Container Type on the Nursery Growth of Kentia Palms and King Palms

*Maren Mochizuki, Donald R. Hodel, A. James Downer

3:00–3:15 PM How Many Hosts Can *Fusarium oxysporum* ff. spp. *canariensis* and *palmarum* Affect?

*Monica L. Elliott

3:15–3:30 PM Susceptibility of Landscape Palms to *Fusarium oxysporum* f.sp. *canariensis* under Nitrate and Ammoniacal Fertilization

*A. James Downer, Donald R. Hodel, Deborah M. Mathews, Dennis R. Pittenger

3:30–3:45 PM Palm Phytoplasmas in Florida and the Caribbean Basin

*Monica L. Elliott, Nigel A. Harrison

2:00–3:00 PM

Windsor

Association of Collegiate Branches (ACB) Annual Business Meeting

Each year, ACB officers and members meet with ASHS at the Annual Conference. ASHS, in its role as the ACB's parent organization, provides the ACB with administrative help and guidance as well as providing financial support for some of the ACB activities. Each year the ACB, along with the Society, sponsors a paper and poster competition. The competition, which offers a plaque-mounted certificate for the winners, is held at the ASHS Annual Conference. The Horticultural Commodity Judging Contest and Plant Identification Contest are held at each ASHS Annual Conference. Regional and national meetings also allow students the opportunity to socialize with students of other backgrounds and horticultural experiences. In addition to national and regional meetings, the ACB and ASHS also sponsor several monetary and nonmonetary awards to undergraduates.

The ACB is broken into four regional groups: Southern, Western, Northeastern, and Mid-Atlantic. Each region has its own constitution, officers, and annual meeting.

2012 ACB Officers:

President: Wade Hummer, Mississippi State University

Vice President: Cassie Warren, Texas A&M University

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

Tuesday, July 31, 2012

Secretary/Treasurer: Erin Nardine, Brigham Young University
Communications Officer: Daniel C. Messick, Middle Tennessee State University
Advisor: Tracy Dougher, Montana State University

2:00–3:00 PM Alhambra

Crop Physiology (CRPP) Working Group Business Meeting

Raj Lada, *Chair*; Mark Matthews; *Chair-elect*

The CRPP Working Group provides a cross commodity forum for discussions of the integrative physiology of horticultural crop growth, development, and cropping. Areas of interest include (but are not limited to): patterns of vegetative and reproductive development; crop radiation interception and microclimate; dry matter production and partitioning; cultural and environmental influences on crop physiology and productivity; integration of carbon, water and nutrient physiology; modeling of physiological processes.

2:00–3:00 PM Escorial

Journal of ASHS Editorial Board Meeting

Neal E. De Vos, *Editor in Chief*; Paul W. Bosland; John A. Juvik; Robert N. Trigiano; Ed Etxeberria

2:00–3:00 PM Raphael

Postharvest (PH) Working Group Business Meeting

David Rudell, *Chair*; David Obenland, *Chair-elect*; John Beaulieu, *Secretary*

The PH Working Group exchanges ideas and information relating to postharvest biology and technology of horticultural crops. Objectives include increasing the awareness among other researchers, research administrators, legislators, and the public of the importance of the postharvest aspects of horticulture.

2:00–4:00 PM Cambridge

Extension Division Advisory Council Meeting

Presiding: Jeanine M. Davis, Vice President; All Working Group Chairs and Chairs-elect, Extension Division

2:00–4:00 PM Tuttle

Oral Session: Teaching Methods 1

Moderator: Douglas C. Needham, dneedham@longwoodgardens.org

2:00–2:15 PM The Effect of a School Landscape Project on Environmental Attitudes

*Ann Fleener, Carolyn W. Robinson, Donald J. Eakes, Jeff L. Sibley, Robert Lyons

2:15–2:30 PM Articulation Between Longwood Gardens' Professional Gardener Program and Institutions of Higher Education

*Brian Trader, Douglas C. Needham

2:30–2:45 PM Campus Sustainability—How to Engage Service-learning Students in Programs That Promote Sustainability on Campus

*Carl E. Motsenbocker, Denise Scribner-Newell

2:45–3:00 PM Genesis of a Sensory Garden: Designing a Place for Everyone

*Michael Schnelle, Michael V. Holmes, Dale M. Maronek, Michael W. Shuttic

3:00–3:15 PM Leadership Development for Life Scientists

*Marvin P. Pritts

3:15–3:30 PM Project-based Education in Public Horticulture

*Douglas C. Needham, Brian W. Trader

3:30–3:45 PM Using Student-generated Videos As Learning Tools for Both Horticulture and Collaboration Skills

*Curt Rom

3:45–4:00 PM Marketing GMO Carnations in Floral Design Shops: Student-designed Policy Formulation

*Neil O. Anderson

2:00–6:00 PM Chopin

Colloquium: Advances in Breeding Vegetables and Fruits for Enhanced Nutritional Content

Sponsor: Vegetable Breeding (VGBR) Working Group

Moderator: Dilip Panthee, dilip_panthee@ncsu.edu

The objectives are: 1. Present an historical perspective on crop improvement to enhance nutritional content. 2. Assess the current status and challenges of research aimed at breeding fruits and vegetables for improved nutritional or health promoting attributes. 3. Examine case studies wherein vegetables are currently being bred for altered nutritional or phytonutrient content. 4. Examine case studies wherein fruits are currently being bred for altered nutritional or phytonutrient content. 5. Discuss the potential challenges and opportunities faced by future projects aimed at breeding enhanced nutritional or phytonutrient content.

2:00–2:45 PM Enhancing Intake of Dietary Nutrients From Vegetables and Fruits: How Are We Doing?

*Philipp W. Simon

2:45–3:15 PM Breeding Tomatoes with Higher Flavonoids and Phenolics Content

*James R. Myers, Peter S. Boches, Peter Mes, Brooke Peterschmidt, Todd Dalotto, Carl M. Jones

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

Tuesday, July 31, 2012

- 3:15–3:45 PM Genomics and Genetic Improvement of Health Promoting Constituents of Blueberry
*Allan Brown
- 3:45–4:15 PM The Intersection of Plant Breeding, Human Health, and Nutritional Security: Lessons Learned and Future Perspectives
*Bhimanagouda S. Patil, Kevin Crosby, David Byrne, Kendal Hirschi
- 4:15–4:45 PM The Use of Genetic Markers and Marker-assisted Selection to Improve the Nutritional Content of a Tropical Fruit Crop
*Raymond Schnell
- 4:45–5:15 PM Nutritional Changes in a Vegetable over Time Related to the Improvement of Important Horticultural Traits Using Broccoli As an Example
*Mark W. Farnham, Michael A. Grusak
- 5:15–5:45 PM The Future of Breeding Fruit and Vegetables with Human Health Functionality: Realities, Challenges, and Opportunities
*Irwin L. Goldman

2:00–6:00 PM Theater

**Colloquium:
Biodegradable Plastic Mulches for Specialty Crop Production: Current Status and Future Directions**

Sponsor: Plasticulture (PLAST) Working Group

Moderator: Carol Miles, milesc@wsu.edu

This colloquium will focus on the new multi-disciplinary topic of using biodegradable mulches in specialty crop production systems. It will feature speakers who are (inter)national leaders in horticulture, soil, polymer, textile and socio-economic sciences. Important aspects of product development, field application, grower acceptance, and environmental impact/benefit will be explored and shared.

- 2:00–2:15 PM Biodegradable Plastic Mulches for Specialty Crop Production
*Carol Miles
- 2:15–3:00 PM Understanding the Science of Biodegradability and Exploring Misleading Claims
*Ramani Narayan
- 3:00–3:30 PM Fabricating Biodegradable Mulches
*Douglas Hayes, Larry Wadsworth, Karen Leonas
- 3:30–4:00 PM Biodegradable Mulches and Specialty Crop Production
*Michael D. Orzolek
- 4:00–4:30 PM Evaluating Biodegradable Mulches in Diverse Climates in the U.S.
*A. Wszelaki, Carol Miles, Jeff Martin, Jeremy Cowan, Tom Walters, R. Wallace, Debra Inglis

- 4:30–5:00 PM Biodegradable Mulches and Soil Quality
*J. Moore-Kucera
- 5:00–5:30 PM Biodegradable Plastic Mulches: Barriers and Bridges to Adoption
*Jessica Goldberger, Carol Miles
- 5:30–6:00 PM Discussion and Closing Remarks
*Debra Inglis, Carol Miles

3:00–4:00 PM Alhambra
Citrus Crops (CITR) Working Group Business Meeting

Robert Krueger, *Chair*

The CITR Working Group provides a forum for exchange of ideas between the various specialists in citrus research and citrus extension personnel.

3:00–4:00 PM Raphael
Consumer Horticulture and Master Gardeners (CHMG) Working Group Business Meeting

Pamela Bennett, *Chair*; Ellen Bauske, *Chair-elect*; Janet Carson, *Secretary*

The objectives of the CHMG Working group are to: become familiar with cooperative extension home horticulture programs within the United States; identify and develop the ability to respond to home horticulture information needs; and improve methods of information delivery to home horticulture audiences.

3:00–4:00 PM Escorial
HortTechnology Editorial Board Meeting

Neal E. De Vos, *Editor in Chief*; Robert E. Lyons; Virginia I. Lohr; George J. Hochmuth, II; Michael A. Arnold

3:00–5:00 PM Windsor
Workshop: ASHS Primer

Sponsor: Collegiate Activities Committee

Coordinator: Tracy A.O. Dougher, tracyaod@montana.edu

This workshop is designed to provide basic information on what opportunities are available to students and first-timers attending a national conference.

4:00–5:00 PM Raphael
Fruit Breeding (FRBR) Working Group Business Meeting

Ksenija Gasic, *Chair*; Vance M. Whitaker, *Chair-elect*; Dan Barney, *Secretary*

The FRBR Working Group promotes and coordinates research efforts in the genetics and breeding of fruit crops.

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

Tuesday, July 31, 2012

4:00–5:00 PM

Escorial

Industry Division Advisory Council Meeting

Robert Mikkelsen (Industry Division Vice President), *Chair*;
All Working Group Chairs and Chairs-elect, Industry Division

4:00–5:00 PM

Alhambra

**Ornamentals/Landscape and Turf (O/LT)
Working Group Business Meeting**

Garry McDonald, *Chair*

The objectives of the O/LT Working Group are to study woody (ornamental and native) herbaceous and turf materials with emphasis on plant adaptability, selection, and maintenance requirements and to provide a vehicle for arboreta, botanic gardens, and the landscape industry (architects and contractors) to become more closely allied to ASHS.

4:00–6:00 PM

Balmoral

**Workshop: Master Gardener Volunteer
Program Management and Project Ideas
That Work**

Sponsor: Consumer Horticulture/Master Gardener (CHMG)
Working Group

Moderator: Pamela J. Bennett, bennett.27@cfaes.osu.edu

The objective of this workshop is to share Master Gardener volunteer program management techniques and projects that expand Master Gardener volunteer outreach and lead to increasing Extension's effectiveness as well as developing a portfolio of these efforts.

4:00–4:15 PM Master Gardener Volunteer Project Ideas
That Work

*Dianne Dilger Jacobson, Alison Stoven O'Connor,
Heidi A. Kratsch

4:00–6:00 PM

Sandringham

**Workshop: Public Funding of Horticultural
Science Depends on Us**

Sponsor: National Issues Task Force

This workshop tells the story of how ASHS and its members are making the 2012 Farm Bill friendly to horticultural research and extension. Insight on changes at NIFA that affect horticultural scientists' planning for grant support.

4:15–6:00 PM

Tuttle

Oral Session: Pomology 1

Moderator: Todd Einhorn, todd.einhorn@oregonstate.edu

4:15–4:30 PM Impact of Groundcover Management
Systems (GMSs) on Tree Growth and Yields, and

Soil Erosion and Runoff in a Hillside Avocado
Orchard

*Amaya F. Atucha, Ian Merwin

4:30–4:45 PM Jujube—Chinese Date, a Potential Fruit
Crop in New Mexico

*Shengrui Yao, Steve Guldán

4:45–5:00 PM Effect of Calcium Sources on the Occurrence
of Bitter Pit of Gamhong' /M.9 Apple Cultivar in
Korea

*Seok-Beom Kang, Yang-Yik Song, Moo-Yong Park,
Hun-Joong Kweon, Jinsu Lee

5:00–5:15 PM Cell Wall Composition and Ethylene
Synthesis Are Altered in Transgenic Apple with
Decreased Sorbitol Synthesis

Mingjun Li, Xin Liu, Chris Watkins,
Abhaya M. Dandekar, *Lailiang Cheng

5:15–5:30 PM Suppression of the Expression of C Type
Sucrose Phosphate Synthase via RNAi Decreases
Sucrose Synthesis without Altering Photosynthesis in
Apple Leaves

Jianlei Sun, Fengjuan Feng, Yanzi Zhang,
*Lailiang Cheng

5:30–5:45 PM Applications of Stimplex™, An Extract of
Ascophyllum nodosum, Improve Apple Yield under
Both Water Stress and Fully Irrigated Conditions

*Holly Little, Esmail "Essie" Fallahi

5:45–6:00 PM Cold Hardy Quince Identified in the
USDA Germplasm Collection: Potential Rootstock
Candidates for Pear

*Todd Einhorn, J. Postman, David Gibeaut, Janet Turner

5:00–6:00 PM

Alhambra

**Floriculture (FLOR) Working Group Business
Meeting**

Peg McMahon, *Chair*

The FLOR Working Group's objectives are: to identify problem areas (and propose approaches to resolving them); to develop higher standards of quality; and to share information about activities occurring in floriculture research, education, and extension.

5:00–6:00 PM

Raphael

**Genetics and Germplasm (GG) Working Group
Business Meeting**

Richard Olsen, *Chair*; Brian Irish, *Chair-elect*;
Cameron Peace, *Secretary*

The GG Working Group provides a forum for plant breeders, geneticists, botanists, general horticulturists, and others interested in collecting, preserving, evaluating, distributing, and/or using germplasm in or for research or teaching programs.

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

Wednesday, August 1, 2012

5:00–6:00 PM

Escorial

Horticultural Landmark Selection Committee Meeting

Chuck Ingels, *Chair*; John Masiunas; Patricia Holloway; Martin Stone; Jeff Olsen; Mary Lewnes Albrecht, *Archivist/Historian*

5:00–6:00 PM

Cambridge

Scholarship Awards Committee Meeting

Patricia Knight, *Chair*; Jayesh Samtani; Richelle Stafne; Lurline Marsh; Cathie Lavis; Ajay Nair; Curt R. Rom, *ASHS Finance Committee Chair*

6:00–7:00 PM

Bayfront Room

Welcome Reception

Wednesday, August 1

7:00–9:00 AM

Bayfront B

Horticultural Commodity Judging Contest and Plant Identification Contest Set-up

7:30 AM–5:00 PM Satellite Registration Mezzanine

Registration Open

8:00–9:00 AM

Cambridge

Fellows Screening Committee Meeting

Jeffrey K. Brecht, *Chair*; Robert Trigiano; Elizabeth Baldwin; Michael Wisniewski; Robert Lyons; Chad Finn; Emily Hoover; Caula Beyl; Penelope Perkins-Veazie; Dewayne L. Ingram, *ASHS President*

8:00–9:00 AM

Raphael

International Horticultural Consultants (ICON) Working Group Business Meeting

Jose Pablo Morales-Payan, *Chair*; Mary Beth Henry, *Chair-elect*

The objectives of this group are: to discuss the credentials and accreditation of international consultants and sources of information, backstopping, teamwork, training, experience, and communications necessary for effective employment as an international consultant in either the private or public sector; and to develop a directory of international horticultural consultants in ASHS and their sources of information.

8:00–9:00 AM

Michaelangelo

Teaching Methods (TCHG) Working Group Business Meeting

Kimberly Moore, *Chair*; David Kopsell, *Chair-elect*; Cindy Haynes, *Secretary*

The working Group provides information and an area of interaction among educators at all levels and extension personnel interested in teaching, with emphasis on teaching procedures, effective use of photographic equipment and materials, and lists of source materials.

8:00–9:30 AM

Escorial

Industry Division Breakfast

Advance registration required. (\$30)

8:00–9:30 AM

Balmoral

Oral Session: Plasticulture

Moderator: Christine M. Bradish, cmbradis@ncsu.edu

8:00–8:15 AM Comparison of Health-beneficial Secondary Metabolites in Red Raspberry Grown under Field and High Tunnel Production Systems

*Christine M. Bradish, Penelope Perkins-Veazie, Gina Fernandez, Guoying Ma

8:15–8:30 AM Season Extension Strawberry Cultivar Trial in Two Climatically Diverse Regions in Arkansas

*M. Elena Garcia, David Dickey, Clay Wingfield, Christopher I. Vincent

8:30–8:45 AM High Quality Winter Strawberry Production in High Tunnels

*Jeff Martin, A. Wszelaki

8:45–9:00 AM Row Cover and Planting Date Interaction in High Tunnel Strawberry Production

Daniel Ward, *Wesley L. Kline, C. Andrew Wyenandt, Jenny Carleo

9:00–9:15 AM We Grew Tomatoes in January without Heat, But Don't Tell the Farmers

*William Evans, Vasile Cerven, Guihong Bi, Kenneth Hood, Randy Little, Mengmeng Gu

9:15–9:30 AM Lessons Learned Field Testing Low-cost High Tunnels in West Virginia

*Barbara E. Liedl, Terry W. Hudson

8:00–9:45 AM

Flagler

Oral Session: Plant Nutrient Management 1

Moderator: Guodong Liu, guodong@ufl.edu

8:00–8:15 AM Influence of Vermicompost on Growth, Antioxidant Content, and Nitrate Concentration of Greenhouse Grown Spinach

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

Wednesday, August 1, 2012

- *April L. Vigaradt, S. Alan Walters, Brian P. Klubek
- 8:15–8:30 AM Abnormality Analyses of Ammonia Volatilization from Nitrogen Fertilized Soils for Commercial Potato Production
*Guodong Liu, Yuncong Li, Ashok Alva
- 8:30–8:45 AM Mineral Nutritional Status and Yield of Swiss Chard in Hydroponic Culture as Influenced by Nutrient Solution Management and Seed Propagation Substrate
*Jonathan N. Egilla, Rose Ogutu, Isabelle Nyirakabibi
- 8:45–9:00 AM Estimating Nitrogen Fertilization Requirement for Grafted Tomato Grown in the Field
*Desire Djidonou, Kenneth Lopiano, Xin Zhao, Eric H. Simonne
- 9:00–9:15 AM Biochemical Properties of Compost Tea Associated with Compost Quality and Effects on Pak Choi Growth
Archana Pant, Theodore Radovich, *Nguyen Hue, Robert E. Paull
- 9:15–9:30 AM Development of Nitrogen Fertilization Best Management Practices (BMPs) for Potatoes in Florida
*Libby R. Rens, Lincoln Zotarelli, Daniel J. Cantliffe, Douglas Gergela
- 9:30–9:45 AM The Effect of Biochar on Sweet Corn Production and Nitrate Leaching
*Touria El-Jaoual Eaton, Masoud Hashemi, Sarah Weis, Allen V. Barker
-
- 8:00–10:00 AM Trade Room
- Workshop:**
RosBREED: Discoveries and Breeding Databases for the Fruit Research Community
Sponsor: Fruit Breeding (FRBR) Working Group
Moderator: Ksenija Gasic, kgasic@clermson.edu
- Workshop objectives are: 1) illustrate that QTL results are only the first step toward marker-assisted breeding as the desirable functional alleles need to be identified and then influence selection decisions; 2) demonstrate that this knowledge of functional alleles has value for the wider community of plant physiologists, thereby enhancing closer collaborations between breeders and physiologists; 3) illustrate the use of the pedigree based software, Pedimap, and breeding decision-based software that has application across breeding programs; and 4) as the first translational genomics CAP project funded for a fruit crop family, our project will provide non-rosaceous crop breeders insight into how one diverse plant community continues to come together to embrace our crop diversity (including polyploid complexity) and move forward with a common goal.
- 8:00–8:15 AM RosBREED Mission—Jewels in the Genome
*Amy Iezzoni, Cameron Peace, Nahla Bassil, Michael Coe, Gennaro Fazio, Karina Gallardo, James Luby, Doreen Main, James R. McFerson, Cholani Kumari Weebadde, Eric van de Weg, Chengyan Yue
- 8:15–8:35 AM RosBREED's Breeding Germplasm Used for Validation of Promising Trait Loci
*James Luby, Cameron Peace, Ksenija Gasic, Chad E. Finn, Nnadozie Oraguzie, Susan K. Brown, David H. Byrne, John R. Clark, Thomas M. Davis, Kate Evans, Thomas Gradziel, James F. Hancock, Philip Stewart, Vance Whitaker, Nahla Bassil, Doreen Main, Gennaro Fazio, Cholani Kumari Weebadde, Eric van de Weg, Marco Bink, Amy Iezzoni
- 8:35–8:55 AM Loci Important for Apple Fruit Quality: What Is Known about Their Functional Alleles?
*Cameron Peace, James Luby, Kate Evans, Susan K. Brown, Matthew Clark, Yingzhu Guan, Benjamin Orcheski, Cari Schmitz, Sujeet Verma, Nahla Bassil, Eric van de Weg, Amy F. Iezzoni
- 8:55–9:15 AM Loci Important for Peach and Cherry Fruit Size and Quality: What Is Known about Their Functional Alleles?
*Ksenija Gasic, David H. Byrne, John R. Clark, Carlos H. Crisosto, Thomas Gradziel, Amy F. Iezzoni, Nnadozie C. Oraguzie, Terrence J. Frett, Paul Sandefur, Jonathan Fresnedo, Tim Hartman, Cameron Peace, Eric van de Weg
- 9:15–9:35 AM Data Overload—Breeding Decision—Support Software to the Rescue!
*S. Jung, Taein Lee, Kate Evans, Cameron Peace, Gennaro Fazio, Sushan Ru, Amy F. Iezzoni, Doreen Main
- 9:35–10:00 AM Discussion
*Amy Iezzoni

8:00 AM–12:00 PM Theater

Colloquium: **Regulating Water Quality:** **Current Legislation, Future Impacts**

Sponsor: Nursery Crops (NUR) Working Group

Moderator: Sarah A. White, swhite4@clermson.edu

Objectives of this colloquium are to: 1) increase awareness of regulations and rationale for limiting nutrient release into surface waters; 2) discuss impacts of regulations on grower (nursery and orchard) management practices and economic viability; and 3) present technologies growers can apply to help meet these stringent water quality criteria.

- 8:00–8:45 AM Researchers Working with Regulators & Growers to Calculate Accurate Loading Rates
*John C. Majsztrik, John D. Lea-Cox

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

Wednesday, August 1, 2012

- 8:45–9:05 AM Bioreactors for Nutrient Remediation
*P. Christopher Wilson, Joseph P. Albano
- 9:05–9:25 AM Wetland Technologies for Nutrient Remediation
*Sarah A. White, Milton D. Taylor, Joseph P. Albano
- 9:25–10:10 AM Why We Need Numeric Nutrient Limits and How to Implement Them
*David Guest
- 10:10–10:55 AM Watershed Management and Educational Programs in California—A Case Study
*Donald J. Merhaut, Lea Corkidi, Maren Mochizuki, Julie Newman, Ben Faber, Oleg Daugovish
- 10:55–11:15 AM Managing Nutrient Runoff in a Container Nursery
*Steve Beeman
- 11:15–11:35 AM Advanced Citrus Production Systems
*Pete Spyke

8:15–9:30 AM Sevilla
Oral Session: Viticulture and Small Fruits 1

Moderator: Mark Ehlenfeldt, mark.ehlenfeldt@ars.usda.gov

- 8:15–8:30 AM Stone Cell Frequency and Cell Size Variation of Crisp and Soft Textured Fruits from Nine Southern Highbush Blueberry Cultivars
*Kendra Blaker, James W. Olmstead
- 8:30–8:45 AM Reproductive Growth and Yield of Three Southern Highbush Blueberry Cultivars Obtained from Micropropagation and Softwood Cuttings in Two Florida Locations
*Silvia R. Marino, Jeffrey G. Williamson, James W. Olmstead
- 8:45–9:00 AM Rootstock and Scion Interactions in Newly Grafted Highbush Blueberry Plants
*Wei Qiang Yang, Peter Sturman
- 9:00–9:15 AM Daylength and Temperature Effects in the Development of Cold-hardiness, Acclimation, and Deacclimation in Diverse Blueberry Germplasm
*Mark Ehlenfeldt, Lisa J. Rowland, Elizabeth Ogden, Bryan T. Vinyard
- 9:15–9:30 AM Identification of Changes in the Glycome Profile of Cell Walls During Blueberry Fruit Abscission
*Tripti Vashisth, Sivakumar Pattathil, Michael Hahn, Anish Malladi

8:30 AM–2:30 PM Grand Ballroom
Exhibits Open

9:00–10:00 AM Cambridge
Horticulture Hall of Fame Selection Committee

L. George Wilson, *Chair*; Dan Cantliffe; Mary M. Peet; Paul E. Read; John R. Clark; Cary Mitchell; Terence Robinson; Dewayne L. Ingram, ASHS President; Mary Lewnes Albrecht, ASHS Archivist/Historian

9:00–10:00 AM Raphael
Produce Quality, Safety, and Health Properties (QUAL) Working Group Business Meeting

John Beaulieu, *Chair*; Penelope Perkins-Veazie, *Secretary*
The QUAL Working Group promotes more creative research, teaching, and industry liaison among horticulturists and food scientists.

9:00–10:00 AM Michaelangelo
Tropical Horticultural Crops (TROP) Working Group Business Meeting

Carl Motsenbocker, *Chair*; Rammohan Uckoo, *Secretary*
The TROP Working Group discusses the culture, postharvest physiology, and processing of tropical fruits, vegetables, herbs, spices, condiments, pharmaceuticals, flavors, fragrances, latex, nuts, oils, beverages, and underutilized horticultural plants.

9:00 AM–12:00 PM Bayfront B
The Horticultural Commodity Judging Contest and Plant Identification Contest

The Horticultural Commodity Judging Contest and Plant Identification Contests are held at each ASHS Annual Conference. Undergraduate students from ACB member clubs compete by rating the quality of horticultural commodities, identifying a large number of plants, many from out of their region, and by taking a general examination of horticultural knowledge.

9:00 AM–12:00 PM Bayfront B
The Horticultural Commodity Judging Plant Identification Written Examination

9:45–10:15 AM Grand Ballroom
Break—Wednesday

10:00–11:00 AM Alhambra
**Government Employees:
Proposed New Working Group Meeting**

Presiding: Mike Arnold

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

Wednesday, August 1, 2012

10:00–11:00 AM

Cambridge

Membership Committee Meeting

Zong-Ming (Max) Cheng, *Chair*; Jed Young; Marita Cantwell; Angela Davis; Matthew Taylor; Tim Rhodus; Dewayne L. Ingram, ASHS President; Michael W. Neff, ASHS Executive Director

10:40–11:20 AM Manna in Winter: Indigenous Americans and Blueberries

*Kim E. Hummer

11:20 AM–12:00 PM The Chilean Strawberry (*Fragaria chiloensis*): Over 1000 Years of Domestication

*Chad E. Finn, J.B. Retamales, G. Lobos, James F. Hancock

10:00–11:00 AM

Michaelangelo

Plasticulture (PLAST) Working Group Business Meeting

Barclay Poling, *Chair*; Peter Nitzsche, *Chair-elect*; Juan Carlos Diaz-Perez, *Secretary*

Heightened environmental awareness and recent advances in plasticulture technology are catalyzing all kinds of new approaches in horticultural production around the world. The purpose of the Working Group is to encourage and facilitate the mutual exchange of ideas and information concerning the use of plastics in various aspects of horticultural research, extension, education, and industry. This is accomplished by promoting plastics science and technology, by providing a forum for the exchange of plasticulture ideas and information, and by encouraging innovation.

10:00 AM–12:00 PM

Flagler

Workshop: Updates and Revisions in Intellectual Property: Patents and Other IPR Policy Changes in the United States

Sponsor: Intellectual Property Rights (IPR) Working Group

Moderator: John R. Clark, jrclark@uark.edu

Attendees will be updated on recent changes and interpretations of intellectual property rights in the United States. Topics will be of interest to both academic and industry inventors and users of proprietary technology.

10:00–10:40 AM America Invents Act: A First Look At First-to-File for Inventors

*Tambryn VanHeyningen

10:40–11:20 AM Owning Patents: Why Do We Need Magic Words and What Does Stanford Have to Do with It?

*Lisa C. Childs, John R. Clark

10:00–11:00 AM

Raphael

Viticulture and Small Fruits (VSF) Working Group Business Meeting

Chrislyn Particka, *Chair*; Mark Ehlenfeldt, *Chair-elect*; James Olmstead, *Secretary*

This Working Group studies the improvement, production, propagation, and culture of small fruit and grape crops, to perform services for the Society and the general public in the area of small fruits and grapes, and exchanges current information on recent research findings and educational and industry problems.

10:00–11:45 AM

Sevilla

Oral Session: Vegetable Crops Management 1

Moderator: Kelly Murray Young

10:00–10:15 AM Comparative Effects of Chili Thrips on Eleven Pepper Varieties on Field and Greenhouse Environments in South Florida

*Cliff G. Martin, Dakshina R. Seal

10:15–10:30 AM Bacterial Spot (*Xanthomonas cucurbitae*): An Emerging Disease of Pumpkins in the Midwest

*Mohammad Babadoost, Abbasali Ravanlou

10:30–10:45 AM Celery Black Streak Disorder Is Promoted by High Temperatures

*Mathieu Ngouajio, Drey Clark

10:45–11:00 AM Use of Drip Irrigation for Table-stock and Chipping Potato Production in Florida Sandy Soils

*Joel Reyes-Cabrera, Lincoln Zotarelli, Michael D. Dukes, Steven Sargent, Diane Rowland, Mildred Makani

11:00–11:15 AM Limiting Irrigation of the Chip Potato ‘Atlantic’

*Alexander D. Pavlista, Gary W. Hergert

11:15–11:30 AM Evaluating Unconventional Leafy Greens for Summer Production in the Southwest Desert

*Kelly Young

10:00 AM–12:00 PM

Balmoral

Workshop: A Survey on the Contribution of Indigenous Peoples of North America to Horticulture

Sponsor: History of Horticultural Science

Coordinator: Jules Janick, janick@purdue.edu

A survey on the contribution of indigenous peoples of North America to horticulture. Topics covered would be crop domestication and crop culture.

10:00–10:40 AM Development of New World Crops by Indigenous Americans

*Jules Janick

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Wednesday, August 1, 2012

11:30–11:45 AM Management of Common Blight Disease Caused by *Xanthomonas axonopodis* pv. *phaseoli* by using the Plant Growth-promoting Rhizobacteria (PGPR) and Some Plant Extracts

*Kubilay Kurtulus Bastas, Recep Kotan, Ozgur Ekici, Esra Karacif, Serife Cetin, Kenan Karagoz, Fatih Dadasoglu

10:15 AM–12:15 PM

Trade Room

Oral Session: Fruit Breeding 1

Moderator: Rachel A. Itle, ritle@ufl.edu

10:15–10:30 AM Genetic Parameter Estimates for Twelve Fruit and Vegetative Traits in the Florida Strawberry Breeding Population and Implications for Breeding and Selection

*Vance Whitaker, Luis F. Osorio, Tomas Hasing, Salvador Gezan

10:30–10:45 AM Heritabilities of Foliar Powdery Mildew (*Podosphaera aphanis*) Resistance in the University of Florida Strawberry Germplasm

*Colleen Kennedy, Dudley A. Huber, Luis F. Osorio, Vance M. Whitaker, Natalia A. Peres

10:45–11:00 AM Interspecific–Interploid Crosses among *Hylocereus* Species (Cactaceae) for the Selection of Improved Cultivars

Aroldo Cisneros, *Noemi Tel-Zur

11:00–11:15 AM Marker Validation for *Rpfl* Red Stele (*Phytophthora fragariae*) Resistance in *Fragaria* for Use in Marker Assisted Breeding

*Megan M. Mathey, Andrew R. Jamieson, Eric van de Weg, Nahla V. Bassil, Chad E. Finn, James F. Hancock

11:15–11:30 AM QTL Mapping in an F₁ Tetraploid Blueberry (*Vaccinium corymbosum* L.) Population

*Rachel A. Itle, Susan McCallum, Julie Graham, James W. Olmstead, Werner R. Collante, Nahla V. Bassil, Allan F. Brown, Emily J. Buck, Chad E. Finn, James F. Hancock, Lisa J. Rowland

11:30–11:45 AM *Vaccinium* Hybrids with the Species of Section *Hemimyrtillus*

*Mark Ehlenfeldt, James Ballington

11:45 AM–12:00 PM Phenotypic Characterization of the First Backcross Generation Between Southern Highbush Blueberry and *Vaccinium arboreum*

*Hilda Patricia Rodriguez-Armenta, Paul Lyrene, James W. Olmstead

12:00–12:15 PM Developing the Genomic Infrastructure for Breeding Black Raspberry

*Nahla V. Bassil, Michael Dossett, Barbara Gilmore, Todd Mockler, Sergei Filichkin, Mary Peterson, Jungmin Lee, Gina Fernandez, Penelope Perkins-Veazie, Courtney A. Weber, Robert Agunga, Emily Rhoades,

Joseph C. Scheerens, Wei Qiang Yang, Kim S. Lewers, Julie Graham, Felicidad Fernandez Fernandez, Song Joong Yun, Chad E. Finn

10:15 AM–12:15 PM

Tuttle

Oral Session: Produce Quality, Safety, and Health Properties

Moderator: Claire H. Luby, cluby@wisc.edu

10:15–10:30 AM Assessing Types and Variation of Vitamin E (tocochromanol) Compounds throughout the Carrot Life Cycle

*Claire H. Luby, Hiroshi Maeda, Irwin L. Goldman

10:30–10:45 AM Orange-fleshed *Cucumis melo* Melons: Determinations of Beta-carotene Bioaccessibility and Bioavailability

*Gene E. Lester

10:45–11:00 AM LED versus HPS Supplemental Lighting Effects on Fruit Quality of Greenhouse Tomato

*Michael Dzakovich, Celina Gomez, Cary Mitchell

11:00–11:15 AM Mineral Properties and Dietary Value of Stinging Nettle (*Urtica dioica* L.) Grown as a Specialty Vegetable

*Laban K. Rutto, Yixiang Xu, Michael Brandt, Edward Sismour

11:15–11:30 AM Influence of Household Processing Techniques on Grapefruit (*Citrus paradisi* var. Macfad) Bioactive Compounds

*Ram M. Uckoo, G.K. Jayaprakasha, Bhimanagouda S. Patil

11:30–11:45 AM An Index of Fresh Vegetable Nutritional Value That Incorporates Biomass Yield and Crop Composition

*Natalie Bumgarner, Matthew D. Kleinhenz, Joseph C. Scheerens

11:45 AM–12:00 PM A Calcium/Calmodulin–Binding UDP-Glycosyltransferase Is Required for Anthocyanin Biosynthesis in Strawberry Fruit

*Tianbao Yang, Xianjin Liu, Jianghao Sun, Hui Peng, Pei Chen, Bruce Whitaker

12:00–12:15 PM Mineral Nutrient Density of Tomato in Response to Cultivar Selection and Nutritional Regimes

Md J. Meagy, *Touria El-Jaoual Eaton, Allen V. Barker

11:00 AM–12:00 PM

Cambridge

Graduate Activities Committee Meeting

Robert Mazalewski, *Chair*; Clare Bowen-O’Conner; Roberto G. Lopez; Justin Moss Nicole Rud; Sarah Potts

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

11:00 AM–12:00 PM

Michaelangelo

Local Food Systems (LOCSY) Working Group Business Meeting

Christine Coker, *Chair*

The LOCSYS Working Group promotes academic and research information exchange on scientific development, scholarship, and educational activities related to and regarding local and regional production systems, including definition and measurement of food systems, foodsheds, small and mid-scale production systems, beginning/new farmers, local farmers and farmers markets, farmers expanding from direct sale to local/regional wholesale, scale neutral technologies, agriculture at the urban/rural interface, urban horticulture production (community gardens, school gardens, home gardens), farm-to-consumer marketing, farmer-to-institution/school marketing, local food system and farmland policy, and relationships of local horticulture to rural and urban communities and economies.

11:00 AM–12:00 PM

Alhambra

Production and Harvest Mechanization (MECH) Working Group Business Meeting

Stephanie J. Walker, *Chair*

The MECH Working Group provides an informal organization to bring together those interested in production and harvest mechanization needs, opportunities, and problems in horticultural crops.

11:00 AM–12:00 PM

Raphael

Temperate Tree Nut Crops (NUTS) Working Group Business Meeting

Carolyn Debus, *Chair*; Richard Rosecrance, *Chair-elect*

The NUTS Working Group works to: bridge the wide communications gap among nut tree researchers; exchange ideas, results, and experiences in similar orchard crops; and provide a forum to discuss various aspects of research unique to tree nut crops.

12:00–1:00 PM

Raphael

Growth Regulators in Fruit and Nut Production (PGR) Working Group Business Meeting

Anish Malladi, *Chair*; Derek Woolard, *Secretary*

To foster excellence in plant growth regulator research, to help and encourage new research talent in plant growth regulators, to unify research and industry workers in an attempt to solve horticultural problems related to plant growth regulator research between ASHS and other related organizations.

12:00–1:00 PM

Michaelangelo

History of Horticultural Science (HIST) Working Group Business Meeting

Jules Janick, *Chair*; Kim Hummer, *Chair-elect*; David Karp, *Secretary*

The HIST Working Group exchanges information and promotes interest in the history of horticultural technology and science.

12:15 –1:00 PM

Grand Ballroom

Graduate Student Poster Competition Session 3

Full competition schedule begins on p. 17

12:15–1:00 PM

Grand Ballroom

Poster Session: Crop Physiology

- (140) Skin Lignification Is Associated with Resistance to Skinning in Sweetpotato Storage Roots
*Ramon A. Arancibia, Xiang Wang, Jeff L. Main
- (141) Three Plant Growth Regulators Modify Growth and Flowering Responses of *Borrchia frutescens* (L.) DC. Produced in Containers
*Sean Carver, Michael Arnold, David Byrne, Anna Armitage, Andrew King
- (142) The Effect of Temperature and Sugar Content on Pollen Viability in Chinese Cabbage
*Jumsoon Kang, Beunggu Son, Youngwhan Choi, Yongjae Lee, Jeongmin Suh, Younghoon Park
- (143) Abscisic Acid Positively Effects Greenhouse Tomato Fruit Quality and Decreases Incidences of Blossom End Rot
*T. Casey Barickman, Dean A Kopsell, Carl E Sams
- (144) Abscisic Acid-Induced Chlorosis Is Leaf Age-dependent and Can Occur Independently of Ethylene in *Arabidopsis*
*Shinsuke Agehara, Daniel I. Leskovar
- (145) Methyl Jasmonate Treatment Enhances Glucosinolate Content of Cauliflower Heads without Influencing Postharvest Quality
*Kang Mo Ku, Jeong-Hee Choi, Kushad M. Mosbah, Elizabeth H. Jeffery, John A. Juvik
- (146) Optimum Methyl Jasmonate Application to Enhance Glucosinolate Concentration in Broccoli Florets
*Kang Mo Ku, John A. Juvik
- (147) Interactions of Leaf Photosynthesis, Nitrate Reductase Activity, Phosphatase Induction, and Leaf Elongation of Two Kale Genotypes
*Hong Li, Ruiping Huang, Tingxian Li, Jin Cao

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Wednesday, August 1, 2012

- (148) Response of Low Marsh Cordgrass (*Spartina alterniflora*) to Various Levels of Salinity and Heavy Metals
*Yan Xu, Wendy Castro, Pedro Flores

12:15–1:00 PM

Grand Ballroom

Poster Session: Fruit Breeding 1

- (371) Identification of Intergeneric Hybridization in *Aronia mitschurinii* using Amplified Fragment Length Polymorphism Analysis
Peter J. Leonard, *Mark H. Brand, Bryan A. Connolly
- (372) The Selection and Testing of New Candidates for an Apple Pollinizer
*Xiang Shen, Xin Li, Yanli Hu, Ling Guo
- (373) Apple Cultivar ‘Honeycrisp’ Exhibits Genetic Resistance to Apple Scab
*Matthew Clark, James Bradeen, James Luby, David Bedford
- (374) Fruit Texture Trait Phenotypes of the RosBREED Apple Reference Germplasm Set Database
*Cari Schmitz, Matthew Clark, Yingzhu Guan, Benjamin Orcheski, James Luby, Katherine Evans, Susan Brown, Cameron Peace, Eric van de Weg, Dorrie Main, Amy Iezzoni
- (375) Functional Variants Provide Strategies to Improve Breeding for “Fresh Sensation” in Apple
*Sujeet Verma, Yingzhu Guan, Katherine Evans, James R. McFerson, James Luby, Cameron Peace
- (376) Identification of the Relationships Between Individual Sugars, Sensory Sweetness and QTL Detection for Sweetness in Apple
*Yingzhu Guan, Kate Evans, Cameron Peace, James Luby, Susan Brown, Cari Schmitz, Matthew Clark, Benjamin Orcheski
- (377) First Results of Screening of Olive Breeding Progenies and Wild Olives for Verticillium Wilt Resistance
Rocío Arias-Calderón, José Bejarano-Alcázar, Angelina Belaj, Raúl De la Rosa, Dolores Rodríguez-Jurado, *Lorenzo León
- (378) NC 430, a New Thornless Blackberry Cultivar
James Ballington, *Gina Elizabeth Fernandez, Penelope Perkins-Weazie
- (379) Resistance of Breeding Program Selections and Cultivars to Pear Psylla
*Richard L. Bell
- (380) Development of a Random Mating Population for Recurrent Selection in Peach
*Rachel Odom, Thomas G. Beckman, José Chaparro
- (381) Description of Two Simply Inherited Traits in *Prunus campanulata*
*Zachary Tucker, Rachel Odom, José Chaparro, Ien-chie Wen

- (382) Identification of QTLs Associated with Powdery Mildew Resistance in Sweet Cherry
*Nnadozie C. Oraguzie, Murali Bellamkonda, Cameron Peace, Amit Dhingra, Dean Glawe, Gary Grove

12:15–1:00 PM

Grand Ballroom

Poster Session: Plant Nutrient Management 2

- (170) Influence of Bicarbonate Concentrations in Nutrient Solution on the Growth and Stolon Production of ‘Seolhyang’ Strawberry Plants during Vegetative Propagation
Hei Soo Lee, *Jong Myung Choi, Chiwon W. Lee
- (171) Influence of Bicarbonate Concentrations in Nutrient Solution on Mineral Contents of Plant Tissues and Root Substrate Solutions during Vegetative Propagation of ‘Seolhyang’ Strawberry
Hei Soo Lee, *Jong Myung Choi, Chiwon W. Lee
- (172) Physical and Chemical Properties of Carbonized and Expanded Rice Hull As Root Substrate Components in Korea
Eun Young Park, Bo Kyung Shin, *Jong Myung Choi, Chiwon W. Lee
- (173) Effectiveness of Controlled-release Formulas in Strawberry Production in California
*Mona Othman, Husein Ajwa, Jonathan Hunzie, Romio Serohijos
- (174) Biofortification of Zinc in *Trigonella foenum-graecum* and *Brassica chinensis* to Enhance the Nutritive Value
*Samantha Levy, Grija Vijayan, Karen Bateman, Dharma Pitchay
- (175) Evaluation of Wollastonite As a Silicon Source for Production of Sunflower
*Jason S. Nelson, Kimberly A. Williams, Todd Cavins
- (176) Evaluating the Potential for Slag As a Source of Supplemental Silicon in Container Crop Production
*Jonathan Frantz, John Yzenas, Jr., Russell Friedrich
- (177) Exogenous Hydrogen Peroxide Impacts Shoot Biomass, Pigments, and Mineral Nutrient Concentrations in Basil (*Ocimum basilicum* L.)
Dean A. Kopsell, *David E. Kopsell, Carl E. Sams
- (178) Controlled-release Fertilizer Drying Methods Effect on Nitrogen Recovery Analysis
*Luther C. Carson, Monica Ozores-Hampton, Jerry B. Sartain
- (179) Treating Runoff using California Native Plants As Biofilters
Lea Corkidi, *Donald J. Merhaut, Maren Mochizuki, Toan Khuong, Julie Newman, Oleg Daugovish, Ben Faber, Jose de Soto, Arturo Keller

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12:15–1:00 PM

Grand Ballroom

Poster Session: Postharvest 2

- (015) Properties of Nucleases Associated with Watersoaking and Programmed Cell Death in Ethylene-treated Cucumber Fruit
*Jinsu Lee, Donald J. Huber, Eduardo C. Vallejos
- (016) Ingress of Gaseous 1-Methylcyclopropene in Tomato Fruit
Xiaoqing Dong, *Maricruz Ramírez-Sánchez, Donald J. Huber, Jing-Ping Rao, James H. Lee, Zhengke Zhang
- (017) 1-Methylcyclopropene–Mediated Phosphorylation of Ethylene Receptor in Tomato Fruit: Implications for Inhibition and Recovery of Ripening Capacity
Yusuke Kamiyoshihara, Harry J. Klee, *Donald J. Huber
- (018) Does Prior Storage in Air At Optimum or Higher Temperature Influence the Potential Benefit of Controlled Atmosphere for Broccoli in Simulated Marine Shipments?
*Eleni D. Pliakoni, Angelos I. Deltsidis, Jeffrey K. Brecht
- (019) Ethephon and Other Chemical Stresses Increase the Incidence of Tip Rot in Mississippi Sweetpotatoes
*Jeffrey L. Main, Ramon A. Arancibia
- (020) Effect of Curing on Sweetpotato Organic Acid Content
*David H. Picha, Mary S. Bowen
- (021) Fruit Quality of Fresh Cut Seedless Watermelon
Norimah Jumat, *Penelope Perkins-Veazie, Guoying Ma
- (022) Differential Response of ‘Beauregard’ Sweetpotato Storage Roots to Ethephon, 1-Methylcyclopropene and Water Submergence Treatments
*Arthur Q. Villordon
- (023) Effect of Postharvest Storage Conditions on Shelf Life of Kale (*Brassica oleracea* var. *acephala*)
Gvozden Dumičić, *Harwinder S. Sidhu, Juan Carlos Díaz-Pérez, Smiljana G. Ban
- (024) Possible Amelioration by MA of Aroma Volatile Loss during Refrigerated Storage of Pink Tomatoes
*Angelos I. Deltsidis, Eleni D. Pliakoni, Jeffrey K. Brecht
- (025) Low Temperature Storage Affects the Anthocyanins and Phenolic Compounds Accumulation in ‘Coreano’ Garlic (*Allium sativum*)
*David Dufoó-Hurtado, Con Mei Cao, Luis Cisneros Zeballos, Sandra Mendoza-Diaz, Edmundo Mercado-Silva, Sr.
- (026) The Effect of Irrigation Method, Harvest Time, and Storage on Mechanical Injury and Tuber Quality of Tablestock Potato (*Solanum tuberosum* L.)
*Mildred N. Makani, Steven A. Sargent, Joel Reyes-Cabrera, Lincoln Zotarelli

12:15–1:00 PM

Grand Ballroom

Poster Session: Viticulture and Small Fruit 2

- (281) Textural Analysis of Muscadine Grapes
*Patrick J. Conner
- (282) The Roles of *Rhizoctonia fragariae* and Terbacil in the Development of Black Root Rot in Strawberry
*E.K. Lavelly, R.P. Marini, B.K. Gugino, K. Demchak
- (283) Greenhouse Production of Strawberries during the Winter
*Ellen T. Paparozzi, George Meyer, Stacy Adams, M. Elizabeth Conley, Ben Loseke, Paul Read
- (284) Early Performance of Rabbit-eye Blueberry Cultivars under Conventional and Organic Practices
*M. Elena Garcia, Clay Wingfield, Christopher I. Vincent
- (285) Vegetative and Reproductive Traits of Southern Highbush Blueberry under Different Summer Pruning Systems
*Alisson Pacheco Kovalski, Jeffrey G. Williamson, Rebecca L. Darnell
- (286) Vegetative Growth of Southern Highbush Blueberry Cultivars Obtained from Micropropagation and Softwood Cuttings in Two Florida Locations during First Two Growing Seasons in the Field
*Silvia R. Marino, Jeffery G. Williamson, James W. Olmstead
- (287) Nitrogen Fertilization Rate, Sawdust Mulch, and Pre-Plant Incorporation of Sawdust—Long-term Impact on Yield, Fruit Quality, and Soil and Plant Nutrition in ‘Elliott’ Blueberry
*Bernadine C. Strik, Gil Buller
- (288) Seed Set and Berry Development in Commercially-Grown Blueberry Cultivars
*Bernadine C. Strik, Chad E. Finn, Emily Vollmer
- (289) New Discoveries in Cranberry Bud Development
*Lisa Wasko DeVetter, Rebecca Harbut
- (290) Type of Stem Cutting Affects Asexual Propagation of Sparkleberry (*Vaccinium arboreum*)
*James Spiers, Jessica R. Bowerman, Elina Coneva, Kenneth M. Tilt, Eugene K. Blythe, Donna Marshall

12:15–1:00 PM

Grand Ballroom

**Poster Session:
Weed Control and Pest Management**

- (117) Efficacy and Safety of Selected Herbicides on Container-grown Herbaceous Ornamental Plants
Ronda Koski, *James E. Klett
- (118) Evaluation of Anaerobic Soil Disinfestation (ASD) for Warm-season Vegetable Production in Tennessee
*D. Grant McCarty, Bonnie H. Ownley, Annette L. Wszelaki, Carl E. Sams, David M. Butler

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Wednesday, August 1, 2012

- (119) Response of Broccoli and Cabbage Hybrid Cultivars to Clomazone
*Howard F. Harrison, Mark W. Farnham
- (120) Foliar Applications of Micro- and Macronutrients to Control ACP in Citrus
*Diego Garza, Shad D. Nelson, Mamoudou Setamou
- (121) Genetic Variability of *Mycosphaerella fijiensis* Morelet from Mexico Mediated Microsatellite Markers
Manzo-Sánchez Gilberto, *Salvador Guzmán-González, Ramírez-Milanés Merary-Nataly, Luciano Martínez-Bolaños, Blondy Canto-Canché, Ignacio Islas-Flores, Mario Orozco-Santos
- (122) A Non-protein Amino Acid from *Crotalaria juncea* Foliage with Allelopathic Potential
M.M. Javaid, M. Bhan, B. Rathinasabapathi, *Carlene A. Chase
- (123) Effects of Cover Crops on Soil Environmental Factors and Weed Suppression
*Elisabeth A. Hodgdon, Rebecca Grube Sideman, Richard Smith
- (124) Effects of Phosphite on *Fusarium oxysporum* in *Washingtonia robusta*
*Jiaming Yu, Monica Elliott, Timothy K. Broschat
-
- 1:00–1:45 PM Grand Ballroom
- Graduate Student Poster Competition Session 4**
- Full competition schedule begins on p. 17
-
- 1:00–1:45 PM Grand Ballroom
- Poster Session: Bioenergy**
- (108) Strategies for Increasing the Harvest Window of Sweet Sorghum in Arizona
Valerie H. Teetor, Abdullah Otkem, Carl L. Schmalzel, *Dennis T. Ray
- (109) Exploration of Simple Sequence Repeat (SSR) Markers from *Miscanthus*
Young-In Choi, Young-Ju Jeon, Do-Soon Kim, *Geung-Joo Lee
- (110) Assessment of Glucose and Stem Dry Weight Among 16 *Crotalaria juncea* Accessions for Potential Cellulosic Ethanol
*Brad Morris, George Anotniou
- (111) Chromosome Doubling and Fertility Restoration in *Miscanthus x giganteus*
*Darren H. Touchell, Thomas G. Ranney
- (112) Research of Switchgrass Growth Habits and Its Mutagenesis
*Hui Li, Suping Zhou, Brya Monk
- (113) Chemical Components and Their Functions of *Eucommia ulmoides* Oliver
Zhiqiang Sun, Fangdong Li, Lanying Du, *Hongyan Du
-
- 1:00–1:45 PM Grand Ballroom
- Poster Session: Floriculture**
- (256) Fistic and Apus De Soare: New Romanian *Gladiolus hybridus* L. Cultivars
*Maria Cantor, Erszebet Buta, Denisa Hort
- (257) Response of Selected Garden Rose Cultivars to Salt Stress
*Xiaoya Cai, Genhua Niu, Terri Woods Starman, Charles R. Hall
- (258) Disease Development in Ethylene Insensitive *etr1-1* Petunia Infected by *Thielaviopsis basicola* under Low Phosphorus Stress
*Hye-Ji Kim, Gary Moorman, Kathleen Brown
- (259) Using Light Emitting Diodes for Early Development of Flowering Plants
*Meriam Karlsson
- (260) *Cymbidium* Forcing Culture with Summer Cooling Systems under Night Interruption Cultivation
Yoon Jin Kim, *Ki Sun Kim
- (261) Experimental Variables to Consider When using the DTPA Extraction Method for Estimating Micronutrients in Peat-based Substrate
*Joseph P. Albano
- (262) Identification and Characterization of Genes Differentially Expressed in *Phalaenopsis aphrodite* Roots under Nutrient Deficiency Stress
*Ya-Chi Yu, Chun-Lin Su, Ming-Che Shih, Yao-Chien Alex Chang
- (263) Biocontainers and the Bigger Picture: Evaluating the Overall Performance of Plastic Pot Alternatives in Greenhouse Production of Coleus (*Solenostemon scutellarioides*)
*Andrew Koeser, Candice Miller, Gary Kling, Daniel F. Warnock
- (264) Liming Requirements for Greenhouse Substrates Containing Wood Aggregates
*W. Garrett Owen, Brian E. Jackson, William C. Fonteno
- (265) Plant Growth Regulator Impact on *Verbena* Branching and Performance
*H. Brent Pemberton, Genhua Niu, William R. Roberson, Pedro Osuna
- (266) Postharvest versus Field Performance of Gomphrena
*H. Brent Pemberton, Michelle L. Jones, William R. Roberson, Cassandra Kerr

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Wednesday, August 1, 2012

- (267) Measuring Hydraulic Conductance As a New Technique for Assessing Root Growth in Greenhouse Substrates
Lesley A. Judd, *Brian E. Jackson, William C. Fonteno, Jean-Christopher Domec
- (268) Hydrologic Properties of Potential Wood Components for Greenhouse Substrates
Jeb S. Fields, William C. Fonteno, *Brian E. Jackson
- (269) Evaluating Heat Tolerance in *Impatiens walleriana* 'Super Elfin XP White' Following the Application of Pageant
*Diana Cochran, Richard L. Harkess, Patricia Knight, M. Tomaso-Peterson, Eugene K. Blythe, Charles H. Gilliam
- (270) Use of Biocontainers for Short- and Long-term Greenhouse Production
*Renee Conneway, Andrew Koeser, Vicky Anderson, Michael R. Evans, Rebecca A. Schnelle, J. Ryan Stewart, Sven Verlinden
- (420) Relationships among Germplasm Accessions of *Viola* and *Phlox* Examined by Analysis of Flower Color and Morphology using Tomato Analyzer™ Image Analysis Software
Daniel Robarts, Andrea Wolfe, *Pablo Jourdan
- (421) Evaluation of a Collection of Lotus (*Nelumbo* spp.) Germplasm for Ornamental Medicinal and Food Crop Potential
Warner Orozco Obando, Lyn Gettys, *Kimberly K. Moore, Floyd M. Woods, Daiké Tian
- (422) Genetic Variation for Winter Hardiness in Rosemary (*Rosmarinus officinalis* L.)
Roderick L. Reed, *Robert P. Flynn, Brindha Narasimhamoorthy, John A. Greaves
- (423) Improvement of *Stevia rebaudiana* Biomass Production and Steviol Glycoside Synthesis
*Jennifer Evans, Veronica Vallejo, Randy M. Beaudry, James F. Hanock, Ryan M. Warner

1:00–1:45 PM

Grand Ballroom

Poster Session: Genetics and Germplasm 2

- (412) The USDA Warm Season Grass Collection: Opportunities for Ornamental Breeding
*Melanie Harrison-Dunn
- (413) Yield Performance of Cowpea Genotypes Grown in Alkaline Soils
*Ricardo Goenaga, Tomas Ayala-Silva, Adolfo Quiles
- (414) Analysis of the North American Plum (*Prunus* L.) Species using Simple Sequence Repeat (SSR) Markers
*Dario J. Chavez, Thomas G. Beckman, W.R. Okie, José X. Chaparro
- (415) Genetic Diversity Assessment of *Musa* spp. Germplasm using SSR Markers
*Brian Irish, Brian Scheffler, Ricardo Goenaga
- (416) Genetic Diversity in Six Kentucky Spicebush (*Lindera benzoin* L.) Populations using Microsatellite (SSR) Markers
*Jeremiah Lowe, Re'Gie Smith, Kirk W. Pomper, Jacob Botkins, Sheri B. Crabtree
- (417) Chromosome Numbers and Ploidy Levels of Chinese *Curcuma* Species
Juan Chen, Nianhe Xia, Richard J. Henny, *Jianjun Chen
- (418) Interspecific Hybridization among the Eastern United States Native *Phlox* Species
*Peter Zale, Pablo Jourdan
- (419) Characterization of U.S. Native *Coreopsis* and *Rudbeckia* Germplasm Conserved At the Ornamental Plant Germplasm Center
Susan Stieve, *Pablo Jourdan

1:00–1:45 PM

Grand Ballroom

Poster Session: Organic Horticulture 2

- (057) Physiochemical and Functional Properties of Organic or Conventional Strawberry
*Seung-Hee Nam, Jeong-Hwa Kang, Bong-Yun Oh, Kyung-Ju Jung, Min-Soo Park
- (058) The Right Time to Plant Fall Crucifer Cover Crops in the Great Lakes Region
*Thomas Björkman, Carolyn Lowry, Daniel C. Brainard, John B. Masiunas
- (059) Impact of Cover Crop Based Reduced-tillage Systems on Eggplant Yield, Weed Populations, and Soil Quality in Organic and Conventional Production
*David M. Butler, Gary E. Bates, Sarah E. Eichler Inwood
- (060) Effects of Pre-plant Compost and Subsequent Fertigation on Organic Production of Zinnia Cut Flowers in a High Tunnel
*Guihong Bi, William Evans, Vasile Cerven
- (061) Improving Fall Organic Vegetable Crops with Summer Cover Crops
William Evans, *Sarah M. Reynolds
- (062) The Use of Vermicompost As an Organic Fertility Source in Vegetable and Herb Transplant Production
*Stephanie Beeks, Neil Mattson
- (063) Strawberry Cultivar Evaluation under Organic and Conventional Fertilization
*Xin Zhao, Guixia Wang, Peggy Chang, Yushen Huang, Caroline R. Hamilton, Linlin Chang

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(064) Integrating Summer Cover Crops for Fall Vegetable Production in the South

*William Bruce Evans, Carl E. Motsenbocker,
Girish Kumar Panicker, Rao S. Mentreddy

(065) Influence of Management Practices on Lettuce Yield and Weed Population in Organic Production

*Yushen Huang, Xin Zhao, Carlene A. Chase,
Caroline R. Hamilton

1:00–1:45 PM

Grand Ballroom

Poster Session:

Ornamentals/Landscape and Turf 2

(235) Performance of Native Connecticut Shrubs for Use As Invasive Alternatives

*Jessica Lubell

(236) Evaluation of 53 Rose Cultivars Grown in Ground Beds At the Veterans Memorial Rose Garden

*Pamela Collins, Ekaterina Jeliaskova, Dennis Rowe

(237) Physical and Physiological Evaluation of Rose (*Rosa* spp.) Genotypes in the Southern United States Conditions

*Md. Shahidul Islam

(238) Effect of Pruning Severity on Flowering of Landscape Roses

*A. James Downer, John F. Karlik, Anna D. Howell

(239) The Effect of Root Size on Drought Stress and Landscape Performance of Roses during a Severe Drought

Kiesha Kay, *Derald A. Harp, David C. Zlesak,
Steve George

(240) Effects of Salinity and Waterlogging and Their Combination on Seed Germination and Seedling Growth of Four Turfgrass Species

*Qi Zhang, Alan Zuk, Kevin Rue

(241) Glycinebetaine Seed Priming Improved Osmotic and Salinity Tolerance in Turfgrasses

*Qi Zhang, Kevin Rue

(242) Effect of Mowing Height on the Appearance, Density, and Weed Competitiveness of Native and Adapted Fine Fescues

*Tracy A.O. Dougher, Gerald Smith

(243) Development of Best Turfgrass Management Practices Using Daycent Model

*Yao Zhang, Yaling Qian

1:00–1:45 PM

Grand Ballroom

Poster Session: Postharvest 3

(027) Biophysical and Hormonal Changes Can Trigger Postharvest Needle Abscission in Balsam Fir

Mason T. MacDonald, *Rajasekaran Lada

(028) Postharvest Needle Loss in Balsam Fir Can Be Reduced by Using Certain Needle Abscission Prevention Agents (NAPA)

R. Scott Veitch, *Rajasekaran Lada

(029) Screening NB Balsam Fir (*Abies balsamea*, L.) Clones for Needle Abscission Resistance and Understanding the Genetic Shift to Pre- and Post-cold Hardening

Azure Adams, *Rajasekaran Lada

(030) The Nature and Role of Volatile Terpene Compounds in Postharvest Needle Abscission

*Ernest A. Korankye, Rajasekaran Lada,
Samuel K. Asiedu

(031) The Relationship Between the Gene Expression of Ethylene Receptors and the Recovery of Ethylene Sensitivity in Carnation Flower Petals

*Byung-Chun In, Tanya G. Falbel, Brad M. Binder,
Sara E. Patterson

(032) Effect of 1-Methylcyclopropene (1-MCP) and Antimicrobial Agent Treatments on Postharvest Quality of Selected Cut Flowers

Lihua Fan, *Jun Song, Tim Huges, Craig Doucette,
Leslie Campbell-Palmer

1:00–1:45 PM

Grand Ballroom

Poster Session:

Vegetable Crops Management 2

(335) Fertilizer Effects of Soy-plastic Containers during Production and Transplant Establishment of Tomato and Pepper

James A. Schrader, Gowrishanker Srinivasan,
David Grewell, *William Graves

(336) Relationship Between Soil Moisture Potential and Seedling Emergence in Cut and Peel Carrots

*Krishanthi D. Vithanage, Rajasekaran Lada

(337) Physicochemical Characterization of Subtropical Vegetables, Indian Spinach, Okra, and Molokhia

*Jeong-Hwa Kang, Yoo-Suk Lee, Seung-Hee Nam,
Bong-Yun Oh, Mi-Hyang Jang, Kyung-Ju Jung,
Kyung-Ju Choi, Min-Soo Park

(338) Gourds in Asia

*Prem Nath Sr., Sundari Velayudhan

(339) Temporal Isoflavone Accumulation in Six Edamame Cultivars

*Luther C. Carson, Josh Freeman, James G. Tokuhisa

(340) Evaluation of Watermelon (*Citrullus lanatus*) Cultivars for Commercial Production in Southwest Indiana, 2011

*Shubin K. Saha, Sara Hoke

(341) Bell Pepper Variety Trials in Western North Carolina

*Christopher Gunter, Susan Colucci, Michael Hannah

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(342) Specialty Melon Cultivar Evaluation under Organic and Conventional Production in Florida

*Wenjing Guan, Xin Zhao, Danielle D. Treadwell, Michael R. Alligood, Donald J. Huber, Nicholas S. Dufault

(343) Glucosinolate Variation among Six Cultigens of Broccoli Grown in Five Diverse East Coast Locations

*Carl E. Sams, Dean A. Kopsell, Mark W. Farnham, Phillip Griffiths, Mark Hutton, Jeanine Davis, Wythe Morris

(344) Broccoli Pigment Profile of Six Cultigens Grown in Five East Coast Locations

*Dean A. Kopsell, Carl E. Sams, Mark W. Farnham, Phillip Griffiths, Mark Hutton, Jeanine Davis, Wythe Morris

1:00–2:00 PM

Escorial

Endowment Fund Committee Meeting

Irwin Goldman, *Chair*; Max Cheng; Adel Kader; Bernadine Strik; Beiquan Mou; Rich Marini; Chris Gunter; Marietta Loehrlein; Astrid Volder; Paul Read; Carl Sams; Dewayne L. Ingram, ASHS President; Curt R. Rom, ASHS Treasurer; Michael W. Neff, ASHS Executive Director

1:00–2:00 PM

Raphael

Pomology (POM) Working Group Business Meeting

Holly Little, *Chair*; Clive Kaiser, *Chair-elect*

The objectives of the POM Working Group are to assist the planning and development of research, extension, and teaching programs in pomology and to serve the current and future needs of the fruit industry.

1:00–5:00 PM

Tours Pick Up in Front of the Main Hotel Lobby Entrance

Art Deco District Tour

South Beach has the largest Art Deco district in America with buildings being restored every day. During the post-Depression industrial boom of the late 1930's and early 1940's, Miami Beach became home to an architectural rage called "streamlined modern." These days, the Art Deco district is experiencing a grand revival. Known simply as "South Beach," this Oceanside necklace of pastel-coated buildings, alfresco cafes and palm-tree-studded sidewalks has become very popular with the international jet setters, fashion models, celebrities, locals and tourists alike. It is "the" place to see and be seen in South Florida. Once in the Art Deco district, a certified guide will lead guests on an interesting and informative ninety-minute walking tour. In addition to a stroll past the late, Gianni Versace's villa on Ocean Drive, guests will observe the outside design elements of various hotels and even walk into some of the hotel lobbies and secluded courtyards.

This tour offers a unique opportunity to explore Deco-age arts and architecture, examine historic preservation efforts and experience the excitement of this trendy area. The Art Deco District is America's only 20th Century historic district listed in the U.S. National Register of Historic Places.

1:45–3:30 PM

Sevilla

Oral Session: Organic Horticulture

Moderator: Amjad Ahmad, alobady@hawaii.edu

1:45–2:00 PM Using Hawaii's Locally Produced Organic Material to Improving Quality of Vegetable Seedlings

Ian Gurr, Theodore Radovich, Kent Kobayashi, Robert Paull, *Amjad Ahmad

2:00–2:15 PM The Effect of Locally Produced Organic Substrates on Germination and Development of Habanero Pepper (*Capsicum chinensis* Jacq.) Seedlings

*Roland Ebel

2:15–2:30 PM Production of High Quality Potted Organic Violas (*Viola tricolor*) in Peat and Compost Based Substrates Supplemented with Liquid Fertilizers

*Vicky Anderson, Rebecca Schnelle

2:30–2:45 PM Screening Hawaii's Locally Produced Composts for Their Nitrogen Release and Plant Growth Response under Different Soils

*Amjad Ahmad, Nguyen Hue, Theodore Radovich

2:45–3:00 PM Herbicides Derived From Natural Products and Their Role in the Integrated Management of Weeds in Organic Vidalia® Sweet Onion

*Wiley C. Johnson III

3:00–3:15 PM Current Status of Biodegradable Plastic Mulches in Certified Organic Production

*Andrew Corbin, Carol Miles, Jeremy Cowan, Douglas Hayes, J. Moore-Kucera

3:15–3:30 PM Bioactive Compounds and Antioxidant Activity in Acerola Fruits from Brazilian Varieties Growing under Traditional and Organic Conditions

Wedja S. da Silva, Raimundo W. de Figueiredo, Geraldo A. Maia, Maria do Socorro M. Rufino, Carlos Farley H. Moura, Fernando Antonio S. de Aragão, *Ricardo E. Alves

1:45–3:45 PM

Tuttle

Workshop: Learning Outcomes—What Every Student Should Know

Sponsor: Teaching Methods (TCHG) Working Group

Moderator: Kimberly K. Moore, klock@ufl.edu

This workshop will review the process for determining the learning outcomes associated with the ASHS Certified Horticulturist exam, demonstrate the value of being a certified

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professional; and compare learning outcomes at different universities to the outcomes identified by the ASHS Certified Horticulturist exam.

1:45–2:05 PM Learning Outcomes: What Every Student Should Know

*Kimberly K. Moore

2:05–2:55 PM The ASHS Certified Horticulturist: Standards and More

*Raymond Talke, Jr.

2:55–3:45 PM The Value of the Certified Horticulturist Credential to the Innovative Practitioner

*George Fitzpatrick, C. Way Hoyt

3:45–5:00 PM Beyond the ASHS Certified Horticulturist Exam

Curt Rom, *Ann Marie VanDerZanden

1:45–3:45 PM

Flagler

Workshop: Tropical Fruits and Vegetables: Impact on the U.S. Economy, Quality, Health, and Food Safety

Sponsor: Tropical Horticultural Crops (TROP) Working Group

Moderator: Bhimanagouda S. Patil, b-patil@tamu.edu

Research on tropical fruits and vegetables has seen tremendous advancements in the past few decades. In recent years, the “healthy living” concept instilled among consumers has led to exploration of fruits and vegetables beyond the continental barriers. The increased awareness of consumers on the health benefits of tropical fruits and vegetables can be attributed to the recent advances on the role of dietary components in reducing risks certain diseases. Interestingly, U.S. consumers have begun to better appreciate the taste, flavor, and health benefits of tropical fruits and vegetables. The workshop will provide a platform for scientists, policy makers and industry leaders to evaluate the challenges and opportunities for sustainable and nutritional security of tropical fruits and vegetables.

1:45–2:15 PM Overview of Bioactive Compounds Derived from Tropical Fruits and Vegetables and Their Implications on Human Health

*Bhimanagouda S. Patil, Ram M. Uckoo, G.K. Jayaprakasha

2:15–2:40 PM Food Safety Concerns of Tropical Fruits and Vegetables

*David Gombas

2:40–3:05 PM Economic Outlook of Tropical Fruits in the United States: Consumers’ View

*Marco Palma

3:05–3:30 PM Potential Benefits of Supplemental Calcium Additions for Sustaining Citrus Production and Quality

*Shad D. Nelson, Marisol Esparza, Diego E. Garza, Mamoudou Setamou, Mac Young

3:30–3:45 PM Panel Discussion

*Ram M. Uckoo

2:00–3:00 PM

Cambridge

Certified Professional Horticulturist (CPH) Board Meeting

Terry Ferriss, *Chair*; John Abbott; Robert Mazalewski; James N. Motes; Karen Panter; Kerrie Badertscher

2:00–3:00 PM

Alhambra

Consulting Editors Meeting

Presiding: Ron Robbins and Neal De Vos. Meeting of the Consulting Editors for *HortScience*, *HortTechnology*, and the *Journal of ASHS*.

2:00–3:00 PM

Raphael

Water Utilization and Management (WUM) Working Group Business Meeting

John Lea-Cox, *Chair*; Donald J. Merhaut, *Chair-elect*; Jim Owen, *Secretary*

The WUM Working Group gathers and disseminates information on water conservation, crop water requirements, irrigation methods, and efficient and effective water management.

2:00–3:30 PM

Trade Room

Oral Session: Temperate Tree Nut Production/Growth Regulators in Fruit and Nut Production

Moderator: Thomas J. Molnar, molnar@aesop.rutgers.edu

2:00–2:15 PM Assessment of Host Resistance to Eastern Filbert Blight (*Anisogramma anomala*) in New Jersey

John M. Capik, *Thomas J. Molnar

2:15–2:30 PM Strategies for Limiting the Spread of Asian Chestnut Gall Wasp in North America

*Michele Warmund

2:30–2:45 PM Managing Vivipary in Pecan

*Bruce W. Wood

2:45–3:00 PM Effects of Abscisic Acid and Abscisic Acid Analogs on Bud Break

*Derek D. Woolard, Suzanne R. Abrams, Ken Nelson, Peter D. Petracek

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

3:00–3:15 PM Influence of 1-Aminocyclopropane-1-Carboxylic Acid (ACC) on Abscission and Fruit Quality of ‘Mcintosh’ Apples
Duane W. Greene, *Esmail “Essie” Fallahi

3:15–3:30 PM Improving Fruit Set in ‘Regina’ Sweet Cherry with Aminoethoxyvinylglycine (ReTain) Is Facilitated by Delayed Stigmatic Senescence
*Jozsef Racsko, Diane Doud Miller

2:00–3:45 PM Balmoral

**Oral Session:
Vegetable Crops Management 2**

Moderator: Will Neily, wneily@acadian.ca

2:00–2:15 PM A New Composition for Solid Matrix Priming of Seed
*Michael Olszewski

2:15–2:30 PM Nitrogen Management for No-tillage Zucchini Squash
*Heather Rich, S. Alan Walters, Brian P. Klubek

2:30–2:45 PM Commercial Extract from the Brown Seaweed *Ascophyllum nodosum* (Stimplex®) Improves Earliness and Yield of Hydroponically Grown Tomatoes
*Will Neily, Jef Achenbach, Laurel Shishkov, Jeffrey Norrie

2:45–3:00 PM Fertility Management for Tomato Production on An Extensive Green Roof
* S. Alan Walters, Karen S. Midden, Brian P. Klubek

3:00–3:15 PM Nitrogen Fertilization Rate and Plant Population Affect Yield and Quality of Drip-irrigated Bell Pepper
*George H. Clough, Anthony D. Bratsch

3:15–3:30 PM Planting Materials Affect Asparagus Performance in a Replant Situation
*Mathieu Nguouajio, Drey Clark

3:30–3:45 PM Effects of Silicon Supplementation in the Cucumber–Anthracnose (*Colletotrichum orbiculare*) Pathosystem
*Sarah K. Taber, Jesse Palenchar, Jodie V. Johnson, Robert J. McGovern, Bala Rathinasabapathi

2:00–4:00 PM Michaelangelo

**Southern Coordinating Committee 83:
Quantifying the Linkages Between Soil Health and Organic Farming and Food**

Presiding: Bill Evans

2:00–6:00 PM Theater

**Colloquium:
Breeding in a Genomics Era: State of the Art and New Opportunities**

Sponsor: Genetics and Germplasm (GG) Working Group

Moderators: Brian Irish, brian.irish@ars.usda.gov

David Douches, douchesd@msu.edu

The objectives of the colloquium will be to help bridge the gap between breeding, MAS and genotyping with agronomic crops and vegetable/horticultural crops, with a target audience of professionals and students involved in improvement and conservation of horticultural crops.

2:00–2:45 PM What the Infinium 8303 Potato SNP Array Tells Us about 100 Years of Potato Breeding
*David Douches, Candice N. Hansey, Kim Fletcher, Joseph Coombs, Robin Buell

2:45–3:30 PM The Effects of Human Selection on Elite Tomato Germplasm and Implications for Genome-based Selection
*David Francis, Sung-Chur Sim, Heather Merk, Allen Van Deynze, Kevin Stoffel, John Hamilton, C. Robin Buell, Dan Zarka, David Douches

3:30–4:15 PM Successful DNA-informed Breeding for Tree Fruit: The RosBREED Experience
*Cameron P. Peace

4:15–5:00 PM Leveraging the Cacao Genome for the Identification of Genes Regulating Important Agronomic Traits
*J.C. Motamayor

5:00–5:45 PM Lessons from Genomewide Selection in Agronomic Crops
*Rex Bernardo

3:00–4:00 PM Escorial

HortScience Editorial Board Meeting

M. LeRon Robbins, *Editor in Chief*; Clint Shock; David Bryla; Jianjun Chen; Penelope Perkins-Veazie

3:00–4:00 PM Alhambra

Nursery Crops (NUR) Working Group Business Meeting

Sarah White, *Chair*; Hannah Mathers, *Chair-elect*; Cheryl Boyer, *Secretary*

Objectives of the NUR Working Group are to: identify those conducting nursery crop research and to ascertain the scope and direction of their studies; develop and share information for teaching nursery management and production courses; and provide staff development opportunities for nursery crop specialists,

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teachers, and researchers by developing information programs and interacting with the nursery industry and profession.

3:00–4:00 PM

Raphael

Plant Nutrient Management (PNM) Working Group Business Meeting

Bielinski Santos, *Chair*; Joseph Albano, *Chair-elect*; Dharma Pitchay, *Secretary*

The PNM Working Group exchanges ideas and information on mineral nutrition and provides interaction between industry and public institutions interested in mineral nutrition of horticultural crops.

4:00–5:00 PM

Cambridge

Collegiate Activities Committee (CAC) Meeting

Tracy Dougher, *Chair*; Gary Bachman; Brian Trader; Curt Rom; Ann Marie VanDerZanden; Todd West; Candice Shoemaker; David Kopsell; Margaret J. McMahon; Stephanie Burnett; Nathan Phillips; Daniel C. Messick, ACB Vice President; Jeremy Crook, Past ACB President

4:00–5:00 PM

Raphael

Vegetable Crops Management (VCM) Working Group Business Meeting

Dean Kopsell, *Chair*; Chris Gunter, *Chair-elect*; Ajay Nair, *Secretary*

The VCM Working Group promotes research and extension of a systems approach to production and utilization of vegetables.

4:00–6:00 PM

Escorial

ASHS Finance Committee Meeting

Curt Rom, *Chair*; David Hensley; Larry D. Knerr; Fred T. Davies, ASHS Board Chair; Paul Bosland, ASHS President-elect; Michael W. Neff (Executive Director)

4:00–6:00 PM

Alhambra

USDA–SCRI Eastern Broccoli Project Working Group Meeting

Presiding: Thomas Björkman

4:00–6:00 PM

Sevilla

Workshop: Grant Writing and Beyond: How to Write a Grant and What to Do Once You Get It

Sponsor: Graduate Student (GRAD) Working Group

Moderator: Kristin Abney, kabney22@gmail.com

Grant writing is becoming an increasingly important part of life in academia and industry, but how should you write a grant?

What happens after you submit it? And how do you deal with the money and reports once you get it? This workshop has been designed to help teach graduate students the following: 1) How to write a grant, including how to create a budget and timeline. 2) What happens to the grant after it's been submitted to the grant's budgeting committee. 3) How to administer the grant once you receive it.

4:00–4:15 PM Grant Preparation Pointers and Budgeting Basics

*Dean A. Kopsell

4:15–4:30 PM Proposal Reviews: What Happens After Submission?

*Marc van Iersel

4:30–4:45 PM Administering Grants—The Good, the Bad, and the Beauty of Having Funding

*John D. Lea-Cox

4:00–6:00 PM

Flagler

Workshop: Issues in Local Food Systems

Sponsor: Local Food Systems (LOCSY) Working Group

Moderator: Christine Coker, ccoker@ra.msstate.edu

The emphasis on food security and food systems continues to play an important role in the discussion of local foods. Through this interactive workshop, participants will 1) be exposed to a balanced discussion of the term “local,” 2) become familiar with challenges and successes of other regions, 3) strengthen and establish collaborations, and 4) identify opportunities for ASHS and its stakeholders to close resource gaps through research, extension, and teaching infrastructure. Invited presentations and facilitated panel discussions will allow for open dialogue focused on local food systems and their supporting infrastructure. The workshop will explore the roles of various partners in local food systems including: community planners and planning agencies, non-profit organizations, and horticulturists and other University, Extension, and Experiment Station personnel. Specific issues to be covered include, but are not limited to, academia's role in local food systems, food safety, views from urban farmers, and trends in local foods.

4:00–4:15 PM What Role Do We Play in Local Food Systems?

*Christine Coker

4:15–4:30 PM Urban Nano Farming

*Gary R. Bachman

4:30–4:45 PM Improving the Safety of Our Local Fruits and Vegetables by X-Ray Irradiation

*Barakat S.M. Mahmoud

4:45–5:00 PM Preaching Local Food Production to Homeowners

*Kathryn Fontenot

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4:00–6:00 PM

Trade Room

Oral Session: Plant Nutrient Management 2

Moderator: Robert Mikkelsen, rmikkelsen@ipni.net

4:00–4:15 PM Nitrogen Source Affects Free Chlorine Concentration and Oxidation Reduction Potential

*Dustin P. Meador, Paul R. Fisher

4:15–4:30 PM Evaluation of Conventional and Alternative Nitrogen Fertigation Methods in Highbush Blueberry

*Oscar L. Vargas, David R. Bryla

4:30–4:45 PM Early Season N Fertilization Management Strategies in Strawberry Production

*Thomas G. Bottoms, Michael Cahn, Timothy K. Hartz

4:45–5:00 PM Mapping Crop Nutrient Use and Removal in the U.S.

*Robert Mikkelsen, P.E. Fixen, R. Williams, Q.B. Rund

5:00–5:15 PM Effect of Microbial Inoculants on Peat-based Substrate Microbial Activity and Bedding Impatiens Growth with Conventional or Organic Slow-release Fertilizers

*Jason S. Nelson, Kimberly A. Williams

5:15–5:30 PM Amino Acid Fertilization of Fraser Fir (*Abies fraseri*), Red Pine (*Pinus resinosa*), and Hybrid Poplar: Effect on Foliar Chemistry and Nutrient Dynamics

*Pascal Nzokou, Alexa R. Wilson, Deniz Guney, Semsettin Kulaç

5:30–5:45 PM Using Stable Isotopes to Quantify Nitrogen Fates in Container Plants

Woradee Werayawarungura, Krystin Riha, Michael J. Gosney, Greg Michalski,

*Michael V. Mickelbart

5:45–6:00 PM Ground Cover Management and Nutrient Source Increase Soil Carbon Sequestration in an Organically Managed Orchard

*N. Mays, C.R. Rom, M. Savin, K. Brye, J. McAfee

4:15–6:00 PM

Balmoral

Oral Session: Pomology 2

Moderator: Bryan Emmett, be68@cornell.edu

4:15–4:30 PM Reduction of Sunburn in ‘Golden Delicious’ Apple (*Malus domestica* L.) Fruit using a Hydrophilic Biofilm

*Clive Kaiser, J. Mark Christensen, Stephen M. Over

4:30–4:45 PM Organic Weed Management Strategies for Apple Trees

*Renae Moran, M. Elena Garcia, Lorraine Berkett, Terence Bradshaw, Sara Kingsley-Richard, Morgan Griffith, Heather Darby, Robert Parsons

4:45–5:00 PM Replant Disease Development on the Fine-

root System of Apple (*Malus domestica* Borkh.)

*Bryan Emmett, Eric Bronson Nelson, Taryn Bauerle

5:00–5:15 PM The OrganicA Project: A Six Year Summary of Research in Two Organic Apple Orchards

*M. Elena Garcia, Lorraine P. Berkett, Renae Moran, Terence Bradshaw, Sara Kingsley-Richards, Morgan Griffith, Heather Darby, Robert Parsons

5:15–5:30 PM Ground Cover Management and Nutrient Source Affect Soil and Foliar Nutrient Contents in an Organically Managed Apple Orchard in the Southern U.S.

*Curt Rom, M. Elena Garcia, Donn T. Johnson, Mary Savin, Jennie H. Popp, Jason McAfee, Heather Friedrich

5:30–5:45 PM Influence of Mechanical Thinning Severity Treatments on Vegetative and Reproductive Tissues, Fruit Set, Yield, and Fruit Quality of ‘Buckeye Gala’

*Thomas M. Kon, James R. Schupp, H.E. Winzeler, Richard P. Marini

5:45–6:00 PM AVG Combined with NAA Control Preharvest Drop of ‘Mcintosh’ Apples Better than Either Chemical Alone

*Terence Lee Robinson, Stephen A. Hoying, Mario Miranda, Kevin Iungerman

4:15–6:00 PM

Tuttle

Oral Session: Postharvest 1

Moderator: Jiwan P. Palta

4:15–4:30 PM Postharvest Application of Various Gas Treatments to Improve Passion Fruit Quality

Livnat Goldenberg, Oleg Feygenberg, Alon Samach, *Edna Pesis

4:30–4:45 PM Application of 1-MCP At Different Ripeness Stages Affects Physiology and Final Tomato Fruit Quality

*Longling Wang, Marita I. Cantwell

4:45–5:00 PM Storage Quality of Enzymatically Peeled Baby Persimmons in High CO₂ Controlled Atmospheres

*Hidemi Izumi, Yukari Murakami, Leelavoravongse Varakorn, Megumi Ishimaru, Yoshihiko Ozaki

5:00–5:15 PM Chlorine Dioxide Sachets Can Reduce Postharvest Decay and Maintain Quality of Fresh Fruit

*Jan Narciso, Jinhe Bai, Anne Plotto, Elizabeth Baldwin

5:15–5:30 PM Harvested Asparagus Spears May Be Conditioned to Withstand Chilling by Heat-shock

*Mikal Saltveit

5:30–5:45 PM Postharvest Dip Treatment with a Natural Phospholipid Along with Lecithin May Extend the

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Thursday, August 2, 2012

Shelf Life of Banana Fruit

Zienab F.R. Ahmed, *Jiwan Paul Palta

5:45–6:00 PM Effect of Rigid Containers on the Shelf Life of Shell-on Fresh Chestnuts At Retail Temperatures

*RenSun Lee, Elliot Ryser, Dennis Fulbright, Eva Almenar

6:00–7:00 PM Blue Water Cafe on the 5th floor

Student Reception

6:00–10:00 PM Escorial

American Pomological Society (APS) Executive and Advisory Board Meeting

Thursday, August 2, 2012

7:30–8:30 AM Cambridge

International Issues Breakfast

Topic: International Opportunities Related to USAID and Horticulture

Speaker: **John E. Bowman** is a Senior Agricultural Advisor at the United States Agency for International Development's Bureau for Food Security based in Washington D.C. Bowman manages global projects for USAID's Office of Agricultural Research and Policy in the areas of horticulture, integrated pest management, food safety, and postharvest loss. Bowman has over 28 years of experience in international development having worked in over 40 countries for international agricultural research centers (CIMMYT, CIAT), multinational food companies (PepsiCo, URC-Philippines, Technico-China), and international consulting firms (DAI, Nippon-Koei, Chemonics).



7:30–5:00 PM Satellite Registration Mezzanine

Registration Open

8:00–9:00 AM Raphael

Bioenergy (BioE) Working Group Business Meeting

Wagner A. Vendrame, *Chair*; Tom Ranney, *Chair-elect*

The BioE Working Group provides a platform for promoting and expanding the opportunities to apply expertise and technologies of horticulture to bioenergy crops and for sharing and disseminating information related to bioenergy research and expanded funding potential.

8:00–9:00 AM

Escorial

Research Division Advisory Council Meeting

Rebecca Darnell, Research Division Vice President, *Chair*; All Working Group Chairs and Chairs-elect, Research Division

8:00–9:30 AM

Theater

Oral Session: Postharvest 2

Moderator: Jinhe Bai, jinhe.bai@ars.usda.gov

8:00–8:15 AM Optimal Incubation Time and Use of Random Methylated Beta-Cyclodextrin (RMCD) to Improve the Solubility of Lipophilic Antioxidants for the FRAP Antioxidant Capacity Assay

*Francisco Loayza, Jeffrey K. Brecht, Amarat Simonne

8:15–8:30 AM Multi-year Flavor Analyses of University of Florida Tomato (*Solanum lycopersicum*) Lines

*Elizabeth Baldwin, John W. Scott, Jinhe Bai

8:30–8:45 AM Extraction of DNA from Orange Juice and Detection of 16S DNA of Candidatus Liberibacter Asiaticus by Quantitative PCR

*Jinhe Bai, Hui-Ling Liao, Elizabeth Baldwin, Igor Kostenyuk, Jacqueline K. Burns, Michael Irey

8:45–9:00 AM Application of Offgel and Dimethylation Labeling As Quantitative Proteomic Analysis Procedure to Investigate Protein Changes in Fruit During Ripening and in Response to Postharvest Treatment

XiaoTang Yang, Li Li, *Jun Song, Leslie Campbell-Palmer, XiHong Li, ZhaoQi Zhang

9:00–9:15 AM Evaluation of Raspberry (*Rubus* sp.) Genotypes for Postharvest Quality and Resistance to *Botrytis cinerea*

*Julia M. Harshman, Wayne M. Jurick, Kim S. Lewers, Christopher S. Walsh

9:15–9:30 AM The Effect of Preharvest Coatings and Foliar Nutritional Sprays on Postharvest Peel Breakdown of Citrus Fruit

*Xiaoqing Yu, Mark A. Ritenour

8:00–9:45 AM

Tuttle

Oral Session: Ornamentals/Landscape and Turf 1

Moderator: Yan Chen, yachen@agcenter.lsu.edu

8:00–8:15 AM Loropetalum Growth Management in the Landscape

*Yan Chen, Regina Bracy, Allen Owings

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

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8:15–8:30 AM Root Dynamics of Congeneric Native and Invasive *Lonicera* and *Rhamnus*

*Maria S. Smith, Jason Fridley, Taryn Bauerle

8:30–8:45 AM Waterlogging and Inundation Tolerance of C4 Turfgrasses

*Vivek Govindasamy, Kenneth B. Marcum, Sr., Jawaharlal M., Ganga M.

8:45–9:00 AM Louisiana Super Plants—Three Years of Successful Plant Promotions

*Allen D. Owings, Regina Bracy, Dan Gill

9:00–9:15 AM Safety Training for Hispanic Landscape Workers: Challenges and Solutions

*E.M. Bauske, N. Fuhrman, A. Martinez-Espinoza

9:15–9:30 AM Maintenance of Substrate Water Content to Control Growth of *Gardenia jasminoides*

*Amanda Bayer, John M. Ruter, Marc van Iersel

9:30–9:45 AM Reaction of Selected Herbaceous Perennials to Low-input Cultural Practices and Severe Heat and Drought Conditions

*Gregory Church, David Spadoni, Kim Schofield, Steve George

8:00–9:45 AM

Sandringham

Oral Session: Vegetable Crops Management 3

Moderator: Ajay Nair, nairajay@iastate.edu

8:00–8:15 AM Growth and Productivity of Hybrid Tomato Varieties in Single-layer or Double-layer Polyplastic High Tunnels

*Sanjun Gu, Steven Kirk

8:15–8:30 AM Season Extension Strategies for Lettuce Production in Midwest: Implication of Row Covers and Foliar Calcium Applications

*Ajay Nair, Brandon Carpenter

8:30–8:45 AM Factors Affecting Fruit Set in Triploid Watermelons from Delaware On-farm Surveys

*Gordon C. Johnson

8:45–9:00 AM Effects of Biodegradable Mulch on Yield of Tomato Grown in High Tunnels and Open Field Conditions in Northwestern Washington

*Jeremy Cowan, Carol Miles, Debra Inglis

9:00–9:15 AM Cabbage Yield As Function of Plant Population Cultivated on Plasticulture

*Charles Barrett, Lincoln Zotarelli, Marcelo Paranhos, Guilherme B. Buck, Michael D. Dukes, Douglas Gergela

9:15–9:30 AM Onion Bulb Size Response to Plant Population for Four Varieties under Three Irrigation Systems

*Clinton C. Shock, Erik B.G. Feibert, Lamont Saunders

9:30–9:45 AM Planting Configuration and Mulch Affect Growth and Yield of Globe Artichoke

*Daniel I. Leskovar, Chenping Xu, Shinsuke Agehara

8:00–10:00 AM

Windsor

Oral Session: Extension

Moderator: Cheryl R. Boyer, crboyer@ksu.edu

8:00–8:15 AM The University of Tennessee Farmers Market: Providing an Engagement Opportunity for the University Community, Students, and Growers

*Annette L. Wszelaki, Sue Hamilton, Fiona McAnally, Mary A. Rogers, Margarita Velandia

8:15–8:30 AM Sustaining Farmers Markets in Low-income, Urban Areas: Farmer Attitudes Regarding Electronic Benefits Transfer (EBT) Programs

*Dru Montri, Bridget Behe, Kimberly Chung

8:30–8:45 AM Using Business Plans to Empower Women Who Manage Horticultural Businesses in New Jersey and Turkey

*Robin G. Brumfield, Jenny Carleo, Burhan Özkan, Nick Polanin, Barbara O'Neill, Stephen J. Komar, Robert Mickel, Meredith Melendez

8:45–9:00 AM Providing Locally Grown Food by Training Non-traditional Students in Agriculture

*Stacey R. Bealmear, Kelly Young

9:00–9:15 AM Low Income Seniors Benefit When They Receive Horticulture and Nutrition Information in a Combined Program

*Angela M. O'Callaghan, Mary Wilson

9:15–9:30 AM Creating a Horticultural Curriculum Addressing Environmental Concerns

*Carly M. Gillett, Edward Bush, Kathryn Fontenot, Maud Walsh, Pamela Blanchard

9:30–9:45 AM The Relationship of Tree Canopy Cover and Vegetation with Incidence of Stress-related Illness in Metropolitan Statistical Areas of Texas

*Ghazal Tarar, Tina Marie Waliczek, Jayne M. Zajicek

9:45–10:00 AM Incorporating Social Media into the Conference Experience

*Cheryl R. Boyer

8:00–10:00 AM

Trade Room

Workshop: From Gene to Phenotype: Molecular Control of Flavors

Sponsors: Plant Biotechnology (BTCH) and Postharvest (PH) Working Groups

Moderator: Nahla Bassil, bassiln@hort.oregonstate.edu

The objectives of this workshop are to: 1) illustrate how basic genomic information enables study of complex sensory traits;

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

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2) show how consumer sensory panels and analytical instruments can help shape breeding decisions; and 3) define the next frontier of integrated research, including new tools and approaches to improve the flavor of food crops.

8:00–8:15 AM Aroma Development in Melon: From Pathway Elucidation to Sensory Perception

*Florence Negre-Zakharov

8:15–8:30 AM Regulation of Plant Volatile Biosynthesis in the Petunia Model

*Thomas Colquhoun

8:30–8:45 AM Fixing the Broken Tomato: The Chemistry of a Great Tasting Tomato

*Denise M. Tieman

8:45–9:00 AM Reclaiming Lost Flavors in Cultivated Strawberry

*Kevin M. Folta

9:00–9:15 AM Evidence for De Novo Synthesis of Fatty Acids in the Formation of Straight-chain Esters in Physalis (Goldenberry)

*Randolph Beaudry

8:00–10:00 AM

Balmoral

Workshop: Mechanized Harvest of Blueberries for the Fresh Market

Sponsor: Viticulture and Small Fruits (VSF) Working Group

Moderator: Jeffrey G. Williamson, jgrw@ufl.edu

Provide current research results in the areas of cultivar development, pre-harvest cultural practices, and postharvest quality and shelf life as related to mechanical harvesting of blueberries for fresh markets.

8:00–8:10 AM Introduction and Overview of the Workshop

*Jeffrey G. Williamson

8:10–8:30 AM Using *Vaccinium arboreum* As a Source of Machine Harvest Traits for Blueberry

*James W. Olmstead

8:30–8:50 AM Using a Miniature Instrumented Sphere to Delineate Blueberry Mechanical Harvesting Process for Potential Fruit Impact Points

*Changying Li

8:50–9:10 AM Strategies to Increase Efficiency of Mechanical Harvest of Blueberry

*Fumiomi Takeda

9:10–9:30 AM Potential of Canopy Shakers to Harvest Southern Highbush Blueberry: Fruit Quality At Harvest and during Storage

*Steven A. Sargent

9:30–10:00 AM Past, Present, and Future of Mechanical Harvest of Blueberries for the Fresh Market: An Industry Perspective

*Brian Kreiger

8:00–10:00 AM

Sevilla

Oral Session: Pomology 3

Moderator: Jennifer Reeve, Jennifer.Reeve@usu.edu

8:00–8:15 AM Everything about Peaches: A One Stop Shop for Peach Information

*Desmond R. Layne

8:15–8:30 AM Influence of Foliar Nitrogen Content on Freezing Injury of Flower Bud in Peach Tree

*Ikjei Kim, Yeuseok Kwon, Taejung Kim

8:30–8:45 AM Approaches for Establishing Organic Stone-fruit Orchards in Utah and the Intermountain West

*Jennifer Reeve, Brent Black, Corey Ransom, Diane Alston, Mae Culumber, Andrew Tebeau, Thor Lindstrom

8:45–9:00 AM Cropload Affects the Size but Not the Number of Cells in Sweet Cherry Fruit

David Gibeau, *Todd Einhorn, Matthew D. Whiting

9:00–9:15 AM Assessing the Role of the Pistil in Sweet Cherry Fruit Set

*Lu Zhang, Matthew D. Whiting

9:15–9:30 AM Sweet Cherry Floral Organ Size Varies with Genotype and Temperature

*Lu Zhang, Yiannis G. Ampatzidis, Matthew D. Whiting

9:30–9:45 AM Tree Architecture Affects Labor Efficiency during Sweet Cherry Harvest

*Yiannis G. Ampatzidis, Matthew D. Whiting

9:45–10:00 AM Mechanical Pruning Shows Promise for Sweet Cherry Trained to the UFO Architecture

*Yiannis G. Ampatzidis, Matthew D. Whiting

8:30 AM–12:30 PM

Dupont

Workshop: International Engagement: Linking to Horticulture CRSP and USAID

Sponsors: International Horticulture and Issues (IHI) and International Horticultural Consultants (ICON) Working Groups

Moderator: John L. Griffis, Jr., jgriffis@fgcu.edu

Workshop attendees will learn about the international aspects of the HortCRSP program as well as the various USAID-funded programs that have agricultural components.

8:30–9:00 AM Overview of the Horticulture CRSP—What It Is and How It Operates

*L. George Wilson, Amanda Crump

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9:00–9:20 AM Improved Small-scale Vegetable Production and Productivity in Africa with the Use of Agricultural Nets

*Mathieu Ngouajio, Thibaud Martin, Lusike A. Wasilwa, Françoise A. Komlan, Mwanarusi Saidi, Elisha O. Gogo, Serge Simon, Sevgan Subramanian, Muo Kasina, Fatuma Omari, Anselme Adegbidi, Laurent Parrot, Damien Ahouangassi, Pierre Guillet

9:20–9:40 AM African Indigenous Vegetables

*Stephen C. Weller

9:40–10:00 AM Vegetable Grafting/Protected Agriculture for African Growers

*Matthew D. Kleinhenz

10:00–10:30 AM Opportunities in International Agriculture: Perspectives from a USAID Officer

*John E. Bowman

10:30–10:45 AM Intermediate Question and Answer Session

*John L. Griffis, Jr., J. Pablo Morales-Payan

10:45–11:10 AM South Sudan Coffee Development Program—*Coffea Arabica* Germplasm Assessment and Conservation Research Plan

*Sarada Krishnan

11:10–11:30 AM Consulting in Armenia

*Richard C. Funt

11:30–11:50 AM Developing a Interior Foliage Industry in Bangladesh—A Winrock International/USAID Farmer-to-Farmer Project

*John L. Griffis, Jr.

11:50 AM–12:15 PM Bridging the GAP: Increasing the Competitiveness of Ugandan Women in the Marketplace

*Mary Holz-Clause, Mona Othman, Margaret Smith, Linda Naeve, Vikram Koundinya

12:15–12:30 PM IHI and ICON Future Program Discussion

*John L. Griffis, Jr., J. Pablo Morales-Payan

8:30 AM–2:30 PM

Grand Ballroom

Exhibits Open

9:00–10:00 AM

Raphael

Environmental Stress Physiology (STRS) Working Group Business Meeting

Bert Cregg, *Chair*; Hannah Mathers, *Chair-elect*; Lloyd Jones, *Secretary*

The STRS Working Group promotes basic and applied research on the physiology of horticultural crops with primary emphasis on crop physiological responses to environmental stresses, specifically including temperature, water, and air pollution stresses.

9:00–10:00 AM

Michaelangelo

Herbs, Spices, and Medicinal Plants (HSMP) Working Group Business Meeting

Valtcho Jeliakov, *Chair*; Dayan Ranwala, *Chair-elect*; Gary Stutte, *Secretary*

The HSMP Working Group promotes and encourage scientific research and education on herbs, spices, and medicinal plants, emphasizing botanical, cultural, environmental, genetic, harvesting, physiochemical, processing, and pharmacological aspects of these plants.

9:00–10:00 AM

Alhambra

Root Growth and Rhizosphere Dynamics (RHIZ) Working Group Business Meeting

Paul Schreiner, *Chair*

The RHIZ Working Group provides a forum to promote and exchange information on basic and applied research about the plant rhizosphere, soil microorganisms, root growth and development, and root modeling, which apply to horticultural (fruit, vegetable, ornamentals), forest, and agronomic crops grown in synthetic or field soils.

9:30 AM–5:00 PM

Escorial

ASHS Board of Directors Meeting

9:45–10:15 AM

Grand Ballroom

Break—Thursday

9:45–11:45 AM

Theater

Workshop: Invasive Plants: Breeding, Production, Ecology, and Management

Sponsors: Ornamental Plant Breeding (OPB) and Invasive Plant Research (INPR) Working Groups

Moderator: James Altland, james.altland@ars.usda.gov

This workshop will provide attendees with varying perspectives on invasive plant issue including experts in plant breeding, landscape ecology, nursery production, and exotic plant management.

9:45–10:00 AM Population Control: Quantifying and Interpreting Measures of Popagule Pressure

*Thomas G. Ranney

10:00–10:15 AM Plant Introductions: Resistance, Coexistence or Hostile Takeover?

*John Lambrinos

10:15–10:30 AM Florida Nursery Production, Striving to Stay Florida Friendly

*Rick Brown

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

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10:30–10:45 AM Protection and Stewardship of Natural Areas Threatened by Invasive Plants

*Jim Burch

10:00–11:00 AM

Michaelangelo

Computer Applications in Horticulture (COMP) Working Group Business Meeting

Norman Lownds, *Chair*; Guangyao (Sam) Wang, *Chair-elect*; Arthur Villordon, *Secretary*

The COMP Working Group studies the application of computers in research, extension, and teaching of horticulture.

10:00–11:00 AM

Raphael

Extension (EEXT) Working Group Business Meeting

Eric T. Stafne, *Chair*; Alex Stone, *Chair-elect*; Milt McGiffen, *Secretary*

The EEXT Working Group identifies those individuals who are involved in eXtension Communities of Practice (CoP) and provides opportunities for collaboration and sharing of ideas and methods among CoP participants through ASHS publications and meetings.

10:15 AM–12:00 PM

Sevilla

Oral Session: Floriculture 1

Moderator: Karen L. Panter, kpanter@uwyo.edu

10:15–10:30 AM Daily Water Use of *Antirrhinum majus* in Hydroponic Greenhouse Production

*Jongyun Kim, Bruk E. Belayneh, John D. Lea-Cox

10:30–10:45 AM Assessment of Vase Life for Two Ornamental Grasses

*Pragati Shrestha, Bruce L. Dunn

10:45–11:00 AM Homemade Floral Preservatives Effects on Postharvest Performance of Selected Specialty Cut Species

*Ifikhar Ahmad, John M. Dole

11:00–11:15 AM Harvest Time Affects Postharvest Longevity, Water Relations, and Carbohydrates Status of Selected Specialty Cut Species

*Ifikhar Ahmad, John M. Dole

11:15–11:30 AM Year-round Production of Fresh Cut Sunflowers in Wyoming

*Karen L. Panter, Andrea R. Garfinkel

11:30–11:45 AM Manipulating Phytochrome in Annual Bedding Plant Seedlings Using Light-Emitting Diodes (LEDs) in End-of-Day (EOD) Treatments Affects Height and Species-specific Morphological Characteristics

*Michael A. Ortiz, Roberto G. Lopez

11:45 AM–12:00 PM Investigating the Nitrogen Sink–Source Relationship in *Phalaenopsis* by Using Stable Isotope ^{15}N As a Tracer

*Hadi Susilo, Ying-Chun Peng, Yu-Chun Chen, Yao-Chien Alex Chang

10:15 AM–12:00 PM

Balmoral

Oral Session: Viticulture and Small Fruits 2

Moderator: Tripti Vashisth, triptiv@uga.edu

10:15–10:30 AM Can Increasing Strawberry Flavor Decrease Strawberry Pathogens?

*Alan H. Chambers, Vance M. Whitaker, Kevin M. Folta

10:30–10:45 AM Evaluation of Fresh Dug Strawberry Plants As an Alternative Method of Establishing Hoop House (High Tunnel) Strawberry Crops in Oklahoma

*Charles T. Rohla

10:45–11:00 AM Retrospective of Analysis of Cultivar Development in the Northeastern United States During the 20th Century

*Rebecca Harbut, Marvin P. Pritts

11:00–11:15 AM Thornless Blackberry Production in High Tunnels

*Marvin P. Pritts

11:15–11:30 AM Methods for Producing Long-cane Blackberry Plants

*Fumiomi Takeda

11:30–11:45 AM Bed Fumigation for Preplant Management of Soil-borne Pathogens and Nematodes in Raspberry Fields

*Thomas Walters, Inga Zasada

11:45 AM–12:00 PM Assessing the Damage Potential of Root Lesion Nematodes on Red Raspberry Varieties

*Ziduan Han, Thomas Walters, Inga Zasada

10:15 AM–12:15 PM

Windsor

Oral Session: Crop Physiology

Moderator: Leo Gene Albrigo, albrigo@ufl.edu

10:15–10:30 AM Physiological Responses of Flooded Avocado (*Persea americana* Mill.) Trees to Leaf Removal

*Maria Angelica Sanclemente, Bruce Schaffer, Frederick S. Davies, Jonathan H. Crane

10:30–10:45 AM Flowering Gene Regulation in *Citrus sinensis* During Floral Bud Induction and Initiation: Water Deficit Effects

*Leo Gene Albrigo, Eduardo Chica

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

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10:45–11:00 AM Factors Affecting Early Cone Development in Fraser Fir
*Brent Crain, Bert Cregg, Pascal Nzokou, Jill O'Donnell, Beth Bishop

11:00–11:15 AM Roles of Starch and Sorbitol in Apple Leaves and Stems under Water Stress and Crop Load Combinations
Shaul Naschitz, Amos Naor, Shmuel Wolf, *Eliezer E. Goldschmidt

11:15–11:30 AM Different Wavelengths of LED Light Affect on Plant Photosynthesis
*Most Tahera Naznin, Mark Lefsrud, Julie Gagne, Michael Schwalb

11:30–11:45 AM Preharvest Application of Ethephon Enhances Skin Lignification and Increases the Force Required to Peel Sweetpotato Storage Roots
Xiang Wang, *Ramon A. Arancibia, Jeff L. Main, Mark Shankle

11:45 AM–12:00 PM Reactive Oxygen Species in Interactions Between Plants and Pathogens
*Kubilay Kurtulus Bastas

12:00–12:15 PM Reactive Oxygen Species Levels of Some Apple Cultivars after Fire Blight Infection
*Kubilay Kurtulus Bastas, Esra Karacif

10:15 AM–12:15 PM Trade Room

Workshop: Rootstocks: Challenges and Progress

Sponsor: Pomology (POM) Working Group
Moderator: Holly Little, hlittle@acadian.ca

The objectives of this workshop are to review challenges and progress in tree rootstock development, discuss methods of rootstock evaluations, and discuss ways to overcome challenges. In addition breeding and evaluation of rootstocks for disease and abiotic stress resistance and tolerance, as well as absorption and translocation of nutrients, and root distribution in the soil will be covered.

10:15–10:40 AM Current State of Pear Rootstock Research: Progress and Priorities
*Richard L. Bell, Rachel B. Elkins, Todd Einhorn

10:40–11:00 AM Development and Evaluation of Rootstocks for Avocado (*Persea americana* Mill.) Production
*Mary Lu Arpaia, Greg Douhan, Zelda van Rooyen

11:00–11:20 AM Evaluating Citrus Rootstock Tolerance to Biotic and Abiotic Stress
*Kim D. Bowman, Ute Albrecht

11:20–11:40 AM Effects of Groundcover Management Systems on Root Distribution and Demography in an Avocado Orchard
*Amaya F. Atucha, Ian Merwin

11:40 AM–12:00 PM Elucidating the Genetics of Absorption and Translocation of Macro- and Micronutrients by Apple Rootstocks in the Context of Breeding Populations
*Gennaro Fazio, Darius Kviklys, Michael A. Grusak, Terence Lee Robinson

10:15 AM–12:15 PM Sandringham

Workshop: Significance of Tropical/Subtropical Tree Fruit Germplasm in Florida and Puerto Rico

Sponsor: Genetics and Germplasm (GG) Working Group

Moderator: Brian Irish, brian.irish@ars.usda.gov

This workshop intends to present the impact of tropical and subtropical tree fruit genetic resources on breeding/selection programs and on the industry in Florida and Puerto Rico as well as show commonalities and marked differences that exist between the two distinct regions.

10:15–10:33 AM Evaluation of Tropical Fruit Crop Genetic Resources for Commercial Production
*Ricardo Goenaga

10:33–10:48 AM University of Puerto Rico, Mayaguez Fruit Crops Research
*J. Pablo Morales-Payan

10:48–11:03 AM The Need for Improved Mango Germplasm for the Puerto Rican Industry
*Yair Aron

11:03–11:18 AM South Florida Tropical Fruit Crops and Germplasm
*Jonathan Crane

11:18–11:33 AM Tropical Fruit Germplasm and Genetic Research at the SHRS: 1987 to 2012
*Raymond Schnell

11:33–11:48 AM Tropical Fruit Germplasm Collecting: The Impact on Agriculture in Tropical America
*Richard J. Campbell

10:30 AM–12:00 PM Tuttle

Oral Session: Vegetable Breeding

Moderator: Kevin Crosby, k-crosby@tamu.edu

10:30–10:45 AM Reactions of Some Tomato Cultivars against *Pseudomonas syringae* pv. Tomato
*Kubilay Kurtulus Bastas, Oznur Ekici

10:45–11:00 AM Patterns of Accumulation and Genetic Mapping of Fructose, Glucose, and Sucrose in Snap Beans
Kyle Vandenlangenberg, *James Nienhuis, Paul Bethke

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11:00–11:15 AM Biplot Analysis of G×E Interactions for Fruit Yield and Component Traits in Melons (*Cucumis melo* L.)

*Sat Pal Sharma, Daniel I. Leskovar, Kevin M. Crosby, Amir Ibrahim

11:15–11:30 AM Characterization and Deployment of Recessive Resistance to *Phytophthora capsici* in *Capsicum annuum*

*Kevin Crosby, Jorge Gonzalez, Daniel I. Leskovar, Thomas Isakeit

11:30–11:45 AM Identification of Molecular Markers Linked to Bacterial Spot Race T4 Resistance from the *Solanum lycopersicum* var. *Cerasiforme* Accession PI 114490 QTL: Toward Developing Broad-spectrum Resistance

*Samuel F. Hutton, John W. Scott, Sarah M. Smith

11:45 AM–12:00 PM Detection of QTL Associated with the Non-heading Rogue Phenotype in Crisphead Lettuce

*Sylvie Jenni, Maria-José Truco, Richard W. Michelmore

11:00 AM–12:00 PM

Michaelangelo

Graduate Student (GRAD) Working Group Business Meeting

Jeremy Crook, *Chair*; Kristin Abney, *Chair-elect*

The GRAD Working Group provides a formal organization for Graduate Students in ASHS to support programs and issues facing Graduate Students in Horticulture.

11:00 AM–12:00 PM

Raphael

Organic Horticulture (ORGH) Working Group Business Meeting

Erin Silva, *Chair*; Xin Zhao, *Chair-elect*; Carl Motsenbocker, *Secretary*

To stimulate discussion on horticultural research techniques that enable growers to produce horticultural crops according to organic standards, and on the processes that make organic production systems function.

12:15–1:00 PM

Grand Ballroom

Poster Session: Genetics and Germplasm 3

(424) Race, Interracial Admixture and Genetic Differentiation of Avocado (*Persea americana* Mill.)

*Edward Boza, Cecile Tondo, David Kuhn, Alan Meerow, J. Michael Moore, Richard J. Campbell, Noris Ledesma, Osman A. Gutierrez, Raymond J. Schnell

(425) Fruit Trait Phenotypic Dataset for RosBREED Apple Reference Germplasm Set

*Matthew Clark, Cari Schmitz, Yingzhu Guan, Benjamin Orcheski, James Luby, Katherine Evans,

Susan Brown, Cameron Peace, Eric van de Weg, Dorrie Main, Amy Iezzoni

(426) Variability of Reproductive Characteristics in *Jatropha curcas* L. Accessions in South Florida

*Wagner Vendrame, Silvia Nietzsche, Anne Pinheiro Costa, Marlon C.T. Pereira, Jonathan H. Crane

(427) Pollen Germination and Fruit Set in *Jatropha curcas* L. Accessions in South Florida

*Wagner Vendrame, Silvia Nietzsche, Marlon C.T. Pereira

(428) The First Genetic Map of American Cranberry and Identification of Quantitative Trait Loci for Fruit Rot Resistance

Laura Georgi, *Jennifer Johnson-Cicalese, Josh Honig, Sushma Parankush Das, Veeran D. Rajah, Debashish Bhattacharya, Nahla Bassil, Jeannie Rowland, James Polashock, Nicholi Vorsas

(429) Collecting and Characterization of Leaf Mustard (*Brassica juncea*) in Korea

*Ho Cheol Ko, On Sook Hur, Man-Jung Kang, Na Young Ro, Do-Yoon Hyun, Gyu-Taek Cho, Yu-Mi Choi, Jae Gyun Gwag, Hyung-Jin Baek, Chang-Yung Kim

(430) Genetic Diversity and Cluster Analysis of Eastern Filbert Blight Resistant Hazelnut (*Corylus* spp.) Germplasm

*Megan Muehlbauer, Josh A. Honig, Jennifer Vaiciunas, Thomas J. Molnar

(431) Novel Sources of Eastern Filbert Blight Resistance in ‘Culpla’ and OSU 495.072 Hazelnuts

*Brooke C. Peterschmidt, Shawn A. Mehlenbacher, Vidyasagar R. Sathuvalli

(432) Ex Situ Conservation of Horticultural Plant Genetic Resources in the Genebank of Korea, National Agrobiodiversity Center

*Young-Yi Lee, Gyu-Taek Cho, Ho-Cheol Ko, Ho-Sun Lee, Young-Ah Jeon, Jung-Sook Sung, Sok-Young Lee, Chang-Yung Kim, Yeon-Gyu Kim

(433) Fatty Acid Profile in Seeds of Embrapa’s Manihot Germplasm Collection

*Maria M. Jenderek, Alfredo Alves, Linda Manthey, Terry Isbell

(434) Improving Sweet Peppers for Fruit Qualities

*Bala Rathinasabapathi, Ann Greene, Tyler Baras, Rachel Wallace, Sarah Dickerson, Adriana Clinton, Jose Castano, Edward Viera, Alexandra Rucker, Alves Cristiane, Lucianne Vilharinho

(435) Genetic Relationships Among the Vine Cacti *Hylocereus* Species Revealed by AFLP Markers

Aroldo Cisneros, *Noemi Tel-Zur

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

12:15 –1:00 PM

Grand Ballroom

**Graduate Student Poster Competition
Session 5**

Full competition schedule begins on p. 17

12:15–1:00 PM

Grand Ballroom

**Poster Session:
Herbs, Spices, and Medicinal Plants**

- (073) An Evaluation of Shade Indices on Growth and Essential Oil Production of ‘Italian Large Leaf’ Basil
*Tara Zasadzinski, Cynthia Haynes, Christopher Cervený, Lester Wilson
- (074) Anti-inflammatory Activity of *Arabis glabra* Extracts
*Jung-Hwan Nam, Oh-Keun Kwon, Su-Young Hong, Su-Jeong Kim, Kwang-Soo Cho, Hwang-Bae Sohn, Hyun-Sam Kim, Kyung-Tea Lee, Hee-Jhun Park, Onsook Hur
- (075) Growing Hops in North Carolina: Variety Trials in the Central Piedmont and Southwestern Mountains of North Carolina
*Jeanine M. Davis, Robert Austin, Scott King
- (076) Establishment of Mass Production in *Tetragonia tetragonides*
Beunggu Son, *Jumsoon Kang, Youngwhan Choi, Yongjae Lee, Jeongmin Suh, Younghoon Park
- (077) Productivity and Quality of Essential Oil of Hinoki Cypress using Steam Distillation Method
*Gyeong Suk Jo, Bong gi Yun
- (078) The Effect of Essential Oil of Hinoki Cypress on EEG and Autonomic Responses
*Gyeong Suk Jo, Jeung Keun Suh, In taek Hwang
- (079) The Effect of Essential Oil of Hinoki Cypress on Anti-atopy and Skin
*Gyeong-suk Jo, Jeung-Keun Suh, Gwang Yeon Gi
- (080) Seasonal Changes in Biomass of Wild Populations of Horsetail
Pavol Labun, Ivan Salamon, Daniela Grulova, *Valtcho D. Jeliazkov

12:15–1:00 PM

Grand Ballroom

Poster Session: Ornamental Plant Breeding

- (391) Variable Fire Blight Resistance among 31 Species of Cotoneaster
Joseph Rothleitner, *Ryan Contreras
- (392) Developing Molecular Markers for Development Rate of Petunia
*Ryan M. Warner, Joseph Tychonievich, Wangchu Lobsang, Cornelius Barry

- (393) Discovery of a New Diploid Cytotype of *Fothergilla*
*Thomas G. Ranney, Ron Miller, Rick Lewandowski, Jenny Xiang

- (394) Effects of Oryzalin and Trifluralin in Polyploidy Induction in In Vitro *Cattleya walkeriana* Gardner (Orchidaceae) Seedlings
*Renato Galdiano, Jr., Wagner Vendrame, Eliana G.M. Lemos

- (395) Morphological Variations in Forsythia Induced by Gamma Ray Irradiation
*Wenhao Dai, Victoria Magnusson

- (396) The Utilization of the Polyploid Nature of Roses
*Jake Ueckert, David Stelly, Kevin Crosby, David Byrne

- (397) Breeding of an OTO Intersectional Hybrid Lily ‘Flashy Party’ with Frangrance and Upward-facing Flower
*Hye Kyung Rhee, Hae Ryong Cho, Dae Hoe Goo, Hyang Young Joung, On Sook Hur

- (398) Cell Membrane Stability Provided Better Resolution for Screening Heat Tolerance in Garden Roses Than Did Chlorophyll Fluorescence
Ockert Greyvenstein, *Terri Woods Starman, Brent Pemberton, Genhua Niu, David H. Byrne

- (399) Characterization of Resistance Genes of *Rosa* Spp. to Black Spot by Molecular Markers
Qianni Dong, *David Byrne, Xinwang Wang

- (400) Ten Site Evaluation of Advanced Clonal Selections of *Taxodium distichum* (L.) Rich. Yields Data Aiding in Selection of Improved Trees for Built Environments in the Eastern and Central United States
*Michael A. Arnold, Donita L. Bryan, Raul I. Cabrera, Geoffrey C. Denny, Jason J. Griffin, Jeffery K. Iles, Andrew R. King, Gary W. Knox, Garry V. McDonald, Cynthia B. McKenney, D. Thayne Montague, Genhua Niu, Daniel K. Struve, Amy L. Shober, Nancy West

- (401) Interspecific Hybridizations in Flowering Cherries
*Margaret Pooler, Hongmei Ma

12:15–1:00 PM

Grand Ballroom

Poster Session: Produce Quality, Safety, and Health Properties

- (040) Waste of Acerola Juice Processing As a Source of Antioxidant Dietary Fiber
Jéssica S. do Carmo, Tarliane M. Tavares, Maria do Socorro M. Rufino, Raimundo W. de Figueiredo, Márcia Régia S. da Silveira, *Ricardo E. Alves
- (041) Variability of Capsaicinoid and Capsaicinoid Analog Concentrations in Ají (*Capsicum baccatum* L.) Peppers
Elena Albrecht, John R. Stommel, Eunhee Park, *Robert A. Saftner

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

Thursday, August 2, 2012

- (042) Phytotoxicity of Fungicides, Herbicides and Insecticides/Acaricides on Ornamental Conifer (Division: Pinophyta) Species in the Southeastern U.S. for Interregional Research Program (IR-4)
B.A. Fraelich, *B.T. Scully, S.M. Schneider, C.L. Palmer, P.H. Schwartz
- (043) Magnitude of the Residue Analyses in Specialty Crops from Experimental Applications of Triazole Fungicides
T.A. Hendricks, *B.T. Scully, D.H. Carpenter, S.M. Schneider
- (044) The Scat /Track Guidebook for Desert Animal Identification
*Kaylee Renick, Kurt D. Nolte
- (045) Carotenoid Content of Raspberry and Blackberry Fruit
Penelope Perkins-Veazie, Guoying Ma, *Gina Fernandez
- (046) Methyl Jasmonate Application Enhances Glucosinolate and Phenolic Concentrations in Kale
*Kang Mo Ku, John A. Juvik
- (047) Antioxidants in Strawberry Cultivars and in Greenhouse-grown Tomatoes Subjected to Salinity
*Tissa Kannangara, David Ehret, Chaim Kempler, Kevin Usher
- (048) Whole Potato Tubers (*Solanum tuberosum* L.) Provide a Protective Matrix Effect That Stabilizes Antiproliferative Inhibitory Metabolites from Thermal Degradation, and Retains Inhibitory Properties Against HT-29 Colon Cancer Cells In Vitro
*Tatiana Zuber, Cecil Stushnoff, David G. Holm
-
- 12:15–1:00 PM Grand Ballroom
Poster Session: Production and Harvest Mechanization
- (125) Development of Intelligent Spray Systems for Nursery Crop Production
Heping Zhu, Erdal Ozkan, Richard D. Derksen, Michael E. Reding, Christopher M. Ranger, Luis Canas, Charles R. Krause, James C. Locke, Stanley C. Ernst, Randall H. Zondag, *Amy Fulcher, Robin Rosetta, Hong Young Jeon, Yu Chen, Jiabing Gu, Hui Liu, Yue Shen, Alfredo A. Rios
- (126) Subsurface Application of Poultry Litter
*Thomas Handwerker, Arthur Allen, Eric May, Fawzy Hashem, Nancy Chepketer, Peter Kleinman, Ray Bryant
-
- 12:15–1:00 PM Grand Ballroom
Poster Session: Propagation
- (149) The Effect of Cutting Type and Auxin Treatment on Rooting of *Cupressus cashmeriana*
*Matthew D. Taylor, Annie Raup
- (150) In Vitro Regeneration of Lettuce [*Lactuca sativa* (L.)] Shoot Buds Depends on Location, Size, and Shape of Explants
Pierre Raphaël David, Sylvie Laliberté, *Sylvie Jenni
- (151) Germination Characteristics of Water Sedge (*Carex aquatilis*) and Cotton Sedge (*Eriophorum angustifolium*) from Arctic Coastal Wetlands, Prudhoe Bay, Alaska
*Patricia S. Holloway, Stephen D. Sparrow, M. Sean Willison
- (152) Year-round Testing of Different Supplemental Lighting Treatments for Propagating Tomato Seedlings
*Celina Gomez, Cary A. Mitchell
- (153) Grafting Techniques for Conservation of Endangered *Prunus geniculata* Harper and Other Native *Prunus* L. Species of the Southeastern U.S.
*Dario J. Chavez, Thomas G. Beckman, José X. Chaparro
- (154) Complete Decapitation and Rootstock Culture In Vitro Are Efficient Methods for Shoot Regeneration from Eggplant Hypocotyls
*Hideyuki Tanaka, Yuta Yokoyama, Satoshi Yamasaki, Masataka Ono, Takahiro Tezuka, Masayuki Oda
- (155) Adventitious Bud Formation Promoted by L-2-Aminooxy-3-Phenylpropionic Acid in Tomato Plants Treated with the Complete Decapitation Method In Vitro
Hideyuki Tanaka, Kazuhiko Mitsukuri, Satoshi Yamasaki, Ryohei Hirose, Takahiro Tezuka, *Masayuki Oda
- (156) Computer Aided Evaluation of *Rhododendron calendulaceum* Early Seedling Growth Parameters in Relation to Soilless Media
*Eric J. Limbird, Nathan C. Phillips, Daniel C. Messick
- (157) Regeneration of *Lonicera japonica* L. through Somatic Embryogenesis from Zygotic Embryos and Cotyledons
Qingjun Huang, Huijie Zeng, Jietang Zhao, Juan Chen, Xiaoming Wang, Richard J. Henny, *Jianjun Chen
- (158) *Glacium* sp. Germination At Different Salinity Levels as Influenced by Growth Regulators
Ahmed Getlawi, Mohamed Shahba, *Harrison G. Hughes
-
- 12:15–1:00 PM Grand Ballroom
Poster Session: Public Horticulture
- (092) Scan, Link, and Learn: QR Codes and Readers Can Be Useful Tools for Learning in Arboreta and Botanic Gardens
*Paul C. Siciliano, Jr.
- (093) The Crosby Arboretum: Thirty Years of Native Plants in the Mississippi Piney Woods
*Richelle A. Stafne, Patricia R Drackett

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- (094) A Twenty-year Survey of Conifer Survival At the Baker Arboretum, Bowling Green, Kentucky
*Martin Stone, Peggy McKillip

12:15–1:00 PM

Grand Ballroom

Poster Session:

Viticulture and Small Fruit 3

- (291) Correlations of Strawberry Leaf CO₂, Cell Transpiration, and Potassium and Nitrate Ion Translocations on Fresh Fruit Yield and Quality
*Hong Li, Ruiping Huang, Tingxian Li
- (292) Organic Blueberry Production Systems: Management of Plant Nutrition, Irrigation Requirements, and Weeds
*Bernadine C. Strik, David R. Bryla, Emily Vollmer, Dan M. Sullivan
- (293) Physical Characteristics of Pyrenes As a Means to Identify Blackberry and Raspberry Cultivars
*Mariah Bruce, Penelope Perkins-Veazie
- (294) Epidemiology and Control of Blackberry Yellow Vein Disease
*Ioannis Tzanetakakis, Chad E. Finn, John R. Clark, Gina Elizabeth Fernandez, M. Elena Garcia, Robert Martin, Diego Quito-Avila, Bindu Poudel, Jana Lee, Hannah Burrack, D.T. Johnson, Terrence Kirkpatrick, Inga Zasada, William M. Wintermantel, Sead Sabanadzovic
- (295) Crumbly Fruit Symptoms in 'Meeker' Red Raspberry Are More Severe with Mixed Virus Infections
Diego Quito-Avila, *Ioannis Tzanetakakis, Robert Martin
- (296) Epidemiology of Blackberry Yellow Vein Associated Virus and Blackberry Chlorotic Ringspot Virus, Two Major Components of Blackberry Yellow Vein Disease
Bindu Poudel, William M. Wintermantel, Sead Sabanadzovic, *Ioannis Tzanetakakis
- (297) Three Viruses Contribute to the Raspberry Crumbly Fruit Phenotype
Diego Quito-Avila, Danielle Lightle, Jana Lee, Chad E. Finn, Inga Zasada, D.T. Johnson, Hannah Burrack, Gina Elizabeth Fernandez, John R. Clark, Sead Sabanadzovic, William M. Wintermantel, *Ioannis Tzanetakakis, Robert Martin
- (299) Determining Nitrogen Fertilization Rates and Time of Application of Primocane-fruited Blackberries
*Jose Carlos Reynoso, M. Elena Garcia, C. Vincent, David Dickey

12:15–1:00 PM

Grand Ballroom

Poster Session:

Water Utilization and Management

- (180) Water Use of Four Perennial Plants
*Shuyang Zhen, Stephanie Burnett
- (181) Comparing Substrate Moisture-Based Daily Water Use and On-demand Irrigation Regimes for Oakleaf Hydrangea Plants Grown in Two Container Sizes
*Ethan D. Hagen, Susmitha Nambuthiri, Amy Fulcher, Robert L. Geneve
- (182) Comparative Effects of Deficit Irrigation in Landrace and Commercial Chile Cultivars
*Israel Calsoyas, S.J. Walker
- (183) Estimating Water Use by Green Industry Activities in Texas
*Raul I. Cabrera
- (184) Soil Moisture Mapping of Potato Farms Utilizing Four Irrigation Practices: Seepage, Subsurface Drip, Tile Irrigation, and Surface Drip
*Libby R. Rens, Lincoln Zotarelli, Marcelo Paranhos, Joel Reyes-Cabrera, Guilherme B. Buck, Charles Barrett

12:45–3:45 PM

Sandringham

SCRI Project Director Workshop

Sponsor: Specialty Crop Research Initiative (SCRI)

Coordinator: Thomas A. Bewick, tbewick@csrees.usda.gov

Objectives: Provide forum where SCRI awardees from 2008 can report their findings. Help ARS scientists learn how to develop non-federal matching funds. Consider how to use emergency Hatch funding to develop an SCRI project team. Provide information on writing impact statements.

1:00–1:45 PM

Grand Ballroom

Graduate Student Poster Competition Session 6

Full competition schedule begins on p. 17

1:00–1:45 PM

Grand Ballroom

Poster Session: Fruit Breeding 2

- (383) A Postharvest Quality Study of University of Florida Strawberry Cultivars and Advanced Selections
*Yanina D. Perez Cayo, Vance Whitaker
- (384) Mandarin Improvement using Interploid Sexual Hybridization
*Milica Calovic, Jude W. Grosser
- (385) Evaluation of Muscadine Genotypes for Storage Ability
*Patrick J. Conner

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

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- (386) Evaluation of Fruit Rot Disease Resistance in Muscadine Grapes (*Vitis rotundifolia* Michx.)
*Xia Xu, Jiang Lu, Barbara J. Smith, Zhongbo Ren, Fitz Bradley
- (387) Simple Sequence Repeat (SSR) Markers Associated with White Flower in Peach [*Prunus persica* (L.) Batsch] Identified using Bulked Segregant Analysis (BSA)
*Dario J. Chavez, Thomas G. Beckman, José X. Chaparro
- (388) Polyploidy of Cells in Sweet Cherry Fruit
*Todd Einhorn, David Gibeaut, Ryan Contreras, Matthew D. Whiting
- (389) Developing New Sources of Resistance to Fire Blight for Use in Apple Scion Breeding Programs
*John L. Norelli, Katherine M. Evans, Cheryl Hampson, Michael E. Wisniewski
- (390) Clonal Propagation of Dragonfruit (*Hylocereus* sp.) Hybrids
*Warren Condon, Wagner A. Vendrame
-
- 1:00–1:45 PM Grand Ballroom
- Poster Session: Nursery Crops**
- (216) Development of an Oxygenation System for Nursery Crop Irrigation Water
S. Evan Wilson, *Amy Fulcher
- (217) Seed Source Significantly Influences Growth Rates and Disease Resistance of *Abies lasiocarpa* Grown for Ornamental Nursery Stock and Christmas Trees
*Danny L. Barney, Michael Bauer, Jennifer Jensen
- (218) Use of Fiber Containers Does Not Affect Water Use or Plant Growth Compared to Plastic Containers for Pot-In-Pot Production of Birch
*Susmitha Nambuthiri, Robert L. Geneve, Rodney Thomas Fernandez, Guihong Bi, Genhua Niu, Amy Fulcher, Nicholas A. Pershey, Xueni Wang
- (219) Do Shrubs in Mediterranean California Differ from Their Eastern Congeners in Drought and Flood Resistance?
Bryan J. Peterson, *William R. Graves
- (220) Irrigation Based on Plant Daily Water Use Conserves Water without Affecting Plant Growth
*Xueni Wang, Tom Fernandez, Bert Cregg, Mathieu Ngouajio, Rafael Auras, Joseph P. Albano
- (221) Effects of Fertility on Sedum Green Roof Module Production and Maintenance
*Jessica Lubell, Kristoffer Barker
- (222) Seed Production of Japanese Barberry Cultivars and Their Establishment in Deciduous Woods
*Mark H. Brand, Jonathan M. Lehrer, Jessica D. Lubell
- (223) Seed Production of Winged Euonymus Cultivars and Their Establishment in Natural Areas
*Mark H. Brand, Jessica D. Lubell, Jonathan M. Lehrer
- (224) Using DNA Fingerprinting to Confirm Identity and Correct Labeling of Japanese Barberry (*Berberis thunbergii*) Cultivars in the Market
*Samuel G. Obae, Mark H. Brand
- (225) Growth of Containerized Nursery Crops in a Cedar Amended Substrate
*Travis R. Carmichael, Cheryl R. Boyer, Jason J. Griffin
- (226) Using Effluent Volumes to Control Leaching in Container Nursery Crops
*Maureen E. Thiessen, Edward W. Bush, Jeffrey S. Beasley, Daniel E. Wells
-
- 1:00–1:45 PM Grand Ballroom
- Poster Session:
Ornamentals/Landscape and Turf 3**
- (244) Landscape Management Cost Comparison Before and After Implementation of Sustainable Landscape Practices
*Marietta Loehrlein
- (245) Sustainable Landscaping Issues and Trends As Discussed in the Academic Literature
*Marietta Loehrlein
- (246) Organic Amendment Effects on Soil Carbon and Microbial Biomass in the Root Zone of Three Landscape Tree Species
P. Eric Wiseman, Susan Day, *J. Roger Harris
- (247) Morphophysiological Dormancy in Seeds of *Thalictrum rochebrunianum* var. *grandisepalum* (H. Lev.) Nakai Native to Korea
Seung Youn Lee, *Yong Ha Rhie, Hyun Hwan Jung, Ki Sun Kim
- (248) Choice and No-choice Feeding Preferences of the Southern Pine Sawyer Beetle on Four Species of Pine
*Matt S. Wilson, Jason J. Griffin, Raymond A. Cloyd
- (249) *Cryptodiaporthe corni*, a Latent Pathogen in Asymptomatic Stems of Pagoda Dogwood (*Cornus alternifolia*)
*Garrett L. Beier, Robert A. Blanchette, Stan C. Hokanson
- (250) The Effects of a Controlled Burn on Native *Aureolaria grandiflora* Populations Existing on an Ozark Savanna and Glade Habitat
*Patrick L. Greenwald, Pamela B. Trewatha

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

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- (251) Ornamental Attributes of 16 Selections of Rhizoma Peanut (*Arachis glabrata* Benth.) in Response to Sun and Shade
*Benjamin Anderson, Gary W. Knox, Ann R. Blount, Cheryl L. Mackowiak
- (252) Impacts of Broadleaf Mistletoe Infestations on Native Trees Used in Urban Environments
*Raul I. Cabrera
- (253) Four Levels of Flooding Alter Soil Oxygen Concentrations and Growth and Survival of *Taxodium distichum* (L.) Rich
*Michael A. Arnold, Andrew R. King, Sean T. Carver
- (254) Mississippi State Extension Horticulture Outreach: A History of Southern Gardening
*Gary R. Bachman, Tim Allison, Brian Utley, Amy Taylor, Bonnie Coblenz, Linda Breazeale, Keri Lewis
- (255) Determining the Minimum Growth Substrate Depth Needed for Plants in Arid Climate Green Roofs
Lauren Hotovec, Dawn VanLeeuwen, *Rolston St. Hilaire

1:00–1:45 PM

Grand Ballroom

Poster Session: Plant Biotechnology

- (127) Somatic Embryogenesis and Agrobacterium-mediated Transformation of *Epipremnum aureum* ‘Jade’
Jietang Zhao, Zhijian Li, Richard J. Henny, Dennis J. Gray, Jiahua Xie, *Jianjun Chen
- (128) QTL Mapping for Fire Blight Resistance in Apple
M. Awais Khan, Youfu (Frank) Zhao,
*Schuyler S. Korban
- (129) The Regulatory Role of an Apple Transcription Factor, MdMYB3, in Anthocyanin Biosynthesis
Sornkanok Vimolmangkang, Yuepeng Han,
*Schuyler S. Korban
- (130) Improving Diploid Strawberry Yellow Wonder Genotype 5AF7 As a Functional Genomics Resources
*Mohamad Fadhli Mad Atari, Laura I. Gonzalez, Kaylie Smith, Kevin M. Folta
- (131) A Transcription Factor Complex Regulates the Anthocyanin Biosynthetic Pathway in Eggplant (*Solanum melongena*)
*John R. Stommel, Judith M. Dumm
- (132) Examining the Role of Arabinogalactan-Proteins in Agrobacterium-mediated Transformation of Citrus
*Vladimir Orbovic, Patricia Soria
- (134) Construction of an Intron-hairpin RNAi Vector Using the Cp Cistron of Papaya Ringspot Potyvirus-P
*Salvador Guzmán-González, Valadez-Ramírez Pedro, Rincón-Castrejón Patricia del Carmen,

- Manzo-Sánchez Gilberto,
Bermúdez-Guzmán Manuel de Jesús,
Buenrostro-Nava Marco-Tulio
- (135) Cryopreservation of *Dendrobium* Hybrid Mature Seeds by Vitrification Using Cryoprotectant Additives
*Renato Galdiano, Jr., Wagner Vendrame, Eliana G.M. Lemos
- (136) Cryopreservation of *Salix* Sp. Dormant Winter Buds
*Maria M. Jenderek, Barbara D Ambruzs, Gregory E. Holman, Gayle M Volk, David D Ellis, Mark P. Widrlechner, Jeffrey Carstens
- (137) Development of Comprehensive Medium for Micropropagation of Cultivated Cassava Accessions
*Maria M. Jenderek, Alfredo Alves, Jenna Schnibbe, David Ellis
- (138) Micropropagation and Its Application for *Ficus* Species
Haiyang Liu, Xiaoling Jin, Xijun Hu, *Donglin Zhang
- (139) Adventitious Shoot Regeneration of Oriental Lily (*Lilium orientalis*) and Genetic Stability Evaluation Based on ISSR Marker Variation
Xiaomei Liu, *Guochen Yang

1:00–1:45 PM

Grand Ballroom

Poster Session: Plasticulture

- (099) High Tunnel Strawberries: Potential New Crop for Small Acreage Growers in West Texas
*Russell W. Wallace, Thomas Walters, Carol A. Miles, Annette L. Wszelaki, Debra A. Inglis
- (100) In Situ Changes to Soil Microbial Community Structure and Function Following Degradation of Potentially Biodegradable Mulch Films
*Chenhui Li, J. Moore-Kucera, Carol Miles, Debra Inglis
- (101) High Tunnels, Cultivars and Plant Types Influence Disease Incidence and Severity in Organically Managed Strawberries
*Thomas Walters, R. Wallace, A. Wszelaki, J. Martin, C. Miles, D.A. Inglis
- (102) Evaluation of Winter Production of Leafy Greens in High Tunnels: A Comparison of Results for Mild and Cold Winters
*James W. Shrefler, L. Brandenberger, B. Kahn, W. Roberts, M. Taylor, Steven D. Upson, C. Rhola, J. Laughlin
- (103) Temperature Moderating Effects of Low Tunnels Over Winter in Cool Climates
*Rebecca Grube Sideman, Amanda Brown, Clifton A. Martin, Ruth Hazzard, Andrew Cavanagh

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1:00–1:45 PM

Grand Ballroom

Poster Session: Postharvest 4

- (033) Samples of Intact Açai (*Euterpe oleracea* Mart.) Fruit Belonging to Different Batches Affect Model Performance for Total Anthocyanin Content Prediction using Near-infrared Spectroscopy (NIR)
*Gustavo Henrique de Almeida Teixeira, José Dalton Cruz Pessoa, Valquiria Garcia Lopes
- (034) The Effects of Storage and Harvesting Method on Anthocyanin Content of Southern Highbush Blueberries (*Vaccinium corymbosum* L.)
*Kristin Abney
- (035) Storing Avocado Under Hyperbaric Pressure
Pansa Liplap, *Clément Vigneault, Vijaya Raghavan, Denis Charlebois, Sylvie Jenni
- (036) Site Specific Fertilization Affects Yield, Fruit Size, Quality, and Shelf-Life of ‘Kent’ Mango
*Jorge A. Osuna-Garcia, Samuel Salazar-Garcia, Sr., Ricardo Goenaga
- (037) Reflectance Spectroscopy to Determine Dry Matter Content in ‘Hass’ Avocado Fruit
Denis Charlebois, Sr., *Jorge A. Osuna-Garcia, Sr., Clément Vigneault, Ricardo Goenaga, Samuel Salazar-Garcia, Sr.
- (038) Shelf Life and Composition of Organically Grown North Carolina Blackberries
*Moo Jung Kim, Penelope Perkins-Veazie, Gina Fernandez
- (039) Effect of Gamma Irradiation on Different Enzymatic Activities in Spongy Tissue Development of Mango Fruit ‘Ataulfo’
Carolina Corona-Martinez, *Edmundo Mercado-Silva, Ma Esthela Vázquez-Barrios, Sergio Romero-Gómez, Sandra Olimpia-Mendoza

1:00–1:45 PM

Grand Ballroom

**Poster Session:
Root Growth and Rhizosphere Dynamics**

- (185) Root Morphology of *Vaccinium* spp. in Response to Iron Concentration
*Gerardo H. Nunez, Rebecca L. Darnell, James W. Olmstead
- (186) Effect of Pervious Pavement on Soil CO₂ Efflux and Root Growth
*Astrid Volder, Bhavana Viswanathan, W. Todd Watson

1:00–1:45 PM

Grand Ballroom

Poster Session: Vegetable Crops Management 3

- (313) A Transdisciplinary Approach to Developing an Eastern Broccoli Industry
*Thomas Björkman, Jeanine M. Davis, Mark W. Farnham, Miguel Gómez, Phillip Griffiths, Mark Hutton, Dean A. Kopsell, James R. Myers, Carl E. Sams, Justin Smith
- (314) The Effects of Different Growing Media Combinations on Yield and Quality of Cherry Radish
*Nurgul Ercan, Funda Ayar Sensoy
- (315) Maximizing Spanish Onion Bulb Size and Quality Through Irrigation and Cultivar Selection in Organic Soils of Eastern Canada
*Sylvie Jenni, Djamila Rekika, Andre Gosselin, Camille Dubreuil Bessette, Denys van Winden, Jean-Bernard van Winden
- (316) A Comparative Evaluation of EM on Soil Quality and Fresh Yield of *Brassica oleracea* var. *acephala* Grown on Orangeburg Loamy Sand Soil
*Cassel S. Gardner, Alfredo B. Lorenzo, Bravo Brown
- (317) High Tunnels in Maine: Production Practices and Challenges
Caragh B. Fitzgerald, *Mark Hutton
- (318) Effect of Grafting on Root Permeability of Dutch and Japanese Tomato Cultivars
*Tomomi Kakita, Mio Nakamura, Takashi Ikeda
- (319) The Effect of High Temperatures on the Growth of Oriental Cabbages
Jeongmin Suh, Beunggu Son, *Jumsoon Kang, Youngwhan Choi, Yongjae Lee, Younghoon Park
- (320) Do Tunnels Enhance Earliness and Quality in Muskmelons for Local Market?
*Mina Vescera, Rebecca N. Brown
- (321) Light-emitting Diodes for Miniature Hydroponic Lettuce
*Kent D. Kobayashi, Michelle K. Lazaro
- (322) Novel Methods to Highlight Relative Differences Between Cultivars in a Variety Trial: An Example Using High Tunnel Tomatoes
*Nicholas Warren, Rebecca Sideman

1:00–2:00 PM

Raphael

Vegetable Breeding (VGBR) Business Meeting

Dilip R. Panthee, *Chair*; Mark W. Farnham, *Chair-elect*; Michael Mazourek, *Secretary*

The VGBR Working Group promotes the exchange of information on breeding procedures, screening techniques, and other

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areas of specific interest to vegetable breeders; encourages the exchange of germplasm among vegetable breeders; and maintains current lists of vegetable variety names and descriptions.

1:00–2:00 PM

Michaelangelo

Waste Utilization in Horticulture (WUH) Working Group Business Meeting

Joseph Albano, *Chair*

The WUH Working Group enables researchers, teachers, and service professionals to meet and share common interests and experiences, to minimize duplication of efforts, to plan future areas of research, and to promote cooperative research. The group serves as a source of current information and guidance to those involved in waste recycling that benefit horticultural industries.

1:00–5:00 PM

*Tours pick up in front of
the main hotel lobby entrance*

Miami City Tour

Miami is a virtual mosaic of ethnic communities. Our City Tour will traverse the Art Deco District, Coral Gables, Little Havana and Coconut Grove to provide an interesting cross-section of greater Miami's history and culture.

1:45–3:45 PM

Balmoral

Workshop: Changing the Pace—Adopting a PechaKucha Approach to Presentations

Sponsor: Teaching Methods (TCHG) Working Group

Moderator: Tim Rhodus, rhodus.1@osu.edu

This workshop will acquaint the audience with the PechaKucha format for organizing a group of presentations. The term PechaKucha is Japanese for “chit-chat”. Under this approach, presenters are restricted to sharing their story through only 20 slides that automatically advance every 20 seconds. The first panel of speakers will present a series of progressive topics targeted to an “Education” audience. The second panel of speakers will deliver talks appropriate for an “Extension” audience and the third panel will address topics of interest to a “Research” audience. Opportunity for questions and answers will be provided between each panel and at the end of the session.

1:45–1:55 PM Using iPads in the Classroom

*Tim Rhodus

1:55–2:05 PM Using Technology to Teach Floral Design

*Terri Woods Starman

2:05–2:15 PM Involving Undergraduate Students on
Hands-on Activities and Research

*Bala Rathinasabapathi

2:15–2:25 PM Strategies for Using An Active Learning
Classroom: The Edible Landscape As a Case Study

*Thomas E. Michaels

2:25–2:35 PM Horticultural Outreach for 5,000+ with Fall
Flower & Garden Fest

*Richard G. Snyder

2:35–2:45 PM Installing Rain Gardens At County
Extension Offices

*Richard E. Durham

2:45–2:55 PM University and Industry Roles in Extension
Teaching into the Future

*Paul F. Fisher

2:55–3:05 PM Kansas Healthy Yards and Communities

*Cheryl R. Boyer

3:05–3:15 PM Ratios of Reproductive to Vegetative Growth
in Six Blackberry Cultivars

*Eric Stafne

3:15–3:25 PM Highlands County Mobile Irrigation Lab

*Dianne Jacobson

3:25–3:35 PM National Grass Research Trials

*Mary Hockenberry Meyer

3:35–3:45 PM Bend Me, Shape Me—Light Enhancing Crop
Growth

*Kent D. Kobayashi

1:45–3:45 PM

Tuttle

Oral Session: Environmental Stress Physiology

Moderator: Jiwan P. Palta, jppalta@wisc.edu

1:45–2:00 PM Seedling Vulnerability to Abiotic Stressors:
Recovery and Phenylpropanoids

*Katherine Warpeha, Joe Sullivan, Lon Kaufman,
Jack Gibbons, Danielle Orozco-Nunnally,
Durre Shahwar Muhammad, Kyo Wakasa,
Tetsuya Yamada

2:00–2:15 PM Xylem Sap Cytokinin Levels Change with
Severe Water Stress in Containerized Citrus Nursery
Trees

*Gurreet Brar, Timothy M. Spann

2:15–2:30 PM Exogenous Methyl Jasmonate Mitigates the
Oxidative Damage in Cucumber Seedlings Subjected
to Water Stress

*Muhammad A. Shahid, Rashad M. Balal, Neil Mattson,
Muhammad Aslam Pervez, Muhammad Afzal,
Tahira Abbas

2:30–2:45 PM Genotypic Differences in Mobilizing
Insoluble Phosphates by Potato Grown in Sandy
Soil

*Wei Chieh Lee, Guodong Liu

2:45–3:00 PM Foliar and Ground Application of Abscisic
Acid to Increase Cold Tolerance in Citrus

*Francisco Melgoza, Ayako Kusakabe, Shad D. Nelson,
Juan Carlos Melgar

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

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3:00–3:15 PM Electrical Signals in Walnut Trees in Relation to Soil Water Content and Vapor Pressure Deficit

*Pilar M. Gil, Jorge Saavedra, Bruce Schaffer, Felipe Minoletti, Rosa Navarro

3:15–3:30 PM Comparative Studies On the Physio-Biochemical and Ionic Responses of Three Avocado (Persea) Species Under Salt Stress

*Rashad M. Balal, Neil Mattson, Muhammad A. Shahid, Francisco Garcia-Sanchez, Usman Ghazanfar

3:30–3:45 PM Response Two Tomato Cultivars to NaCl Stress in the Presence and Absence of Mycorrhiza
Amr Hassan, *Jiwan P. Palta

1:45–3:45 PM

Dupont

Workshop: Identifying, Quantifying, and Minimizing Variation in Controlled Environments

Sponsor: Growth Chambers and Controlled Environments (CE) Working Group

Moderator: Gioia D. Massa, gioia.massa@nasa.gov

The CE working group, along with related organizations, has worked since the late 1970s to reduce variability in environmental and cultural parameters in controlled environments through testing to identify and quantify variability, and through standards development. The original driver for this activity was to improve comparability among experiments conducted in controlled environments by researchers at different locations, and while this goal remains, the increasing use of large controlled environment facilities in commercial agriculture has again brought this concern to the forefront. This workshop will provide an overview of factors contributing to variability in controlled environments, the impact of variability in greenhouses and other controlled environment facilities used for commercial applications such as crop production and high-throughput plant screening, and techniques to identify and minimize problems related to variability. This information will have application to those researchers, ornamental and vegetable crop producers, plant breeders, and plant biotechnologists who work in controlled environments.

1:45–3:45 PM

Trade Room

Workshop: Organic Agriculture in the Tropics

Sponsor: Organic Horticulture (ORGH) Working Group

Moderator: James Nienhuis, nienhuis@wisc.edu

This workshop will discuss the unique challenges to organic vegetable production in the tropics.

1:45–2:00 PM Organic Vegetable Production in the Tropics
*James Nienhuis

2:00–3:00 PM

Raphael

Intellectual Property Rights (IPR) Working Group Business Meeting

John R. Clark, *Chair*; Amelie Aust, *Chair-elect*; Todd West, *Secretary*

The IPR Working Group provides a forum that will promote the exchange of information and discussion of issues concerning the protection of intellectual properties.

2:00–3:00 PM

Alhambra

International Horticulture and Issues (IHI) Working Group Business Meeting

John Griffis, Jr., *Chair*; Sarada Krishnan, *Chair-elect*

The objectives of the IHI Working Group are to provide a forum for the exploration, discussion, and exchange of information on global issues of vital concern to horticulturists in all divisions and disciplines and to provide a potential mechanism through concerted action for input into decision and policymaking processes at the national and international levels.

2:00–3:00 PM

Michaelangelo

Public Horticulture (PUBHORT) Working Group Business Meeting

David Graper, *Chair*; Sue Hamilton, *Chair-elect*

The PUBHORT Working Group provides a forum for professional networking and discussion about matters related to botanic gardens, arboreta, and other institutions of public horticulture. Of particular interest are issues germane to public horticulture research, education, and outreach activities conducted within a higher education environment.

2:00–3:30 PM

Cambridge

International Division Advisory Council Meeting

Diane Doud Miller, International Division Vice President, *Chair*; All Working Group Chairs and Chairs-elect, International Division

2:00–3:45 PM

Theater

Oral Session: Ornamental Plant Breeding

Moderator: Neil O. Anderson, ander044@umn.edu

2:00–2:15 PM Utilizing CT Technology to Answer Unsolved Questions in Ornamental Tree Root Research

*Taryn Bauerle

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

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2:15–2:30 PM Breeding in the Private Sector versus Academia: Objectives and Challenges
*Sloane Michele Scheiber, Michael Dobres

2:30–2:45 PM Disease Resistance Gene Candidate Sequences in Gerbera: Cloning, Characterization, and Utilization for Molecular Marker Development
Xiaohe Song, *Zhanao Deng

2:45–3:00 PM Limiting Invasive Ruellia Populations via Breeding Sterile Cultivars and Developing Efficient Control in Natural Areas
*Rosanna Freyre, Adam Moseley, Carrie Reinhardt-Adams, Gary Knox, Sandra B. Wilson

3:00–3:15 PM Inheritance Study and Molecular Marker Development for Powdery Mildew Resistance in Gerbera
Xiaohe Song, *Zhanao Deng, Jinguo Hu

3:15–3:30 PM Field Evaluation of Heat Tolerance in Rose
*David H. Byrne, Natalie Anderson, Qianni Dong, Jake Ueckert, Ockert Greyvenstein

3:30–3:45 PM Heritability of the Groundcover ('wave'TM) Plant Habit in Garden Chrysanthemums
*Neil O. Anderson

2:00–4:00 PM Windsor

Oral Session: Herbs, Spices, and Medicinal Plants

Moderator: Valtcho D. Jeliazkov (Zheljazkov),
valtcho.pubs@gmail.com

2:00–2:15 PM Comparative Analysis of Essential Oil Contents of Tuberose (*Polianthes tuberosa*) by Supercritical Fluid Extraction (SFE) Method Grown at Different Regions
*Abdul Manan, Shoaib -ur-Rehman, M.A. Pervez, C.M. Ayub, M. Usman

2:15–2:30 PM Relation of the Juliana Anicia Codex and the Codex Neapolitanus: Ancient Greek Illustrated Dioscoridean Herbals
*Jules Janick, John Stolarczyk

2:30–2:45 PM Antidiabetic Compounds in Plant Species
*Venu Perla, Sastry S. Jayanty

2:45–3:00 PM *Juniperus scopulorum* Essential Oil Yield, Composition, and Antioxidant Activity Can Be Altered by the Length of the Steam Distillation
*Valtcho Jeliazkov (Zheljazkov), Tess Astatkie, Ekaterina Jeliazkova, Adrienne A.O. Tatman, Vicki L. Schlegel

3:00–3:15 PM Japanese Cornmint Can Be Harvested after the First Few Frosts in Wyoming
*Valtcho Jeliazkov (Zheljazkov), Charles Cantrell, Tess Astatkie, Ekaterina Jeliazkova

3:15–3:30 PM Harvest Time Effects on Peppermint and Spearmint Grown in Wyoming
*Valtcho Jeliazkov (Zheljazkov), Charles Cantrell, Tess Astatkie, Ekaterina Jeliazkova

3:30–3:45 PM Peppermint, Spearmints and Japanese Mint As Essential Oil Crops for Southeastern U.S.
*Valtcho Jeliazkov (Zheljazkov), Thomas E. Horgan, Charles Cantrell, Tess Astatkie, M. Wayne Ebelhar, William Evans

3:45–4:00 PM Nutritional Quality of Oyster Mushroom As Affected by Drying and Pretreatments
*Itai Mutukwa, Larry J. Cihacek, Clifford Hall, Chiwon W. Lee

2:00–4:00 PM Sevilla

Workshop: Protected Cultivation for Fruit Crops

Sponsor: American Pomological Society

Coordinator: Mercy A. Olmstead, mercy1@ufl.edu

This workshop will explore the principles of protected cultivation in horticultural systems and illustrate the use of protected cultivation to mitigate abiotic and biotic challenges for fruit production.

2:00–2:30 PM Micrometeorological Principles of Protected Cultivation
*Julie M. Tarara

2:30–2:50 PM Peach Production in China
*Desmond R. Layne

2:50–3:10 PM Strawberries in Protected Cultivated Systems
*Russell W. Wallace

3:10–3:30 PM Advances on Protected Culture of Strawberry and Blueberry in Florida
*Bielinski M. Santos

3:30–4:00 PM High Tunnel Production of Sweet Cherries
*Gregory A. Lang

2:30–7:00 PM Grand Ballroom

Exhibits Move Out–Thursday

3:00–4:00 PM Raphael

Association of Horticulturists of Indian Origin (AHIO) Business Meeting

Jayesh Samtani, *Chair*; Rammohan Uckoo, Secretary

The Working Groups goals are to: 1) promote fellowship among the horticultural scientists of Indian origin and increase professional opportunities through increased interaction among them and with other American scientists; 2) promote awareness of ASHS membership benefits and encourage membership pool

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from India; 3) facilitate and support ASHS ad-hoc membership to attract Indian Horticulturists; 4) act as scientific ambassadors to facilitate an exchange of scientific information and cultural ideas between India and countries in North America; and 5) help share and transfer results of scientific research to India to improve agricultural productivity and quality.

3:00–4:00 PM

Michaelangelo

Ornamental Plant Breeding (OPB) Working Group Business Meeting

Ryan Contreras, *Chair*; Wenhao Dai, *Chair-elect*

The OPB Working Group promotes ornamental plant breeding, serves as a forum for exchange of information among breeders, and coordinates the communication of results to industry and academe.

3:00–4:00 PM

Alhambra

Working Group of Asian Horticulture (WGAH) Business Meeting

Yan Chen, *Chair*; Jayesh Samtani, *Chair-elect*

The WGAH Working Group promotes dialogue and information and germplasm exchanges between horticulturists residing in America and Asia and assists them in developing horticultural education, research, and extension programs to better preserve and utilize their rich horticultural resources.

3:30–5:00 PM

Cambridge

Education Division Advisory Council Meeting

David W. Reed, Education Division Vice President, *Chair*; Dennis T. Ray, Past Education Division Vice President; All Working Group Chairs and Chairs-elect, Education Division

4:00–4:30 PM

Sevilla

APS Tropical Fruit Tasting

Sponsor: American Pomological Society

4:00–5:00 PM

Alhambra

Commercial Horticulture (CHEX) Working Group Business Meeting

Carol Miles, *Chair*; Gordon Johnson, *Chair-elect*

To increase ASHS membership and meeting participation of horticultural extension specialists working with industry and/or community groups, to foster communications between such specialists, and to share ideas and methods for working with growers and commodity groups.

4:00–5:00 PM

Raphael

Invasive Plants Research (INPR) Working Group Business

James Altland, *Chair*

To communicate research ideas, techniques, and methods on the identification, study, and control of invasive plants in cross-commodity horticulture production and in urban and rural lands; and the assessment of exotic plants for potential invasiveness.

4:00–5:00 PM

Theater

Oral Session: Genetics and Germplasm 1

Moderator: Dilip Panthee, dilip_panthee@ncsu.edu

4:00–4:15 PM Assessment of Genetic Diversity in *Psidium guajava* L. using Simple Sequence Repeat Markers

*Viji Sither, Sadanand Dhekney, Saroj Pramanik, Francis T.P. Zee, Anand K. Yadav

4:15–4:30 PM Identification of Aroma Volatile Compounds in Juice of California-grown Pomegranate Cultivars

*Javier M. Obando-Ulloa, Jeff Moersfelder, John Preece, Rebecca E. Stein, John C. Beaulieu

4:30–4:45 PM Evaluation of Tomato Germplasm for Flavor and Flavor-contributing Components

*Dilip Panthee, Joanne A. Labate, Larry D. Robertson

4:45–5:00 PM Genetic Mapping and QTL Analysis in Interspecific Chestnut Population

*Eiichi Inoue

4:00–5:45 PM

Dupont

Oral Session: Nursery Crops

Moderator: Robert H. Stamps, rstamps@ufl.edu

4:00–4:15 PM Efficacy and Duration of Control using Indaziflam during Containerized Plant Production Varies with Formulation and Application Rate

*Robert H. Stamps

4:15–4:30 PM A Narrowly Endemic *Dirca* from Mexico Outperforms Its Broadly Distributed Congener in the Upper Midwest

*William R. Graves, Kelly Norris

4:30–4:45 PM Nursery Tree Production and Transplant Success of *Pyrus calleryana* ‘Glen’s Form’ (Chanticleer®) Influenced by Container Types and Overwintering Treatments

*Alison Stoven O’Connor, James E. Klett, Anthony J. Koski

4:45–5:00 PM Performance of Alternative Containers and Plant Growth and Water Use of *Euonymus fortunei*

*Xueni Wang, Tom Fernandez, B. Cregg, Amy Fulcher, Robert L. Geneve, Genhua Niu, Sven Verlinden,

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Mathieu Ngouajio, T. Kijchavengku, Rafael Auras,
Guihong Bi, Susmitha Nambuthiri, Renee Conneway

5:00–5:15 PM Nutrient and Biomass Accumulation of
Container-grown Landscape Trees with Controlled
Release and Organic Fertilizer

*Bert Cregg, Dana Ellison, R. Thomas Fernandez,
Pascal Nzokou

5:15–5:30 PM On-farm Evaluation of Mesh Wireless
Network for Monitoring Moisture of Containerized
Ornamental Crops

*Tyler Hoskins, James S. Owen, Jr., Daniel R. Bailey,
Heather M. Stoven, John Selker

5:30–5:45 PM Water Uptake of *Hydrangea macrophylla*
and *Gardenia jasminoides* in Response to a Gradually
Drying Substrate

Lucas O'Meara, Matthew Chappell, *Marc van Iersel

4:00–6:00 PM

Sandringham

Workshop: Advances in Plasticulture Technology and Education Delivery

Sponsor: Plasticulture (PLAST) Working Group

Moderator: E. Barclay Poling, strawberrydoc@gmail.com

Innovative uses of plastics will be discussed in the context of high tunnel tomatoes; row covers for vegetable crop production in tropical and temperate climates; and one presentation will focus on utilizing biodegradable mulch (BDM) to increase sustainability of high tunnel tomato production in northwestern Washington. An update on recycling of used agricultural plastics will be provided.

4:00–4:15 PM Rowcovers in Vegetable Crops Production in
Tropical and Temperate Climates

*Ramon A. Arancibia

4:15–4:30 PM High Tunnels in the Urban Environment of
Philadelphia, Pennsylvania

*William J. Lamont

4:30–4:45 PM Influence of Grafting on Fruit Yield and
Quality of Tomatoes Grown in a High Tunnel

*Peter Nitzsche, Wesley L. Kline, J. Rabin,
M. Infante-Casella

4:45–5:00 PM Shade Level Affects Microenvironment,
Plant Growth, and Plant Function in Bell Pepper
(*Capsicum annum* L.)

*Juan Carlos Diaz-Perez

5:00–5:15 PM A Private Extension and Risk Management
Initiative to Assist Direct Market Strawberry
Plasticulture Growers in the Eastern United States

*E. Barclay Poling

5:15–5:30 PM Update on Recycling of Used Agricultural
Plastics

*Keith Williamson

5:30–5:45 PM The Effects of High Tunnels and Bio-
degradable Mulch on Fruit Quality of Tomatoes
Grown in Northwestern Washington

*Jeremy Cowan, C. Miles, D. Inglis

4:00–6:00 PM

Tuttle

Workshop: Environmental Effects on Whole Plant Long-distance Transport

Sponsor: Crop Physiology (CRPP) Working Group

Moderator: Martin P.N. Gent, martin.gent@ct.gov

Environment can affect both the growth and composition of plants. This workshop will focus on the effect of water stress on long distance transport of carbon and nitrogen in horticultural crops.

4:00–4:15 PM Effect of Drought on Expression of Nitrate
Transporter Genes in Apple

*Carole L. Bassett, Angela Baldo, Robert E. Farrell

4:15–4:30 PM Variation Among Plant Species in Phloem
Loading Strategies and Plant–Water Relations

*Lailiang Cheng

4:30–4:45 PM Diurnal Variation in Water Potential and
Xylem and Phloem Transport

*Martin P.N. Gent

4:00–6:00 PM

Balmoral

Workshop: I Have An App for That: Introduction to Mobile Applications and Development in Horticulture

Sponsor: Computer Applications in Horticulture (COMP)
Working Group

Moderator: Arthur Q. Villordon, avillordon@agcenter.lsu.edu

This workshop will provide an overview of horticulture-related mobile applications and designing, developing, and testing mobile applications.

4:00–4:15 PM Are There Horticulture-related Mobile
Applications for Me?

*Kent D. Kobayashi

4:00–6:00 PM

Trade Room

Oral Session: Water Utilization and Management

Moderator: Jongyun Kim, jongyun@umd.edu

4:00–4:15 PM Sensor-Based Automated Irrigation System
Can Save Water in Pot-In-Pot *Acer rubrum* Caliper
Tree Production

*Youbin Zheng, Janice Carmichael, Cody Thompson,
Katherine Vinson, Linping Wang, Michael Dixon

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

Friday, August 3, 2012

4:15–4:30 PM Quantifying Root Zone Sensor and Substrate Volumetric Water Content Variability in Pot-In-Pot Tree Production

*Bruk E. Belayneh, Jongyun Kim, John D. Lea-Cox

4:30–4:45 PM Amelioration of Irrigation Alkalinity by Changing Calcium and Magnesium Source and Rate

*Edward Bush, Ben Agnew

4:45–5:00 PM A Survey of Key Attributes to Consider When Selecting Alternative Water Treatment Technologies

*Rosa E. Raudales, Tracy A. Irani, Paul R. Fisher

5:00–5:15 PM The Difficulties of Watering Your Lawn While Conserving Water

*Liz A. Felter, Paul F. Monaghan

5:15–5:30 PM A National Irrigation Management Survey for Greenhouse and Nursery Operations

*John Majsztrik, Erik Lichtenberg, John D. Lea-Cox

5:30–5:45 PM Evaluating the Water Use and Climate Zone Tolerance of Ornamental Plants for Sustainable Landscapes

*S. Karrie Reid, Lorence R. Oki

5:45–6:00 PM Considering the Variability of Capacitance Sensors Due to Placement in a Greenhouse Production Area

*Jongyun Kim, Bruk E. Belayneh, John D. Lea-Cox

5:30–5:45 PM Dormancy Breaking and Germination Requirements of *Jeffersonia dubia*

*Yong Ha Rhie, Seung Youn Lee, Ki Sun Kim

4:30–6:00 PM

Sevilla

American Pomological Society (APS) Annual Business Meeting

Terence Robinson, *Chair*

5:00–6:00 PM

Alhambra

Human Issues in Horticulture (HIH) Working Group Business Meeting

Cynthia Haynes, *Chair*

The HIH Working Group stimulates discussion among those engaged in research and education programs in areas of horticulture that interact with the social sciences, such as economics, psychology, education, various forms of therapy, urban and rural sociology, and urban and rural development.

5:00–6:00 PM

Escorial

William A. Tex Frazier Lecture Selection Committee

Stephen Love, *Chair*; Penelope Perkins-Veazie; Ellen T. Paparozzi; Stephanie Harvey; Craig Campbell

4:15–5:45 PM

Windsor

Oral Session: Floriculture 2

Moderator: Jonathan Franz, Jonathan.Frantz@ars.usda.gov

4:15–4:30 PM Response of Poinsettia to Various Air Temperature Drops and Root Zone Temperatures At the Same Daily Integrated Temperature

*Xiuming Hao, JingMing Zheng, Celeste Little

4:30–4:45 PM Use of Controlled Water Deficit to Control Height of Poinsettias (*Euphorbia pulcherrima* ‘Classic Red’)

*Peter Alem, Paul Thomas, Marc van Iersel

4:45–5:00 PM ABA and ABA Analog Foliar Sprays Reduce Evapotranspiration in Pansies

*Geoffrey Weaver, Marc van Iersel

5:00–5:15 PM Plant Growth Regulator Impact on Calibrachoa Branching and Performance

*Genhua Niu, H. Brent Pemberton, Pedro Osuna, William R. Roberson

5:15–5:30 PM Short-term UV Light Exposure Can Lead to Long-term Plant Growth Regulation

*Jonathan Frantz, Scott A. Heckathorn, Nicole Rud, Deanna Bobak, Alycia Pittenger

Friday, August 3, 2012

7:30 AM–3:00 PM Satellite Registration Mezzanine

Registration Open

8:00–9:30 AM

Chopin

Presidential Address and ASHS Annual Business Meeting

Dewayne Ingram, ASHS President

ASHS Annual Business Meeting (immediately follows the Presidential Address)

Presiding: Fred T. Davies, *Chair*, ASHS Board of Directors

Board of Directors Report

Observation of a moment of silence for deceased members

Open discussion on matters of importance to Members

Association of Collegiate Branches (ACB) report

Presentations in recognition of services to ASHS

Introduction of the 2012–2013 ASHS President and Board of Directors

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

8:00 AM–12:30 PM

*Tours pick up in front of
the main hotel lobby entrance*

Tour of the Port of Miami U.S. Customs and Border Protection—Agriculture Facility

Pre-registration Required. Copies of Identification Must Be Submitted by July 2.

Sponsor: Vegetable Crop Management (VCM) Working Group

Coordinator: Dean A. Kopsell, dkopsell@utk.edu

Tour the U.S. Customs and Border Protection Agency—Agriculture Facility at the Sea Port of Miami to learn how fresh vegetables, fruits, and other ornamental commodities are received, inspected, and imported into the United States.

8:00 AM–2:40 PM

*Tours pick up in front of
the main hotel lobby entrance*

The Subtropical Horticulture of South Florida

Stops along this tour include: Costa Farms (Colors Division); Sal Santelli's Grove; the University of Florida/IFAS Tropical Research & Education Center (TREC); Silver Vase (a fully robotized wholesale orchid and bromeliad nursery); and The Fairchild Farm.

8:30 AM–12:30 PM

*Tours pick up in front of
the main hotel lobby entrance*

Florida Everglades Airboat Adventure

Not far from downtown Miami lies a vast stretch of primeval quiet . . . 800 square miles of unspoiled wilderness known as the Everglades. Upon arrival at Everglades Safari Park, the outdoor adventure begins with a 30-minute ride on an airboat, stopping occasionally to speak about the ecological system of the Everglades, to feed the fish, and point out some of the unusual plant and animal life.

9:30–10:30 AM

Cambridge

Annual Conference Technical Program Committee Meeting

Dennis Ray, *Co-Chair*; Carl Sams, *Co-Chair*;
Jackie Burns; Michael Evans; Maren Mochizuki;
Kent Kobayashi; Marita Cantwell; Anita Azarenko;
Brian Trader; Dean Kopsell;
Dewayne L. Ingram, ASHS President;
Michael W. Neff, ASHS Executive Director

9:30–11:00 AM

Tuttle

Oral Session: Genetics and Germplasm 2

Moderator: John-David Swanson, jd.swanson@salve.edu

9:30–9:45 AM Variability of Morphological Characters in the Sweet Potato [*Ipomoea batatas* (L.) Lam.] Varieties under Barbados Agro-climatic Conditions
Deborah Holder, *Rajendra P. Maurya,
Jeff St. A. Chandler

9:45–10:00 AM Blackberry Markers and Their Application to Fingerprinting and Gene Identification
*John-David Swanson, Nicole Spencer

10:00–10:15 AM QTL Mapping for Cold Tolerance and Flower Type in a Reciprocal F₁ Florida Avocado Mapping Population
*Osman A. Gutierrez, Raymond J. Schnell, David Kuhn, Cecile Tondo, James Borrone

10:15–10:30 AM Comparison of Genes in Apple [*Malus x domestica* (Borkh.) 'Royal Gala'] Responding to Simulated Drought and Recovery
*Carole L. Bassett, Jacob T. Moore, Ryan M. Jenkins, Robert E. Farrell

10:30–10:45 AM Gene Expression Profiles for Two Auxin Transporters during Apple Fruit Maturation and Ripening
*Sungbong Shin, James Mattheis, Kate Evans, Yanmin Zhu

10:45–11:00 AM Field Performance of Transgenic 'M.26' Apples Overexpressing a Peach CBF Gene
*Michael Wisniewski, Timothy Artlip, John Norelli

9:30–11:30 AM

Balmoral

Workshop: Foliar Nutrition to Enhance Horticultural Crop Production and Quality

Sponsor: Plant Nutrient Management (PNM) Working Group

Moderator: Bielinski M. Santos, bmsantos@ufl.edu

The workshop seeks to a) provide the science framework for using foliar nutrition in vegetable and fruit crops, and b) discuss the applied conditions for its implementation.

9:30–9:40 AM Introduction to Foliar Nutrition
*Bielinski M. Santos

9:40–10:10 AM Foliar Fertilization: The Facts and the Fiction
*Patrick H. Brown, Victoria Fernandez, Thomas Sotiropoulos

10:10–10:25 AM Properly Timing Foliar-applied Fertilizers Increases Efficacy
*Carol J. Lovatt

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

Friday, August 3, 2012

10:25–10:40 AM Foliar Fertilization with Zinc: From Field Trials to Elemental Transport

*Patrick H. Brown, Sebastian Saa, Scott Johnson, Shengke Tian

10:40–10:55 AM Foliar Application of Nutrients and Their Impacts on Growth, Yield, and Quality in Tree Fruits

*Esmail "Essie" Fallahi, Bahar Fallahi, Bahman Shafii

10:55–11:10 AM Foliar Potassium Fertilization Effects on Muskmelon Fruit Quality

*John L. Jifon, Gene Lester

11:10–11:25 AM Effective Strategies to Temporarily Correct Fe Deficiency in Florida

*Monica P. Ozores-Hampton

9:30–11:30 AM

Dupont

Workshop: How Can We Best Support Public Sector Development of New Cultivars?—Given Scarce Resources and the Need to Support Rural Prosperity and Sustainable, Secure Food Systems

Moderator: Ann Marie Thro, athro@nifa.usda.gov

A discussion between stakeholders to help shape national thinking and action in moving forward.

9:30–11:30 AM

Flagler

Workshop: Modified Atmosphere Packaging: Physiological and Modeling Limits Based on Critical Input Variables

Sponsor: Produce Quality, Safety, and Health Properties (QUAL) Working Group

Moderator: John C. Beaulieu, John.Beaulieu@ars.usda.gov

We propose to deliver a Modified Atmosphere Packaging (MAP) workshop detailing pertinent historical background and mathematical equations through the use of a fully executable Excel-based program where several user-input variables and package designs and their potential pitfalls will be highlighted, illustrated and discussed.

9:30–9:50 AM MAP: Background, Importance, Benefits, Effects on Produce Quality, and Some Pitfalls

*John C. Beaulieu

9:50–10:10 AM New Packaging Approaches with Impact on In-package Gas Compositions

*Eva Almenar

10:10–10:30 AM Engineering or Physiology: What Is Significant to Harness the Benefits of Modified Atmosphere Packaging in Fresh-cut Produce?

*Domingos Almeida

10:30–11:15 AM A Practical, User-friendly, Teaching, Research, and Design Tool for Modified Atmosphere Packaging of Fresh Produce

*Randolph Beaudry

9:30–11:30 AM

Theater

Workshop: What Does Horticulture Scholarship Look Like in the Digital Age?

Sponsor: eXtension (EEXT) Working Group

Coordinator: Eric Stafne, estafne@ext.msstate.edu

New advances in methods to deliver teaching, research, and extension information has created uncertainty within the academic community on how to best determine its value. The participants of this workshop will be introduced to the present model of peer review and tenure and discuss how that system may change as information becomes more widely available and faster. Perspectives on digital scholarship delivered through a variety of outlets and methods will be introduced and analyzed. How digitally developed peer-reviewed information is created and its new measure of importance within the academic community with regard to papers, grants, tenure, and related issues will be covered. Structured discussion will allow for an open dialogue on the implications of digital scholarship and its delivery with an eye toward the future.

9:30–9:45 AM Peer Review, Digital Technology, and Promotion: Putting Them Together Through Extension

*Emily Hoover

9:45–10:00 AM The Concept and Implementation of the Plant Breeding and Genomics Community of Practice

*David Francis

10:00–10:15 AM Packaging Web-based Extension Materials into a Successful Tenure Package

*Danielle D. Treadwell

10:15–10:30 AM A View of Digital Scholarship in Extension

*Eric Stafne

9:30 AM–12:00 PM

Gusman

Workshop: HLB/ACP: Approaches to Management of Disease, Pathogen, and Vector

Sponsor: Citrus (CITR) Working Group

Coordinator: Robert R. Krueger, rkrueger@ucr.edu

This workshop will provide information on the current status of Huanglongbing Disease of Citrus and its vector, the Asian Citrus Psyllid, in the United States. In addition, presentations will be made on research approaches to management of the disease, its vector, and its pathogen.

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

Friday, August 3, 2012

- 9:30–9:35 AM Introduction to the Workshop
*Robert R. Krueger
- 9:35–9:55 AM Unforbidden Fruits: Preventing Citrus Smuggling by Introducing Varieties Culturally Significant to Ethnic Communities
*David A. Karp, Robert R. Krueger, Richard F. Lee, Toni J. Siebert, Georgios Vidalakis, Tracy L. Kahn
- 9:55–10:15 AM Rescue and Preservation of Citrus Germplasm Threatened by Huanglongbing and Citrus Canker
*Greg McCollum, Richard F. Lee
- 10:15–10:35 AM Use of Cryotherapy to Eradicate Pathogens from Horticultural Crops
*Gayle Volk
- 10:35–10:55 AM Citrus Production Maintained in a Florida Grove using the Boyd Nutrient/SAR Foliar Spray Program
*Robert E. Rouse
- 10:55–11:15 AM Inconsequential Effect of Nutritional Treatments on Huanglongbing Control, Fruit Quality, Bacterial Titer, and Disease Progress
*Tim Gottwald, Jim Graham, Michael Irely, T.G. McCollum, Bruce W. Wood
- 11:15–11:35 AM Practical Management of HLB Disease in a Florida Commercial Citrus Grove
*Timothy C. Gast
- 11:35–11:55 AM Chinese Way of Huanglongbing (HLB, also Citrus Greening) Management—From Nutritional Approach to Heat Treatment
*Yulu Xia, Ronald Sequeira
- 9:35–10:15 AM Ten Years of the National Program: Past, Present, and Future
*Mark Lipson
- 10:15–10:45 AM The Current Status of Organic Agriculture at Land-Grants: Development of Education and Outreach
*Erin Silva
- 10:45–11:15 AM Developing Organic Extension Programs
*Annette Wszelaki
- 11:15 AM–12:00 PM Perspectives from the Field: Farmer and Industry Experiences with the Land-Grant World
*Danielle Treadwell
- 12:00–1:15 PM Lunch
- 1:15–1:45 PM The Evolution of Organic Research: Trends of the Past Decade
*Mary Peet
- 1:45–2:15 PM Organic Vegetable Research: Twenty Years of Progress
*Kathleen Delate
- 2:15–2:45 PM Breeding for Organic Crop Production
*Jim Myers
- 2:45–3:00 PM Break
- 3:00–3:30 PM Long-term Organic Systems Research on Horticultural Food Crops in the “Salad Bowl of America”
*Eric Brennan
- 3:30–4:00 PM Organic Fruit Production
*Curt Rom
- 4:00–4:30 PM Organic Agriculture’s Issues Related to Food Safety: Research, Perception and Regulation
*Francisco Diez
- 4:30–5:00 PM Panel Discussion: Future Directions of Organic Research

9:30 AM–5:00 PM

Sevilla

Symposium:

A Decade of Progress in Organic Agriculture Science, Teaching, and Extension

Sponsor: Organic Horticulture Working Group

Moderator: Erin Silva, emsilva@wisc.edu

This symposium, organized by the Organic Working Group at the 10 year anniversary of the inception of National Organic Program, will provide a past, present, and future overview of organic research, extension, and education. Invited speakers with strong programs in organic research, extension, and teaching will present in several key areas related to organic vegetable and fruit production, providing both a historical overview as well as specific examples from their own programs. Industry representatives will provide perspective from outside of the university system.

9:30 AM Welcome, Introduction

*Erin Silva

9:30 AM–5:00 PM

Trade Room

Symposium: The Use, Application and Analysis of Experimental and Field Sensor Data for Horticultural Applications

Advance Registration is required—Limited to 30 Participants

Sponsors: Water Utilization Management (WUM) and Nursery (NUR) Working Groups, Decagon Devices and the SCRI–MINDS project

Moderators: Marc van Iersel, mvanier@uga.edu

Jongyun Kim, jongyun@umd.edu

This symposium, sponsored by the Water Utilization Management and Nursery working groups, Decagon Devices and

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Friday, August 3, 2012

the SCRI-MINDS project will be focused on the use and application of soil and environmental sensors for horticultural crop research and production. This day-long event will demonstrate equipment both from Decagon Devices and Campbell Scientific, but will emphasize best practices in using sensors in various situations. Designed for faculty, research scientists, and graduate students interested in using sensors for soil, plant and environmental research measurements both in the lab and the field.

9:30–11:00 AM Environmental Sensors for Measuring
Weather and Intra-canopy Conditions

*John D. Lea-Cox

11:00–12:30 PM Accuracy and Calibration of Water
Content Sensors

*Doug Cobos

12:30–1:30 PM Lunch Break

1:30–3:00 PM Using Dataloggers for Measurement and
Control of Environmental Conditions

*Marc van Iersel

3:00–4:30 PM Using Software for Data Collection,
Analysis and Decision Making

*Jongyun Kim

9:45–11:00 AM

Windsor

Oral Session: Teaching Methods 2

Moderator: David E. Kopsell, dkopsell@ilstu.edu

9:45–10:00 AM Two Unique Horticulture Classes Capture
Diverse Student Interest

*Marcia Eames-Sheavly

10:00–10:15 AM Providing Course-based Research
Experiences through the Implementation of Lab
Modules in a Large Enrollment Undergraduate
Course: Assessment of Crop Diversity

*Dimuth Siritunga

10:15–10:30 AM Comparison of Two Delivery Methods
Used to Produce an Online Lecture Entitled
“Worldwide Technology for Controlled Environment
Plant Production”

*Gene A. Giacomelli, Michael T. Harrington,
Aaron J. Sotala, Sandra B. Wilson

10:30–10:45 AM Teaching Undergraduate Nursery
Management As an Online Course: Instructor and
Student Perspectives

*Pamela B. Trewatha

10:45–11:00 AM Incorporating Study Abroad into the
Undergraduate Organic Crop Production Program

*Xin Zhao, Carlene A. Chase, Teresa Briz

10:00 AM–12:00 PM

Chopin

2012 B.Y. Morrison Lecture

Speaker: *Raymond Wheeler

NASA Advanced Life Support Biomass Production
Element, Kennedy Space Center

Title: Horticulture for Space: A Classic Exercise in Controlled
Environment Research

See inset on the next page.

10:30 AM–12:30 PM

Cambridge

Certified Horticulturist (CH) Board Meeting

Fred T. Davies, Texas A&M University, Chair;
Kerrie Badertscher, Otoke Horticulture LLC, Allenspark, CO;
Steve Carver, Ohio Florist Association (OFA);
Janet C. Cole, Oklahoma State University;
Terry Ferriss, University of Wisconsin, River Falls;
George Fitzpatrick, University of Florida;
Mary Lamberts, University of Florida;
Doug Needham, Longwood Gardens, Kennett Square, PA;
Karen Panter, University of Wyoming;
Kay Phelps, Clinton Nurseries of Florida;
Susan Steinberg, NASA-Johnson Space Center

11:15 AM–12:15 PM

Sandringham

Oral Session: International Horticulture and Issues

Moderator: Ann Marie Thro, athro@nifa.usda.gov

11:15–11:30 AM Interamerican Society for Tropical
Horticulture from an ASHS Regional Group to Over
60 Years of History

*Ricardo E. Alves, Maria do Socorro M. Rufino,
Fernando Antonio S. de Aragão, Ebenézer de O. Silva,
Francis X. Mangan

11:30–11:45 AM International Horticulture—Food Security
Issues

*Prem Nath, Sr.

11:45 AM–12:00 PM Water for Horticultural Crop
Production in Afghanistan

*S. Alan Walters

12:00–12:15 PM Developing a Professional Society for
Agricultural Professionals in Afghanistan

*Ann Marie Thro

11:15 AM–12:30 PM

Windsor

Oral Session: Viticulture and Small Fruits 3

Moderator: David R. Bryla, brylad@onid.orst.edu

11:15–11:30 AM Nutrient Foraging In Grapevine
Rootstocks

*R. Paul Schreiner

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Friday, August 3, 2012

B.Y. Morrison Memorial Lecture Series

Horticulture for Space: A Classic Exercise in Controlled Environment Research

Friday, August 3, 2012 • 10:00 AM–12:00 pm • Chopin

The Agricultural Research Service (ARS), USDA's principal in-house scientific agency, and ASHS are pleased to welcome **Raymond Wheeler**, lead, NASA Advanced Life Support Biomass Production Element, Kennedy Space Center, as the 2012 B.Y. Morrison Memorial Lecturer. The title of Wheeler's lecture is "Horticulture for Space: A Classic Exercise in Controlled Environment Research."

According to Wheeler, "Studies of crop responses to environmental factors have often used greenhouses or controlled environment chambers. This approach goes back more than a century, with testing in plant growth chambers expanding following development of electric lamps. Yet getting meaningful data from controlled environments requires a disciplined and careful approach to avoid spurious results. Some universities have developed specific courses in controlled environment research to teach students proper approaches for this type of research. This needs to continue, particularly as opportunities for controlled environment agriculture continue to expand."

About Raymond Wheeler

Wheeler is the foremost expert on the history of space horticulture and because of his significant strides



Raymond Wheeler
NASA
Kennedy Space Center, Florida

have been made in controlled-environment horticulture. He has done extensive research on lighting, specifically looking at LED lights and increasing the efficiency of crop production. He has also looked at how space-based horticultural research can be applied to Earth-based agriculture.

About the B.Y. Morrison Lecture

The B.Y. Morrison Lecture was established in 1968 by the Agricultural Research Service (ARS) of the U.S. Dept. of Agriculture (USDA), to honor the memory of Benjamin Y. Morrison (1891–1966) and to recognize scientists who have made outstanding contributions to ornamental horticulture and other environmental sciences, to encourage the wide application of these sciences, and to stress the urgency of preserving and enhancing natural beauty. The Morrison Lecture is on a scientific or policy topic of the lecturer's choice.

11:30–11:45 AM Foliar Application of Mixture of Amino Acids and *Ascochyum nodosum* Extract Improve Growth and Physico-Chemical Quality of Grapes
*Ahmad Sattar Khan, Bilal Ahmad,
Muhammad Jafar Jaskani, Aman Ullah Malik,
Rashid Ahmad

11:45 AM–12:00 PM Skin Mechanical Properties and Fruit Cracking in Flame Seedless Tablegrapes
*Yan Zhuang, Mark Matthews, Ken Shackel

12:00–12:15 PM Ten Years of Western Nebraska Grape Cultivar Trials
*Paul E. Read, James A. Schild, Stephen J. Gamet

12:15–12:30 PM Temperature Thresholds to Freeze Damage in Cranberry
*David R. Bryla, Linda D. White

11:15 AM–1:15 PM

Tuttle

Oral Session: Propagation

Moderator: Matthew Chappell, hortprod@uga.edu

11:15–11:30 AM Seed Germination At Different Seed Capsule Maturities to Reduce Stratification Requirement of Japanese Tree Lilac
Samuel DeMarais, *Todd P. West, Chiwon W. Lee

11:30–11:45 AM The Effect of Intermittent Misting and Adventitious Root Development on Leafy Stem Propagule Water, Osmotic, and Turgor Potential Values
Michael Martin, *Matthew Chappell, Marc van Iersel

11:45 AM–12:00 PM In Vitro Bulblet Formation of *Ungernia trisphaera*, a Rare Species of

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Friday, August 3, 2012

- Amaryllidaceae from Twin-scales
*Mahnaz Kiani, Homa Zarghami II, Farshid Memariani
- 12:00–12:15 PM Studies on the Propagation of Jamaican
Ackee [*Blighia sapida* (L.)] by Air-layering
Dion M. Lewis, *Rajendra P. Maurya,
Jeff St. A. Chandler
- 12:15–12:30 PM An Ethylene Blocker Delays Epidermal
Cell Death At the Location of Adventitious Root
Emergence in ‘Beauregard’ but Not in ‘Evangeline’
Sweetpotato Cuttings
*Arthur Q. Villordon, Chirstopher Clark, Don LaBonte,
Nurit Firon
- 12:30–12:45 PM Evaluation of *Piriformospora indica*, a
Mycorrhizal Fungi, on Adventitious Root Formation
of Slow-to-Root Annuals and Perennials
*Allison Hope Justice, Jim Faust
- 12:45–1:00 PM Chilling Duration Affects the Microshoot
Elongation of ‘G.30’ Apple Rootstock
*Fang Geng, Renae Moran, Donglin Zhang
- 1:00–1:15 PM Water Quality Effects on Grafted and Non-
grafted Citrus
*Catherine Simpson, Shad D. Nelson, Astrid Volder,
Stephen King, John L. Jifon, Juan Carlos Melgar,
Greta Schuster
-
- 11:45 AM–1:00 PM Balmoral
- Oral Session: Marketing and Economics**
Moderator: Kristin L. Getter, getterk@msu.edu
- 11:45 AM–12:00 PM Do You See What I See? Eye-tracking
Research Shows Where Consumers Look in Holiday
Plant Displays
*Bridget K. Behe, Allison Jones, R. Thomas Fernandez,
Kristin Getter, Patricia Huddleston
- 12:00–12:15 PM An Investigation of United States Apple
Producers Trait Prioritization—Evidence from
Clicker Surveys
Chengyan Yue, Karina Gallardo, James Luby,
*Alicia L. Rihn, James R. McFerson, Vicki McCracken,
David Bedford, Susan K. Brown, Kate Evans,
Cholani Kumari Weebadde, Audrey Sebolt, Amy Iezzoni
- 12:15–12:30 PM Contribution of USAID Firms Project to
Develop Horticulture Sector in Pakistan
*Waqar Ahmed, Khalid Saeed Wattoo,
Muhammad Azher Nawaz, Raheel Anwar
- 12:30–12:45 PM The Effects of the Consideration of Future
Consequences on Willingness to Pay Decisions for
Plant Attributes
Chengyan Yue, *Hayk Khachatryan, Ben Campbell,
Charles R. Hall, Bridget K. Behe, Roberto G. Lopez,
Jennifer Dennis
- 12:45–1:00 PM Influencing Consumer Perceptions and
Purchases of Christmas Trees and Poinsettias through
a State-wide Marketing Campaign
*Kristin L. Getter, Bridget K. Behe
-
- 11:45 AM–1:45 PM Flagler
- Workshop: Vegetable Grafting for Open Field
Conditions: Opportunities and Challenges**
Sponsor: Propagation (PROP) Working Group
Moderator: Todd P. West, todd.p.west@ndsu.edu
- The objective of this workshop will be to bring together leaders
in the field of vegetable grafting to address the current issues,
needs, challenges and technology status of this growing indus-
try. Topics will include overview of vegetable grafting to use
as IPM tactics, challenges to introduce grafting tomatoes and
watermelon to U.S. tomato production, update on propagation
technologies and issues and commercial vegetable grafting.
- 11:45 AM–12:00 PM Overview of Vegetable Grafting to
Use As IPM Tactics in U.S. Vegetable Production
*Frank J. Louws
- 12:00–12:15 PM Grafting Tomato: Its Use and Challenges
to Introduce to U.S. Tomato Production
*Michael G. Bausher
- 12:15–12:30 PM Grafting Watermelon: Its Use and
Challenges to Introduce to U.S. Watermelon
Production
*Richard L. Hassell
- 12:30–12:45 PM Vegetable Grafting Propagation -
Methods, Technology, and Logistics
*Chieri Kubota
-
- 12:00–12:30 PM Chopin
- B.Y. Morrison Reception and ARS Get-together**
Sponsor: USDA–Agricultural Research Service
-
- 12:30–1:30 PM Chopin
- USDA–ARS All Employee Meeting**
Presiding: Sally Schneider
-
- 12:30–2:30 PM Sandringham
- Oral Session: Consumer Horticulture and
Master Gardeners**
Moderator: Christine Coker, ccoker@ra.msstate.edu
- 12:30–12:45 PM Armed Forces Retirement Home Green
Roof Assessment
*Christine Coker, Gary R. Bachman, Susan DeBlanc,
Corey Wheeler

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Friday, August 3, 2012

- 12:45–1:00 PM CSU Lawncheck: Colorado’s On-site Lawn Diagnostics Service
*Anthony J. Koski, Alison Stoven O’Connor, Mary Small, Curtis Utley, Robert Cox, Carol O’Meara, Carl Wilson
- 1:00–1:15 PM Getting Others to Actually Do IPM: A Communications Tutorial
*Mary Hockenberry Meyer, Aaron Boyson, Karen Jeannette
- 1:15–1:30 PM Getting Help with Consumer Horticulture Questions
*Pamela J. Bennett, Karen Jeannette, Julie Weisenhorn, Mary Wilson
- 1:30–1:45 PM Trees Matter! Conducting Tree Surveys with Master Gardener Volunteers
*Pamela J. Bennett, James C. Chatfield
- 1:45–2:00 PM Adopt-A-Tree: A Reforestation Program to Replace Lost Urban Canopy Due to Disasters in South Florida
*Adrian Hunsberger
- 2:00–2:15 PM Impacts and Lessons Learned from the “Growing a Garden 101” School Garden Project
*Kathryn Fontenot
- 2:15–2:30 PM Train Extension Volunteers to Track Climate Change by Monitoring Phenology
*Peter Warren, LoriAnne Barnett, Will Sheftall, George Kish
-
- 12:30–3:00 PM Gusman
- Workshop: Good Genes from Asia—Contributions and Opportunities of Asiatic Origin Crops to U.S. Horticulture**
- Sponsor: Working Group of Asian Horticulture & The Association of Horticulturists of Indian Origin
- Moderator:* Yan Chen, yachen@agcenter.lsu.edu
- This workshop will review historical contributions of horticultural crops with Asiatic origin to the advancement of the horticulture commodities in the U.S., and discuss future opportunities in germplasm exchange between U.S. and Asia. Commodities will include ornamentals, floriculture, vegetable, berries, and other fruit crops.
- 12:30–1:00 PM Asian Germplasm in American Horticulture: New Thoughts on an Old Theme
*Richard T. Olsen
- 1:00–1:30 PM Gone Global: Familiar and Exotic Cucurbits Having Asian Origins
*James D. McCreight, Jack E. Staub, Todd C. Wehner, Narinder P.S. Dhillon
- 1:30–2:00 PM High-value Vegetables from Eastern Asia
*Prem Nath, Grisana Linwattana, Robert Holmer
- 2:00–2:30 PM The Influence of Asian Germplasm on American Berry Crops
*Kim E. Hummer, James R. Ballington
-
- 12:45–2:45 PM Escorial
- Joint Apple, Prunus, and Pyrus Crop Germplasm Committee (CGC) Meeting**
- Cameron Peace, *Chair*
-
- 12:45–2:45 PM Windsor
- Oral Session: Ornamentals/Landscape & Turf 2**
- Moderator:* Brian J. Pearson, bpearson@ufl.edu
- 12:45–1:00 PM Bud Development, Flowering, and Fertilization of *Moringa oleifera* Lam. (Horseradish Tree) Grown in South Africa
*Elsa S. du Toit, Quintin Ernst Muhl, P.J. Robbertse, J.M. Steyn, Z. Apostolides
- 1:00–1:15 PM Planting Systems for Improved Stands of Fall Planted Native Perennials
Erik B.G. Feibert, *Clint Shock, Cheryl Parris, Saunders Monty, Nancy Shaw
- 1:15–1:30 PM Influence of Pine Bark Mulch and *Salvia farinacea* on Stormwater Runoff and Leachate from Simulated Landscape Soil Boxes
*Brian Pearson, Richard C. Beeson, Jr.
- 1:30–1:45 PM Improving Environmental Performance of Landscapes: Sustainability, LCA, Sites
*Michael Keyes, Marie-Luc Arpin
- 1:45–2:00 PM Landscape Evaluation of Roses At the LSU Agcenter
*Allen D. Owings
- 2:00–2:15 PM Impact of Biopots on Plant Performance and Pot Degradation in Landscapes
*Genhua Niu, Guihong Bi, Andrew Koeser, Vicky Anderson, Renee Conneway, Sven Verlinden, Rebecca Schnelle, Ryan Stewart
- 2:15–2:30 PM Deficit Irrigation of Mixed Landscapes Based on Turfgrass Coverage and ET_o
Scott H. Simpson, *Richard C. Beeson Jr., Gail Hansen De Chapman, Michael D. Dukes
- 2:30–2:45 PM Response of Selected Landscape Roses to Low-input Cultural Practices, High Disease Pressure, and Severe Heat and Drought Conditions
*Gregory Church, David C. Zlesak, Derald A. Harp, Kim Schofield, John Sloan, Gaye Hammond, Pam Smith, Steve George

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Friday, August 3, 2012

1:00–2:00 PM

Cambridge

Nominations and Elections Committee Meeting

Kimberly Moore; Brian Trader; Mengmeng Gu;
Glenn Wright; Mike Orzolek; Matthew Chappell;
Holly Little; Rod Reed; Lakhwinder Randhawa; Max Cheng;
Jinhe Bai; Dharmalingam Pitchay; Rafael Socias i Company;
Christine Coker; Greg Reighard

1:00–2:30 PM

Dupont

Oral Session: Growth Chambers and Controlled Environments

Moderator: Gary Stutte, gary.w.stutte@nasa.gov

1:00–1:15 PM Media Effects on Lettuce Growth in
“Pillows” Designed for the VEGGIE Spaceflight
Growth Chamber

*Gioia D. Massa, Gerard Newsham, LaShelle McCoy,
Gary Stutte, Raymond Wheeler

1:15–1:30 PM Controlled Environment Production of
Sphagnum Species for Propagation, Conservation,
and Utilization

*Gary Stutte, Lisa Connole, Aisling Flanagan,
Michelle Bennett

1:30–1:45 PM Light-Emitting Diodes (LEDs) As a
Sustainable Alternative for Lighting
Greenhouse-grown Tomatoes

*Celina Gomez, Cary A. Mitchell

1:45–2:00 PM Growth and Morphology of Greenhouse
Cucumbers Seedlings Grown under Varied Daily
Solar Light Integrals with Different Supplemental
LED Blue:Red Ratios

*Ricardo Hernández, Chieri Kubota

2:00–2:15 PM Low Temperature Tolerance of
Curcubit Scion and Rootstock Seedlings toward
Development of Low Temperature Storage
Techniques in Vegetable Grafting

*Hans Spalholz, Chieri Kubota

2:15–2:30 PM Comparing Growth Responses of Bedding
Plant Seedlings under Different Red Wavelengths
from Light-emitting Diodes

*Heidi M. Wollaeger, Erik S. Runkle

1:00–5:00 PM

Fairchild Tropical Garden

Certified Horticulturist Certification Examination

Proctor: George Fitzpatrick

1:15–3:00 PM

Balmoral

Oral Session: Postharvest 3

Moderator: Christopher B. Watkins, cbw3@cornell.edu

1:15–1:30 PM ReTain and Harvista Effects on Maturity and
Interactions with Smartfresh on Storage Quality of
‘Honeycrisp’ Apples from Three New York Growing
Regions

*Christopher B. Watkins, Jacqueline F. Nock,
In-Kyu Kang, Yanping Ma, Yifan Cheng,
Michael F. Fargione

1:30–1:45 PM 1-MCP Differentially Regulates Metabolic
Responses in Stem and Calyx End Flesh Tissue of
‘Empire’ Apples during CA Storage

*Jinwook Lee, David Rudell, Christopher B. Watkins

1:45–2:00 PM Development of Stem-end Internal
Browning and Cracking in Cold Stored ‘Gala’ Apples
Is Related to Fruit Size

*Jinwook Lee, James Mattheis, David Rudell

2:00–2:15 PM Inhibition of Ethylene Action and
Biosynthesis Differentially Affect Alpha-Farnesene
Metabolism and Superficial Scald Development in
‘Greensleeves’ Apples

*Bruce D. Whitaker, Andrew J. Macnish,
Sergio Tonetto de Freitas, Elizabeth J. Mitcham

2:15–2:30 PM Characteristics of a ‘Gala’ Apple Fruit
Internal Browning Storage Disorder

*James Mattheis, Jinwook Lee, David R. Rudell

2:30–2:45 PM Evaluating the Synchronicity of Flesh
and Peel Ripening in Standard and New Cultivars of
Apples

*Peter M.A. Toivonen, Younes Mostofi,
Cheryl R. Hampson, Paul A. Wiersma

2:45–3:00 PM Changes in Free and Lipid-Bound Fatty
Acids As Related to LOX-derived Volatiles in
Ripening ‘Jonagold’ Apple Fruit

Carolina Contreras, Henrik Tjellström, John Ohlrogge,
*Randolph Beaudry

1:30–3:15 PM

Tuttle

Oral Session: Citrus Crops

Moderator: Jude W. Grosser, jgrosser@ufl.edu

1:30–1:45 PM Conservation of U.S. Citrus Collections
using Cryopreservation

*Gayle Volk, Remi Bonnart, Robert R. Krueger,
Richard Lee

1:45–2:00 PM Role of Nitrous Oxide in Promoting
Abscission in Citrus by the Abscission Agent CMNP

*Suneali Sharma, Robert Ebel, Naveen Kumar

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Friday, August 3, 2012

- 2:00–2:15 PM Evaluation of Rapidly Produced Louisiana-grown Satsuma Juice
*John C. Beaulieu, Rebecca E. Stein,
Javier M. Obando-Ulloa
- 2:15–2:30 PM Involvement of Micro RNA Expression in Physiological Effects of Grafting: Experiments with Citrus
Raanan Tzarfati, Shifra Ben-Dor, Ilan Sela,
*Eliezer E. Goldschmidt
- 2:30–2:45 PM Quantification of *Candidatus Liberibacter Asiaticus* in Plant Extracts—From Ct to Biologically Meaningful Units
*Greg McCollum, Mark Hilf, Michael Irej
- 2:45–3:00 PM Periodical Nutrient Dynamics in ‘Blood Red’ Sweet Orange as Affected by Fungicides Soil Drenching
*Basharat Ali Saleem, Aman Ullah Malik,
Ahmad Sattar Khan, Ishfaq Ahmad Rajwana
- 3:00–3:15 PM Exploiting Somaclonal Variation to Deliver Improved Sweet Orange Cultivars for Processing and the Fresh Market
*Jude W. Grosser, Gary Barthe, Paul Ling, Bill Castle,
Fred Gmitter
-
- 2:00–3:30 PM Flagler
Oral Session: Plant Biotechnology
Moderator: Alan H. Chambers, ac@ufl.edu
- 2:00–2:15 PM ‘Fastrack’—A Revolutionary Approach to Long-generation Cycle Specialty Crop Breeding
*Ralph Scorza, Chris Dardick, Ann M. Callahan,
Chinnathambi Srinivasan, Ted M. DeJong, Jay Harper,
Doug Raines, Sarah Castro
- 2:15–2:30 PM A Floral Transcriptome for *Hippeastrum* (Amaryllidaceae)
*Alan W. Meerow
- 2:30–2:45 PM Virus-induced Gene Silencing Optimization in *Petunia*
*Shaun R. Broderick, Michelle L. Jones
- 2:45–3:00 PM Over Expression of a Beta-1,3-Glucanase Gene in Transgenic Citrus in Efforts to Inhibit Phloem Plugging Caused by Citrus Greening Disease (Huanglongbing)
*Ahmad A. Omar, Abdullah M. Shohael, Jude W. Grosser
- 3:00–3:15 PM Identification of Candidate Genes Related to Water Stress in Grapevine by Co-expression Analysis and Comparative Genomics
Bin Cai, Guan-Qiao Feng, *Zong-Ming Cheng
- 3:15–3:30 PM FaNES1 and Linalool Characterization in Diverse Strawberry Genotypes
*Alan H. Chambers, Vance M. Whitaker, Brian Gibbs,
Anne Plotto, Kevin M. Folta
-
- 2:00–3:45 PM Theater
Oral Session: Floriculture 3
Moderator: Jinsheng Huang, huangj@ufl.edu
- 2:00–2:15 PM Effects of Compaction on Physical Properties of Propagation Substrates
*Jinsheng Huang, Paul R. Fisher, William Argo
- 2:15–2:30 PM Evaluation of a Rapid, Automated Titration System for Evaluating Lime Requirements for Peat-based Substrates
*Jared Barnes, Paul Nelson, Dean Hesterberg,
Ka Yeon Jeong, Brian E. Whipker
- 2:30–2:45 PM Effect of Biochar on Growth of Chrysanthemum and Tomato Plants in Containers
Fei Yu, *Mengmeng Gu
- 2:45–3:00 PM Planting Time Affects Vegetative and Reproductive Growth of Various Cultivars of Snapdragon (*Antirrhinum majus*)
*Muhammad Azher Nawaz, Anum Shafique,
Muhammad Maqbool, Muhammad Afzal, Waqar Ahmed,
Raheel Anwar
- 3:00–3:15 PM Nutrient Reallocation during Flower Petal Senescence
*Michelle L. Jones, Laura Chapin, Eileen Ramsay
- 3:15–3:30 PM Response of *Gladiolus grandiflorus* to Variation in Corm Size
*Abdul Kareem, Abdul Manan,
Muhammad Jafar Jaskani, C.M. Ayub,
Shoaib Ur-Rehman, M.A. Pervez
- 3:30–3:45 PM Effect of Biochar on Yield of Lettuce and Basil in Containers
*Mengmeng Gu, Fei Yu
-
- 2:45–4:30 PM Sandringham
Oral Session: Fruit Breeding 2
Moderator: Ed Stover, ed.stover@ars.usda.gov
- 2:45–3:00 PM Functional Haplotypes for Fruit Firmness in Sweet Cherry using Pedigree-based Analysis
*Murali Bellamkonda, Cameron P. Peace,
Umesh Rosyara, Marco Bink, Eric van de Weg,
James R. McFerson, Amy Iezzoni, Nnadozie Oraguzie
- 3:00–3:15 PM Identification of QTLs Underlying Pedicel Fruit Retention Force in Sweet Cherry (*Prunus avium* L.)
*Yunyang Zhao, Murali Bellamkonda, Matthew Whiting,
Amit Dhingra, Nnadozie Oraguzie
- 3:15–3:30 PM Genetic Diversity and Population Structure of *Prunus umbellata* Elliot in Florida
*Dario J. Chavez, Thomas G. Beckman, José X. Chaparro
- 3:30–3:45 PM Breeding a Grower Friendly Peach Tree
Omar Carrillo-Mendoza, *José X. Chaparro

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

Saturday, August 4, 2012

3:45–4:00 PM Citrus Scion Breeding in Florida Affected by Endemic Huanglongbing Disease
*Ed Stover, Greg McCollum, R. Driggers, M. Hoffman, M. Doud, Y-P Duan, Richard Lee

4:00–4:15 PM Mapping QTLs Associated with Resistance to Bacterial Spot (*Xanthomonas arboricola* pv. *pruni*) in Peach
Nannan Yang, *Gregory Reighard, David F. Ritchie, W.R. Okie, Ksenija Gasic

4:15–4:30 PM Mapping QTLs for Red Skin Color in Peach
Terrence J. Frett, Gregory Reighard, W.R. Okie, *Ksenija Gasic

3:00–4:30 PM Windsor

Oral Session: Vegetable Crops Management 4

Moderator: Carol A. Miles, milesc@wsu.edu

3:00–3:15 PM Active and Passive Microenvironment Management Effects on Temperature Profiles and Crop Yield in Ohio Low and High Tunnel Systems
*Matthew D. Kleinhenz, Natalie R. Bumgarner

3:15–3:30 PM The Effect of Grafting on Vigor, Yield, and Verticillium Wilt of Eggplant (*Solanum melongena* L.) in Open Field Production
*Carol Miles, Sacha Johnson, Debra A. Inglis

3:30–3:45 PM Grafting and Number of Layers of Polyplastic Film Affected Growth and Yield of Heirloom Tomatoes in High Tunnels
*Sanjun Gu, Steven Kirk

3:45–4:00 PM Rootstock Assessment for Root-knot Nematode Management in Grafted Honeydew Melon
*Wenjing Guan, Xin Zhao, Donald W. Dickson, Maria L. Mendes, Judy Thies

4:00–4:15 PM Grafting Compatibility in Heirloom Tomatoes
*Sanjun Gu, Steven Kirk

4:15–4:30 PM Tomato Rootstock Performance under Non-fumigated Open Field Conditions
*Michael G. Bausher, Daniel O. Chellemi

3:00–5:00 PM Gusman

Workshop: Globalized World—Opportunities and Challenges from Asia for International Horticultural Enterprises

Sponsors: Association of Horticulturists of Indian Origin/ Working Group of Asian Horticulture

Moderator: Jayesh B. Samtani, jbsamtani@ucdavis.edu

The objectives of this workshop are to provide a discussion forum for U.S. and international horticultural businesses with operations in Asian countries, to present the unique opportunities and challenges for research and technology development and transfer, marketing and customer service.

3:00–3:15 PM Market Linkage and Value Chain Infrastructure—Challenge for South Asia for Value-added Horticulture
*Ajay Jha

3:15–3:30 PM VFIC's Foods for Health: In the Context of Asian Fruits and Vegetables
*Bhimanagouda S. Patil, Ram M. Uckoo, G.K. Jayaprakasha

3:30–3:45 PM Floriculture Marketing in Asian Markets Is Not the Same Old Marketing Experience
*Will Healy

3:45–4:00 PM Working with Horticulture Research Institutions in China for Economic Impact in the United States
*Donglin Zhang

4:00–4:15 PM Nutrient Enhancement with Microcarbon Technology
*Alan Merrill

* * *

An asterisk (*) in front of a name indicates the presenting author. The schedule is subject to change.

Saturday, August 4, 2012

Post-Conference Events

9:00 AM–6:30 PM

*Tours pick up in front of the
main hotel lobby entrance*

Miami Area Public Gardens Tour

The tour will consist of three, rather different public gardens, all close to Miami. This will be a day-long tour with lunch included at the second stop. The first stop is The Vizcaya Museum and Gardens. This is a national historical landmark, museum and 10 acres of formal gardens and a rockland hammock (native forest), built by James Deering in 1916. The Kampong, a division of the National Tropical Botanical Garden is the second stop on the tour. Located on Biscayne Bay in Coconut Grove, Florida, The Kampong contains a fascinating array of tropical fruit cultivars and flowering trees. This site was first established in the early 1900's where some of the first introductions of many of these fruits were made in the US. The tour will culminate at the Montgomery Botanical Center, established in 1959. Montgomery Botanical Center keeps living specimens from wild plant populations worldwide. Emphasizing palms and cycads, the population-based, documented, scientific collections are available for study in Montgomery's 120-acre botanical garden. There will be time to attend the ASHS HortLandmark Award presentation ceremony.

4:00–5:00 PM

Hortlandmark Award Presentation to Montgomery Botanical Center

All ASHS members and conference attendees are invited invitation to the Horticultural Landmark presentation at the Montgomery Botanical Garden. The center will have a nice presentation ceremony and reception following the ceremony.

About the Montgomery Botanical Center

A nonprofit botanic garden established in 1959, Montgomery Botanical Center keeps living specimens from wild plant populations worldwide. Emphasizing palms and cycads, the population-based, documented, scientific collections are available for study in Montgomery's 120-acre botanical garden of exemplary design.

Montgomery Botanical Center (originally The Montgomery Foundation) was established by Nell Montgomery Jennings in memory of her husband, Colonel Robert H. Montgomery, and his love of palms and cycads.

Today, Montgomery Botanical Center advances botanical research, conserves rare species, and educates the community through workshops, lectures, publications, and tours of its scientific plant collections.

Source—website:

<http://www.montgomerybotanical.org/>

Accessed 6-18-12

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- **HortTalks and ASHS Horticulture Podcasts** are two innovations of ASHS that are available in QuickTime and on iTunes. Subscribe, download, and play more than 100 talks given at the ASHS Annual Conference and receive the latest news and announcements from ASHS automatically.

- Receive first notification of the **scholarships** offered through ASHS. Each year the Society sponsors two \$1500 scholarships to undergraduate students.

- Of course you'll have **all other ASHS member benefits**: reduced subscription prices to *Journal of ASHS* and *HortScience*, reduced registration for the ASHS Annual Conference, and the chance to interact with the many members of ASHS. There is no better way to network and make contacts for your future in horticulture!



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ASHS CERTIFIED HORTICULTURIST

a program of the American Society for Horticultural Science

Examination Announcement

The American Society for Horticultural Science Certified Horticulturist (ASHS-CH) professional certification program is the national credential validating the knowledge and skills of working horticultural practitioners in the industry of horticulture. The ASHS-CH designation is establishing industry-wide standards of excellence and providing the public, government, and industry with the means to identify individuals with a thorough knowledge of horticultural practices. We identify working horticulturists who adhere to a professional Code of Ethics, and encourage commitment to ongoing professional development through continuing education requirements.

Examinations for the ASHS Certified Horticulturist designation are scheduled on the following dates:

2012 EXAMS

Friday, Aug. 3, 2012 1–5 pm
Fairchild Tropical Botanical Garden
10901 Old Cutler Rd., Coral Gables FL 33156
Application deadline: July 20

Friday, Aug. 24, 2012 1–5 pm
Farwest Tradeshow, Oregon Convention Ctr.
Rm. A105, 777 NE MLK Jr. Blvd.,
Portland OR 97232
Application deadline: Aug. 10

Monday, Sept. 17, 2012 9 am–1 pm
Phipps Garden Center
1059 Shady Ave., Pittsburgh PA 15232
Application deadline: Sept. 3

Monday, Sept. 24, 2012 9 am–1 pm
American Horticultural Society, River Farm
7931 East Boulevard Dr., Alexandria VA 22308
Application deadline: Sept. 10

Thursday, Oct. 11, 2012 9 am–1 pm
Missouri Botanical Garden
Kemper Center for Home Gardening classroom
St. Louis MO 63166
Application deadline: Sept. 27

Friday, Oct. 12, 2012 9 am–1 pm
Bloedel Reserve, 7571 NE Dolphin Dr.
Bainbridge Island WA 98110
Application deadline: Sept. 28

Friday, Oct. 26, 2012 8 am–Noon
UC Davis Arboretum
University of California, Davis, CA 95616
Application deadline: Oct. 12

Wednesday, Nov. 7, 2012 1–5 pm
Longwood Gardens, Acer Room
Kennett Square PA 19348-0501
Workshop precedes exam, 11 am–Noon
Application deadline: Oct. 24

Monday, Nov. 12, 2012 1–5 pm
Chicago Botanic Garden
Linnaeus Room, Regenstein Center
1000 Lake Cook Rd., Glencoe IL 60022
Application deadline: Oct. 29

Friday, Nov. 30, 2012 9 am–1 pm
Huntington Botanical Garden
Botanical Auditorium, 1151 Oxford Rd.
San Marino CA 91108
Application deadline: Nov. 16

2013 EXAMS

Saturday, Jan. 12, 2013 Noon–4 pm
The New York Botanical Garden
2900 Southern Blvd., Bronx NY 10458
Workshop video precedes exam, 10–11 am
Application deadline: Dec. 31, 2012

Saturday, Jan. 19, 2013 9 am–1 pm
Naples Botanical Garden
4820 Bayshore Dr., Naples FL 34112
Application deadline: Jan. 5, 2013

Friday, March 15, 2013 8 am–Noon
UC Davis Arboretum
University of California, Davis CA 95616
Application deadline: March 1, 2013

Visit the ASHS website (ashs.org) to download the complete ASHS Certified Horticulturist Candidate Handbook and study outline to learn more about the program and its requirements. For more information, contact: CH Program Coordinator Dawn Mancini; ph. 703.836.4606, ext. 116; email: dmancini@ashs.org

American Society for Horticultural Science

1018 Duke Street, Alexandria VA 22314 • phone: 703.836.4606 • email: ashsch@ashs.org

Save the Date!

ASHS Annual Conference

Palm Desert, California

22 - 25 July 2013



Desert Springs

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See you there!